

Sources of Lexical Cross-linguistic Influence in English L3 Production in the Moroccan EFL Context

Bader Aghoulid

Ibn Zohr University, Morocco

bader.aghoulid@edu.uiz.ac.ma

Naima Trimasse

Ibn Zohr University; Agadir, Morocco

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Abstract

This study investigates lexical errors in English production by third-year university students, exploring their types, frequencies, and sources of Cross-Linguistic Influence (CLI). Content Analysis was utilized to systematically evaluate written and spoken English samples, facilitating the identification and categorization of lexical errors. James' Taxonomy (1998) was employed as the framework to classify errors into formal and semantic types, enabling a nuanced comprehension of error patterns. Employing Content Analysis and James' Taxonomy (1998), prevalent errors including overinclusion, omission, and calque were identified in both written and spoken forms. The impact of CLI was traced to the students' native languages, Moroccan Arabic/Amazigh L1 and French/Standard Arabic L2. Results illustrated that a substantial proportion of errors classified under the distortion category (overinclusion, omission, misselection) and one within the misformation category (calque) originated from L1 Moroccan Arabic/Amazigh, while overinclusion, misselection, and lexical borrowing errors were attributable to L2 French. The study encountered challenges arising from intertwined language sources and structural similarities between English and French. These results have interesting implications for English vocabulary learning and teaching in Morocco.

1. INTRODUCTION

In today's increasingly globalized world, multilingualism has become essential for communication and success in various fields (De Bot & Jaensch, 2015). As such, understanding the processes involved in acquiring multiple languages is of great importance (Alonso, 2016; Angelovska & Hahn 2017; De Angelis & Dewaele, 2011; Peukert, 2015). Cross-Linguistic Influence (CLI), also known as language transfer, is a widely recognized phenomenon that can impact language acquisition, particularly in third language (L3) learning. Morocco, a country with Arabic and Amazigh as its official

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languages and French as the predominant foreign language, provides an ideal setting to investigate CLI's on English as a Foreign Language (EFL) learners (Trimasse, 2018).

The linguistic diversity in Morocco has experienced both opportunities and challenges (Ennaji, 2003; Sadiqi, 1991). Moroccan learners of L3 English are likely to be influenced by the dominant languages, which can result in transfer errors. They may have difficulty separating the different languages in their minds and struggle to switch between languages since, typologically speaking, English is linguistically different from Arabic, and Amazigh, and slightly closer to French (Crystal, 2010). Arabic and all its varieties go back to Hamito-Semitic one; Amazigh to Afro-Asiatic major origin; finally, English and French to Indo-European languages (Crystal, 2010; Lewis, 2009). Another frequent challenge is that students may transfer grammar and lexical structures from their first language to English, leading to errors in communication (Hufesein, 2000; Jessner, 1999, 2006, 2008).

Consequently, investigating the nature and frequency of these errors can provide valuable insights into the mechanisms involved in Third Language Acquisition (TLA) and how they can be addressed. Within this context, learning English as an L3, especially in the educational system is a challenging task due to the interference of previously learned or acquired languages in the learners' mental lexicon (De Angelis, 2007; Hufesein, 2000; Jessner, 1999, 2006, 2008, Trimasse, 2018; Issa et al, 2022). Once learners fail to cope with a situation, they often switch or resort to those languages interactively, confusing structure and meaning (Baker, 1996; Jessner, 1999, 2006, 2008; Hufesein, 2000; Herdina & Jessner, 2002; Cenoz, 2005; Mansoor et al., 2023). To some extent, the problem can be attributed to CLI. These CLI errors manifest themselves in lexical errors.

To provide greater precision, it is the skills of writing and speaking that are the focal points for detecting deficiencies in lexical accuracy. These proficiencies are deemed to be of the utmost importance, as they often manifest the most glaring errors in the lexicon. In both modes of communication, a distressing prevalence of mistakes has been observed, thus engendering considerable worry among educators and scholars alike. (Ringbom, 1987). The purpose of this research is to identify, classify, and describe the types of lexical errors in L3 writing and speaking of third-year university students based on James' Taxonomy as well as to explore the source(s) of CLI in lexical errors in L3 of Moroccan EFL learners. Research on such language issues offers encouraging opportunities for a better understanding of the dimensions of CLI. This also provides a profound understanding of the phenomenon of lexical errors for better performance in the Moroccan EFL written and spoken production. Additionally, it will provide an opportunity for language educators, students, and curriculum developers to foresee challenges that learners may encounter, resulting in enhanced EFL course instruction.

To attain the general objectives, the present study addresses the following research questions:

A. What are the types and frequency of lexical errors in L3 English by Moroccan EFL learners based on James' Taxonomy (1998)?

B. What is the source(s) of CLI in lexical errors in L3 production of Moroccan EFL learners?

In order to achieve the general objectives and answer the above-mentioned research questions, the study considered the following working hypotheses to explain the role of previously acquired languages:

- **Hypothesis 1:** Based on James' taxonomy, it can be hypothesized that Moroccan EFL learners will make a higher frequency of semantic errors due to differences in the meaning of English words compared to their L1 and L2.

- **Hypothesis 2:** In L3 production, the source of CLI in lexical errors is L1.

It is hypothesized that in multilingual societies such as Morocco, students' mother tongue serves as an exceedingly predominant source of CLI in TLA and precisely in the early stages of learning a target language. The hypothesis is supported by research (Llisteri & Poch, 1987; Kellerman 1977, 1979; Ringbom, 1987; Wrembel, 2012). In the case of writing, Arab students are more likely to show lexical transfer from L1 which leads to semantic and formal failure in English.

- **Hypothesis 3:** In the L3 production, the source of CLI in lexical errors is L2

It is also expected that students will rely on French as L2 to be the main source of lexical CLI to compensate for the needed vocabulary. English and French belong to the same language family and are typologically closer to each other. The claimed hypothesis was highlighted in many studies and the main one is the one conducted by Bardel and Falk (2007) who argue that "the L2 acts like a filter, making the L1 inaccessible in TLA" (p.480).

2. LITERATURE REVIEW

In the age of multilingualism, many learners have fully acquired at least one additional linguistic system. As a result, CLI has recently been an essential aspect to consider in the study of TLA. (Alonso, 2016; Angelovska & Hahn 2017; De Angelis & Dewaele, 2011; Peukert, 2015). CLI refers to the interaction between different dialects and languages within the mind of an individual speaker consciously or unconsciously. It typically involves at least two languages or dialects that make the learner's both prior linguistic knowledge and prior learning experience play a major part in the complex learning process. In this regard, Jarvis (2009) provides a comprehensive definition of CLI that covers all aspects of language learning. For him, CLI is "the influence that a person's knowledge of one language has on that person's recognition, interpretation, processing, storage and production of words in another language." (p.99)

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A considerable amount of research has been published on the way previously learned non-native languages influence the acquisition of an additional language (Cenoz, 2001; Hammarberg, 2001; Ringbom, 1987, 2001). For example, Kellerman and Smith (1986) perceive CLI as “the interplay between earlier and later acquired languages.” This interaction is not limited or static in nature. It rather occurs in different directions from possibly L1 to L2/ L3 and/ or from L3 to L2/L1 (Odlin, 2003; Jarvis & Pavlenko, 2008). Besides, Lipińska (2014a) believes that in the mind of the multilingual speaker, there is not a precise direction or plausible interpretation of the source of CLI and the number of transfer possibilities increases dramatically. For instance, in TLA, the interaction between the three languages can be in the 6 following configurations: L1→L2, L1→L3, L2→L3, L2→L1, L3→L2 or L3→L1 (Chłopek, 2011). In addition, although it is not a frequent phenomenon, also combinations of various languages can influence other ones (e.g. L1+L2→L3, L1+L3→L2 or even L2+L3→L1) (Chłopek, 2011). CLI can affect not only the performance of an L2 but also result in the weakening of linguistic skills in a native language when L2 speakers lose contact with their language community or have limited exposure to the native language because of extensive exposure to the L2.

Morocco's linguistic situation is complex and reflects the country's diverse history and culture. The use of multiple languages is prevalent in Morocco, and many Moroccans are proficient in several languages. The official languages of Morocco are Modern Standard Arabic and Amazigh. Modern Standard Arabic is commonly used in government, media, and education and is considered an L2 in the country. However, Moroccan Arabic, also known as Darija, and Amazigh are L1s in Morocco. They are used in everyday communication (Sadiqi, 2006). All of these languages have been present in the country for thousands of years and are an essential part of Morocco's cultural heritage.

In the Moroccan context, few recent studies have focused on the investigation of CLI effects in areas of language knowledge and acquisition where transfer has previously been claimed not to occur. (Loutfi, 2016; Trimasse, 2018). In his study, Loutfi (2016) explores the issue of pragmatic transfer of the Moroccan speaker in English. The main concerns in the study are to primarily know when these learners make requests in English and secondly to compare the average frequencies of direct and indirect strategies used by both Moroccan learners of English and native speakers of English. Loutfi (2016) examines pragmatic transfer at two levels: Pragma-linguistic and Socio-pragmatic level. The results showed that the pragmatic competence of the Moroccan learners is far from satisfactory. Semantically speaking, Trimasse (2018) investigates the occurrence of lexical transfer in L3 production in Morocco in a multilingual context. To do so, the researcher analyzed paragraphs written in English by Moroccan EFL university students in order to pinpoint the source of semantic transfer: Moroccan Arabic (the Low variety) or Modern Standard Arabic (the High variety). Based on this analysis, 240 cases of semantic extensions were detected. The results indicated that lexical transfer can occur from both varieties in L3 production.

When dealing with errors, there are several taxonomies that provide steps on how to identify and classify them; one of them is James Taxonomy (1998). James' taxonomy of lexical errors is connected to Richards and Rodgers' eightfold knowledge classification framework, which implies that errors can also be categorized based on language proficiency levels. Furthermore, James initially classifies lexical errors into two main types: formal and semantic. Formal errors are further divided into misselection, misformation, and distortion. These subcategories encompass omission, overinclusion, and blending. To provide a concise explanation, formal misselections involve errors in word selection, misformation pertains to the creation of non-existent words in the target language derived from the learner's first language, and distortion is linked to word misspelling caused by similarities in phonemes or graphemes among words. (James, 199)

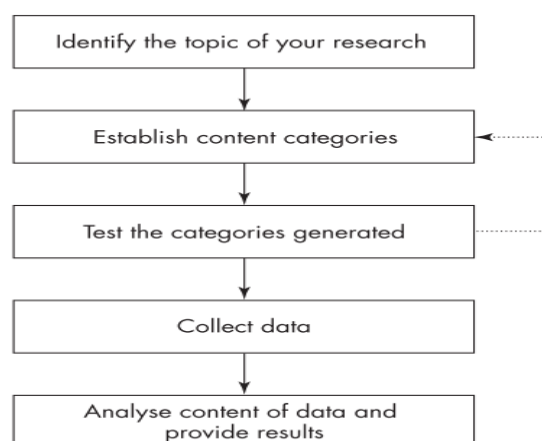
3. METHODOLOGY

3.1. Research Design

The research questions were addressed using Content Analysis (CA) to identify, classify, and describe the types and sources of lexical errors made by Moroccan EFL students. The rationale behind choosing CA was to provide genuine steps and tools for the examination of the research topic besides the flexibility of interpretation of the collected data. Additionally, CA offers a structured and systematic way to scrutinize written or spoken language data, such as essays or transcripts of spoken language, to identify patterns, themes, and trends. In the context of identifying, classifying, and describing lexical errors in English production made by Moroccan students, this method would be particularly useful in explaining which types of errors are more prevalent among students of different proficiency levels, and how the error patterns change as proficiency increases and these choices were backed by many previous studies such as that of Wilkinson and Birmingham (2003).

According to Wilkinson and Birmingham (2003), CA allows researchers to apply meaning to various content of responses such as open-ended questions in questionnaires, interviews, transcripts, or any textual data. Using CA, the researcher does not necessarily need to interact with participants (although it could happen if necessary). All that is needed is to simply examine the data that they already produced. CA proves to be efficient when it comes to the analysis of data such as audio recordings, text, books, or even Facebook posts and instant messages. Finally, it serves as the best method to find a relationship between words or concepts for the purpose of providing an interpretation of the data through a rigorous step that we share here in the figure below:

Figure 1



One of the main advantages of CA is its versatility and applicability to a wide range of research topics and data types. It also provides a systematic and structured approach to data analysis, making it possible for researchers to replicate the study and ensure consistency in coding and interpretation. Additionally, CA allows researchers to analyze existing data without directly interfering with the subjects or sources being studied, which can be useful for studying sensitive or private topics.

3.2. Research Instruments

Taking into consideration the nature of the present study and the research questions, three main research instruments were adopted. They were the primary methods of data collection. The table below englobes all the data collection instruments based on the types of productive skills:

Table 1

The data collection instruments

Productive skills	Data collection instruments	
Writing	A linguistic background questionnaire	writing task
Speaking	A linguistic background questionnaire (LBQ)	Audio recordings of students

3.2.1. The Linguistic Background Questionnaire (LBQ)

The Linguistic Background Questionnaire (LBQ) is a commonly used data collection instrument in language research studies. It is a self-report questionnaire to amass information about participants' linguistic background, including information on their first language, other languages spoken, and language exposure and proficiency (Peters, 2010). One of the paramount advantages of using the LBQ is to understand how the participants' linguistic background may affect their language production. Some of the items in the LBQ used in this study were questions about the L1, L2, and L3 of the participants, their daily language of use, and their language of instruction in school.

3.2.2. Writing task

Writing tasks provide researchers with a rich and nuanced understanding of a participant's language proficiency, as it allows participants to demonstrate their ability to produce written language in a controlled setting (Darus & Ching, 2009). The participants were required to write an essay on their daily routine during the holy month of Ramadan. According to Kellerman (2001), compositions have more validity as a method of eliciting data because it is a more natural language activity. Having this claim would strongly support the choice of the subject since it would majorly activate the previously learned languages and see their impact on English as TL in a multilingual context.

3.2.3. Audio Recordings

Audio recordings help to get spoken language production data, allowing for the identification of errors in pronunciation, intonation, and vocabulary use. The rationale behind choosing this instrument was that it explicitly helped elicit data on lexical errors by directly recording informants when speaking about their daily activities during the holy month of Ramadan. The recording provided a permanent record of the student's speech, which was reused for later analysis and evaluation. Audio

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Recording aimed at eliciting spontaneous production data of the target utterances. Previous studies used audio recordings to naturally collect data about the impact of L1 on the learning of any foreign language (Ravem, 1968; Wode, 1976).

3.3. Participants and Sampling

In accordance with the overarching objectives of this study, the sample group was third-year university students from the Department of English. To get a representative sample, a combination of convenience and purposive sampling techniques was adopted to select the appropriate sample for the research. The choice is supported by Duff's claim (2006) when he points out that qualitative research may use either a purposive sample or a sample of convenience. For convenience sampling, the recruited participants were simply the individuals who happened to be the most accessible to the researchers (Mackey and Gass, 2012). To opt for purposive sampling, on the other hand, the researchers had to first obtain prior general knowledge about the population to approach the eligible sample since they serve the purpose of the study (Stockemer, 2019). The choice was made because Morocco introduced English as a compulsory language subject in the third-year middle school curriculum. Additionally, exposure to English is often limited to the classroom. Finally, they should not have taken any extra classes in language centres or language academies. In light of the aforementioned reasons, the sample size extracted was 258 participants. The participants' ages were between 17 and 41 years old. A cross-sectional approach was chosen, yielding two language skills for the target group. The table below displays the sample size for each skill.

Table 2

Sample size, skills, and level

	Writing	Speaking	Total
Third-year university students	206	52	258

3.4. Data Collection Procedures

3.4.1. Writing

Pre-administering the instruments

The initial step involved contacting professors who were willing to help collect data. They were informed of all the procedures and steps they had to abide by and meetings were held with them to maximize the credibility of the process. Among the procedures was to make sure the elicitation of data

was not part of their classroom assessment or evaluation. Additionally, the professors had to provide a comfortable atmosphere in addition to insurance of the security and confidentiality of students' writing. This will make the students feel comfortable and confident while completing the task. It was also important to address potential distractions or hindrances that may have affected the participants' performance if there were any.

The participants, on the other hand, were made aware that their written work would be evaluated based solely on their efforts and abilities, and not influenced by outside sources. In other words, to ensure the credibility of the writing, no dictionaries, phones, or any other sources were there to be consulted. This served to eliminate any possible sources of bias and ensured that the data collected was as valid as possible. They were also given adequate time to prepare for the task and asked to read the instructions carefully. Furthermore, it was important to set clear expectations and guidelines for the participants with regard to time management. This included setting a specific time limit for completing the task and emphasizing the importance of working efficiently and effectively within that time frame.

While administering

It is crucial to note that before administering the writing task and LBQ, it was ensured that the participants understood the instructions clearly. They were provided with clarity on any doubts they had regarding the task. After filling in the LBQ as the first task, they immediately started the writing task. The participants were asked to write an essay on their daily routine during the holy month of Ramadan with a limitless number of words in almost an hour and a half. Once the participants finished writing their essays, they were encouraged to read through their work and make any necessary adjustments. Finally, to ensure the quality and reliability of the data collected, it was important to closely monitor the participants as they completed the writing task.

3.4.2. The Speaking Task

Pre-administering the audio recording instrument

Taking into consideration the difficulty of audio recording, a lot of rigorous measures were taken. It was made sure that the recording equipment was in good working condition and positioned correctly. This was after providing adequate training to the data collecting team to familiarize them with the instrument and the steps to follow. Furthermore, everything was arranged to provide a quiet and comfortable environment for the participants to complete the task. In the beginning, the participants were informed that they would not have time for prior preparation. Each student would have 5 minutes maximum to speak. Additionally, students could not be given any input or pre-speaking stage. That is to say, the participants would not be introduced to the vocabulary of Ramadan before the speaking task.

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However, as the participants were all volunteers, they could decide not to continue speaking in the research at any time.

While administering the audio recording instrument

The instructions were carefully read to the participants. Their responses were recorded using phones as the data collection tool. It was important to note that the participants had the right to pause and think during the recording, but they were not allowed to ask for help. Any paralinguistic features were not identified or detected. This was a deliberate choice made by the researchers to focus on other aspects of the participant's responses which are the produced sentences for the sake of identifying lexical errors. After having the collected data, it was important to clean up the transcriptions by removing filler words and false starts for the sake of having perfect data for analysis.

3.5. Data Analysis

Inductive data analysis was adopted in this study. The general aim is to ground a solid emergence of significant themes from the raw data in the research findings. This research tends to identify errors and then analyze them in terms of categories following the determined steps of CA as well as James' Taxonomy (1998). The analysis of the obtained data from the group has gone through precise steps in this section. First, data were collected and classified. Then, the correction step was done meticulously. All possible errors were identified including the ambiguous ones. The aim was to maximize the accuracy of the collected and analyzed data. The researcher adopted Celaya and Torras's (2001) detection technique, in which all lexical deviations were considered an error. Any type of lexical error was treated as such and the only disregarded case was if the lexical item was an independent and meaningful unit. Different sources were consulted to provide approval and precision. NTC's Dictionary of French Faux Pas (1994) and *Dictionnaire des faux amis* (1988) were used to check if the source is L2 French. Then they were submitted to native French, Amazigh, and Arabic speakers to provide acceptability input. This verification was proven to be efficient in predicting CLI in L2 and L3 (Falk & Bardel, 2011). Additionally, the lexical norm is established by the monolingual dictionary of English Collins Cobuild. The following step was to categorize errors depending on James' Taxonomy of lexical errors, words were grouped into two major types of lexical errors; Formal errors and Semantic errors. This was the second step in the data analysis of the productive skills. Each of these major ones is subdivided into 3 categories as seen in the figure below:

Figure 2

James' Taxonomy of Lexical Errors (1998)

A	Formal errors
1	Formal misselection
1.1	Suffix type
1.2	Prefix type
1.3	Vowel-based type
1.4	Consonant-based type
1.5	False friends
2	Misformations
2.1	Borrowing (L1 words)
2.2	Coinage (inventing based on L1)
2.3	Calque (translation from L1)
3	Distortions
3.1	Omission
3.2	Overinclusion

The taxonomy proved to be a suitable means to classify and get insightful results about the types of lexical errors, the impact of CLI, and also to trace them back to the main languages. The frequency of all lexical error items was calculated along with their percentage. Then those errors were classified into L1 or L2 CLI. Adopting James' taxonomy (1998) was comprehensive for the analysis of lexical errors in the student's writing and speaking.

For the speaking task and having all the collected audio recordings, it was necessary to separate participants' input and transcribe them into text, given that there were plenty of gap fillers and pauses.

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Unclear words were disregarded as well as self-adjusted expressions. Then, the data were checked and double-checked respecting the same steps adopted in the writing task. Data went through rigorous steps for analysis as shown in the following:

Error documentation: The errors identified were documented in a spreadsheet database, including information such as the student's name, type of error, and examples of the error in a context based on the Taxonomy of James. This allowed us to categorize the Formal and the Semantic lexical errors. Some identified elements were classified in more than one lexical error item in the spreadsheet of the database.

Error analysis: The data was analyzed employing the CA method and relying on James' Taxonomy to determine patterns in the errors, such as the types of errors that are most common in the form of distortion, formal, semantic, etc. The categorization helped to figure out the major ones so as to infer the source of CLI-

4. RESULTS

After recognizing the errors, the task of filtering and classifying them was a challenging one. Most errors and precisely the formal lexical category share some features with others. In other cases, the context was not provided to decide to which list a word belonged. Consequently, we ruled out any error that was unclear, uncontextualized, or did not fit in the taxonomy; the reason is to maximize accuracy.

4.1. Types, order, and frequency of lexical errors in the writing of third-year university students

In this section, a list provides a meticulous depiction of lexical errors in the writing of third-year university students. The subsequent figure provides the inferred data from the study.

Table 3

Order, frequency, percentage, and the mean score of lexical errors in third-year university students' writings

No.	Error types	Frequency	Mean score	Percentage
1	Calque	204	0.99	16,01%
2	Overinclusion	197	0.95	15,46%
3	Omission	148	0.71	11,61%
4	Using wrong synonym	121	0.58	9,49%
5	Vowel-based type	99	0.48	7,77%

6	Suffix type	77	0.37	6.04%
7	Misselection	58	0.28	4.55%
8	Using a superonym for a hyponym	52	0.25	4.08%
9	Miss-ordering	51	0.24	4,00%
10	Using a hyponym for a sypronym	47	0.23	3,68%

As seen in the table above, only the top ten types of errors from the taxonomy detected in the students' production are listed due to their considerable frequency leading to linguistic deviations in L3 English production. In sum, the findings reveal that *misformation* and *distortion* are the major categories of lexical errors. *Calque* is the most frequent lexical error with a total of 204 instances. This demonstrates that language learners of different language backgrounds use *calque* "to fill the gaps" in the writing of English as a foreign language. Moreover, overinclusion is the second to be detected. The least observed type is using a hyponym for a superonym.

4.2. Types, order, and frequency of lexical errors in the speaking of third-year university students

Being a third-year university student means an improvement in language competence and performance in all skills. All aspects of errors are supposed to go down since majoring in English requires a minimum level of proficiency. The data obtained portray a serious situation proved in the table below.

Table 4

Order, Frequency, percentage, and the mean score of lexical errors in third-year university students' speaking

No.	Error types	Frequency	Mean score	Percentage
1	Overinclusion	144	2.76	22,78%
2	Omission	107	2.05	16,93%
3	Calque	91	1.75	14,39%
4	Using wrong synonym	77	1.48	12,18%
5	Borrowing	48	0.92	7,59%
6	Misordering	45	0.86	7.12%
7	Misselection	29	0.55	4.58%

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8	Using a hyponym for as uperonym	25	1.56	3.95%
9	Using a superonym for a hyponym	23	0.86	3,63%
10	Using inappropriate co-hyponym	12	0.23	1,89%

This order provides useful data about the deviant lexical productions in speaking that shaped the typical profile of the different stages of learning a foreign language. Overinclusion is still high in number counting for 22,78% of all errors. Consequently, the entire category needs more focus. Conversely enough, collocations are the least to detect in the speech productions of third-year university students.

4.3. L1 as a source of CLI in the L3 production in English

The present section highlights the types of lexical errors attributed to Moroccan Arabic or Amazigh L1. The results have shown that overinclusion, omission, and calque errors are mainly the results of L1 CLI. The following table states the frequency of both productive skills of third-year university students.

Table 5

Major errors in the writing and speaking of third-year university students attributed to L1 Arabic or Amazigh

Types of errors	Frequency of Errors in both levels		
	Writing	Speaking	Total
Overinclusion	101	124	225
Omission	87	83	170
Calque	86	62	148

The result states a high percentage of errors that belong to the distortion category (overinclusion, omission, misselection) and one in the misformation category (calque). It suggests that L1 transfer is a significant factor contributing to lexical errors in the writing and speaking of third-year university students who have Moroccan Arabic or Amazigh as their first language.

Elaborating on the difficulties in categorizing lexical errors and attributing them to a certain language and because of the similarities between standard Arabic and Moroccan Arabic, it is hard to

make the differences between the two in semantics. Standard Arabic (SA) is the literary and official language used in the media, education, and government in many Arabic-speaking countries, while Moroccan Arabic (MA) is a colloquial dialect spoken in Morocco.

Despite being different, SA and MA share many similarities in terms of vocabulary and syntax. This can make it difficult to distinguish between the two in terms of lexical and syntactic structures (Caubet, 2017). For example, many words in MA are derived from SA, and the syntax of MA is largely based on SA. As a result, speakers of SA can often understand MA to some extent, and vice versa. However, there are also many differences between the two languages, such as variations in pronunciation, grammar, and vocabulary (Caubet, 2017). These differences can sometimes make it difficult for speakers of one language to fully understand and communicate with speakers of the other language.

In detail and based on the results of the study, overinclusion, and calque errors seem to be the most frequent among the students, with the highest number of errors being observed in speaking, while omission and misselection errors are also prevalent. The instances detected are double-checked and many were not included due to confusion and due to untraceable origin.

4.4. L2 as the source of CLI in L3 English Production

This section unveils the various forms of lexical blunders attributed to L2 French. The findings, astoundingly, reveal that the errors of borrowing, calque, misselection, and overinclusion are predominantly the outcome of the L2 CLI. The subsequent table exemplifies the frequency of these productive skills among third-year university students.

Table 6

Major errors in the writing and speaking of third-year university students attributed to French L2

Types of errors	Frequency of Errors in both levels		
	Writing	Speaking	Total
Borrowing	40	45	85
Calque	33	36	69
Misselection	31	24	55

The data presented depicts a remarkable insight into the linguistic challenges faced by third-year university students when expressing themselves in English and influenced by L2 French. The frequency of errors in writing and speaking reveals a staggering occurrence of borrowing errors,

numbering a total of 85 followed by the errors of calque with 69, and misselection with 55. It is quite evident that the students are struggling with the appropriate use of words and expressions, leading to the aforementioned errors. This information serves as a valuable resource for educators to focus their efforts on refining the students' linguistic abilities in L3 English and bridging the gap toward fluency. The result states the high percentage of errors that belong to mostly and exclusively the misformation category (borrowing, calque, coinage) and distortions (misselection). Having this input, the researchers are able to address and discuss some lexical errors in English due to L2 French interference according to the taxonomy adopted in this study.

5. DISCUSSION

5.1. Types and frequency of lexical errors in speaking and writing

Based on the findings, there was a relationship between the types of lexical errors in the writing and speaking tasks, with the major lexical errors being in the Formal category and specifically in the distortion class. The most frequent types of lexical errors were overinclusion, misselection, and calque. A slight difference was observed in the mean. The least frequent types of errors were those of a semantic nature. The results of this study are consistent with the findings of many others. Basir and Zaiyadi (2015) undertook a study that scrutinized the lexical errors exhibited by diploma-level students enrolled in English for Academic Purposes classes. A cohort of 19 students partook in the research, and their lexical blunders were meticulously identified and grouped into distinct categories. The results uncovered that among the observed errors, three categories prevailed as the most frequent: erroneous word choice, omission, and misspelling. In contrast, redundancy, word formation, and collocation errors were the least observed.

Furthermore, Hamadi (2016) conducted a thorough inquiry into the lexical inaccuracies found in the English compositions of Tunisian learners studying English as a Foreign Language (EFL). The study enlisted 20 undergraduate students in their third year, hailing from the esteemed ISEAH Institute of Kef, Tunisia. The researcher employed James' lexical error taxonomy as a framework, the same one adopted in the current study, to categorize and scrutinize the errors. The study's outcomes indicated that the occurrence of formal lexical errors surpassed that of semantic ones in the written work of Tunisian EFL students. Additionally, the analysis revealed that the group struggled the most with distortion, followed by mis-formation, whereas formal mis-selection was the least problematic area.

To connect the discussion and interpretation of the data with the research objectives, the types of lexical errors in the field of education have become very crucial and necessary to investigate due to their usefulness as indicators of the quality of learners' written and spoken work, as well as predictors of their lexical development, proficiency, and overall academic achievement. As noted by Hughes & Lascaratou (1982), Santos (1988), and Ellis (1994), lexical errors are deemed to be the most detrimental type of error and are subject to harsh evaluation by both native and non-native speakers as well as L2

learners. The claim is also supported by Astika (1993), and Engber (1995) who demonstrate the significant impact of lexical errors on the quality of academic writing and speaking, while Santos (1988) discovered that native speakers find them particularly irritating. On the other hand, Carter (1998) believes that errors in lexical selection may be less forgiving in non-classroom contexts. This is likely due to the fact that lexical choices primarily consist of content words, which are responsible for conveying the intended message. Therefore, when inappropriate lexical choices are made, it can result in direct misunderstandings or at least an increased burden in interpreting the text.

5.2.L1 (Moroccan Arabic or Amazigh) as a source of CLI in the L3 production of English

This section discusses the impact of L1 Moroccan Arabic or Amazigh on English L3 production in CLI at the lexical level in both writing and speaking, among third-year university students. In both tasks, the findings were manifested in terms of CLI of formal and semantic lexical categories based on James' Taxonomy (1998) and respecting the procedures of Content Analysis (CA).

5.2.1. Overinclusion

The high frequency of overinclusion errors is a direct result of L1 influence and it occurs when L1 vocabulary is used inappropriately in the target language, usually because the L3 learner is unaware of the correct usage of L3 vocabulary. This indicates that L1 affects the learner's ability to produce appropriate L3 vocabulary (Ander & Yildirim, 2010). The excessive use of the definite article, for example, is consistent and evident in this study. In English, however, articles are not used before uncountable, abstract, and plural countable nouns that are used in a general sense for instance:

- (1) We go * to the home after Aicha

The preposition 'to' in the example above is not typically used before the word 'home'; we usually say 'I am going home' instead. Thus, no inclusion of "the" and it sounds pertinent for the speaker to find the equivalent from both versions of Arabic in L3 English which leads to the error. The reason for this error is that Moroccan learners employ 'the' before nouns. This usage is not usually applied in English before days of the week, in known locations, and places, in some idiomatic expressions, and most names of medical infections. Limited exposure to English and insufficient opportunities to practice using articles accurately can contribute to these errors, especially among learners who have recently started learning English or who have limited access to native-speaker models and authentic language materials (Al-Shormani & Al-Sohbani, 2012). Furthermore, Arabic and its variations have distinct sentence structures and

grammar rules compared to English, which may cause learners to translate their thoughts and sentences from L1 to L3 English. This can result in incorrect sentence structures or lexical errors (Al-Shormani & Al-Sohbani, 2012).

5.2.2. Omission

Omission errors are also common in the speaking and writing tasks in this study in the form of subject-verb agreement. S-V agreement errors take two forms; either the omission of the auxiliary or the omission of letters the suffixes of third personal pronouns of the present tenses. In datum (2) provided below, the subject does not agree in number and gender with the verbs since the auxiliary is really needed. The auxiliary ‘does’ is absent from the sentences above. In English, negation requires the addition of the auxiliary ‘do’ to produce a well-formed sentence. As a result, meaning distortion can break communication, especially in speaking for instance:

(2) She *study hard but *not success

Learners have to understand the rules to produce a correct sentence since learners at the beginning often make errors related to subject-verb agreements. The most striking fact is that even advanced learners such as those at the third-year university level still make a high frequency of such an error. In many cases, adding an adverb of frequency between a subject and a verb in an affirmative sentence is commonly observed. For instance,

(3) My father always *support me

Alahmadi (2019) conducted a study about the subject-verb agreement errors in writing made by Saudi students in the foundation year at Taibah University. It targeted both intermediate and upper intermediate levels. The subjects were asked to write eight different paragraphs on eight different topics taken from the reading and writing book. He came up with the conclusion that this type of error results from a learner’s failure to complete the right application of rules and failure to fully develop these rules, which led him or her to produce unacceptable use of the target language. These findings are partially consistent with previous research in the field mentioned since they do not trace back the source of those mistakes made by Arab students, they instead share a general description of those errors and possible superficial decisions.

The second main reason to mention is that Moroccan Arabic and Amazigh have pronunciation-based spelling. On the other hand, English and French include muted consonants that make words to use and remember challenging; many even avoid them. Al-Jarf (2010), for instance, elucidates the point by saying that Arabic has “a one-to-one correspondence between phonemes (spoken sounds) and graphemes (written symbols)” (p.13). Elaborating on this, Arabic has no consonant and vowel diagraphs, no double letter system, and contains a limited number of silent letters. Taking all these into account, Al-Jarf (2010) concludes that the writings of Arab students are fraught with pronunciation-based spelling errors such as the omission of the silent letter ‘K’ in the word knife, *nife. In other cases, they replace the voiceless affricative /s/ with the voiced one /z/ in words like *bezy instead of <busy>.

To explain some of the orthographic difficulties mentioned earlier, Panos and Ruzic (1983) believe that the omission of many vowels in English writing by Arab learners is the result of the omission of short vowels in the Arabic writing system. This claim is supported by Ryan and Meara (1991) who coined the term ‘vowel blindness’ to allude to the reasons Arab students are less likely to notice words with missing vowels in their study. Additionally, in a study conducted by Hayes-Harb (2006), the results indicate that Arab speakers tend to visually process words in English the same way it is done in Arabic. Consequently, vowel graphs are given less attention than consonant graphs resulting in semantically deviant utterances.

5.2.3. Calque

Another common error detected in productive tasks is calque. Calques majorly occur due to reliance on L1, the number of cases is very high. More specifically, 295 cases were obtained from the total productions. Similarly, calque errors also demonstrate the influence of L1 on L3 production. Calque errors occur when a direct translation from L1 is used in the target language. By studying the frequency and nature of these errors, researchers can gain insights into the ways in which L1 interferes with the acquisition of L3 vocabulary (Jurianto, 2015). This information can be used to inform language instruction programs to address these specific issues. For instance,

(4) * He takes what to eat

Generally, the significant lexical errors commonly made by Moroccan students in English are predominantly semantic in nature, owing to their complete dependence on various forms of translation. This instance is a pure calque of خدا ماياكل /xda: maja:kəl/. This claim is supported by Righbom (2001) who stated that what triggers calque is “awareness of existing target language units but not of relevant semantic/ collocational restrictions” (p.64). To confirm his claim, he alluded to the following example:

- (5) ‘My uncle never married: he remained a *young-man all his life’
- (6) ‘My favorite plate is pasta and rice

For Ringbom, the learner intended to use the word ‘bachelor’ and not a young man. As the outcomes of this study try to prove, calque can be traced back to L1 influence be it Arabic or Amazigh. They are mostly the result of the powerful presence of L1 in L_n production. According to Ringbom (2001), the statement regarding L1 influence on calques was confirmed. They explained that calquing tends to occur more frequently based on L1 rather than L2, as this type of transfer is more intricate than simply substituting one lexical unit with a formally similar one, and involves additional complexities.

Additionally, the only study that targeted the occurrence of lexical transfer in L3 production in the Moroccan context was that of Trimasse (2018). CLI was investigated through a deep analysis of semantic extensions. The researcher considers the diglossic context by distinguishing the impact of the low variety (Moroccan Arabic) and the high variety (Modern Standard Arabic) on L3 English. 240 cases of semantic extensions are identified from a sample of 600 paragraphs written in English by Moroccan EFL university students. Some of them are the following:

- (7) You get the degree after *discussing the thesis with a group of professors. At the end of the *discussion, they will decide if your research is worthy or not.
- (8) One cause of divorce is the *noise between the parents

Based on the first instance provided by Trimasse (2018), the lexical error (discussing/discussion) is attributed to the Moroccan Standard Arabic derived from ‘naaqaša’ instead of defending / defense. The second instance (noise) is derived from the Moroccan Arabic ‘sdae’ which has polysemous meaning for ‘noise’ and ‘problems’. The outcomes of the study reveal that semantic extensions in English L3 production by Moroccan EFL university students can be the result of the impact of both varieties that unconsciously compete in the mental lexicon of the learner. The complex interaction between languages in a learner's mind can make attributing lexical errors solely to the Amazigh language difficult. This difficulty is compounded by the fact that research question 2 only addresses one L1 language, making it challenging to identify Amazigh instances. This identification is made even more difficult by the numerous varieties of Amazigh and the lack of access to its script, despite its official recognition as a language in 2011 and implementation in the teaching process.

The scarcity of Amazigh data in L3 English production may be attributed to two main reasons. Firstly, the psychotypical factor, as third-year university students are aware of the typological

differences between Amazigh and English. These two languages do not share significant phonological, semantic, or syntactic features. Secondly, Most Moroccans are fluent in MA and use it daily, making it the dominant language in the country when compared to Amazigh. Consequently, there is minimal contact between L1 languages, making it challenging to see their impact on language use. To sum up, the results of CLI at the lexical level show that the L1 influence in the production of L3 is manifested in overinclusion, omission, and calque types of errors. Omission and misselection widely occur in writing, whereas calque is majorly detected in speaking of the two levels. In all cases, learners assume that the L3 words have a meaning corresponding to the L1 word.

5.3.L2 French as a source of CLI in English L3 production

The acquisition of a second language (L2) often has a profound impact on an individual's ability to learn and produce a third language (L3). In multilingual societies, where individuals are exposed to multiple languages, the presence of a strong L2 can serve as a rich source of linguistic resources for acquiring an L3. Accordingly, shifting to TLA, questions and hypotheses were developed to compare and contrast the role of any acquired language after L1 in the learning and/or acquisition of L3, especially in multilingual societies. (Cenoz, Hufeisen & Jessner, 2001; Hammarberg & Williams, 2009). Accordingly, data obtained from the study showed that overinclusion, misselection, borrowing, and calques are all major ones attributed to French L2.

5.3.1. Overinclusion and misselection

Most cases identified in this study are the overinclusion of letters. The following examples illustrate this issue:

(9) He did not know the *adresse <address> of the house?

These errors can occur due to the recency of use. In many cases, it is believed that major errors can be attributed to the typological proximity between the two languages. French and English share many similarities in vocabulary and grammar and it can be easy to mix up the two languages. For instance, both languages share many words that have the same or similar meanings, such as "restaurant" or "culture." Additionally, both languages use similar sentence structures and have many standard grammatical rules.

Another result is confusing possessive pronouns. In French, the possessive pronoun "her" is "sa" for both masculine and feminine nouns, whereas in English it is "his" for masculine nouns and "her" for feminine nouns. A French speaker may use "sa" instead of "his" when referring to a male's possession, or vice versa. Another error is the Incorrect use of adjectives: In French, adjectives must agree in gender and number with the noun they modify, whereas in English, adjectives do not change. For example, a French speaker might say "He is tall" using the feminine form of "tall" ("grande") instead of the masculine form ("grand") when referring to a male. The common one also is the Misuse of articles: In

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French, the definite articles "le" and "la" and the indefinite articles "un" and "une" also have to agree in gender with the noun they modify. For example, a French speaker might say "I bought a la voiture" instead of the correct "I bought a car" because they are used to using the feminine article "la" before the noun "voiture".

In (9) the interference of French linguistic structure could potentially explain this error. In French, words often have a distinct rhythm and sound, and the placement of certain letters can be different from English. One common feature of French is the use of silent letters, particularly at the end of words. The letter 'e' is often silent in French words, and this might lead to an over-inclusion of the letter 'e' in English words for those who are familiar with both languages. In the given sentence, someone might have mistakenly added the extra 'e' to "address" because they were influenced by the French spelling "adresse," where the 'e' at the end is silent. This could be seen as a case of interference from the phonological patterns of French impacting the spelling in English.

In the Moroccan context, there are not many studies that specifically examine the influence of L2 French on L3 English production using James' Taxonomy. However, other studies have shown that CLI from L2 French to L3 English is a common phenomenon, especially in multilingual contexts. For instance, a study by De Angelis (2007) found that some examples of lexical items with similar meanings in French and English have a strong impact on the development of English L3 vocabulary. According to him, learners have varying perceptions of relatedness and similarity between languages, and their judgment may be influenced by their prior knowledge. They may consider different factors when evaluating the overall closeness of languages or the similarity of specific language components. For example, many learners would recognize similarities between French and English words because they share a large number of cognates, but those same learners would also notice significant differences in the phonetic and phonological aspects of the two languages.

5.3.2. Borrowing

The results strengthen the conclusion that recourse to borrowings is a chief means to compensate for the lack of lexical knowledge (Cenoz, 2001). The linguistic awareness of two or more various lexical and syntactic structures allows language learners to swiftly loan from the systems of any acquired or learned L(n). This awareness is manifested in the inverted commas or brackets inserted by some students to allude to the foreignness of words. Bouvy (2000), concluded that borrowing is temporary but it is evolving once there is more exposure to other languages similar to the target one. In our case, French is typologically the same as the writing system of English (Hammarberg & Williams, 1998).

In contrast, Arabic and English are not typologically close, as Arabic is a Semitic language and English is an Indo-European language. This absence of typological closeness between Arabic and English is believed to be one of the main reasons why the transfer of linguistic elements from L1 Arabic to L3 English is not as common. In general, the meticulous filtering of data has revealed a significant prevalence of French L2 borrowing in the spoken production in third-year university students' productions, in comparison to their writing. Through a process of self-reflection and modification, these students have been able to reduce the occurrence of foreignizing, leading to a gradual and steady decline in the production of borrowing errors in their written work.

The supposition that the educational environment for L2 closely resembles that of L3 has garnered support from numerous studies (Falk, 2010; Falk & Bardel, 2011). Our own research concurs with these findings, even though French L2 and English L3 are both foreign languages that are not recognized as official languages in the Moroccan kingdom. In stark contrast, the widespread use of French in governmental documents and communiqués, as well as in administrative settings, belies its constitutional status and highlights the irony of the reality of linguistic practices in Morocco, both before and after the reforms of 2011.

Additionally, Bardel and Falk (2007) conclude that in TLA, L2 is acting as a “filter making the L2 inaccessible” (Bardel & Falk, 2007, p. 480). For them, they infer that the psychotypological factor is not that strong to be the major trigger. The L2 exceeds the power of L1 in the mental lexicon of the L3 learner and turns out to be the source of CLI. This claim might be supported by the claim of Odlin (1989) when he points out that any interlanguage can be the outcome of “similarities and differences between the target language and any other language that has been previously acquired” (P.27). Taking into consideration the linguistic similarities between French and English, it is evident that these two languages share common traits such as script, linguistic ancestry, and an array of semantically similar words that contrast significantly with the lexicon of Amazigh and Moroccan Arabic, the primary languages spoken in Morocco. Ringbom (1987), additionally, finds out that learners' perception of relatedness and similarities is the main factor in transferring. His study is conducted with a sample of native Swedish speakers (L2 Finnish) and native Finnish speakers (L2 Swedish) in written English compositions. He discovers that the typological closeness between English and Swedish would primarily determine the issues of interference.

Based on the data presented and the discussion above, it is suggested that the hypothesis that students will rely on French as L2 to compensate for the needed vocabulary in English is also valid among Moroccan learners in the context of Moroccan students. This is because French was introduced earlier in the education system and students who have high proficiency in French tend to heavily transfer the formal and semantic features to English. This supports the argument made by Bardel and Falk (2007)

that the more exposure and proficiency a learner has in L2, the greater the influence it will have on L3 vocabulary production.

6. GENERAL CONCLUSION

The research objectives stated before were to explore the types and frequency of lexical errors and the source(s) of Cross-Linguistic Influence (CLI) in the production of English as L3 of third-year university students. Those objectives were approached through Content Analysis respecting the processes of identifying and categorizing the frequency of lexical errors based on James' Taxonomy (1998). The study identified the highly frequent errors and their order of occurrence in third-year university students. James' Taxonomy (1998) helped filter the classification of lexical errors into two major types; formal and semantic. It has shown that formal errors are excessively occurring lexical errors. Overinclusion, omission, and calque are the major ones to name in both writing and speaking made by third-year-university students.

This study also managed to identify and attribute many lexical errors either to Moroccan Arabic/Amazigh L1 or French/ Standard Arabic L2. In other words, the previously learned or acquired languages strongly affect the language production of English as an L3. The task was a bit challenging since some words cannot be traced back to one of the languages- Moroccan Arabic or Standard Arabic. There was also the possibility of errors committed due to the English structure. The reason was attributed to the shared similarities in features with French. Additionally, it was proven in this study that the choice of the taxonomy, the instruments, and the tool of analysis adopted helped to attain these objectives.

The study of the CLI on lexical errors in L3 English production by Moroccan learners has several important implications. Firstly, it highlights the need for a more comprehensive understanding of the challenges faced by learners in this context. The results of the study demonstrate that Moroccan learners struggle with lexical errors in the speaking and writing of L3 English regardless of their level or proficiency. In addition, classroom teaching should be designed to raise students' awareness of this issue. Vocabulary learning strategies in contexts can be effective and should be introduced into the classroom so that the students can find their ways to cope with problems. At university, students can be trained to use dictionaries effectively. Another necessary pedagogical implication is to call foreign language instructors and teachers to include in their curriculum teaching lexical competence so as to raise both learners' awareness of differences between languages and also become aware of the target language they intend to acquire and, more precisely, the target lexical choices. The third implication is to adhere to the practice of 'English only' policies. Furthermore, the study has vital implications for the design and implementation of English language learning programs and materials for Moroccan learners.

For instance, the study may inform the development of language learning materials that specifically address common lexical errors made by Moroccan learners in L3 English production.

REFERENCES

- Williams, S., & Hammarberg, B. (1998). Language switches in L3 production: Implications for a polyglot speaking model. *Applied Linguistics*, 19(3), 295-333. Retrieved from
- Al-Jarf, R. (2010). *Spelling Error Corpora in EFL Sino-US. English Teaching*, 7(1), 73.
- Alonso, R. (2016). *Crosslinguistic Influence in Second Language Acquisition*. Bristol: Multilingual Matters
- Al-Shormani, M. Q., & Al-Sohbani, Y. A. (2012). Semantic Errors Committed by Yemeni University Learners: Classifications and Sources. *International Journal of English Linguistics*, 2(6). <https://doi.org/10.5539/ijel.v2n6p120>
- Ander, S., & Yildirim, Ö. (2010). Lexical Errors in Elementary Level EFL Learners' Compositions. *Procedia Social and Behavioral Sciences*, 2(1), 5299–5303. doi:10.1016/j.sbspro.2010.03.864
- Angelovska, T., & Angela, H. (2017). *L3 Syntactic Transfer. Models, New Developments and Implications*. Amsterdam: John Benjamins.
- Astika, G. G. (1993). Analytical assessment of foreign students' writing. *RELC Journal*, 24, 61–72. 22
- Baker, C. (1996). *Foundations of Bilingual Education and Bilingualism*. Clevedon, UK: Multilingual Matters.
- Bardel, C., & Falk, Y. (2007). The role of the second language in third language acquisition: the case of Germanic syntax. *Second Language Research*, 23 (4),
- Basir, A., & Zaiyadi. (2015). Lexical Errors in English for academic purposes (EAP) students' essays. *Proceeding of the 2nd International Conference on Management and Muamalah*.
- Bouvy, C. (2000). Towards the construction of a theory of cross-linguistic transfer. In J. Cenoz & U. Jessner (Eds.), *English in Europe. The Acquisition of a Third Language*. (pp.143-156). Clevedon: Multilingual Matters.
- Carter, R. (1998). *Vocabulary: Applied linguistics perspectives (2nd ed.)*. London: Routledge.
- Caubet, D. (2017). Morocco: An Informal Passage to Literacy in dārija (Moroccan Arabic). In J. Høigilt & G. Mejdell (Eds.), *The Politics of Written Language in the Arab World: Writing Change* (pp. 116–141). Brill. <http://www.jstor.org/stable/10.1163/j.ctt1w76vkk.10>

Sources of Lexical Cross-linguistic Influence in English L3 Production in the Moroccan EFL Context

- Celaya, M.L. & Torras, M.R. (2001) L1 influence and EFL vocabulary: *Do children rely more on L1 than adult learners? Proceedings of the 25th AEDEAN Meeting*, University of Granada, 13th15 December (pp. 114)
- Cenoz, J. (2001). The effects of linguistic distance, L2 status and age on cross-linguistic influence in third language acquisition. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.), *Cross-linguistic influence in third language acquisition: psycholinguistic perspectives* (pp. 8-20). Clevedon: Multilingual Matters.
- Cenoz, J. (2005). Learning a third language: Crosslinguistic influence and its relationship to typology and age. In B. Hufeisen & R.J. Fouser (eds.), *Introductory Readings in L3, Tertiärsprachen und Mehrsprachigkeit* (pp. 1-9). Tübingen: Stauffenburg Verlag.
- Cenoz, J., Hufeisen, B., & Jessner, U. (Eds.). (2001). *Cross-linguistic Influence in Third Language Acquisition*. Clevedon: Multilingual Matters
- Chlopek, Z. (2011). Lexical transfer in the written production in a third language – the case of content words and function words. *Studia Linguistica*, 30, 39–55.
- Crystal, D. (2010). *The Cambridge Encyclopedia of Language*. 3rd ed. Cambridge: Cambridge
- Darus, S. and Ching, K. (2009). Common errors in written English essays of form one Chinese students: A case study. *European Journal of Social Sciences*, 10 (2).
- De Angelis, G., & Dewaele, J. (Eds.). (2011). *New Trends in Crosslinguistic Influence and Multilingualism Research*. Bristol: Multilingual Matters.
- De Angelis, G. (2007). *Third or Additional Language Acquisition*. Clevedon: Multilingual Matters
- De Bot, K. and Jaensch, C. (2015). What is special about L3 processing? *Bilingualism: Language and Cognition*, 18, 2, 130-144.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
- Engber, C. A. (1995). The relationship of lexical proficiency to the quality of ESL compositions. *Journal of Second Language Writing*, 4, 139–155. Farghal,
- Ennaji, M. (2003). Reflections on Arabization and Education in the Maghreb. In: Youssi, A. et al. (Eds.): *The Moroccan Character. Studies in Honor of Muhammed Abu-Talib*. 37-48. Rabat: AMAPATRIL
- Falk, Y., & Bardel, C. (2010). The study of the role of the background languages in third language acquisition. The state of the art. *International Review of Applied Linguistics and Teaching*, 48, 185–219

- Hamadi. (2016). An analysis of lexical errors in the English compositions of EFL Tunisian learners. *International Journal of Humanities and cultural studies*, 2(4), 643-652
- Hammarberg, B. (2001). Roles of L1 and L2 in L3 production and acquisition. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.), *Crosslinguistic influence in third language acquisition: psycholinguistic perspectives* (pp. 21-41). Clevedon: Multilingual Matters.
- <http://aplij.oxfordjournals.org/>
- Hufesein, B. (2000). How do foreign language learners evaluate various aspects of their multilingualism? In S. Dentler, B. Hufeisen & B. Lindemann (eds.), *Tertiär- und Drittsprachen. Projekte und empirische Untersuchungen* (pp. 23-39). Tübingen, Germany: Stauffenburg Verlag.
- Hughes, A. & Lascaratou, C. (1982). Competing criteria for error gravity. *ELT Journal* 36 3, 175- 182.
- Issa, S. H., Awadh, F. H., & Ahmed, H. R. (2022). The role of proficiency level in the speed of lexical activation. *Cogent Arts & Humanities*, 9(1), 1999613.
- James, C. (1998). *Errors in Language Learning and Use: Exploring Error Analysis*.
- Jarvis, S. (2009). Lexical transfer. In A. Pavlenko (Ed.), *Bilingual mental lexicon: Interdisciplinary approaches* (pp. 99–124). Clevedon: Multilingual Matters.
- Jarvis, S., & Pavlenko, A. (2010). *Crosslinguistic Influence in Language and Cognition*. London: Routledge.
- Jessner, U. (1999). Metalinguistic awareness in multilinguals: Cognitive aspects of third language learning. *Language Awareness*, 8, 3&4: 201-209
- Jessner, U. (2006). *Linguistic Awareness in Multilinguals: English as a Third Language*. Edinburgh: Edinburgh University Press.
- Jessner, U. (2006). *Linguistic awareness in multilinguals: English as a third language*. Edimburgh: Edinburgh University Press Ltd.
- Jessner, U. (2008). A DST model of multilingualism and the role of metalinguistic awareness. *The Modern Language Journal*, 92, 2, 270-283.
- Jurianto, R. A. (2015). An Analysis of Lexical Errors in the English Narrative Writing Produced By the Tenth Grade Students of SMA Negeri 9 Surabaya in EFL Classroom. *Anglicist*, 4(2), 69–76.

Sources of Lexical Cross-linguistic Influence in English L3 Production in the Moroccan EFL Context

Kellerman, E. & Smith, M. (1986). Cross-linguistic influence in second language acquisition: an introduction. In E. Kellerman and M. S. Smith (Eds.), *Cross-linguistic Influence in Second Language Acquisition*, New York: Pergamon Press.

Kellerman, E. (1977). Toward a characterisation of the strategy of transfer in second language learning. *Interlanguage Studies Bulletin*, 2, 58–145

Kellerman, E. (1977). Towards a characterizations of the strategies of transfer I sn second language learning. *Interlanguage Studies Bulletin*, 2(1), 58-145.

Kellerman, E. (1979). Transfer and Non-Transfer: Where We Are Now. *Studies in Second Language Acquisition*, 2(1), 37–57

Kellerman, E. (2001) New uses for old language: cross-linguistic and cross- gestural influence in the narratives of non- native speakers. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.), *Cross-linguistic influence in third language acquisition: psycholinguistic perspectives* (pp. 170-191). Clevedon: Multilingual Matters.

Lewis, M. P. (ed.). (2009). *Ethnologue: Languages of the World*, Sixteenth edition. Dallas, Tex.: SIL International. Online version: <http://www.ethnologue.com/>.

Llisterri, J. P., & D. Poch. (1987). Proceedings from the XI International Congress of Phonetic Sciences, vol. 5: *Phonetic interference in bilingual's learning of a third language*.134– 137. Tallinn.

London: Longman

Loutfi, A., & Noamane, A. (2018). On Language Policy in Morocco : A Prestige Planning Approach. In the 1st International Conference on Multilingualism (pp. 1–12).

Mackey, A., & Gass, S. M. (2012). *Research Methods in Second Language Acquisition: A Practical Guide*. John Wiley and Sons. <https://doi.org/10.1002/9781444347340>

Mansoor, A. A., Mohammed, O. S. M., Ahmed, H. R., Munasser Awadh, A. N., Abdulfatah, H. M., & Sheikh, E. Y. (2023). English language teaching through a short story: A technique for improving students' vocabulary retrieving. *Cogent Education*, 10(1), 2161221.

Odlin, T. (1989). *Language transfer. Cross-linguistic Influence in Language Learning*. Cambridge: Cambridge University Press.

Odlin, T. (2003). Cross-Linguistic Influence. In C. Doughty & M. Long (Eds.), *Handbook of Second Language Acquisition* (pp. 436-486). Maldon: Blackwell Publishing.

- Peters, J. (2010). *Variable lexicalization of Dynamic Events in Language Production: a comparison of monolingual and bilingual speakers of French and English*. Ph.D. University of Alberta, Edmonton.
- Peukert, H. (2015). *Transfer Effects in Multilingual Language Development*. Amsterdam: John Benjamins
- Ravem, R.(1968). Language acquisition in a second language environment. *International Review of Applied Linguistics* 6, 17585
- Ringbom, H. (1987). *The role of the first language in foreign language learning*. Clevedon: Multilingual Matters.
- Ringbom, H. (2001). Lexical transfer in L3 production. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds.), *Crosslinguistic influence in third language acquisition: Psycholinguistic perspectives* (pp. 59–68). Clevedon, UK: Multilingual Matters.
- Sadiqi, F. (1991). The Spread of English in Morocco. In Moha Ennaji (ed.), *International Journal of the Sociology of Language*, 87. pp. 99-114. <https://doi.org/10.1515/ijsl.1991.87.99>
- Santos, T. (1988). Professor's reactions to the academic writing of non-native- speaking students. *TESOL Quarterly* 22, 69-90.
- Trimasse, N. (2018). *The source of lexical transfer in L3 production in a diglossic context*. *International Journal of Multilingualism*, 1–13. doi:10.1080/14790718.2018.1428328
- University Press.
- Wilkinson, David & Birmingham, Peter. (2003). *Using Research Instruments: A guide for researchers*. NY: RoutledgeFalmer. ISBN 0-415- 27279-3 www.routledgefalmer.com
- Williams, S., & Hammarberg, B. (2005). A study of third language acquisition. *In Processes in Third Language Acquisition*. Volume? Page?
<http://doi:10.3366/edinburgh/9780748635115.003.0002>
- Wode, H. (1976) Developmental sequences in naturalistic L2 acquisition. *Working Papers on Bilingualism* 11, 113.
- Wrembel, M. (2012). Foreign accentedness in third language acquisition. In J. Cabrelli- Amaro, S. Flynn, & J. Rothman (Eds.), *Third language acquisition in adulthood* (pp. 281–310). Amsterdam: John Benjamins.