



Investigating Language Transfer Effect of Arabic and Spanish on English Using Test of English as Foreign Language Corpus

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Abstract

The first language, or also known as a mother tongue, can influence second language acquisition (SLA). Contrastive analysis theory state that mother tongue can either facilitate or hinder second language acquisition. The similarities between first language and second language facilitate the learning process while the differences between L1 and L2 could sometimes hinder the learning process and cause a negative transfer. Thus, to comprehend the impact of L1 on L2, it is necessary to analyze the language performance of EFL learners. The objective of this study was to investigate the negative transfer effect of Arabic and Spanish as a first language (L1) on learning English as a foreign language (L2). The data was collected using test of English as foreign language corpus. The researcher used a qualitative method. The errors were collected and analyzed based on rubric. The findings showed that Arabic and Spanish had a negative transfer effect on English as a second language. Arabic language had more negative transfer effect on English than Spanish language.

Keywords: TOEFL corpus, Language transfer effect, L1, L2

1 Introduction

Language transfer phenomenon refers to the influence of one's native language on a new language when learners learn it and use it in speaking and writing. As Feng (2017) mentioned, "transfer refers to the effect that old language knowledge has on the new language knowledge". Language transfer could have positive transfer effects and negative transfer effects. Positive transfer can occur when there are similarities between L1 and L2, and these similarities help facilitate learning development while negative transfer can hinder the process of learning a new system of language because of the differences between a native language and a second language. Tajareh (2015) summarized the negative transfer process as follows:

- Difference between L1 & L2 item → interference of L1 into L2 → difficulty in learning L2.

The primary source of L2 learners' errors is the interference of their mother tongue on the second language learning. Therefore, this study highlighted the negative transfer effect of Arabic and Spanish as native languages on English performance by using test of English as foreign language corpus.

2 Methodology

This section explains the type of research, tools, participants, and data collection procedure.

2.1. Type of the Research

This research was qualitative research because the researcher critically analyzed text errors.

2.2. Research Tool

Contextual analysis rubric: The research tool was contextual analysis rubric which was adapted from previous study. The collected errors were analyzed depending on categories on the rubric. The rubric contains three main categories: grammar, lexis, and mechanics. Under each category, there are subcategories. Grammar category contains subject-verb agreement, subject or verb omission, and incorrect sentence order. Lexis category contains prepositions, articles, and homophones. Lastly, the mechanics category has punctuation, capitalization, and spelling.

2.3. Data Overview

This research used test of English as foreign language corpus. test of English as foreign language is used internationally as a measure of academic English proficiency. test of English as foreign language corpus contains almost 12,100 essays written by students who are non-native English speakers. test of English as foreign language corpus contains 11 L1s, Arabic, Spanish, Turkish, French, German, Italian, Japanese, Korean, Chinese, Hindi, and Telugu. test of English as foreign language corpus is used in different research areas such as second language acquisition.

2.4. Data Collection Procedure

This study focused on two native languages which were Arabic and Spanish. Fifty files were randomly chosen and analyzed: thirty from texts written by native speakers of Arabic, and twenty texts from native speakers of Spanish. The analysis of the errors derived from Corder's method. This method consists of three parts: finding errors, describing errors, and classifying errors based on the categories of the rubric. Then, the researcher discussed and analyzed the reasons behind the most common errors.

3 Result and Discussion

This section explains the results of the data collected using test of English as foreign language corpus.

3.1. Contextual Analysis Rubric

The analysis of test of English as foreign language text errors was derived from Corder's (1967) method on error analysis. This method consists of three parts: finding errors,

describing errors, and classifying errors based on the types of the rubric. The rubric used in this research was borrowed from a previous study (Hussain 2019).

Table 1: Frequency of Arabic errors.

Grammatical Category			Lexical Category			Mechanics Category		
S-V-A	S-V-O	Word order	Preposition	Articles	Homophones	Punc.	Cap.	Spell.
48	36	10	16	4	14	194	125	206
Total			653					

The results revealed that the total errors committed by 30 Arabic test of English as foreign language texts was 653 errors from all the three categories. The Mechanics category had the first and highest rank of errors which scored 525 errors. 94 errors were collected in the grammatical category. And the lowest errors belong to the lexical category with a total of 30 errors.

Table 2: Examples of Arabic grammatical errors category

Grammatical category	Writers' incorrect sentence	The correct sentence
Subject-verb agreement	If <i>somebody want</i> to do it.	If <i>somebody wants</i> to do it.
Subject or verb omission	I still trying.	I <i>am</i> still trying.
Incorrect word order	You might wonder how <i>will this</i> affect my life to the better.	You might wonder how <i>this will</i> affect my life to the better.

According to Murcia (1995), grammatical error is defined as the wrong form in the structure of a sentence. Grammar errors can be classified into various categories. Such as subject-verb agreement, subject or verb omission, and incorrect sentence order. Grammatical errors are considered as one of the common errors produced by EFL. The different grammar structure between the first language and the second language can cause errors. The total grammar errors of L1 Arabic were 94 errors out of 653 errors. As shown in Table 2, the researcher listed the most frequent and interesting errors of each type of the grammatical category from the data with their correct forms. S-V-A stands for subject verb agreement which means the verb must agree with the subject. In English, a singular subject takes singular verb, and a plural subject takes a plural verb. Subject verb agreement type scored 48 errors in the Arabic test of English as foreign language texts. The most common errors were because of the misuse of suffix -s for third singular person. As shown in the example above, the verb does not agree with the subject because the student didn't use the suffix -s for 3rd singular person. This error was repeated in more than one file since in Arabic language the rule and the form of the suffix are different. In Arabic all verbs' suffixes change based on gender and number while in English only if the subject is singular the suffix -s will be added to the verb. S-V-O stands for Subject or verb omission which means the deletion of one of the sentence components which are a subject or a verb. Another frequent error was the omission of the verb to be is, am, and are. Such as saying, "I still trying". The idea of helping verbs is somehow new to Arabic learners because these auxiliary verbs are used alongside the main verbs to form different tenses and different language patterns while in Arabic, there are no auxiliary verbs. If you want to change the tense you will change the verb itself according to the situation. Word order is the way words are arranged in a particular order to form a

sentence. Word order may be one of the most linguistic areas that cause a negative transfer between one's native language and the target language. Arabic language and English language have different word order. English language starts the sentence with subject then verb while Arabic language begins the sentence with the verb then then subject. So native Arabic speakers of English tend to apply their native language rule to the sentence. As shown in the example above, the writer substitutes the verb place with the subject 'how will this affect my life' instead of "how this will affect my life". So, this happened as a result of a negative transfer from Arabic to English.

Table 3: Examples of Arabic lexical errors category

Lexical category	Writers' incorrect sentence	The correct sentence
Preposition	<i>In</i> the other hand.	<i>On</i> the other hand
Article	Most of <i>the</i> German cars are too expensive	Most of German cars are too expensive.
Homophone	Their mother didn't offer <i>to</i> much love to <i>here</i> kids.	Their mother didn't offer <i>too</i> much love to <i>her</i> kids.

34 errors out of 653 were committed in lexical errors. Lexical category refers to a linguistic classification system which consists of content words, to convey the intended message to the reader. When inappropriate lexical choices happen, lexical errors happen. Preposition is a word used before a noun to elicit direction, time, place or to introduce an object. Preposition criterion could be one of the most criteria that cause confusion for native Arabic speakers when learning English. Because Arabic and English prepositions differ in the usage, and one preposition in Arabic could have more than one equivalent in English. This can cause many problems for learners. Arabic preposition 'fii,' used as an equivalent for more than one preposition in English 'in, into, at, and on. Therefore, in the example above, the preposition in is incorrectly selected instead of on. English language has a lot of rules for articles. Therefore, the researcher focused on the proper nouns which are words for specific things, places, and people. In Arabic the definite article the 'al-' is used with proper nouns while in English the definite article "the" is not used with proper nouns. As the example above, students wrote 'the German' while German considered proper nouns as it is the name of the country. In linguistics, specifically semantics when words have the same pronunciation, but different meanings and spellings are called homophones. So, the researcher focused on the error that homophones in English could cause. This difference led to change in meaning and cause ambiguity to the reader such as the example above, the writer wrote the preposition to while he means too. Also, in the same sentence, we can see the word here used incorrectly, while the correct word should be the possessive her since 'her' is related to the mother's kids.

Table 4: Examples of Arabic mechanics errors category.

Mechanics category	Writers' incorrect sentence	The correct sentence
Punctuation	If you were with a group you can go on the bus.	If you were with a group, you can go on the bus.
Capitalization	<i>i</i> strongly agree.	<i>I</i> strongly agree.
Spelling	<i>exampl.</i>	<i>exmaple.</i>

The highest number of errors were committed in the mechanics' category which included punctuations, capitalization, and spelling errors. Danielson (200) defines mechanics as standard writing conventions such as spelling, punctuations, capitalization, and sentence structure skills. Spelling type ranked the first in the frequent errors with a total of 206 as seen in Table 1. For spelling errors, as seen in Table 4, the most common errors were deleting the silent letters. For example, writing “exampl” instead of “example”. The reason for this error is that in Arabic language there are no silent letters, what is spoken is written. Another common error was compound words. It was obvious from more than one example that the writers don't understand that English language has compound words such as somehow, and therefore. They break it down into two words ‘some how, there fore’. The last common errors were misspelling of double letters. It was noticed that writers didn't pay attention to the double letters they write ‘clases’ not ‘classes’. Because in Arabic, we don't have the concept of double letters the way it's treated in English. So, English learners usually make these errors. It could be concluded that the main reason for spelling errors were because of characteristic that does not exist in the first language. Punctuation type ranked second in the mechanics frequent errors. Sulaiman (2019) stated that punctuation is defined as symbols that are used in various languages to organize sentence structure and to help the reader to grasp the message clearly. In the example, the writer wrote “if you were with a group you can go on the bus” the writer here didn't use a comma to separate the dependent and independent clauses from each other. Finally, capitalization ranked third in mechanics error categories. Capitalization is considered one of the contrasting areas between Arabic and English languages. Because this feature does not exist in Arabic language. Letters are written without making distinction between uppercase and lowercase letters in Arabic. The writer in the example above wrote ‘i’ in a small form, whereas ‘I’ is always written in a capital letter whether it is at the beginning of the sentence or not. In English language, capital letters are essential as they are used to inform the reader that this is a name of a specific place, people, or organization. Also, it is used to inform the readers that this is the beginning of a sentence. So, while capitalization plays a significant role in English language, it is not a feature of Arabic language. So, this differences caused a negative interference.

Table 5: Frequency of Spanish errors

Grammatical Category			Lexical Category			Mechanics Category		
S-V-A	S-V-O	Word order	Preposition	Articles	Homophones	Punc.	Cap.	Spell.
12	16	10	9	1	14	150	2	79
Total			293					

The results showed that the twenty test of English as foreign language texts written by Spanish speakers contained 293 errors from all the three categories. Half of the errors were in the mechanics category with a total of 231 errors. The second rank of the errors were in the grammar category which scored 38 errors. And the last number of errors were 24 errors on the lexical category.

Table 6: Examples of Spanish grammatical errors category

Grammatical category	Writers' incorrect sentence	The correct sentence
Subject-verb agreement	<i>I thinks</i> this because I use this principle all time during my studying life.	<i>I think</i> this is because I use this principle all time during my studying life.
Subject or verb omission	For me <i>is</i> not accurate nor correct.	For me <i>it is</i> neaither accurate nor correct.
Word order	The tour guide is usually a <i>tourist professional</i> .	The tour guide is usually a <i>professional tourist</i>

In the grammatical category, the subject or verb omission ranked first with the total number of 16 errors. Then, subject or verb agreement ranked second with the total of 12 errors. And the last 10 errors were for word order. So, the grammatical errors category had in total 38 errors out of 293 errors.

Most of the subject-verb omission errors found in Spanish texts involved deleting the pronoun 'it'. The writer begins the sentence with the verb 'is', as in the example above. This is because Spanish subject pronouns are often deleted and embedded within the verb endings. So, this mistake could be due to the effect of the mother tongue. In subject-verb agreement, writers overgeneralized the rule of suffix -s and added it to plural verbs. The reason for this is that Spanish language has inflection marks for both third person singular and plural while in English only verbs in the 3rd person singular are marked with -s suffix. Obviously, different rules between Spanish and English languages in subject-verb agreement led to misuse of the suffix -s for third singular person rule. For word order, the witter wrote 'statement given' where he substituted the places of the two words. The word 'professional' should be used as a pre-modifier that comes before the noun 'tour' to describe it. In the writer's native language (Spanish), the adjective is preceded by the noun it modifies. This is why the writer wrote 'tourist professional' instead of 'professional tourist'. Using the L1 word order, which is different from English, results in a negative transfer.

Table 7: Examples of Spanish lexical errors category

Lexical category	Writers' incorrect sentence	The correct sentence
Preposition	The most important values are related <i>with</i> the personal achievement.	The most important values are related <i>to</i> the personal achievement.
Articles	<i>The</i> Walt Disney	Walt Disney.
Homophones	This would be a <i>waist</i> of time.	This would be a <i>waste</i> of time.

Lexical category has the lowest number of errors with a total of 18 errors. 9 errors were in preposition and 8 errors in homophone. The only error remaining belonged to the article type.

Khotaba (2013, p. 279) stated that "the occurrence of lexis errors relates basically to native language interference or the learners' knowledge inadequacy of the target language, or even the multiple meanings and functions of English prepositions." Preposition interference can be shown in the writer's example. In Spanish, the 'con' preposition is an equivalent to the preposition 'with' in English. In Spanish, it is used to indicate a relationship or connection. Therefore, based on the context, the writer used the preposition 'with' incorrectly. The

appropriate preposition in this sentence is ‘to’ so the sentence will be ‘related to personal achievement’. In the article category, there was one error which is adding ‘the’ to proper noun. The article rule in English indicates that articles should not be used with proper nouns, which is opposite to Spanish rule. Therefore, the writer added it to the proper noun ‘the Walt Disney’. So, this is clear evidence of L1 negative transfer. Lastly, waste and waist are homophones that have totally different meanings. According to Cambridge dictionary, the word waist refers to the part of body while waste means inappropriate use of something. From the context of the sentence, the writer meant waste but wrote waist.

Table 8: Examples of Spanish mechanics errors category

Mechanics category	Writers' incorrect sentence	The correct sentence
Punctuation	creating library which would include; internet, books, dvd.	creating library which would include internet, books, dvd.
Capitalization	MAYBE achieving success.	Maybe achieving success.
Spelling	Clases.	Classes.

The mechanics category ranked first in English texts written by Spanish speakers. The total number of errors were 231 errors. 150 of them occurred in punctuation, 79 in spelling type, and the rest two were in capitalization type. In punctuation, the writer used the colon symbol incorrectly as saying ‘include; internet, books, dvd.’ where there is no punctuation needed. If the sentence is translated to Spanish, the colon will be needed to show the list of examples. According to Babel magazine (2024), one of the colons usages in Spanish is when you want to introduce a list. Thus, it is mother tongue interference. In spelling, the error was in the missing of the second s in the word ‘clases’. This error was repeated in the files because in Spanish language just two letters can be doubled which are l and r letters. And the rule of Spanish double letters is different from English. If they want to double l letter, it will change to /y/ sound. Therefore, it is expected from Spanish speakers to make mistake in double letters. Finally, in capitalization, the writer capitalized the whole word while just the first letter needs to be capital.

Table 9: Number of Errors in Arabic and Spanish

Category	Arabic errors	Spanish errors
Grammar	94	38
Lexis	34	24
Mechanics	525	231

To sum up, the researcher compared the number of the errors of the main categories between test of English as foreign language texts written by Arabic speakers and test of English as foreign language texts written by Spanish speakers. The results showed that English texts written by Arabic speakers have a higher number of errors than English texts written by Spanish speakers. It is because Spanish language shares some similarities in features with English language while Arabic is a completely different language compared to English. Thus, errors happened more in English texts written by Arabic speakers. In addition,

negative interference happened mostly among English learners whose mother tongue is Arabic English than whose mother tongue is Spanish.

The results of the study answered the research questions. The first question was 'is there language transfer effect while learning L2?' the findings showed that there are negative transfer effect when learning L2. This finding is in line with the previous study of Kazazoglu (2020) which found that native language causes negative transfer. The second question was 'what are the common errors in test of English as foreign language corpus when L1 is Arabic and Spanish?' The highest number of errors made by L1 Arabic and Spanish were in mechanics category. Arabic speakers tend to make more spelling mistakes while Spanish speakers tend to commit more punctuation mistakes.

4 Conclusion

The purpose of the study was to investigate language transfer effect of Spanish and Arabic as L1s on English as L2 using test of English as foreign language corpus. Overall, the results showed that language transfer had a negative effect on learning English as a second language where the learners of English apply their L1 features incorrectly to L2 situations. The negative transfer effect happened mostly in the mechanics category for both L1 Arabic and Spanish.

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References

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