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| RESEARCH ARTICLE

Numeral-based English and Arabic Formulaic Expressions: Cultural, Linguistic and Translation Issues

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| ABSTRACT

This study explores the similarities and differences between English and Arabic numeral-based formulaic expressions, and difficulties that student-translators have with them. A corpus of English and Arabic numeral-based formulaic expressions containing zero, two, three, twenty, sixty, hundred, thousand…etc., and another corpus of specialized expressions with numerical prefixes (mono-, bi-, milli-, kilo-, mega-) were collected, analyzed and compared. It was found that English and Arabic numeral-based formulaic expressions fall into 4 categories:: (i) those that are identical in form and meaning in both languages (seventh heaven, four eyes, fifth column); (ii) those that are similar in meaning but differ in wording (cats have nine lives, high five, cloud nine); (iii) those that exist in English, but have no equivalents in Arabic; and (iv) those that exist in Arabic but have no equivalents in English. Specialized expressions containing numerals or numerical prefixes used in business, sports, science, politics and others are exact translations in both languages (five-power agreement, five percent rule, five tigers, tripartite alliance, fifth wheel replace). Student-translators could translate fewer than 25% of the test items correctly and left many blank. Numeral-based formulaic expressions similar in both languages were easy to translate, whereas opaque ones (at sixes and sevens, double Dutch, strap); culture-specific ones (Pentateuch, Millennialism, ثوبٌ سُبَاعِيّ، الثنائي الشيعي، ألف صحة، صحتين وعافية، مرحبتين، رباعيات الخيام، ستين داهية، and those that require a specialized background knowledge (five C's, the big five, five pillars of the UN, three-name paper) were difficult. Literal translation was the most common translation strategy. Detailed results and recommendations are given.

| KEYWORDS

Numeral-based formulaic expressions, numerical idioms, numerical metaphors, translation difficulties, translation strategies

| ARTICLE INFORMATION

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1. Introduction

According to *The Canadian Modern Language Review*, formulaic expressions or sequences are "fixed combinations of words". They include idioms, collocations, proverbs, conversational speech formulas, pause fillers, counting, swearing, and other conventional and multiword units (Rammell, Sidtis and Pisoni, 2017). Formulaic expressions with a fixed meaning may contain color words, animals, food, body parts, family numbers, titles, metals, numerals and many others. Specifically, numerical formulaic expressions in linguistics are phrases involving numbers. They are made up of two words: numbers, and expression meaning phrase. Such numerical expressions exist in all languages and are common in general as well as technical languages. They are part of the spoken and written, formal and informal language. They can have a literal meaning as in *Third World countries* in English and دول العالم الثالثin Arabic. They have an idiomatic meaning as in *six feet under* in English and ضرب اخماس في أسداس in Arabic.

Due to the prevalence of numerical expressions in all languages, a review of the literature has shown few studies that focus on numerical expressions and idioms in some languages. For example, 鲍璇 (2017) compared numeral idioms in English and Chinese, and 党风琴 (2011) explored the translation strategies of English-Chinese numerical idioms based on the Skopos theory, which utilizes the prime principle of a purposeful action that determines a translation strategy**.** Here, the intentionality of a translational action stated in a translation brief, the directives, and the rules that guide a translator to attain the expected target text translatum.

In two other studies, Kong (2014a) analyzed the definition and cultural characteristics of English and Chinese idioms and the translation of numerical idioms from English to Chinese and vice versa. Kong (2014b) analyzed English and Chinese numerical idioms that share some equivalent or similar connotative meaning according to their expressive means and expressive forms. He classified expressive means into rhetorical devices of English and Chinese numerical idioms and found that the main rhetorical device used is metaphor. The metaphorical image varies a lot due to differences in the cultural backgrounds of the two languages. Sometimes, the same image reflects different emotional colors in different countries and are used in different occasions. The researcher concluded that the metaphorical images in English and Chinese numerical idioms are reflections of the historical traditions, lifestyles, values, moral standards, and customs in languages.

In addition, Xiaoling Hu (2022) explored English and Chinese numerical idioms from the perspective of cognitive linguistics. The author proposed five strategies for translating English-Chinese numerical idioms: Literal translation, literal annotation, borrowing, naturalization, and paraphrase. English-Chinese numeral colloquialisms sometimes choose the same number to express the same thing or the same meaning.

Few other studies in the literature analyzed numerical idioms in some languages such as numerals and their idiomatic use in Rajbanshi/Kamtapuri language spoken in different parts of North Bengal, Rangpur of Bangladesh, and Jhapa and Morong of Nepal and the lower part of Assam (Ray, 2018). Ray analyzed a variety of Rajbanshi/Kamtapuri numerals and their idiomatic use that are mainly spoken in Jalpaiguri andCoochbehar in West Bengal. The researcher noticed that numerals play an important role in the Rajbanshi/Kamtapuri language. They are used in personal name formation, proverbs, idioms, and riddles. They have normal and idiomatic usages, and are used in personal names, children's games, and riddle formation. The Rajbanshi numerals are of Indo-Aryan origin (except for some borrowings). No evidence of Tibeto-Burman influence was found in the numerical idioms, proverbs and riddles of this language.

In Armenian, idiomatic expressions containing numerals were compared and contrasted by Hovhannisyan (2022) from a linguocultural and translation perspective. The researcher indicated that English numeral idioms are translated into Armenian according to three main equivalent categories: full equivalence, partial equivalence and non-equivalence. Partial equivalence was the most common because the same meaning of the phrase is worded differently due to different linguocultures. Non-equivalence is the second most common strategy because the numbers and examples are culture-specific and are only comprehensible in the source language (SL). Total equivalence is exhibited in few examples as a result of the mental cognition of various outlooks and cultural identification of the source and target languages.

Finally, Ethiopian historical numerical idioms were examined by Tafla (1987) in particular contexts. The researcher found that Ethiopian historical numerical idioms have meanings that differ from their normal numerical significance in Amarena, Tegrena, Ge'ez, three Semitic languages of Ethiopia. Examples of the use of certain numbers in idiomatic expressions revealed that some numbers imply greatness or excessiveness of amount, but others merge into the phrases so as to lose their identity as far as meaning is concerned.

Regarding Arabic numerical idioms and numeral-based formulaic expressions, the literature review revealed a complete lack of studies that compare and contrast numeral-based formulaic expressions in English and Arabic, the translation strategies used in translating them, the types of equivalents that exist between English and Arabic**,** and the difficulties that translators and interpreters have in translating them. Therefore, this study aims to explore the similarities and differences between English and Arabic numeral-based formulaic expressions, identify the difficulties that student-translators have in translating numeral-based formulaic expressions from English to Arabic and vice versa and the translation strategies that they follow.

This study is significant because it fills a gap in the Arabic literature. It starts a new area of research that has not been explored in the Arabic and translation literature. Results will help instructors at the College of Languages and Translation with language teaching and learning, translation and intercultural communication as they will gain a proper understanding of the differences between English and Arabic numeral-based formulaic expressions, which numeral-based formulaic expressions are identical in form and meaning in both languages, i.e., identical in their conceptual basis (meaning) and linguistic form (wording), which ones

have the same meaning but a different linguistic form, which ones exist in Arabic but have no equivalents in English, and which ones exist in English but have no equivalents in Arabic. They will be familiar with general as well as specialized numeral-based formulaic expressions and culture-specific examples. By mastering the deep cultural meaning of numeral-based formulaic expressions, translation can become more vivid and expressive, thus effectively improving students' intercultural communication skills.

2. Methodology

2.1 Subjects

A total of 56 translation students at the College of Languages and Translation (COLT), King Saud University, Riyadh, Saudi Arabia, participated in the study. The subjects completed 4 levels of English language courses: 4 listening, speaking, reading and writing courses, 3 grammar and 2 vocabulary courses, in addition to several Arabic language courses: Syntax, morphology and rhetoric. They took linguistics (2 hours), semantics (3 hours), text linguistics (2 hours), 3 interpreting courses (6 hours), and 2 specialized translation courses in physical sciences and the humanities (2 hours each). In addition, students in level 9 completed 12 specialized translation courses in medicine, engineering, military, Islamic studies, media, administration, sociology, education, security, commerce, politics, and computer science (2 hours each).

As for numeral-based formulaic expressions, the students did not study numeral-based formulaic expressions per se, rather, they studied a sample of English idioms, collocations, and metaphors in the vocabulary courses that they took in the first two semesters of the program.

2.2 The Numeral-Based Formulaic Expressions Corpus

A corpus of 230 Arabic and 150 English numeral-based formulaic expressions were collected from various online resources, analyzed and compared. The Arabic numeral-based formulaic expressions, in particular, were collected from Al-Maani dictionary, Arab informants and the author's own collection as a native speaker of Arabic. The Arabic corpus was verified by two professors at the Arabic department to make sure that the sample includes numeral-based formulaic expressions only and does not include mere phrases consisting of numerals and words. The majority of the Arabic numeral-based formulaic expressions are common in Standard Arabic, with few from Arabic dialects spoken in different Arab countries.

The final corpus contains the following: (i) general English and Arabic numeral-based metaphors containing *zero, half, one and a half, quarter, one, two, three, four, five, six, seven, eight, ten, twenty, forty, fifty, sixty, hundred, 180, thousand, million*. (ii) Specialized expressions with numerical prefixes: *uni, mono-, bi-tri, quadr-, penta, hexa-, deci, cent, milli-, kilo-, mega-, Fortet, triplet, pintet*. (iii) Culture-specific expressions.

2.3 Analyzing the Numeral-Based Formulaic Expressions Data

Each English numeral-based formulaic expression was translated into Arabic and each Arabic numeral-based formulaic expression was translated into English. Then, numeral-based formulaic expressions were classified into the following categories:

1) Numeral-based formulaic expressions that are identical in their conceptual basis (meaning) and linguistic form (wording) in both English and Arabic such as 7th heaven السماء السابعة; 4 eyesأربع عيون ; 5th columnالطابور الخامس ; one-way streetطريق ذو اتجاه واحد ; two parallel linesخطان متوازيان ; 10 commandments الوصايا العشر; double standards معايير مزدوجة; lesser of two evilsأقل/أهون الشرين ; never in a million years ولا في مليون سنة; Twenty four seven 24 على 7; stand on one's own two feetيقف على قدميه ; million dollar questionسؤال المليون ; The one-thousand mile trip رحلة الألف ميل; The seven wonders عجائب الدنيا السبع.
2) Numeral-based formulaic expressions that are the same in their conceptual basis, but different in their linguistic form as in *started from scratch* بدأ من الصفر *; a bird in the hand is better than 2 in the bush* خير من عشرة على عصفور في اليد الشجرة*; cloud nine* طاير من الفرحة/سابع سما*; cats have 9 lives* قطة بسبع أرواح*; son of a bitch* ابن 60 كلب*; perfect ten* عشرة عشرة على*; two cents worth* يسوى قرشين*; two wrongs don't make a right* الخطأ لا يعالج بالخطأ*; two peas in a pod* عديم الفائدة; *put two and two together* يُقرّر ثمّ يُوازن بين الأُمور/ معلومات من لديه توفر ما على بناء الحقيقة استنتج ; *one in a million* لا مثيل له/واحد في المليون/ واحد في الالف*; literally;* أكل لقمتين *to have a bite*.
3) Numeral-based formulaic expressions that exist in Arabic but have no equivalents in English as in-صف واحد together, united; يد واحدة together, united; على قدم وساق in full swing; يحارب على جبهتين fights on two fronts; صفر على الشمال useless, good for nothing; على رجل ونص on alert; ضربه كفين slap on the face; أقول لك كلمتين have a word with; ضرب اخماس في اسداس deeply concerned about, having all kinds of worrying thoughts; ستين داهية go to hell , to hell with you.
4) Numeral-based formulaic expressions that exist in English but have no equivalents in Arabic as in nine to *five attitude* العمل بأقل مجهود*; joe six pack* شخص عادي من الطبقة العاملة*; have one too many* يشرب أكثر مما ينبغي، يسرف في الشرب*; have one over the eight* سكر جماعي *; get the third degree* اسْتِجْواب طَويل قَدْ يَتخلَّله تَعذيب جَسديّ أو نَفسيّ أو كِلاهما معًا

خصم لخمسة *five finger discount;* نَبتة خَضْراء لها أربع أوراق *four leaf clover;* كلمة نابية *four letter word;* للحُصول على مَعْلومات *one over the eight ;* شخص مسيطر او ذو قوة *eight-hundred pound gorilla;* 15 دقيقة من الشهرة *fifteen minutes of fame;* اسابيع يسْكر حتّى الثَّمالة.

5) Specialized expressions containing numerals or numerical prefixes used in business, sports, science, politics…etc. are exact translations in both languages such as *American unilateralism* الأحادية الأمريكية*; G 20* مجموعة العشرين*; Quinquennial review of quotas* فحص كل خمس سنوات /التعديل الخمسي للحصص*; Bilpolar* ثنائي القطب*; Fifth ventricle; Bilingualism* الثنائية اللغوية*; Third window* الشباك الثالث*; Trinomials* ثلاثيّ الحدود/ ثلاثي التسمية*; Tripartite alliance* تحالف ثلاثي*; unicellular* أحادي الخلية*; Fifth wheel replace* استبدال العجلة الخامسة*; five percent rule* قاعدة الخمسة بالمائة*; ten percent rule* قاعدة العشر في المائة*; five- second count (sport)* احتساب مدة الخمس ثواني*; five tigers* النمور الخمسة*; third market* السوق الثالثة، سوق خارج البورصة*; five-power agreement* اتفاق خماسي السلطات*; 4G* الجيل الرابع*in English and* الأحادية الثنائية اللغوية*;* حَرْق من الدَّرجة الثَّالثة*;* الحجيرات الأربعة*;* ثنائي القطب*;* الأحادية القطبية*;* العالم الثالث*;*الأمريكية*;* تحالف رباعي*;* احادي الخلية*;* قاعدة الخمسة بالمائة*;* قاعدة العشرة بالمائة*;* النمور الخمسة*;* اتفاقية القوى الخمسة*;* الجيل الرابع in Arabic.

6) Culture-specific numerical formulaic expressions such as *the Pentateuch (Torah); Beethoven's Fifth Symphony; a novena for Christians; Millennium* (a Christian belief) in English and الأئمة الخمسة *the 5 Imams;* رباعيات الخيام *Rubáiyát of Omar Khayyám;* نص انصيص *a fictitious story about a boy with deformity;* 60 داهية *go to hell, I do not give a damn;* نيلة *60 get into trouble;* خمسة وخميسة *a spell to ward off envy and magic;* عاشوراء *10 day of Muharram;* رابع المستحيلات *the fourth impossible;* خمسة في عين العدو *a spell to ward off envy and magic;* لا ناقة لي فيها ولا جمل *I have nothing to do with/gain from it;* انصاف الرجال *unmanly, lacking magnanimity;* حركات نص كم *prevarication and an attempt to evade responsibility;* خ يد واحدة لا تصفق *ne hand does not clap;* بإذن واحد أحد *God's willing;* عاد بخفي حنين *came away empty-handed* in Arabic.

The percentages of numeral-based formulaic expressions in each category were computed. Translations, comparisons and categorization of English and Arabic numeral-based formulaic expressions were verified by two professors of English-Arabic translation. Disagreements were solved by discussion.

2.4 The Numeral-based Formulaic Expressions Test

The subjects were given a Numeral-based formulaic expressions test. The test consisted of 40 English and 40 Arabic numeral-based formulaic expressions that were randomly selected from the English and Arabic numeral-based formulaic expressions corpora collected and which covered numeral-based formulaic expressions in all categories. The items were presented in isolation as presenting them in context would help the students understand and infer their meanings. The test instructions specified what the test items were. The students were asked to translate the English numeral-based formulaic expressions into Arabic and the Arabic numeral-based formulaic expressions into English. The subjects were not allowed to use any kind of dictionary, whether paper, online or mobile dictionary apps. No time limit was imposed on the test session.

The English subtest

nine to five attitude; joe six pack; have one over the eight; get the third degree; four letter word; four leaf clover; five finger discount; fifteen minutes of fame; eight-hundred pound gorilla; started from scratch; on cloud nine; perfect ten; two peas in a pod; put two and two together; one in a million; American unilateralism; G 20; Quinquennial review of quotas; Fifth ventricle; third window; trinomials; Tripartite alliance; Fifth wheel replace; five-second count (sport); third market; five-power agreement; 4 eyes; 5th column; one-way street; two parallel lines; 10 commandments; lesser of two evils; never in a million years; twenty four seven; stand on one's own two feet; double standards; the one-thousand mile trip; the seven wonders, the Millennium, Pentateuch.

The Arabic subtest

صف واحد ;يد واحدة ;على قدم وساق ;يحارب على جبهتين ;صفر على الشمال ;على رجل ونصف;ضربه كفين ;تعال أقول لك كلمتين ;ضرب اخماس في اسداس ;في ستين داهية ;الأئمة الخمسة ;رباعيات الخيام ;نص انصيص ;60 نيلة ;خمسة وخميسة ;عاشوراء ;رابع المستحيلات ; خمسة في عين العدو; لا ناقة لي فيها ولا جمل ;انصاف الرجال ;حركات نص كم ;يد واحدة لا تصفق ;بإذن واحد أحد ;عاد بخفي حنين ;ثنائي القطب ;الحجيرات الأربعة ;حَرْق من الدَّرجة الثَّالثة ;الثنائية اللغوية ;تحالف رباعي ;احادي الخلية ;قاعدة الخمسة بالمائة ;النمور الخمسة ;اتفاقية القوى الخمسة ;الجيل الرابع; أكل لقمتين ;قطة بسبع أرواح ;ما يسوى قرشين ;بالحرف الواحد ;ابن 60 كلب ;عصفور في اليد خير من عشرة على الشجرة.

2.5 Analyzing the Subjects' Responses

The subjects' written responses to the numeral-based formulaic expressions test were marked by the author. To be marked correct, each English and Arabic numeral-based formulaic expression had to be translated correctly, either by an equivalent numeral-based formulaic expression or by an explanation if equivalents are absent. To find out the strategies that the subjects used in translating numeral-based formulaic expressions, mistranslations were compiled and subjected to further analysis. Translation strategies were classified into: (i) Avoidance (leaving the answer blank), (ii) literal translation, (iii) explanation, (iv) partial translation, (v) contextualized guessing, (vi) use of synonym, (vii) confusing numeral-based formulaic expressions with

non-numeral-based phrases such as *(seven days; 5 night; 3 attempts),* (viii) inventing their own formulaic expressions, (ix) free language expression, and (x) extraneous translation. The translation error corpus consisted of 1025 incorrect responses. Quantitative and qualitative data analyses of the error data are reported.

2.6 Test reliability

Since it was not possible to use parallel forms, split-halves of the numeral-based formulaic expressions test, or a re-test the students two weeks after the first administration of the test, reliability of the numeral-based formulaic expressions test scores was calculated using the Kuder-Richardson 21′ formula as it estimates the internal-consistency of the test items from a single administration of the numeral-based formulaic expressions test. The reliability coefficient of the numeral-based formulaic expressions test scores was .72.

In addition, inter-scorer reliability of the numeral-based formulaic expressions test was also calculated by having a colleague who teaches translation courses mark a sample of answer sheets and by comparing both analyses. There was a 95% agreement between the two scorers in identifying those numeral-based formulaic expressions available in both English and Arabic and those that are available in one language only and classifying the translation strategies utilized by the subjects. Disagreements between the two scorers were solved by discussion.

3. Results and Discussion

3.1 Translation Equivalence in English and Arabic Numeral-Based Formulaic Expressions

Analysis of the meaning equivalence of English and Arabic numeral-based formulaic expressions showed that 30% of the numeral-based formulaic expressions in the English and Arabic data have identical in their conceptual basis and linguistic form. Data analysis also showed that numeral-based formulaic expressions that exist in English but have no equivalent formulaic expressions in Arabic constituted 57% of the data. Thirdly, numeral-based formulaic expressions that have the same conceptual basis in both English and Arabic, but different linguistic forms constitute 7% of the Arabic corpus and 6% of the English corpus.

3.2 Students' Difficulties with English and Arabic Numeral-Based Formulaic Expressions

Analysis of the subjects' responses to the English and Arabic numeral-based formulaic expressions test showed that the subjects had considerable difficulty in translating English numeral-based formulaic expressions to Arabic and Arabic numeral-based formulaic expressions to English. The students gave a total of 025 responses to the test items (blank responses were excluded). The subjects left 41% blank. The typical student responded to 26% and 22% of the Arabic and English numeral-based formulaic expressions on the test respectively. Fewer than 26% and 22% of their responses to the test items were correct (See Table 1).

Table 1: descriptive Statistics of Correct and Incorrect Responses to the Numeral-based Formulaic Expressions Test

Numeral-based Formulaic Expressions	Mean		Median		Range		Sum	
	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect
Arabic	27.1%	33.3%	26%	34%	4-19	4-30	330	485
English	23.4%	37.1%	22%	38%	3-17	3-27	225	540
Total	24.4%	35.4%	25%	34%	3-19	3-30	555	1025

Numeral-based formulaic expressions that were translated correctly are those that are identical in English and Arabic such as: *fifteen minutes of fame; started from scratch; perfect ten; one in a million; 4 eyes; one-way street; two parallel lines; never in a million years; stand on one's own two feet; double standards; the one-thousand-mile trip; the seven wonders;* يد واحدة ;صف واحد عصفور في اليد ;الجيل الرابع ;النمور الخمسة ;حَرْق من الدَّرجة الثَّالثة ;رابع المستحيلات ;يد واحدة لا تصفق ;في ستين داهية ;يحارب على جبهتين .خير من عشرة على الشجرة

Qualitative analysis of the error data showed that numeral-based formulaic expressions with an idiomatic meaning were found to be more difficult than those that are more transparent. The fact that 60% of the Arabic numeral-based formulaic expressions in the corpus have no equivalents in English, and that 58% of the English numeral-based formulaic expressions in the corpus have no equivalents in Arabic makes the acquisition of numeral-based formulaic expressions in both languages difficult. The students' difficulties in translating Arabic numeral-based formulaic expressions to English may be due to inadequate linguistic

competence in English, whereas their difficulties in translating English numeral-based formulaic expressions to Arabic may be due to comprehension problems, as their meaning is not transparent, and they are culturally unfamiliar.

Moreover, results of the current study are consistent with results of prior studies which found that formulaic expressions are problematic for non-English speaking students participating in academic lectures in English (Littlemore, 2004; Littlemore, Chen, Koester and Barnden, 2011) and in academic reading in discipline-specific contexts (Sandgren & Stewart, 2014). Second language learners and translation students have difficulty comprehending and translating metaphors regardless of their proficiency levels.

Furthermore, findings are also consistent with other prior studies conducted with Arab students such as Zibin (2016) and Alsadi (2016). Zibin (2016) found that Jordanian EFL college students had difficulty in comprehending metaphorical expressions in English. Similarly, Alsadi (2016) found that Qatari EFL students had difficulties in comprehending and producing English metaphorical expressions due to their unfamiliarity with the English culture, and their inability to distinguish metaphorical and literal structures.

Students' difficulties in translating numeral-based formulaic expressions are similar to difficulties that other groups of translation students at COLT have in translating other types of formulaic expressions such as Arabic and English dar (house) and bayt (home) expressions (Al-Jarf, 2022b); English and Arabic color-based metaphorical expressions (Al-Jarf, 2019); *English and Arabic common names of chemical compounds (*Al-Jarf, 2022d); Arabic om- and abu-expressions (Al-Jarf, 2017); and *English and Arabic binomials (*Al-Jarf, 2016).

As in the present study, Charteris-Black (2002) pointed out that figurative expressions, with an equivalent conceptual basis and linguistic form, were the easiest for Malaysian EFL students, whereas those with a different conceptual basis and an equivalent linguistic form, and with culture-specific expressions that have a different conceptual basis and a different linguistic form were difficult. The students resorted to the conceptual basis in their native language in processing unfamiliar metaphorical expressions in L2.

3.3 Strategies Used In Translating English And Arabic Numeral-Based Formulaic Expressions

Students in the present study utilized the following strategies in translating English and Arabic numeral-based formulaic expressions:

1) ***Avoidance*** which was the most common strategy, as 41% of the items on the test were left blank as in the following cases: *nine to five attitude; joe six pack; four leaf clover; five finger discount; quinquennial review of quotas; Fifth ventricle; trinomials; tripartite alliance; Fifth wheel replace; 5th column; have one over the eight; Millennium, Pentateuch;* نص انصيص; خمسة وخميسة; عاشوراء; انصاف الرجال; حركات نص كم ; تحالف رباعي; أكل لقمتين; ابن 60 كلب ;.

2) ***Literal translation***. The subjects tended to translate numeral-based formulaic expressions word-for-word, i.e., as consisting of single words, not as a unit, although Arabic equivalents with the same conceptual basis but a different linguistic form exist, as in the following faulty responses: *get the third degree* يحصل على درجة ثالثة; *four letter word* كلمة مكونة من 4 حروف; *fifteen minutes of fame* مشهور لمدة 15 دقيقة/شهرة مدتها 15 دقيقة ; *eight-hundred pound gorilla* غوريلا ثمنه 800 جنيه; *started from scratch* بدأ من لا شيء ; *perfect ten* عشرة كاملة ; *5th column* العمود الخامس; *twenty four seven* اربعة وعشرون وسبعة; *third window* الشباك الثالث; لا ناقة لي فيها ولا جمل *I have no camel;* على رجل ونصف *on one leg and a half;* على قدم وساق *on one foot and foot and leg;* تعال أقول لك كلمتين *come I will tell you two words;* بالحرف الواحد *with one letter;* ستين نيلة *60 Nile;* قطة بسبع أرواح *a cat with 7 lives;* صفر على الشمال *zero on the left; bilateral languages/ bilateral linguistics;* قاعدة الخمسة بالمائة *5% rule;* ابن 60 كلب *son of 60 dogs;* ألف صحة *1000 health;* الثنائي الشيعي *the two Shiiaa (Shiite).*

   In these examples, the subjects transferred the wording of the source numeral-based formulaic expressions to their word-for-word equivalents, although each has a different wording in the TL, i.e., equivalent numeral-based formulaic expressions exist such as in ابن ستين كلب *son of a bitch;* احادي الخلية *unicellular;* ما يسوى قرشين *2 cents'/pennies worth;* قطة بسبع أرواح *a cat with 9 lives;* عصفور في اليد خير من عشرة على الشجرة *a bird in the hand is better than 2 in the bush;* يد واحدة لا تصفق *one hand does not clap;* انصاف الرجال *unmanly/coward.*

3) ***Explanation (paraphrase)***. In some cases, some students explained the meaning of the numeral-based formulaic expressions with incorrect word order in some cases as in:
   - الجيل الرابع *fourth generation of mobile phones*
   - حرْق من الدَّرجة الثَّالثة *burn from third degree*

- رباعيات الخيام *poetry of Omar Khayyam*
- *24* ساعة في الاسبوع *twenty-four seven*

4) ***Partial translation***. Here some subjects translated part of the numeral-based formulaic expressions and left the other part blank as in:
   - حركات نص كم *short sleeve; movements; moves*
   - ضرب اخماس في اسداس *five by six*
   - اتفاقية القوى الخمسة *agreement; five powers*
   - عاشوراء *Muharram 10*

5) Use of ***synonyms*** as in:
   - تحالف رباعي *agreement.*
   - *Fifth wheel replace* يغير العجلة
   - *10 commandments* الأوامر العشرة
   - الحجيرات الأربعة *four small rooms*
   - احادي الخلية *one cell/single cell*
   - قطة بسبع أرواح *cat with 7 souls*
   - *stand on one's own two feet* يقف على رجليه

6) ***Extraneous translation***. Some subjects did not know what a numeral-based formulaic expression, so they just gave any phrase that they knew, without checking the accuracy of the meaning as in:
   - خمسة في عين العدو *five bullets in the enemies' eyes.*
   - نص انصيص *half share, half a portion, half a person*
   - خمسة وخميسة *five and fifth, bad omen*
   - ثوب سباعي *7th dress*
   - *10 commandments* الفئات العشرة
   - على رجل ونصف *broken leg.*

The above strategies that students in the current study employed in translating numeral-based formulaic expressions are similar to those that other groups of translation students at COLT utilized in translating other types of formulaic and multi-word expressions and grammatical structure such as Arabic and English dar (house) and bayt (home) expressions (Al-Jarf, 2022b); English and Arabic color-based metaphorical expressions (Al-Jarf, 2019); English and Arabic common names of chemical compounds (Al-Jarf, 2022d); Arabic om- and abu-expressions (Al-Jarf, 2017); English and Arabic binomials (Al-Jarf, 2016); translating polysemes (Al-Jarf, 2022c); translating English word + preposition collocations to Arabic (Al-Jarf, 2022f); word+particle collocations (Al-Jarf, 2009); English and Arabic plurals (Al-Jarf, 2020c); interlingual pronoun errors (Al-Jarf, 2010a); English neologisms (Al-Jarf, 2010b); Arabic equivalents to English medical terms (Al-Jarf, 2018); SVO word order errors (Al-Jarf, 2007); and grammatical agreement errors in L1/L2 translation (Al-Jarf, 2000). In all of those studies, the most common translation strategy was literal translation. The students also translated the formulaic expressions and structures imitatively rather than them discriminately.

In addition, the above strategies that students in the present study employed in translating numeral-based formulaic expressions are similar in type but differ in the degree of difficulty compared to those utilized by Jordanian students in Zibin's (2016) and Smadi and Alrishan's (2015) studies, by Swedish students in Sandgren and Stewart's (2014) study and by Malaysian students in Charteris-Black's (2002) study. In Zibin's study, the receptive knowledge of metaphors varied in terms of metaphor type. The easiest metaphorical expressions for EFL Jordanian college students to recognize were those that have the same conceptual bases and linguistic expressions in English and Arabic (85%). Likewise, metaphorical expressions that have equivalent conceptual bases in English and Arabic, but completely different linguistic expressions were easy to recognize as well (81%). Those that have different conceptual bases and linguistic expressions in both languages, and those in which the conceptual bases are culturally neutral elicited a good number of correct responses (71%). Those that are conceptually and linguistically different in both English and Arabic resulted in a significantly lower number of correct responses (52%). Those that have a completely different conceptual basis in English and Arabic, but are similar in linguistic expression (form), were the most difficult.

Moreover, the strategies used in translating numeral-based formulaic expressions in this study are partially similar to those used in translating idioms in Smadi and Alrishan's (2015) study who found that the most efficient strategy utilized by EFL Jordanian graduate students in translating opaque idioms was paraphrase. The researchers attributed their findings to the degree of semantic transparency of the idioms under investigation. They added that the variety of strategies used in translating English idioms into Arabic reflects differences in the students' linguistic and pragmatic competence and their familiarity with those

idioms. Moon (1998) added that *"opaque metaphors"* cannot be understood without knowledge of their historical origins. This is true in the case of some Arabic and English numeral-based formulaic expressions in the current study that require historical knowledge of the formulaic expressions as in عاد بخفي حنين , رابع المستحيلات ,الأئمة الخمسة ,ثوب سباعي ,نص انصيص رباعيات الخيام, *Millennium, Pentateuch,*

Furthermore, Sandgren & Stewart (2014) found that cultural richness was the most common cause of comprehension problems, not the type of metaphorical expression. They concluded that comprehension of metaphorical expressions in two languages requires four main strategies by L2 readers: (i) Context decoding, (ii) prior knowledge, (iii) guessing, and (iv) translation. Such strategies require bottom-up and top-down processing. Prior knowledge includes everything that a reader may bring to the text, such as general knowledge of the world, topical knowledge, specialist knowledge and cultural knowledge as in *nine to five attitude; joe six pack; have one over the eight; get the third degree; four letter word; four leaf clover; five finger discount; eight-hundred pound gorilla; Quinquennial review of quotas; Fifth ventricle; American unilateralism; G 20;;* بإذن واحد أحد ;خمسة وخميسة نيلة *60;* الجيل الرابع*;* اتفاقية القوى الخمسة. Background knowledge, in particular, is extremely important for translating numeral-based formulaic expressions. In this respect, Anderson, Reynolds, Schallert, and Goetz (1977), argued that "language comprehension always involves utilization of one's knowledge of the world", and that "many problems in reading comprehension are traceable to inadequate knowledge rather than inadequate linguistic skills".

The mistranslation strategies that subjects in the present study used reflect insufficient knowledge of English and Arabic numeral-based formulaic expressions, what they mean, lack of conceptual basis and historical knowledge resulting in an inadequate ability to comprehend, match and transfer their meaning from English to Arabic and vice versa. In addition, the subjects had inadequate knowledge of the English culture. In this respect, Al-Kharabsheh (2003) pointed out that the subjects' poor linguistic competence, their poor contrastive analysis ability, poor translation competence, the varying degrees of opaqueness in numeral-based formulaic expressions, lack of sufficient experience and practice are factors that give rise to a wide range of mistranslations of English and Arabic numeral-based formulaic expressions. Furthermore, students' difficulty with numeral-based formulaic expressions may be due to inadequate instruction. Additionally, Zibin (2016) indicated that formulaic expressions with a metaphorical meaning are opaque as their conceptual basis reflects the encoding of a culture-specific meaning. Their conceptual bases and linguistic expressions are completely different in both English and Arabic.

4. Recommendations

Translation of formulaic expressions poses several challenges to undergraduate translation students when they approach them conceptually, linguistically, and culturally. Results of the present study revealed that translation students at COLT have considerable difficulty in translating English and Arabic numeral-based formulaic expressions, especially those that are culture-specific, and those with an idiomatic or specialized meaning. To help the students master English and Arabic numeral-based formulaic expressions, the author recommends that translation instructors raise students' awareness of the similarities and differences between English and Arabic numeral-based formulaic expressions, the idiomatic meaning of some, how to translate those that exist in one language but not in the other, those that are similar in both languages in conceptual basis but different in linguistic form, those that are similar in the linguistic form but different in the conceptual basis, those that are culture specific, those that have a literal as well as a connotative meaning, and those with multiple meanings (Al-Jarf, 1994; Al-Jurf, 1994).

Since numeral-based formulaic expressions are loaded with attributive and connotative meanings, semantic, pragmatic, cultural, and historical should be taken into consideration. The amount of knowledge that translation students have about the similarities and differences between English and Arabic numeral-based formulaic expressions will help the students comprehend and interpret them correctly (Al-Jarf, 2022a).

To understand the literal and connotative meanings of unfamiliar numeral-based formulaic expressions, translations students can check specialized English-English and English-Arabic dictionaries such as Al-Maany Online Dictionary, as such dictionaries, offer the meanings of general as well as specialized formulaic expressions, show how lexicalized metaphors and phrases have monosemous and/or polysemous meanings, in addition to some specific regular patterns which can help students in the cognitive mechanism of translating metaphors (Bojović, 2014; Al-Jarf, 2022c; Al-Jarf, 2022e; Al-Jarf, 2020a; Al-Jarf, 2014).

Enriching students' prior (background) knowledge is of great importance as well. Providing the students with language and translation activities can help enhance their knowledge of numeral-based formulaic expressions and develop their ability to transfer their meaning from Arabic to English and vice versa. The students can engage in online collaborative activities using social media such as Twitter and/or a blog to discuss the similarities, differences and translation strategies that should be used in transferring the meanings of numeral-based formulaic expressions paying attention to the linguistic, cultural, pragmatic and historical association involved in the translation. They can compare and contrast numeral-based formulaic expressions in English

and Arabic and identify those that have total equivalence, those that have partial equivalence and those that have no equivalence (Al-Jarf, 2022a, Al-Jarf, 2020b; Hovhannisyan, 2022; Al-Jarf, 2006).

In addition, translation students can engage in the translation process and can practice and gain skills in all figurative language translation strategies. They can practice the translation procedures suggested by Xiaoling Hu (2022), Schäffner (2004), Dobrzyńska(1995): Substitution (metaphor into a different metaphor), paraphrase (metaphor into sense), literal annotation, naturalization, borrowing or deletion. Since there is no one-to-one correspondence between numerous Arabic and English numeral-based formulaic expressions, the students can take into consideration the connotative and idiomatic meanings of numeral-based formulaic expressions; use non-literal (free) translation in some cases and give explanatory equivalents in others. Since the interpretation and translation of formulaic expressions is culturally conditioned, student translators can choose an exact equivalent of the original metaphor; a metaphorical phrase which has a similar sense; replace an untranslatable metaphor in the ST with its approximate literal paraphrase in the TT (Xiaoling Hu, 2022; Schäffner, 2004; Dobrzyńska, 1995).

Finally, translation students and instructors may compile English and Arabic numeral-based formulaic expressions together with their equivalents for future reference. Translation students' difficulties with multi-word units in English and Arabic such as those that contain body parts, family members, times, currency, animals, and plants are still open for further investigation by future studies.

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