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The Lexicon of Emotions in the Corpus of L2 Learners: Exploring the Effect of Lexical Anisomorphism, Word Frequency, and L2 Proficiency

A b s t r a c t

This study explores the use of English emotion vocabulary by learners of English with L1[1] Moroccan Arabic (MA). Just as with color terms, languages carve up the emotional spectrum differently. Cross-linguistic comparison of emotion lexicons may, therefore, reveal varying degrees of lexical equivalence. In addition to this lexical anisomorphism, the study investigates the effects of word frequency and L2 proficiency on the use of English emotion vocabulary. To examine these factors, intermediate and advanced learners of English, as well as a group of native English speakers, watched two concise films and described the actors' emotions during specific scenes. The data was analyzed listing the most frequently used emotion terms for each group. Chi-square tests were then performed to compare the significance of the lexical choices made by native speakers to those provided by each learner group. The results indicate that advanced learners managed to describe the suggested scenes using nearly the same emotion words as native speakers. However, some culture-specific emotion terms posed problems for them. L2 proficiency demonstrated a strong effect, as intermediate learners often deviated from native usage. The implications drawn from these results suggest that culturally specific emotion terms, which lead to lexical inequivalence, should be considered alongside factors, namely word type and word frequency, that can challenge learners in acquiring L2 vocabulary. The study also highlights the importance of context-rich instruction of L2 emotion vocabulary and opens avenues for further research that would contribute to the understanding of the intersection between second language acquisition, culture, and emotions.

Keywords: emotion, culture, lexical equivalence, word frequency

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[1] The following abbreviations are used in this paper: ALs (advanced learners), EFL (English as a foreign language) ILs (intermediate learners), L1 (first language), L2 (second language), MA (Moroccan Arabic), NSM (Natural Semantic Metalanguage), NSs (native speakers), SLA (second language acquisition).

The study of human emotions has intrigued scholars from various disciplines, including philosophy (e.g., Plutchik, 1980; Ben-Ze'ev, 2000), anthropology (e.g., Ekman, Sorenson, & Friesen, 1969), and cultural psychology (e.g., Matsumoto, 1990; Markus & Kitayama, 1991). Nevertheless, as noted by Dewaele (2008, p. 29), "the study of emotion within the broad field of Applied Linguistics, language teaching research, and cognitive linguistics is much more limited." Recently, there has been a surge in the study of emotions in these fields, focusing on the role of emotions in foreign language teaching (e.g., Dewaele, 2011; Gökmen & Yarici. 2018), the language of emotions in migration contexts (e.g., Ożańska-Ponikwia, 2012; Mavrou, Bustos & Chao, 2023), and bilinguals' emotions (e.g., Pavlenko, 2011; Dewaele, 2013).

Research in the area of L2 vocabulary reveals that languages are characterized by lexical anisomorphism. That is, words in one language may have different degrees of equivalence when translated into another language, including near equivalence, partial equivalence, and no equivalence (Šipka, 2015). Emotions add another layer of complexity because culture influences how such concepts are lexicalized in a society. Unawareness of the precise meaning of emotion words may result in miscommunications, especially among people from distant linguistic and cultural backgrounds. Therefore, emotional vocabulary is crucial for enhancing L2 users' communicative competence. Along these lines, Mavrou et al. (2023, p. 1) emphasize that "emotional vocabulary is an important element in daily conversations, and knowledge and teaching of this vocabulary in a second language (L2) should be a primary goal in migration contexts." However, emotional vocabulary should not only be prioritized in migration contexts but also in EFL contexts due to technological advancements that have facilitated global interactions.

This study attempts to explore the emotional vocabulary of L2 learners through three main factors: word frequency, L2 proficiency, and lexical anisomorphism, which has received little attention in L2 vocabulary research, as mentioned by Pavlenko (2008, p. 92): "the relationship between the degree of translation equivalence and the linking and re-linking processes in the L2 vocabulary learning has remained relatively unexplored until now… [and] little attention has also been paid to words that lack L1 translation equivalents." Apart from contributing to SLA research, particularly in the area of L2 emotion vocabulary, this study suggests pedagogical implications for teaching emotional vocabulary to second language learners.

Literature Review

Cross-linguistic research investigating linguistic categories that involve a continuum, such as color and kinship terms, highlights that languages categorize emotions differently. Along these lines, Wierzbicka (1999, p. 15) asserts that every language "has lexically encoded some scenarios involving both thoughts and feelings and serving as a reference point for identifying what speakers of this language see as distinct kinds of feelings." Differences in how emotions are lexicalized across languages are evident in various emotional aspects, namely appraisals, regulation, intensity, causal antecedents, and display rules. These multi-componential patterns thus allow for various lexicalizations (Zammuner & Frijda, 1994). In other words, emotion terms in different languages may focus on different elements constituting phases of emotional feeling. For example, in English, anger implies that something unpleasant has been done by someone, and the intense mode of this emotion is rage. Conversely, the state of not showing anger may not be lexicalized in some languages, as in English, while in other languages there might be words indicating "unexpressed anger," such as the MA word 'fagʕan' (Elasri, 2018). Consequently, emotion words in one language may not have translational equivalents in another.

Most studies examining emotion concepts across cultures involve a contrastive analysis between English emotion terms and those of various languages. The results show that equivalence between emotion terms across languages ranges from near equivalence to complete non-equivalence (Russell, 1991; Wierzbicka, 1999; Parkinson et al., 2005; Pavlenko, 2005; Goddard, 2010). Put differently, an emotion expressed by a single word in one language might be described by several terms in another. For example, the English word "surprise" has two translational equivalents in Ifaluk: 'ker' meaning "pleasant surprise," and 'rus' meaning "unpleasant surprise" (Lutz, 1980). Additionally, some culture-specific emotion terms in one language may not have equivalents in other languages. For instance, there is no equivalent for the Polish word "przykro," which describes the feeling of pain caused by not showing warmth to another person (Wierzbicka, 1999).

This list of such examples can be extended almost indefinitely. Nevertheless, the absence of a word denoting an emotional state in a language does not mean that the emotion is not felt by its speakers; rather, the existence of certain specific emotion terms in some cultures suggests that the events giving rise to these emotions are highly salient and prevalent in those cultures. As Wierzbicka (1995, p. 19) explains, "the presence of a word proves that in that society the concept in question is a salient one—sufficiently to merit lexicalization. Correspondingly, the absence of a word indicates that a given concept is not salient in that society." Similarly, Parkinson et al. (2005, p. 53) add that

"societies develop words for the issues that are important and need to be communicated, but not for the issues that are unimportant, or irrelevant."

Besides influencing the lexicalization of emotions, culture also shapes how emotions are represented in language. Studies in this line of research often explore the individualistic-collectivistic dimensions of culture (Frijda, 1993; Oatley, Keltner, & Jenkins, 2014). According to Oatley et al. (2014), the conceptualization of emotions in individualist cultures emerges from the interaction of individuals' bodies and minds; therefore, socially engaging emotions are less prevalent in these cultures. By contrast, in collectivist cultures, emotions are constructed through social interactions and occur among people rather than within an individual's mind. Several studies have explored the linguistic outcomes of these cultural dimensions, particularly regarding the use of emotional vocabulary in a second language (Semin et al., 2002; Pavlenko & Driagina, 2007; Pavlenko, 2008). Findings show that in English, adjectives are the dominant morpho-syntactic categories for expressing emotions. In particular, emotions "are most commonly expressed through copular constructions with adjectives and pseudo-participles that present emotions as passive inner states (to be upset, happy, excited). Only a few emotions are expressed primarily through intransitive verbs (to rejoice, to worry)" (Pavlenko, 2005, p. 87). On the other hand, studies on languages related to collectivist cultures reveal the influence of this cultural dimension on the linguistic representation of emotions. For example, the analysis of some narratives by MA speakers shows that emotions are mostly expressed with verbs, and even when nouns are used, they typically collocate with verbs (e.g., 'ħes bi- l-farħa' meaning 'felt-he DEF-happiness') (Elasri, 2021).

The differing linguistic expressions of emotions, both conceptually and structurally, have led researchers to investigate whether this anisomorphism can have cognitive consequences on the acquisition of L2 emotions terms (Pavlenko, 2002; 2005; Stepanova & Coley, 2006; Pavlenko, 2008). L2 lexical acquisition involves various cognitive processes, depending on the degree of lexical equivalence between the L1 and L2 terms. The overall patterns of the results indicate that L1 semantic and grammatical categories can affect the use of L2 emotion terms. When there is conceptual equivalence, L2 learners may learn the target word through positive transfer from L1. However, when the L2 word is only partially equivalent to the L1 term, learners may acquire the word via positive transfer but may also encounter negative transfer by assuming total equivalence. In cases of non-equivalence, learners need to develop new categories.

Despite this interest in L2 emotion vocabulary, it remains under-researched, with limited studies available (e.g., Rintell, 1990; Stepanova & Coley 2006; Dewaele & Pavlenko, 2002; Pavlenko & Driagina, 2007; Pavlenko, 2008). For instance, Pavlenko and Driagina (2007) examined the use of Russian emotions through narratives by learners of Russian with L1 English. The participants

watched a 3-minute film and then were asked to describe the character's emotions. The study found that American learners could describe the characters' feelings like native speakers when the scenes required using emotion words that had lexical equivalents in English. However, they encountered difficulties in describing scenes that required words with partial or no equivalents in English.

In another study, Pavlenko (2008) analyzed 206 narratives told by Russian and English native speakers and L2 learners of Russian and English after watching two video clips. The results showed that L1 English speakers used adjective constructions with the verb *to be* or *to get* and emotion words such as *afraid*, *frightened*, or *terrified*. In contrast, L1 Russian speakers in the same context preferred reflexive emotion verbs like *to get scared*. Regarding bilinguals, they generally adhered to the structural patterns of native speakers. They "internalized new structural patterns of emotion description, verbs in the case of L2 Russian and adjectives in the case of L2 English" (Pavlenko 2009, p. 134).

Research Questions and Hypotheses

Although informative, the studies mentioned above have mostly focused on two languages: English and Russian, as they involve Russian and American bilinguals. Given the need to explore this research area with a broader range of languages and participants with different mother tongues, this study is carried out with two groups of Moroccan learners of English—intermediate and advanced—to detect the effect of L2 proficiency on the use of emotion words. Furthermore, this study investigates the roles of two other factors, lexical anisomorphism, and word frequency, in describing emotions using English terms. Accordingly, the following questions are addressed:

1. Does lexical anisomorphism between MA and English affect learners' use of emotion terms in describing emotional scenes compared to native English speakers?
2. Do low-frequency emotion terms influence learners' lexical choices in describing emotional scenes compared to native English speakers?
3. Is there any effect of proficiency level on using English emotion terms to describe emotional scenes like native English speakers?

Answers to these questions will either confirm or refute the following hypotheses: first, based on previous studies (e.g., Pavlenko & Driagina, 2007), advanced learners would approximate native speakers in describing emotions, but they may encounter problems with L2 emotion concepts lacking equivalence in their L1. Second, advanced learners are more likely to use both frequent and less frequent emotion terms, as they have a broader and deeper vocabulary

that enables them to use nuanced emotion terms like native speakers. Finally, advanced learners are expected to outperform intermediate learners, as the former group is likely to have developed a rich lexicon that allows them to use emotion vocabulary appropriately in context.

Method

Population and Sample of Participants

A total of 180 subjects participated in this study: 60 native speakers (NSs), 60 advanced learners (ALs), and 60 intermediate learners (ILs). Responses from ILs were collected from two groups of students enrolled in intermediate-level English courses at the American Language Center in Marrakech. Based on the pedagogical system of this language center, each group included 30 students. Group membership was determined by scores on a proficiency test administered at the beginning of the academic year. The first group (B1 level) included 17 females and 13 males, and the second group (B2 level) included 19 females and 11 males. The age range for each group was 17–21. To ensure a similar number of participants, responses from ALs (ages 21–25) were collected from 26 males and 34 females studying for a master's degree in English at the Faculty of Educational Sciences in Rabat and the Faculty of Letters and Humanities in Marrakech. The recruitment of native English speakers was done using convenience sampling. A request titled "For native speakers of English only" was posted on the website www.linguist-list.com with a link to a Google Form, which allowed the possibility of integrating visual material. Besides the specified emotional scenes, the form included filter questions related to age and gender. The participants' ages ranged from 21 to 46 years, and their educational backgrounds ranged from high school to PhD, but they all declared English as their native language.

Instrumentation

The instrument used in this study consisted of two video clips from YouTube. The first video clip (https://www.youtube.com/watch?v=PQjMGv3CoPk) is a segment from the film *Mr. Bean in the swimming pool*. There are no verbal exchanges in the clip, only sound effects, including laughter and music. In this segment, Mr. Bean goes to a public swimming pool. Realizing there is much fun in the children's pool, he runs to join them but is stopped by the lifeguard,

who orders him to go to the adults' pool. There, he sees people diving off a super-high board and runs towards it. Reaching the board and looking down, he finds himself scared to death. While making attempts to jump, two boys who have just climbed up the platform push him down. Upon landing, Mr. Bean loses his swimming trunks and is unable to retrieve them. He tries to get back to the changing room unseen just as everyone is told to leave the pool, but he ends up face to face with female swimmers, who start screaming.

The second video clip (https://www.youtube.com/watch?v=iVrQqWIs6ZE-&t=32s) includes verbal exchanges accompanied by music and English subtitles. The clip tells the story of a boy who steals medicine from a pharmacy but is caught by the pharmacist, who starts shouting at him and attempts to beat him, despite his pleas that the medicine is for his sick mother. A man from a nearby fast-food shop intervenes, asking her to forgive the boy and offering to pay for the medicine. Thirty years later, while the man is working in his shop, he collapses and is immediately taken to the hospital by his worried daughter. Although he feels better, the large sum on the hospital bill adds to his daughter's distress. The next day, she discovers that the bill has been paid. The doctor explains that the expenses were covered thirty years ago when her father gave him food and bought medicine for a sick mother. She then remembers the boy, who has become a doctor.

Data Collection Procedure

The first video clip was previously used by Pavlenko (2008) to examine the effect of structural and conceptual equivalence on the use of emotions by learners of Russian and learners of English. Pavlenko elicited data by interviewing the participants, allowing for the spontaneous analysis of structural and lexical choices. In the current study, a different methodology was followed. Since the focus was only on emotion terms, participants were asked to watch the segment and describe the emotions felt by the actors in each video clip. This method allowed participants to describe the same stimulus simultaneously, without the need for individual interviews, which might not help in evaluating the same pattern of emotion vocabulary used by all participants.

Data Analysis Procedure

Several steps were taken in analyzing the responses of the participating groups to derive results for each variable. First, rarely used emotion terms from each group were eliminated, and only the most frequently used emotion terms were listed, with frequencies and percentages calculated (see Table 1). Next, the

most frequently used emotion terms by NSs were compared to those used by ILs and ALs in terms of frequency and percentage (see Table 2). To confirm the significance of these frequencies and percentages, pairwise Chi-square tests were performed for each emotion category between each pair of groups. The results of these pairwise chi-square tests, along with effect size information, are shown in Table 3. Comparing learners' lexical choices to those of native speakers addressed the first and third research questions related to lexical anisomorphism and language proficiency, respectively. For the word frequency factor, emotion words used by NSs were categorized into 'frequent' and 'less frequent' based on the 2000 most frequent words in the Oxford list of word frequency (see Table 4). This categorization allowed for examining whether low-frequency emotion words affected the learners' performance in describing emotions like NSs by comparing the lexical choices of each learner group with those of NSs.

Results

The Most Frequently Used Emotion Terms by Participants in Each Group

The lexical choices provided by participants in each group are presented according to the main emotional scenes that were pointed out for description. Table 1 displays the emotion terms most frequently used by ILs, ALs, and NSs for each of the eight scenes. Other emotion terms, being less frequently used and therefore less representative, are excluded from the analysis.

Table 1

The Most Frequently Used Emotion Terms by Participants in Each Group

Scenes	NSs	*N*	%	ALs	*N*	%	ILs	*N*	%
1	confused	22	36.7	surprised	20	33.3	angry	17	28.3
	annoyed	12	20.0	angry	13	21.7	surprised	13	21.7
	angry	7	11.7	shocked	7	11.7	confused	11	18.3
	surprised	4	6.7	confused	6	10.0	shocked	9	15.0
2	excited	50	83.4	excited	37	61.2	excited	31	51.7
	elated	2	3.3	enthusiastic	5	8.3	happy	11	18.3

Table 1 continued

Scenes	NSs	*N*	%	ALs	*N*	%	ILs	*N*	%
3	terrified	25	41.7	terrified	20	33.4	scared	23	38.3
	scared	23	38.4	scared	17	28.4	afraid	11	18.3
	afraid	5	8.4	afraid	14	23.4	terrified	7	11.7
4	embarrassed	43	71.7	embarrassed	33	55.0	embarrassed	30	50.0
	ashamed	8	13.3	ashamed	20	33.4	ashamed	22	36.7
5	angry	44	73.4	angry	42	70.0	angry	45	75.0
	furious	8	13.4	furious	5	8.4	furious	10	16.7
6	ashamed	40	66.7	ashamed	20	33.3	ashamed	20	33.3
	embarrassed	7	11.7	embarrassed	15	25.0	embarrassed	17	28.3
	humiliated	4	6.7	humiliated	8	13.4	sad	5	8.3
7	compassion-ate	20	33.4	compassionate	20	33.4	pitiful	24	40.0
	sympathetic	19	31.7	sympathetic	16	26.7	merciful	11	18.3
	empathetic	9	15.0	pitiful	13	21.7	compassion-ate	9	15.0
8	sad	14	23.4	sad	21	35.0	sad	23	38.3
	worried	11	18.4	worried	10	16.7	scared	19	31.7
	scared	11	18.4	scared	4	6.7	afraid	5	8.3

As shown in Table 1, different emotions are used in the first scene since it involves a sequence of two emotional reactions from the lifeguard who noticed something unusual (Mr. Bean swimming in the children's area) and frowned; as a result, participants used emotion terms that describe different feelings of the lifeguard. The most frequently used terms are *confused* and *annoyed* by NSs, and *surprised*, *angry*, and *shocked* by ALs and ILs. The second scene refers to when Mr. Bean saw two boys enjoying themselves by jumping off a super diving board and ran towards them. Most NSs and ALs used *excited*, but most ILs used both *excited* and *happy*. The third scene involves Mr. Bean going up to the super diving board and being terrified when he looks down. Participants in each group used the same terms (*scared*, *afraid*, and *terrified*), but in a different order for ILs. Likewise, participants used the same terms (*embarrassed* and *ashamed*) to describe Mr. Bean's feelings when exited the pool without trunks and faced female swimmers. The same terms were used by participants in each group for the sixth scene, showing a woman reproaching a boy in public. Participants also did not differ in their lexical choices for the

fifth scene, with most using *angry* and *furious* to describe the woman's feelings when reacting violently against the boy. In the seventh scene, most NSs used *compassionate*, *sympathetic*, and *empathetic* to describe the feeling of a man offering to pay for stolen medicine and providing food for the boy. ALs approximated NSs by using *compassionate* and *sympathetic*, but very few used *empathetic*. ILs' choices were *pitiful*, *merciful,* and *compassionate*. Moreover, most NSs and ALs used *sad*, *worried*, and *scared*, while ILs used *sad*, *scared*, and *afraid* for the last scene, which involved a sequence of two brief events: a girl watching her father fall in pain and then waiting near the emergency room.

As a preliminary analysis, it seems that ALs often managed to use the same emotion words as NSs for most of the emotional scenes. ILs also approximated the native speakers' lexical choices but with less accuracy compared to ALs. To assess the significance of differences or similarities in lexical selections between each group of learners and native speakers, further statistical tests are needed for comparison.

The Most Frequently Used Emotion Terms by NSs Compared to ILs and ALs

Since the aim of this study is to explore MA learners' performance in describing emotional scenes using English emotion terms, the responses provided by native speakers will be considered a reference. After all, acquiring a second language entails developing a native-like competence in the target language. Therefore, only emotion terms used by more than 15% of the participants in the NSs group are considered for analysis: *confused*, *annoyed*, *excited*, *terrified*, *scared*, *embarrassed*, *angry*, *ashamed*, *compassionate*, *sympathetic*, *empathetic*, *sad*, and *worried*. ALs and ILs used the same emotions except for *annoyed* and *empathetic*. Relevant statistics for each of these words are taken from the corpus. Table 2 displays the most frequently used emotion terms by NSs compared to ILs and ALs in terms of frequency and percentage.

To compare the significance of the lexical selections provided by NSs with those of each learner group, pairwise chi-square tests were conducted for each emotion term. Table 3 presents these tests for each emotion category between each pair of groups, along with effect size information.

Table 2

The Most Frequently Used Emotion Terms by NSs Compared to ILs and Als

NSs	N	%	ALs	N	%	ILs	N	%
confused	22	36.7	confused	6	10.0	confused	11	18.3
annoyed	12	20.0	annoyed	5	8.3	annoyed	1	1.7
excited	50	83.4	excited	37	61.2	excited	31	51.7
terrified	25	41.7	terrified	20	33.4	terrified	7	11.7
scared	23	38.4	scared	17	28.4	scared	23	38.3
embarrassed	43	71.7	embarrassed	33	55.0	embarrassed	30	50.0
angry	44	73.4	angry	42	70.0	angry	45	75.0
ashamed	40	66.7	ashamed	20	33.3	ashamed	20	33.3
compassion-ate	20	33.4	compassion-ate	20	33.4	compassionate	9	15.0
sympathetic	19	31.7	sympathetic	16	26.7	sympathetic	6	10.0
empathetic	9	15.0	empathetic	1	1.7	empathetic	1	1.7
sad	14	23.4	sad	21	35.0	sad	23	38.3
worried	11	18.4	worried	10	16.7	worried	2	3.3

Table 3

The Results of the Pairwise chi-square Tests for Each Emotion Category between Each Pair of Groups

Emotions	NSs vs ALs	Effect Size	NSs vs ILs	Effect Size	ALs vs ILs	Effect Size
confused	χ = 11.898* p = 0.0006	d = 0.70	χ = 4.742* p = 0.0294	d = 0.50	χ = 1.012 p = 0.3146	d = 0.10
annoyed	χ = 2.291 p = 0.1301	d = 0.20	χ = 8.194* p = 0.0042	d = 0.60	χ = 1.862 p = 0.1723	d = 0.25
excited	χ = 8.616* p = 0.0033	d = 0.60	χ = 14.818* p < 0.0001	d = 0.80	χ = 1.505 p = 0.2197	d = 0.15
terrified	χ = 0.476 p = 0.4901	d = 0.05	χ = 9.114* p = 0.0025	d = 0.65	χ = 3.992* p = 0.0458	d = 0.40
scared	χ = 1.473 p = 0.2247	d = 0.10	χ = 0.0 p = 1.0	d = 0.00	χ = 1.473 p = 0.2247	d = 0.10
embarrassed	χ = 3.751 p = 0.0527	d = 0.35	χ = 7.492* p = 0.0062	d = 0.55	χ = 0.282 p = 0.5952	d = 0.05
angry	χ = 0.086 p = 0.7691	d = 0.05	χ = 0.021 p = 0.8844	d = 0.02	χ = 0.154 p = 0.6948	d = 0.03

Table 3 continued

Emotions	NSs vs ALs	Effect Size	NSs vs ILs	Effect Size	ALs vs ILs	Effect Size
ashamed	χ = 10.0* p = 0.0016	d = 0.70	χ = 10.0* p = 0.0016	d = 0.70	χ = 0.0 p = 1.0	d = 0.00
compassion-ate	χ = 0.0 p = 1.0	d = 0.00	χ = 5.542* p = 0.0185	d = 0.50	χ = 5.542* p = 0.0185	d = 0.50
sympathetic	χ = 0.423 p = 0.5155	d = 0.05	χ = 8.694* p = 0.0032	d = 0.60	χ = 4.712* p = 0.0300	d = 0.45
empathetic	χ = 10.533* p = 0.0012	d = 0.75	χ = 10.533* p = 0.0012	d = 0.75	χ = 0.0 p = 1.0	d = 0.00
sad	χ = 1.767 p = 0.1836	d = 0.15	χ = 4.713* p = 0.0300	d = 0.40	χ = 0.079 p = 0.7792	d = 0.05
worried	χ = 0.073 p = 0.7865	d = 0.05	χ = 6.536* p = 0.0106	d = 0.55	χ = 5.712* p = 0.0168	d = 0.50

Note: *Significant differences are marked with asterisks.

The Frequent and Less Frequent Emotion Terms Used by NSs

Emotion words used by NSs were categorized into "frequent" and "less frequent" based on the most 2,000 frequent words in the Oxford list of word frequency, which mainly involves words that are common in everyday usage. These words served as a reference to pinpoint the impact of word frequency on the use of L2 emotion vocabulary by learners in each group. Table 4 provides a detailed breakdown of these frequent and less frequent terms.

Table 4

Frequent and Less Frequent Terms Based on the Oxford 2000-Word List

Frequent Terms	Less Frequent Terms
confused	annoyed
excited	terrified
scared	ashamed
embarrassed	compassionate
angry	sympathetic
sad	empathetic
worried	

Discussion

The results indicate that lexical anisomorphism and L2 proficiency significantly affect learners' use of English emotion terms. The discussion of the results begins with an analysis of the lexical choices by comparing the responses

of ALS and NSS to identify instances of equivalence and non-equivalence. This comparison may reveal cases of positive transfer from L1 as well as negative transfer. The Natural Semantic Metalanguage (NSM) is adopted to analyze the emotion terms used by NSs and their translational equivalents in MA. NSM was developed by Wierzbicka (1996) and other scholars (e.g., Goddard, 2010). It addresses ethnocentrism in linguistic research, particularly in cross-cultural studies of emotions. The discussion then highlights the effect of word frequency on the use of emotion terms by both groups of learners. Finally, the effect of language proficiency is explored by comparing the performance of ALs and ILs in approximating the lexical choices of NSs.

Lexical Anisomorphism

Emotions are deeply intertwined with culture, and each language community has its own set of terms to express them, leading to lexical anisomorphism across languages. In other words, a language may exhibit different degrees of lexical equivalence, ranging from near equivalence to no equivalence when its emotion lexicon is compared to that of another language. English emotion terms denoting general emotions (*sad*, *angry*, and *scared*) do not seem to pose problems for advanced participants, as they performed quite similarly to NSs. Likewise, emotions with direct lexical equivalents in MA, namely *compassionate* and *sympathetic*, show no significant differences between ALs and NSs, although each language includes several terms denoting emotional reactions to other people's plights. Nevertheless, significant differences between ALs and NSs are observed for emotion terms with different cultural connotations in MA, and therefore lacking direct lexical equivalents, such as *ashamed*, *excited*, *empathetic*, and *confused* (see Table 3 which displays the significance and non-significance of the lexical choices provided by each learner group compared to NSs).

While NSs distinguished between embarrassment and shame in the sixth scene, ALs used both terms interchangeably, as these concepts are subsumed under the single term 'ħšem' in MA, meaning "got embarrassed" or "ashamed." In NSM terms, shame implies that "people can know something bad about me; I don't want people to know this; if people know this, they can't think something bad about me" (Wierzbicka 1999, p. 110). Embarrassment is related to shame, but the latter is culture-specific since it is oriented to individualistic self-image. According to Wierzbicka (1999, p. 115), embarrassment has emerged concerning one's image and it implies that: "something is happening to me now not because I want it; someone knows about it; this person is thinking about me; I don't want people to think about me like this." Thus, ALs could not distinguish between the two English terms since the only equivalent, *ħšem*, describes the

same causal antecedents for both shame and embarrassment. It is important to note that many words associated with shame in MA carry positive meanings, while in English, they convey negative ones.

Other emotion terms that lack lexical equivalence and reveal acquisitional problems for ALs are *excited* and *empathetic*. While *excited* is the first choice for ALs, it is statistically significant from NSs, and *empathetic* hardly appeared among the lexical choices of ALs. These two terms are salient within Anglo-Saxon cultures and emphasize individual expression. Specifically, *excited* conveys that "something good will happen" (Goddard & Wierzbicka 2014). Similar to excitement, enthusiasm also denotes a future orientation; however, excitement is typically triggered by external factors, while enthusiasm arises from internal and personal motivations. The only MA word that can indicate "something good will happen" is 'metħammes,' which means enthusiastic, and it is the only word that fits contexts of excitement. The use of a translational equivalent and general terms denoting happiness affected ALs' frequency of using *excited*, leading to significant differences from native-like usage. *Empathy*, which involves imagining oneself to be the person who is suffering, exists in MA but is expressed through paraphrasing: 'kajbqa fia' meaning "he keeps within me." The lack of a direct lexical equivalence, therefore, explains why only very few ALs used the target term. Moreover, ALs also differed significantly from NSs in using *confused*. Its individualistic connotation is revealed when defining it using NSM primes: "I don't know what is happening. I don't know what to think about it. Because of this, I feel something bad." The reason for not using *confused* as a first choice for Moroccan learners seems to be due to the fact that the MA words 'metfajeʔ', meaning surprised, and 'tesdem', meaning shocked are expressed approximately with the same facial expressions as *confused*. The use of these words, therefore, constitutes a case of L1 negative transfer.

ALs managed to perform like NSs in using *annoyed*, *embarrassed*, *terrified*, and *worried*, which do not have lexical equivalents in MA. As mentioned earlier, embarrassment is a specific cultural concept relevant to individualistic cultures. The MA emotion lexicon contains several words related to shame, but embarrassment is not one of them. *Annoyed* is also included among terms specific to Anglo-Saxon cultures. Despite the universal sensation of experiencing this emotion, its specific triggers and tolerance levels are deeply influenced by cultural norms and values. In NSM terms, *annoyed* means: "this person (Y) did something; I didn't want this, I would want: this person; didn't do it" (Wierzbicka, 1994, pp. 443–444). There is no lexical equivalent of *annoyed* in MA; the closely related term that subsumes annoyance is 'fagʕan', which can be explained in semantic primes as follows: "this person did something; I would want: this person didn't do it. I don't want to do anything." The difference lies in display rules, which result in "unexpressed anger" in MA and

a slight feeling of anger in the English term *annoyed*, manifested in "I don't want this." Thus, the MA concept of 'fagʕan' reflects a collectivist culture that values connection to others and often promotes hiding conflict.

Terrified implies the thought that "something very bad is happening […] something very bad can happen to me now because of this" (Wierzbicka, 1999, p. 77). *Horrified* is closely related to *terrified*, but unlike *terrified*, which focuses on the feeling of the experiencer (happened to me), *horrified* can refer to what happened to someone else: "Something very bad has happened now; I didn't think that something like this could happen; I want to do something because of this if I can; I can't do anything" (Wierzbicka, 1999, p. 79). Both concepts are subsumed into one word in MA, ruʕb, which indicates "something very bad has been happening, and because of this something bad can happen to me." Thus, Anglo-Saxon cultures, which tend to emphasize individual expression, display a more explicit articulation in differentiating between emotions experienced individually and collectively. This difference is blurred by the MA terms since Moroccan culture is influenced by collectivistic values. The same explanation holds for *worried* and *concerned*. *Worried* involves the following cognitive scenario: "Something is happening now; something bad can happen because of this; I don't want it to happen; because of this I want to do something; I don't know what I will do" (Wierzbicka, 1999, p. 85). Its closest equivalent in MA is 'mʕalleq', meaning concerned. Unlike *worried*, which is typically associated with thoughts about oneself, feeling concerned is often linked with thoughts about someone else: ''Something bad can happen to this person; I don't want this to happen; I want good things to happen to this person; because of this I want to do something if I can'' (Wierzbicka, 1999, p. 86). This indicates that MA, influenced by a collectivistic orientation, tends to focus more on emotions felt concerning others. Despite the cultural-specificity of *worried* and *terrified*, ALs managed to make finer-grained distinctions in using these terms, showing no significant differences from NSs.

Thus, cultural norms shape emotional expression and interpretation within a given community, leading to the lexicalization of salient emotions. This can result in lexical anisomorphism when comparing the emotion lexicons of different languages, especially if they belong to distant language families, as in the case of MA and English. ALs managed to overcome cultural differences by demonstrating a native-like performance in describing some situations using terms specific to Anglo-Saxon cultures. Other culture-specific terms, however, posed problems for them, resulting in L1 negative transfer. The fact that L2 learners may struggle with emotion terms that do not have direct equivalents in their native language has been reported by several scholars (e.g., Pavlenko, 2008; Dewaele, 2010; and Altarriba & Basnight-Brown, 2011). This is because each emotion involves several elements, including antecedent, appraisal, and display rules. Culture influences each of these elements, resulting in culturally

embedded lexical terms. When faced with the complexity of emotion terms specific to a certain culture, learners resort to transferring cultural conceptualization from their L1 to the target language (Matsumoto & Hwang, 2012). Hence, advanced learners in the current study showed significant differences with NSs in using *confused*, *excited*, *ashamed*, and *empathetic*, as these terms might carry deep cultural connotations in the English language.

Word Frequency

In their descriptions of the specified emotional scenes, NSs used both high-frequency and low-frequency words (see Table 4). The frequent emotion terms in NSs' corpus, which are within Oxford's first 2,000 words, include *angry*, *scared*, and *sad*. Participants in both groups of learners did not differ from NSs in using these common terms. However, NSs also used words like *compassionate*, *sympathetic*, *terrified*, and *embarrassed*, which do not appear within the 2,000 words of the Oxford list and are thus considered low-frequency. ILs differed significantly from NSs in using these words, while ALs showed hardly any significant difference from NSs. This suggests that at an intermediate level, learners manage their emotional expression in L2 by relying on generic, high-frequency terms. In contrast, at an advanced level, learners' emotion lexicon develops, enabling them to use nuanced, complex L2 terms that might have infrequent usage in the target language. This finding supports the second hypothesis, which posits that advanced learners use both frequent and less frequent emotion terms similarly to NSs. The increased exposure to the target language allows learners to have a broader and deeper vocabulary, allowing them to describe emotions more appropriately, akin to native speakers. This is consistent with previous research, such as Nation (2001), which emphasizes the priority of high-frequency words in early acquisition, as well as Laufer and Goldstein (2004), who note that low-frequency words are less likely to be known and correctly used by learners.

Language Proficiency

It is well-established that language proficiency level exerts a strong effect on L2 learners' performance. In other words, as learners advance in their language proficiency, their performance approximates that of native speakers more closely. ALs demonstrate lexical choices closer to those of native speakers by providing nine similar emotion terms out of thirteen, indicating a higher degree of native-like usage, but still show some differences related to specific emotion terms. On the other hand, ILs managed to perform like

NSs in using only emotion terms that have lexical equivalents in MA, indicating significant L1 negative transfer. They seem to compensate for emotion terms lacking equivalence in their L1 by using words that have translational equivalents, such as *merciful* and *pitiful*, or terms denoting general emotions like *happy*, *sad*, *afraid*, *angry*, and *surprised* instead of *excited*, *worried*, *terrified*, *annoyed*, and *confused*, respectively.

The use of high-frequency and low-frequency emotion words highlights the effect of language proficiency in emotional description. Intermediate learners tend to use frequent words more often because their vocabulary is more limited, whereas advanced learners, with a broader vocabulary, can use both frequent and less frequent emotion terms. This indicates that learners' understanding of less frequent words becomes more aligned with that of native speakers as proficiency increases. Consequently, the third hypothesis is confirmed as ALs outperformed ILs.

Several studies demonstrate such a developmental progression in achieving a native-like competency in describing the emotions of others using emotion terms of the target language (e.g., Altarriba et al., 2004; Grosjean, 2010; Dewaele, 2013). Nevertheless, having an advanced level of proficiency might sometimes not be sufficient for using appropriate emotion terms, as was the case with ALs in the current study. According to Dewaele and Pavlenko (2002), even at an advanced level, L2 learners would often have gaps in using L2 emotion terms appropriately. This gap might be related to cultural variability, especially since language is closely tied to culture.

Conclusion

Summary of the Findings

This study aimed to determine whether Moroccan EFL learners could achieve native-like proficiency in describing emotions based on visual material. The result of comparing the emotion vocabulary of native English speakers with that of intermediate and advanced learners unveiled that L2 emotion description can be influenced by lexical anisomorphism and language proficiency. ILs matched NSs using only two emotion terms, particularly those with lexical equivalents in MA. Advanced learners, on the other hand, demonstrated greater competency in describing most video scenes with emotion terms similar to those used by NSs. This suggests that as language proficiency increases, the impact of lexical anisomorphism on using L2 emotion vocabulary diminishes. However, ALs differed from native speakers in their use of emotions without

direct equivalents in their L1, namely *confused*, *excited*, *ashamed*, and *empathetic*. This implies that an advanced level of language proficiency may not ensure the internalization of new concepts lexicalized in L2. Regarding word frequency, it had minimal impact, as ALs used nearly the same frequent and non-frequent emotion terms in similar contexts to NSs.

Implications

Based on the findings of this study, several implications emerge for research on L2 vocabulary acquisition, pedagogical instruction, and curriculum development. At the research level, the results show that lexically differentiated emotion terms, or those lacking equivalence in MA, pose significant challenges for ILs and, to a lesser extent, for ALs. This suggests that culturally specific emotion terms, leading to lexical inequivalence, should be considered a key factor in the difficulties L2 learners face in acquiring vocabulary, alongside word type and frequency (De Groot & Van Hell, 2005). Furthermore, the challenges learners face with some culturally specific emotion terms emphasize the importance of raising awareness among language educators and learners about differences in how emotional terms are conceptualized differently in the target language and culture. Being aware of cultural sensitivity can only be effective when emotion vocabulary is contextualized within its cultural framework. This would not only contribute to the development of L2 learners' pragmatic competence, as pointed out by Bardovi-Harlig and Mahan-Taylor (2003) but also help them manage cultural conflict and foster successful interpersonal relationships (Altarriba & Bauer, 2004; Fisher & Shapiro, 2005).

The non-contextual, explicit instruction of emotion vocabulary explains why advanced learners did not always provide appropriate emotion terms for some emotional scenes. In the Moroccan context of teaching English, emotion vocabulary is rarely taught and seldom represented in the syllabus. This is evident from an analysis of English textbooks in Morocco at all levels. Emotion vocabulary is explicitly presented in only two EFL textbooks: *Ticket to English* and *Gateway to English*. Although emotion terms are incorporated in these two textbooks, they are presented as if they were unproblematic with regard to the semantic differences between MA and English emotion lexicons. This oversight may lead to discrepancies from the native speakers' preferred lexical patterns through facilitating negative transfer from L1, as observed in the learners' corpus. Therefore, curriculum designers should include thematic units related to emotional expression in English to help learners develop effective emotional communication in the target language.

Limitations and Future Research

This study did not consider additional languages prevalent in the Moroccan linguistic landscape, including French, which is introduced at earlier educational levels; Amazigh, the mother tongue of about half of the country's population; and Standard Arabic, the high variety used in media and formal instruction. Investigating the effect of these additional languages on the acquisition of English emotions would enrich the field of SLA. Moreover, conducting cross-linguistic research on the emotion lexicons of these languages could provide insights into the universality and variability of expressing emotions across multiple languages. Another important variable unexplored due to the limited scope of the present study is motivation, particularly extrinsic motivation, which involves the use of authentic materials outside the classroom, such as English movies, literature, and media. These materials offer learners direct exposure to the target language and can significantly affect the learning of emotion vocabulary. Exploring the effect of learners' motivation on the acquisition of English emotion vocabulary would contribute to the literature, especially since motivation and L2 vocabulary acquisition might correlate. Finally, the study's methodology did not include qualitative data, such as interviews with learners and practitioners, which could have supported the results. Future research incorporating these methods would yield important insights into the learning strategies adopted by learners in learning emotion vocabulary as well as the techniques used by teachers in teaching emotion vocabulary.

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