Corpus-focused Analysis of Spelling Errors in Saudi Learners' English Translations

Yasir Alenazi

University of Tabuk, Saudi Arabia

yaalenazi@ut.edu.sa

Shen Chen

University of Newcastle, Australia

shen.chen@newcastle.edu.au

Michelle Picard

Murdoch University, Australia

Michelle.Picard@murdoch.edu.au

Jaime W. Hunt

University of Newcastle, Australia

jaime.hunt@newcastle.edu.au

Bio-Profiles:

Yasir Alenazi is an English language lecturer at the Faculty of Arts and Education, the University of Tabuk, Saudi Arabia. He is currently completing his Ph.D. degree in the field of Education/Applied linguistics at the University of Newcastle, Australia. His research interests include second language acquisition, error analysis and corpus linguistics.

Shen Chen is an Associate Professor of Teaching English as a Second/Foreign Languages and Teaching Chinese as a Second/Foreign Language TESOL/LOTE. His fields of expertise include culture in foreign language education, computer assisted language learning, intercultural communication, international education and language teacher training. He is a program convenor (Master of Educational Studies - TESOL) at the school of Education, the University of Newcastle, Australia.

Michelle Picard is an Associate Professor in the field of Education/Applied linguistics. Her fields of expertise include academic integrity, TESOL, higher education, online learning and English for Academic Purposes. She is Dean of Teaching and Learning in

the College/Faculty of Arts, Business, Law and Social Sciences at Murdoch University, Australia.

Jaime W. Hunt is a linguistics lecturer at the University of Newcastle, Australia. Having studied German and Applied Linguistics, he researches the effects of language contact between English and German. He focuses specifically on the sociolinguistic, lexical, and morphological effects of this contact from two different perspectives. In the European context, he is interested in the influence of English as a feature of globalization upon the German language, whereas in the Australian context, he investigates language maintenance and shift among migrant populations who have German as a heritage language.

Abstract

The English language plays a significant role in Saudi Arabia at the local and international levels. Spelling errors, as one of the challenging elements in writing confronted by Saudi learners of English, have a negative effect on the quality of their written translation products (Ababneh, 2019). Therefore, more analytical studies are needed to scrutinize spelling errors through multiple categories to reveal the reasons behind these errors in a specific cultural context. The primary objective of this study is to examine the types of spelling errors in the translations of English majors at a Saudi University, using a comprehensive classification system of spelling errors developed particularly for this study. A corpus of 105 translation texts were collected, and the identified errors were sorted into eleven categories. The frequency of each type of error was calculated and, consequently, the most common errors were determined statistically using frequency analysis. The results revealed that capitalization and omission errors were the most common types of spelling errors among the students. Furthermore, interlingual and intralingual factors were the main reason behind the occurrence of spelling errors. Based on the findings, the study makes a number of recommendations for English language instructors to develop suitable pedagogical solutions to the issue of spelling errors in their students' translations.

Keywords: spelling errors, translation, L1 transfer, lexical knowledge, error analysis

1. Introduction

Spelling is an essential aspect of the written English language that English language learners find challenging (Llach, 2017). Accuracy in spelling is crucial to quality text translation

from the source language into the target language. This is because in the translation process it is essential to convey the message of the source language efficiently and accurately in the target language. By contrast, misspelling may hamper the intended meaning of the original text. English language learners encounter various difficulties while producing translation texts due to differences in spelling, style genre, orthographical and grammatical rules between their first language and the target language (Agriani & Djatmika, 2018). Among the problems of translation, spelling is of utmost importance since it provides the reader with their first overall impression of the translated text (Galinskaya et al., 2014).

The quality of Saudi English majors' texts is particularly affected by misspellings (Ababneh, 2019). This is a critical issue to address since English majors form the backbone of the Saudi Arabian translation industry and the quality of their translations could potentially influence the reputation of the industry. Thus, improving the quality of English teaching is vital in overcoming the problem of learners' misspelling.

The literature on spelling errors in Saudi Arabia indicates that many Saudi EFL learners have encountered difficulties in writing and particularly in English spelling which negatively affected the quality of their writing (Ababneh, 2019; Al-Jarf, 2010). The research has revealed that spelling errors are the most obvious errors in their written language use (Alhaisonie et al., 2015; Aloglah, 2018; Hameed, 2016; Othman, 2018). For this reason, spelling errors require attention as a priority pedagogical issue among EFL teachers in Saudi Arabia since the teaching of spelling improves students' orthographical awareness of the target language (Bowen, 2011).

There have been quite a few studies in the Saudi context that have explored the common spelling errors, and their potential causes, in the free-written products of university students. These studies, however, have been qualitative in nature and restricted within limited categories of spelling errors, such as transposition, addition, omission, and substitution. Some significant types of misspelling seem to have been excluded from in-depth analysis, for instance, capitalization, grapheme substitution and meaning related spelling errors. Regarding the causes of spelling errors, interlingual and intralingual factors appear to be to be the major source of errors in most studies conducted in this field. However, previous research has not reached an agreeable conclusion about the significance of each source of error.

2. Literature Review

Previous studies conducted on Saudi English leaners' misspelling have provided mixed results regarding the types of spelling errors and their potential causes. In addition, most of these studies have used a variety of methods and data sets to investigate learners' misspellings, such as essays, language tests, and interviews. Furthermore, much research relies on limited classification systems and categorizes only a small number of error types. Therefore, the most significant types of misspelling do not feature such analyses in detail, if at all. Some studies found L1 transfer to be an influential factor in the occurrence of errors, while others found that most errors were related to intralingual factors. The following summary of previous work shows how spelling errors analysis may be conducted, with particular focus on the Saudi context.

Younes and Albalawi (2015) investigated some of the writing problems facing second year students at a university in Saudi Arabia. The authors stated that misspellings were quite pervasive in the participants' writings and they identified several types of errors, such as the use of undecipherable words, segmentation disordering, as well as addition, omission, and substitution errors.

Using a limited classification, M. Albalawi (2016) studied the misspelling of university English learners at the preparatory year level, yet, merely categorized the spelling errors of the study's 45 participants into substitution, omission, and addition. M. Albalawi's findings illustrated that the coherence of students' writings was influenced by various spelling errors, and the author concluded that the difference between the Arabic and English linguistic systems (interlingual influence) caused students to make spelling errors.

This contrasts with F. Albalawi (2016), who, using the spelling error classification system developed by Cook (1999), scrutinized the spelling mistakes of 80 Saudi English learners at the university level. The findings in this study showed that misspelling due to omission was the most common, amounting to 59% of all error types. Similar to the previous study, F. Albalawi indicated that interference between the first and the target languages accounted for the occurrence of most of these errors in the students' writings.

Using dictation as a means of eliciting data, Hameed (2016) also explored spelling mistakes in 26 Saudi students' English writings. The findings revealed that omission, addition, and transposition errors were the most common spelling errors among the participants. Furthermore, the findings highlighted the role that pronunciation plays in spelling and that mispronunciation of English lexical items and the difference in sound systems between Arabic and English were the reason behind these errors.

Another study by Othman (2018) used Saudi English learners' free production texts to examine the types of spelling mistakes made by those students. In this analysis, Othman used only four categories as part of his classification system of spelling errors, namely, addition errors, omission errors, substitution of letters, and transposition errors. The findings showed that L1 transfer and mispronunciation of English words were the main source of these misspellings. Othman also provides suggestions for improving student spelling, stating that more attention should be given to the teaching of spelling rules since it is an essential component of English as a Second Language (ESL) learning.

From a qualitative perspective, Albesher (2018) examined spelling errors made by 100 learners of English at the preparatory year at Qassim University. These errors were categorized according to two sources, interlingual and intralingual transfers, and were established while interviewing 44 language teachers at the university. Albesher concluded that the students' misspellings were, again, due to the linguistic differences between L1 and L2, students' mispronunciation of L2 words, and their lack of the English morphological and orthographical knowledge.

Altamimi and Rashid (2019) also employed a qualitative approach in examining the causes of spelling errors made by Saudi learners of English at Tabuk University. Altamimi and Rashid conducted several structured interviews for 15 language teachers and 15 students within the same English language program. The findings showed that, in addition to interlingual and intralingual factors playing a crucial role in the occurrence of spelling errors, other factors, such as the education system, the teaching syllabus, and the student's learning strategies contributed to students' errors.

Alzamil (2020) conducted a study to analyze the writing errors of 24 Saudi English majors, analyzing the 48 free compositions that students composed over two weeks. Among the various writing errors that Alzamil identified, spelling and capitalization errors were prominent. However, Alzamil's analysis offered only a narrow explanation of the types of spelling errors due to the limited categorization system employed.

Other research has taken place on Arabic speakers in non-Saudi contexts. For example, Benyo (2014) conducted a study on spelling inaccuracies of English learners at university in Sudan. Two spelling tests in the first and the second semester were given to 200 students in different academic disciplines. The study showed that students encountered difficulties with English phonemic orthography in which some spelling errors were related to English vowel and consonant sounds. Benyo revealed that omission, addition, substitution, and transposition errors were the most common types of misspellings among the participants. Benyo suggested

that interference of the students' L1 phonological system and the students' limited knowledge of the target language were the main reason for these spelling mistakes.

Another study by Al-Zuoud and Kabilan (2013) on English spelling in Jordan examined the writing of 43 English learners and yielded a total of 228 spelling errors which the authors categorized into four major types. Al-Zuoud and Kabilan found that substitution and omission were the most common types of spelling errors among those learners' written production.

All in all, these studies reveal a research gap leading to the current research, which, by comparison, is a more in-depth analysis utilizing a more comprehensive classification system. To our best knowledge, no study has endeavored to investigate the different types of spelling errors in learners' English translations quantitatively. This research, consequently, involved an analysis of the spelling errors manifested in the students' translations. We categorized errors based on their linguistic characteristics using a taxonomy we designed particularly for this study and added new types of spelling errors to the taxonomy which were not fully covered in the previous literature. We then further categorized these errors based on their potential causes, in other words, whether errors were due to interlingual or intralingual influences. We measured this by comparing the characteristics of these errors and their relationship to the linguistic similarities and difference of the learners' first and second languages. In addition, we contrasted the frequencies of error sources on the basis of spelling categories from a quantitative perspective because, as Allen (2017) argues, quantitative research provides more accurate, meaningful, and reliable analysis of a phenomena's frequency.

By investigating and analyzing the various types of spelling mistakes made and classifying them into different categories using a well-developed classification system, this study helps bridge the current gap in the related literature. It contributes to the existing body of knowledge by shedding light on the types of spelling errors made by Saudi English majors and their sources. This provides insight for English teachers about their learners' weaknesses and may assist with finding pedagogical solutions to address their needs. This study demonstrates and confirms the importance of vocabulary in written translation products and how spelling errors could negatively impact on the quality of translation produced by Saudi English majors.

The objective of the present study is to examine the spelling errors made by English major students at a Saudi University while translating from Arabic to English. From a quantitative perspective, the study employed a comprehensive classification system to identify

and quantify the number of spelling errors in the students' translations with a thorough diagnosis of the causes behind these errors. The study aims to answer the following research questions:

1) What are the types of common spelling errors in the translations of Saudi English majors at the university level?

2) What are the most frequent types of spelling errors prevalent in the students' translations?

3) Which of these errors are caused by interlingual and intralingual factors?

3. Methodology

3.1. Research Design

This project employed a quantitative approach to error analysis, focusing on various types of spelling errors. Such statistical methods provide explicit evidence of spelling errors made by Saudi English majors and their potential causes. An extensive comparison enabled by the bespoke taxonomy designed for this study, allowed for a more reliable data analysis and better understanding of the students' spelling errors. The taxonomy here employed is an extension and innovation of previous classifications (Ahmed, 2017; Al-Jarf, 2010; Cook, 2014; Shalaby et al., 2009).

3.2. Participants

The data source for this study was a corpus of translated texts consisting of examination papers written by 105 male students enrolled in an English translation program at a public university in Saudi Arabia. All the students were native Arabic speakers with an age range from 18 to 25 years. The students had spent six years learning English language at intermediate and secondary schools. In their first year of university, the students received 160 hours of English instruction for 32 weeks as a pre-requisite of enrolling in the English translation program. The students were expected to have an intermediate English proficiency level to cope with the program's academic requirements.

3.3. Data Collection Procedure

Before the study commenced, ethics approval was obtained from the university and students were asked to provide consent for the researchers to access their exam papers. These papers comprised formative and summative assessment tasks, namely, their translation courses' exams. The students had 60 to 90 minutes to complete each of their exams, where they were required to translate various Arabic texts into English without using a dictionary.

The total word count of the corpus was approximately 11550 words. The average length of each translation text was 110 words.

3.4. Categorization of Spelling Errors

Llach (2011) stated that error analysis studies usually develop error taxonomies to describe the language sample systematically. This study draws on Ahmed (2017), Al-Jarf (2010), Cook (2014), and Shalaby et al. (2009) to produce the taxonomy shown in Figure 1. The new taxonomy created for this particular study contains error categories that are less often used in the literature such as impeding comprehension errors, L1 transfer errors, and errors resulting in inappropriate meaning. These categories were added because they were particularly recurrent features of learner spelling (Shalaby et al., 2009). The new extended and innovated classification system provides greater scope for extensive spelling errors analysis.

Figure 1

Spelling Errors Taxonomy
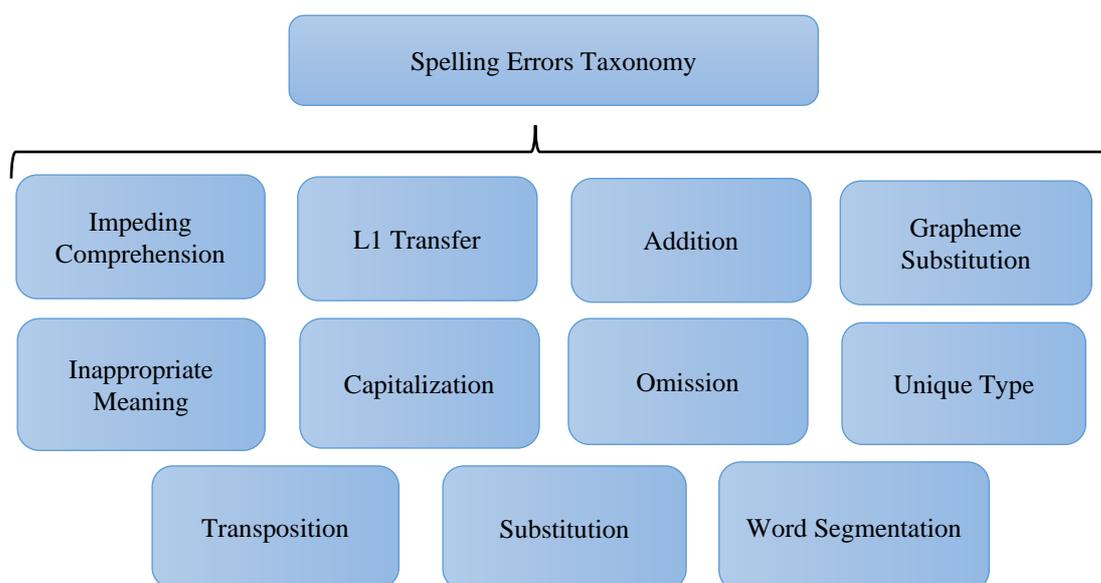
Based on the above taxonomy, we classified the spelling errors into 11 subcategories as follows:

1. Spelling errors impeding comprehension: a lexical item in the source text is translated into another lexical item that does not exist in the target language and is incomprehensible to readers. In this category the lexical item written is partially or completely a coined word (e.g., *asch <each> or *geun <gain>).
2. Spelling errors resulting in inappropriate meaning (for example, *pest <best>).
3. L1 transfer errors, i.e., the transfer of L1 phonological rules into English accounts for the occurrence of misspelled words (for example, native Arabic speakers tend to produce

misspelled words as *bopular <popular>*, because the phoneme /p/ does not exist in the phonological system of the Arabic language).

4. Spelling errors due to addition of a letter (for example, *everry <every>* or *kingdome <kingdom>*).

5. Spelling errors due to omission of a letter (for example, *geat <great>* or *importnt <important>*).

6. Spelling errors due to substitution of one letter for another (for example, *citicen <citizen>* or *fawrard <forward>*).

7. Spelling errors due to transposition of two neighboring letters (for example, *recieve <receive>* or *lukcy <lucky>*).

8. Spelling errors due to grapheme substitution. In this category, more than two letters are substituted for the usual form based on the sounds associated with individual letters, for example, *knoldg <knowledge>*.

9. Spelling errors due to segmentation: the target language lexical items are either divided by a space or an unnecessary space is added between lexical items, such as *black board <blackboard>* and *shortsighted <short-sighted>*.

10. Spelling errors due to capitalization of a letter (necessary or unnecessary capitalization), for example *john* for *<John>* or *I Have time* for *<I have time>*.

11. Unique spelling errors (multiple errors). In this category, more than one type of spelling error is identified.

3.5. Data Analysis Procedures

After reading the source documents, we followed Corder's (1974) error analysis approach of identification, description, and explanation. For the purpose of this paper, we tagged each misspelling (error and mistake) as an error.

To maintain validity and reliability in the data analysis process, we identified spelling errors in consultation with two experienced English lecturers to ensure accuracy in spelling error identification. These lecturers also evaluated the results separately for the purpose of comparison. Using the previous taxonomy of errors mentioned above, we coded and categorized all spelling errors in a shared document in which the identified errors were discussed, explained, and agreed upon to avoid any biased judgment. To facilitate the next step of the analysis of the corpus data, we exported the document to the SPSS statistical analysis software (version 25) to determine the frequency of each type of error found.

We then further analyzed these errors according to their likely causes, which were either interlingual or intralingual. If the second language learners produce errors in the target language that are attributed to their mother tongue, then they are called interlingual errors (Mantasiah et al., 2018; Richards, 2015). These include capitalization errors, word segmentation errors and L1 transfer errors. Errors that do not reflect the structure of the learners' first language but are based on the learners' inadequate knowledge of the target

language, are classified as intralingual errors. These include, addition errors, omission errors, substitution errors, transposition errors, inappropriate meaning errors, impeding comprehension errors, unique errors and grapheme substitution errors. Thus, following Richard's classification of language error causes, we divided the spelling errors in the current study into these two opposite categories.

4. Results of the Study

4.1. Spelling Errors in Saudi University Students' Translation Products

Analysis of the translated texts yielded 452 spelling errors. This means that 3.9% of the 11,550 lexical items in the corpus were misspelled. The average percentage of spelling mistakes made by each individual is 4.3%. These were classified into eleven subcategories as shown in Table 1. The error types that appear to be particularly problematic for the students are presented in detail below.

Table 1

Frequency Distribution of Spelling Error Subcategories

Type of error	N	%
Capitalization	129	28.5
Omission	86	19.0
Substitution	70	15.5
Unique errors	41	9.1
Impeding comprehension	38	8.4
Addition	34	7.5
Word segmentation	17	3.8
Transposition	15	3.3
Grapheme substitution	12	2.7
Errors due to L1 transfer	7	1.5
Errors resulting in inappropriate meaning	3	0.7
Total	452	100

With regard to the research questions and objectives, the following sections illustrate the identified spelling errors based on their frequency of occurrence starting with capitalization errors.

4.1.1. Capitalization Errors

Misspellings due to capitalization were the most frequent, constituting 29% of all errors. These errors included failure to capitalize the initial letter of a word at the beginning of a sentence or proper nouns such as *arabia for <Arabia> or *middle east for <Middle East> or capitalizing a lexical item unnecessarily, such as word in the middle of a sentence. Examples of this type of spelling error are illustrated in Table 2.

Table 2

Types of Capitalization Errors in the Translation Texts

Misspelled word	Correct form	Error
*saudi	Saudi	<s>
*egypt	Egypt	<e>
… *Life …	… life…	<L>
*we …	We …	<w>
… *west …	… West …	<w>
*there are …	There are …	<t>

4.1.2. Omission Errors

The second most frequent category was omission errors (19%) which occurred 86 times in the translation products. Omission errors include omitting a letter in the target language word. In the translation texts, omission of the silent letters in the target language lexical items was also common. Example of spelling omission errors are presented in Table 3.

Table 3

Types of Omission Errors in the Translation Texts

Misspelled word	Correct form	Error
*lif	life	<e> omitted
*midde	middle	<l> omitted
*incom	income	<e> omitted
*shoud	should	<l> omitted

Furthermore, some omission errors included failure to double word-final consonants when certain suffixed are added, such as in *mentaly for <mentally>, *stoped for <stopped> and *runing instead of <running>.

4.1.3. Substitution Errors

Next in frequency were substitution errors, appearing 70 times in the translation texts and constituting 15.5% of all errors. This type of error includes substituting one letter for another. Most of the substitution instances here involved English vowels. Examples of this category are listed in Table 4.

Table 4

Types of Substitution Errors in the Translation Texts

Misspelled word	Correct form	Error
*mast	must	\<u\> substituted by \<a\>
*pirson	person	\<e\> substituted by \<i\>
*citicen	citizen	\<z\> substituted by \<c\>
*enjoe	enjoy	\<y\> substituted by \<e\>
*warking	working	\<o\> substituted by \<a\>

The substitutions of the English consonants /b/ for /p/ and /v/ for /f/ were classified as a separate type of misspelling (L1 transfer errors) in this study.

4.1.4. Impeding Comprehension Errors

There are 38 (8.4%) errors that impede comprehension. Table 5 illustrates selected examples of the misspellings in this category.

Table 5

Types of Impeding Comprehension Errors in the Translation Texts

Misspelled word	Correct form	Error
*geun	gain	\<e\>, \<u\>
*xet	exist	\<e\>, \<i\>, \<s\>
*habbite	hobby	\<a\>, \<i\>, \<t\>, \<e\>
*terest	tourism	\<e\>, \<e\>, \<t\>
*asch	each	\<a\>, \<s\>

As the examples above illustrate, the lexical items in the source text were translated into other lexical items that do not exist in the target language, and as consequence they were incomprehensible. This results in lexical items that are either partially or fully coined words.

4.1.5. Addition Errors

There were 34 errors which involve the inclusion of an unnecessary letter. Examples of such errors are presented in Table 6.

Table 6

Types of Addition Errors in the Translation Texts

Misspelled word	Correct form	Error
*off	of	\<f\> added
*tickeet	ticket	\<e\> added
*beatch	beach	\<t\> added

*maiking	making	\<i\> added
*huoman	human	\<o\> added

4.1.6. Unique Errors

Unique spelling errors occurred 41 times in the texts, comprising 9% of the total spelling errors. In this category, several spelling errors were identified, as indicated in Table 7.

Table 7

Types of Unique Errors in the Translation Texts

Misspelled word	**Correct form**	**Error**
*navre	never	\<e\> substituted by \<a\>, \<r\> and \<e\> transposed
*coollct	collect	\<o\> added, \<e\> omitted
*hopies	hobbies	\<b\> substituted by \<p\>, \<b\> omitted
*midacally	medically	\<e\> substituted by \<i\>, \<i\> substituted by \<a\>
*beitwen	between	\<i\> added, \<e\> omitted

4.1.7. Word Segmentation Errors

Spelling errors due to incorrect word segmentation, i.e., writing two individual lexemes together or separating compounds otherwise written as single words, occurred 17 times (4% of all errors). This results in the type of segmentation errors illustrated in Table 8.

Table 8

Types of Word Segmentation Errors in the Translation Texts

Misspelled word	**Correct form**	**Error**
*alot	a lot	N/A
*with out	without	N/A
*donot	do not	N/A
*onearth	on earth	N/A
*every thing	everything	N/A

4.1.8. Transposition Errors

There were 12 instances of transposition errors (3% of all errors). This category includes those errors that involve the substitution of two neighboring letters in the target language lexical item, as shown in Table 9.

Table 9

Types of Transposition Errors in the Translation Texts

Misspelled word	Correct form	Error
*monye	money	\<y\>, \<e\> reversed
*pepole	people	\<e\>, \<o\> reversed
*thier	their	\<i\>, \<e\> reversed
*abuot	about	\<u\>, \<o\> reversed
*langauge	language	\<a\>, \<u\> reversed

4.1.9. Grapheme Substitution Errors

Similar to the previous category, grapheme substitution errors occurred 12 times with the proportion of 3%. Examples of spelling errors in this category are illustrated in Table 10.

Table 10

Types of Grapheme Substitution Errors in the Translation Texts

Misspelled word	Correct form	Error
*pachent	patient	\<ti\> substituted by \<ch\>
*knoldg	knowledge	\<w\> omitted, \<e\> omitted, \<e\> omitted
*becose	because	\<au\> substituted by \<o\>
*expirians	experience	\<e\> omitted, \<e\> substituted by \<a\>, \<ce\> substituted by \<s\>
*beard	bird	\<i\> substituted by \<ea\>

4.1.10. L1 Transfer Errors

Misspellings due to the transfer of the source language phonetic feature to the target language lexical item were infrequent in comparison with the previous subcategories. There were 12 instances of this type of spelling error. Examples are listed in Table 11.

Table 11

Types of L1 Transfer Errors in the Translation Texts

Misspelled word	Correct form	Error
*stambs	stamps	\<p\> substituted by \<b\>
*facation	vacation	\<v\> substituted by \<f\>
*hapit	habit	\<b\> substituted by \<p\>

4.1.11. Inappropriate Meaning Errors

Spelling errors resulting in an inappropriate meaning were infrequent in the translation texts. Examples of this type of error are presented in Table 12.

Table 12

Types of Inappropriate Meaning Errors in the Translation Texts

Misspelled word	Correct form	Error
*rude	road	\<oa\> substituted by \<u\>, \<e\> added
*pace	peace	\<e\> omitted

The different types of spelling errors identified in this study could be attributed to various causes (Albesher, 2018). However, these can be grouped into those resulting from either interlingual or intralingual factors. This will be discussed in the following section.

4.2. The Potential Sources of Spelling Errors

In error analysis studies language, errors are usually classified as either interlingual errors or intralingual errors (James, 2013; Richards, 2015). Subsequently, the potential sources of spelling errors in this study were classified according to these two sources. We sub-divided these two sources into two groups with several subcategories depending on the type of errors and their possible causes.

The first group of errors is that of interlingual errors (L1and L2 interferences/ L1 transfer). In this group we found that the different writing systems between Arabic and English may have led to errors such as capitalization errors and errors due to word space. In addition, transfer of Arabic phonological rules into the target language appeared to play a role in the occurrence of some spelling errors.

The second group includes the intralingual errors caused by a lack of knowledge of L2 morphological and orthographical rules. These include omission errors, substitution errors, transposition errors, addition errors, unique errors, impeding comprehension errors, and errors resulting in inappropriate meaning. Some errors are caused by a lack of L2 phonological knowledge such as grapheme spelling errors.

As illustrated in Table 13, (66.2%) of the spelling errors occurred were due to intralingual influence, that is, a lack of L2 morphological, orthographical knowledge (63%) and phonological knowledge (3%). Interlingual influence made up a considerable proportion (33.8%) of the total spelling errors. This is most likely a result of interference between the

Arabic and English writing systems (32% of errors) and the transfer of L1 phonological system (2% of errors).

Table 13

Total Percentage Frequency Distribution of Misspellings Based on Their Possible Causes

Spelling Error Source	Possible Cause	Error Category	N	%
Interlingual	L1 and L2 Writing System Interference	Capitalization errors	129	33.8
		Word segmentation errors	17	
	Transfer of L1 Phonological System	L1 transfer errors	7	
Intralingual	Lack of L2 Morphological and Orthographical Knowledge	Addition errors	34	66.2
		Omission errors	86	
		Substitution errors	70	
		Transposition errors	15	
		Inappropriate meaning errors	3	
		Impeding comprehension errors	38	
		Unique errors	41	
	Lack of L2 Phonological Knowledge	Grapheme substitution errors	12	
Total			452	100

5. Discussion

Previous studies that addressed English language learners' misspellings provided mixed results regarding the types of spelling errors in written compositions (see Ahmed, 2017; Albesher, 2018; Altamimi & Rashid, 2019; Al-Zuoud & Kabilan, 2013; Benyo, 2014; F. Albalawi, 2016; Hameed, 2016; Othman, 2018; Younes & Albalawi, 2015).This study, in the other hand, reports on the types and frequency of spelling errors and their potential sources in

English learners' written translations. Therefore, the study has addressed the three questions, each of which will be answered in turn.

1) What are the types of common spelling errors in the translations of Saudi English majors at the university level?

The findings reveal that Saudi English majors produced various types of spellings errors. These errors were categorized into eleven subcategories based on a taxonomy designed especially for the type of language sample collected. The types of spelling errors identified in the students' translations were capitalization errors, omission errors, substitution errors, unique errors, impeding comprehension errors, addition errors, word segmentation errors, transposition errors, grapheme substitution errors, L1 transfer errors and inappropriate meaning errors.

2) What are the most frequent types of spelling errors prevalent in the students' translations?

The most common type of spelling error identified in the corpus was due to erroneous capitalization. This finding correlates with Alzamil (2020), who also found that capitalization was the most common type of error in his Saudi participants' written compositions. However, other types of misspellings did not feature in his study, owing to the limited classification system Alzamil employed. In addition, this frequency of errors contradicts Ahmed (2017), who found that omission errors were more frequent than capitalization errors in Kurdish learners' written compositions. The next subcategory were errors due to omission. Unlike Othman (2018), who found substitution errors to be the most frequent type in learners' essays, this type of misspelling in the present study was the third most common. This was followed by unique spelling errors, errors impeding comprehension, addition errors, and word segmentation errors. Both subcategories of transposition errors and grapheme substitution errors were next in frequency. L1 transfer errors due the difference of Arabic (L1) and English (L2) phonological systems were also identified in the translations with a lower frequency. The least frequent type of spelling errors was those resulting in inappropriate meaning.

3) Which of these errors are caused by interlingual and intralingual factors?

In relation to the last question of the study, the analysis conducted using a comprehensive classification of spelling errors has confirmed that interlingual and intralingual influences are two key factors contributing to the occurrence of spelling errors in the translation products of Saudi English majors. Therefore, this investigation of various types of spelling errors, such as capitalization errors, word segmentation errors, grapheme substitution

errors, L1 transfer errors, and impeding comprehension errors, were prevalent in the students' translations, has addressed the gap left by the previous studies within the Saudi context.

The findings indicate that capitalization errors and word segmentation errors could also be traced back to the students L1' writing system and its interference with the target language. In the English language writing system, a normal word space is necessary between two separate lexical items and it is unrequired with the use of some compound words. In contrast, in the Arabic writing system, a space is not required at the lexical level, and there is no distinction between upper-case and lower-case forms due to the nature of the Arabic alphabet.

Grapheme substitution errors could be related to the students' mispronunciation of the target language words. Another possible reason is the difference between Arabic and English phoneme-grapheme correspondence rules. According to Watson (2002), Arabic letters are written based on how they are pronounced. This may explain the occurrence of this type of misspelling in the students' English writing because the latter has more complex spelling rules. In English, a phoneme can be symbolized by several graphemes. For example, /ʃ/ can be found in words like <shoot>, <patient>, <sure>, and <social>, while in Arabic /ʃ/ is represented by only the letter /ش/.

A likely cause of L1 transfer errors, e.g., misspelled words such as *bopular <popular> and *falue <value>, is the lack of voicing contrast between bilabial stops and labio-dental fricatives in Arabic. While the phonemes /p/ and /b/ and /f/ and /v/ contrast in English, they are allophonic variants in Arabic. Other types of misspellings such as transposition errors, unique errors, impeding comprehension errors and inappropriate errors could be related to the students' limited knowledge of vocabulary items and especially how to represent these in written form (Cook, 2014).

The results also show that the addition of vowels or consonants may be related to the way that word is articulated. As mentioned earlier, Arabic writing is phonetic (Othman, 2018), and Arab learners of English tend to write English lexical items the way they are pronounced, as they usually do when they write in Arabic. This causes students to make spelling mistakes by adding extraneous letters. Some addition errors could be related the learners' limited orthographic knowledge of the target language in words like *careing <caring> and *saveing <saving>.

The distribution of intralingual errors was higher than interlingual errors. This result is quite different from comparable studies reporting that interlingual errors were more frequent than intralingual errors. In other words, the results of this study may explain the discrepancies

between M. Albalawi's (2016) and Othman's (2018) findings. However, further research is required to confirm this.

At the same time, the results of the data analysis in this study show that the main sources of Saudi English learners' spelling errors were due to their lack of L2 morphological and orthographical knowledge. Other intralingual errors were owing to the learners' lack of L2 phonological knowledge. In other words, an increased knowledge of the L2 is essential to overcome the errors.

In the views of Alhaisoni et al. (2015), many learners of English do not focus on the spelling aspect of their language learning since it can be easily checked or corrected using the spellchecking function in word processing software. Compounding this issue is the limited number of learning activities in the English curricula that focus on spelling. Therefore, it is necessary to provide the explicit, focused teaching of spelling at all levels of tertiary study. As an example, English lecturers could provide daily reading sessions and focus on vocabulary that may be challenging for ELL students, taking into consideration the differences between their learners' L1 and the target language. This may be beneficial because reading tasks help students to see how words in sentences connect. Furthermore, providing multiple spelling activities for learners will help the lecturer to gauge the learners' strengths and weaknesses when writing in English, allowing them to address the students' specific needs. Finally, the lecturer might see positive results by assisting learners to develop an enhanced self-awareness in regard to spelling.

The study of errors in written translations is vital in that it underscores the value of context in effective translation. Spelling inaccuracies by Saudi English majors in their efforts to translate specific Arabic words to English are a good indicator of the extent to which context is considered when writing through translation and the impact this has on the resultant translation product. By examining the writing errors, the Saudi English major students make, EFL instructors would be able to immerse themselves into the learning environment and realistically experience the content through the linguistic lenses of the students. In this respect, the systematic analysis of errors will not only help identify the spelling errors affecting the translation efforts of the Saudi English major students but also establish how interference between English and Arabic languages causes these errors.

5.1. Limitations of the Study

In our study, we analyzed the English translations produced by male English majors which were gathered from one public university in Saudi Arabia. Further research

investigating the spelling errors in the language products of both male and female learners of English at other Saudi universities would provide a greater understanding of this topic. This study can be extended or replicated in different ways to include larger language samples other than translation samples such as, short stories, reports and essays. Lastly, the classification system of spelling errors developed in the current study may provide a foundation for other studies that investigate spelling errors by English language learners from other first language background in different contexts.

6. Conclusion

We hope that this study will be valuable to learners of English in general by explaining the areas of difficulties and weaknesses of Saudi English majors in producing translations from Arabic into English. We also anticipate that the findings of this study will be beneficial for ESL/EFL teachers to help their students to acquire a good command of English spelling by focusing on the spelling rules which seem to be difficult to handle. Spelling errors categorized into the eleven subcategories in this paper enable us to understand better the reasons for these errors. It is important for students to be given the opportunity to focus on English spelling and its relation to pronunciation. Moreover, translation courses would benefit by placing more emphasis on spelling instruction to avoid making repeated spelling errors while writing through translation in English. The improvement of the teaching and learning of English in terms of spelling is dependent on the joint efforts of both teachers and students.

References

Ababneh, I. (2019). Errors in Arabic-English translation among Saudi students: comparative study between two groups of students. *Arab World English Journal for Translation & Literary Studies, 3* (4), 118-129. http://dx.doi.org/10.24093/awejtls/vol3no4.10

Agriani, T., Nababan, M. R., & Djatmika, D. (2018). Translation quality on words containing spelling, punctuation and grammatical error. *International Journal of Multicultural and Multireligious Understanding, 5* (5), 224-240. https://doi.org/10.18415/ijmmu.v5i5.314

Ahmed, I. A. (2017). Different types of spelling errors made by Kurdish EFL learners and their potential causes. *International Journal of Kurdish Studies*, *3* (2), 93-110. https://doi.org/10.21600/ijoks.334146

Albalawi, F. S. (2016). Analytical study of the most common spelling errors among Saudi female learners of English: causes and remedies. *Asian Journal of Educational Research, 4* (3), 48-62. http://multidisciplinaryjournals.com/ajer-vol-4-no-3-2016/

Albalawi, M. J. (2016). The academic writing performance and spelling errors of English as foreign language students at Tabuk University: a case of the introductory year students. *Asian Journal of Social Sciences, Arts and Humanities, 4* (1), 1-8. https://multidisciplinaryjournals.com/ajsah-vol-4-no-1-2016/

Albesher, K. B. (2018). Saudi EFL adult learners' spelling errors: reasons and remedial strategies to raise their writing proficiency level. *International Journal of Applied*

Linguistics and English Literature, *7* (7), 131-141.
https://doi.org/10.7575/aiac.ijalel.v.7n.7p.131

Alhaisoni, M. (2012). An analysis of article errors among Saudi female EFL students: a case study. *Asian Social Science-Canadian Center of Science and Education*, *8* (12), 55-66. https://doi.org/10.5539/ass.v8n12p55

Alhaisoni, E. M., Al-Zuoud, K. M., & Gaudel, D. R. (2015). Analysis of spelling errors of Saudi beginner learners of English enrolled in an intensive English language program. *English Language Teaching, 8* (3), 185-192.
https://doi.org/10.5539/elt.v8n3p185

Al-Jarf, R. (2010). Spelling error corpora in EFL. *Sino-US English Teachin*g, *7* (1), 6-15. https://www.researchgate.net/publication/267834979

Allen, M. (Ed.). (2017). *The SAGE encyclopedia of communication research methods*. Sage Publications.

Aloglah, T. M. (2018). Spelling errors among Arab English speakers. *Journal of Language Teaching and Research, 9* (4), 746-753. https://doi.org/10.17507/jltr.0904.10

Altamimi, D., & Rashid, R. A. (2019). Spelling problems and causes among Saudi English language undergraduates. *Arab World English Journal, 10* (3) 178- 191.
https://dx.doi.org/10.24093/awej/vol10no3.12

Alzamil, A. (2020). An Investigation of Writing Errors Made by Saudi English-Major Students. *International Journal of English Linguistics, 10* (2).
https://doi.org/10.5539/ijel.v10n2p92

Al-Zuoud, K., &Kabilan, M. (2013). Investigating Jordanian EFL students' spelling errors at tertiary level. *International Journal of Linguistics, 5* (3), 164-176.
https://doi.org/10.5296/ijl.v5i3.3932

Benyo, A. F. (2014). English spelling problems among students at the University of Dongola, Sudan. *International Research Journal. Educational Research, 5* (9), 476-484. https://ajouronline.com/index.php/AJEEL/article/view/1907

Bowen, H. (2011). Spelling it out! Accounting for spelling difficulties for Arab learners of English. In T. Smith (Ed.), *Foundations for the future: Focus on vocabulary*, 85-98.
https://www.semanticscholar.org/paper/

Cook, V. (1999). Teaching spelling.
http://www.viviancook.uk/Writings/Papers/TeachingSpelling.htm

Cook, V. J. (2014). *The English writing system*. Routledge.

Corder, S. P. (1974). Error analysis. In J. Allen & S. Corder (Eds.), *Techniques in applied linguistics* (pp. 122-154). Oxford: Oxford University Press.

Galinskaya, I., Gusev, V., Mescheryakova, E., & Shmatova, M. (2014). Measuring the impact of spelling errors on the quality of machine translation. *LREC*, 2683-2689. http://www.lrec-conf.org

Hameed, P. (2016). A Study of the spelling errors committed by students of English in Saudi Arabia: exploration and remedial measures. *Advances in Language and Literary Studies, 7* (1), 203-207. https://doi.org/10.7575/aiac.alls.v.7n.1p.203

James, C. (2013). *Errors in language learning and use: Exploring error analysis*. Routledge.

Llach, M. P.A. (2011). *Lexical errors and accuracy in foreign language writing*. UK; USA; Canada: Multilingual Matters.

Llach, M. P.A. (2017). Vocabulary teaching: insights from lexical errors. *TESOL International Journal, 12* (1), 63-74. https://files.eric.ed.gov/fulltext/EJ1247791.pdf

Mantasiah, Y. J., & Yusri, J. (2018). The development of grammar teaching material using error and contrastive analysis (A linguistic approach in foreign language teaching). *TESOL International Journal, 13* (3), 9-18. https://files.eric.ed.gov/fulltext/EJ1247441.pdf

Othman, A.Kh.A. (2018). An Investigation of the most common spelling errors in English writing committed by English-major male students: At the University of Tabuk. *Journal of Education and Practice, 9* (1), 17-22. https://www.iiste.org/Journals/index.php/JEP/article/view/40733

Richards, J. C. (2015). *Error analysis: Perspectives on second language acquisition*. Routledge.

Shalaby, A. N., Yahya, N., & El-Komi, M. (2009). Analysis of lexical errors in Saudi college students' compositions. *Journal of the Saudi Association of Languages and Translation*, *2* (3), 65-93. http://citeseerx.ist.psu.edu/viewdoc

Watson, J. C. (2002). *The phonology and morphology of Arabic*. Oxford University Press on Demand.

Younes, Z. B., & Albalawi, F. S. (2015). Exploring the most common types of writing problems among English language and translation major sophomore female students at Tabuk University. *Asian Journal of Basic and Applied Sciences, 3* (2), 7-26. http://www.multidisciplinaryjournals.com