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List of abbreviations

Abbreviated form	Full form
Abbrev.	Abbreviation
Acron.	Acronym
Add.	Addition
alph. nu. form	Alphanumeric form
Ar	Arabic
AFs	Abbreviated forms
Eng.	English
Equiv.	Equivalent
F.meth	Method of formation
Init.	Initialism
ISO	International Organization for Standardization
KUNA	Kuwait News Agency
MSA	Modern standard Arabic
NASA	The National Aeronautics and Space Administration
OED	Oxford English Dictionary
Omis.	Omission
OPEC	The Organization of the Petroleum Exporting Countries
ORP	Other Rendering procedure
Pronounc.	Pronounceable
QIP	Quality improvement procedure
Rearg.	Rearrangement of letters
RQ	Research question
SL	Source language
Syl	Syllable
TL	Target language
Translit.	Transliteration
UN	The United Nations
UNOV	The United Nations Office at Vienna
UNTERM	The United Nations Terminology Database

Chapter 1 Introduction

Terminology occupies a prominent position in multilingual communication, especially in the United Nations context, which can be a suitable area for examining practical problems of international multilingual communication through translation and terminology practices. In the UN context, multilingualism is considered one of the foundations of the organization where translation contributes significantly to the work of the UN system. Since terminology is an important part of language in general and of specialized languages in particular, translators and terminologists pay terminological units a special attention. Within the field of terminology, abbreviated forms of terms are gaining a growing importance. Abbreviation in general is a process of using a reduced form to represent a longer form, whether the longer form is a word, phrase, or even sentence. This process is becoming a more common practice in communication, especially after the information revolution of the 20th century. Furthermore, abbreviation has been one of the remarkable phenomena and main features of languages at the present time, given the fact that the current era is witnessing a proliferation of the use of abbreviated forms in the social media, internet applications, various fields of science, technology, and almost all other fields of life. Fontenelle (2014) states that we cannot have a finite list of abbreviated terms in a language. There are nowadays huge term banks, which can include millions of terms including abbreviated forms; however, such term banks cannot cover all terms in languages as the number of terms keeps growing. Furthermore, no dictionary can contain a definitive number of words including abbreviated forms; this would look like a myth (ibid).

Abbreviation is studied within the domain of word formation in many publications, while it is addressed as a part of the word creation process in other works where it entails a great deal of creativity. According to Fandrych: “these forms fulfil a vital function of modern communicative needs: they are compact (in their short form), yet precise (in their full form), they can be mysterious and esoteric, yet common and widespread” (Fandrych, 2012, p. 20). In addition to the regular methods of word formation, it seems that there is a general tendency to use abbreviation in forming new words for the emerging concepts, products, and objects in various fields of life; this is obvious from the increasing numbers of abbreviated forms being generated every day. The OED has added 228 abbreviated forms to its entries only in 2018⁽¹⁾. Accordingly, the generation of abbreviated forms can neither be avoided nor stopped; they continue to evolve and grow over time. Although some scholars consider acronyms and initialisms relatively new linguistic phenomena, the English language seems very rich in its abbreviated forms and has a long history in this regard; for example, many abbreviated forms can be found in Old English manuscripts (Gelderen, 2014, p. 53). The English language has borrowed many abbreviated forms from Latin and French and even generated them throughout its history; many Latin abbreviated forms are still being used in English in our days.

Due to the lack of consolidated methods for the definition and use of abbreviated forms, these forms raise problems in terms of formation, classification, and translation. This is apparent in the discrepancy in the use of abbreviated forms among different UN duty stations and sometimes among bodies or agencies within the same duty station. This

⁽¹⁾ <https://public.oed.com/updates/>

problem is common among languages and includes both Arabic and English. The study attempts to shed further linguistic and terminological light on the process of abbreviation in its broadest sense and to summarize the main obstacles to forming and/or translating abbreviated forms in multilingual communication. It examines the properties of abbreviated forms generated in English and Arabic, modes of formation, uses and types as well as the assessment of the validity of generated forms. The study also addresses the capacity of the Arabic language to produce and employ abbreviated forms, which were, according to some views, unknown to Classical Arabic as a method of word formation but were rather aspects of graphical shorthand. Payeur explains that Classical Arabic, which is “also known as Qur’anic or Koranic Arabic, is the form of the Arabic language used in literary text from Umayyad and Abbasid times (7th to 9th centuries). It is based on the Medieval dialects of Arab tribes” (2015, p. 11).

1.1 Arabic Transliteration Alphabet

The Unified Arabic Transliteration System (Beirut 2007 system), which has officially been adopted by the United Nations Group of Experts on Geographical Names (UNGEGN) in 2017 (UNCSGN, 2017, pp. 19-20), will be used for the purpose of the current study. Introducing this systems, the UN Conference on the Standardization of Geographical Names stated the following: “*Knowing* that many Arab States have issued their official valid decisions on the adoption of the system so that it has become applied and stable in those countries” (ibid, p.19). Therefore, this system which was submitted by the Arabic Division at the United Nations (The Arabic Division, 2017) will be used for the transliteration of Arabic words in the current dissertation, taking into account that it is widely used by official institutions in the Arab countries.

Romanization	Arabic Character	Romanization	Arabic Character
'	همزة ء	GH	غ
Ā	ا	F	ف
B	ب	Q	ق
T	ت	K	ك
TH	ث	L	ل
J	ج	M	م
<u>H</u>	ح	N	ن
KH	خ	H	هـ والتاء المربوطة في نهاية الكلمة (هـ and ة at the end of words)
D	د	W, Ū	و
DH	ذ	Y, Ī	ي
R	ر	a	Short Opener
Z	ز	ā	Long Opener
S	س	ā	Maddah
SH	ش	a'	Alif Maqṣūrah
<u>S</u>	ص	u	Short Closer
<u>D</u>	ض	ū	Long Closer
<u>I</u>	ط	i	Short Breaker
<u>DH</u>	ظ	ī	Long Breaker
'	ع	Doubling the letter	شَدَّة

Table 1 – Arabic Transliteration Alphabet (UNCSGN, 2017, p.1)

1.2 Importance of abbreviated forms

Owing to the increasing use of abbreviated forms in the last few decades, these forms have become more common, and gained a broader background and more importance in language in general. This importance is attributed to several reasons, among them the fact that abbreviation has become an effective tool in specialized and global communication due to the multi-dimensional development the current world is witnessing. Under such a high tempo life and an accelerating information revolution, which results in new concepts, inventions, and terms, abbreviated forms become an important tool for the designation of these concepts and inventions to facilitate their communication and cope with the extreme time pressure. Thus, the role of abbreviated forms has been more prominent in global communication. Sa'īd (2001) claims that more than 25% of the words we hear or read were abbreviated in one way or another such as KUNA, NASA, OPEC, etc. In the same vein, it is noted that there is currently a large number of dictionaries of abbreviated forms, which compete with terminological dictionaries, and even general dictionaries in size, diversity and good coordination. For example, Sa'īd (ibid) notes that the 'Acronyms, Initialisms and Abbreviations Dictionary', which is one of the largest dictionaries of abbreviated forms in the English language, contains over 520,000 entries of various types of abbreviated forms. Relatedly, the 'Acronym Finder' online dictionary contains 7,243,679 abbreviated forms as of January 2021⁽²⁾. Some linguists believe that the formation of new words via abbreviation adds to the vocabulary and this is an essential factor in the growth of languages. According to Kostina, Zerkina, & Pesina, abbreviated forms constitute a rich source for new words in English and other languages. The 20th century witnessed the emergence of a huge number of abbreviated forms and this number keeps growing (2015, p. 706).

In the academic circles, abbreviation and blending as methods of word formation are gaining broader background in the curricula. For example, it is studied in the MA program at the Department of Arabic language and literature/ Hebron University in Palestine, where the subject of blending and abbreviation is classified under word formation and derivation in Arabic ⁽³⁾. Furthermore, abbreviated forms had been used in classical Arabic, where Arab scholars used many abbreviated forms such as 'رض' for 'رضي الله عنه' (R.D. for radiya Allāhu 'anh = May God be pleased with him), and 'عج' for 'عجل الله فرجه' ('ajjala Allahu farajah = May Allah hasten his reappearance).

Abbreviated forms are used in many languages and for various purposes and numerous abbreviated forms have entered the lexicon as new independent entries. Pop & Sim (2009) state that "acronyms are a significant and the most dynamic area of the lexicon of many languages" (p. 561). At the time of their introduction, abbreviated forms can also create confusion and misunderstanding. However, when such abbreviated forms are lexicalized or terminologized, they can be more readily recognizable than long convoluted words. Hence, abbreviation can provide language with concise forms that are shorter than their long and complicated source words or phrases.

⁽²⁾ See <https://www.acronymfinder.com/stats.asp>

⁽³⁾ See <https://www.hebron.edu/index.php/gs-dep/gs-dep1/gs-dep1-courses.html>

In the language of science, abbreviated forms can help maintain textual cohesion by signifying already established concepts. There are many examples in which the abbreviated form replaces the source form as in *UNICEF* or *USA*. This is because the shortened form is more economical and easier to use, write, and memorize. Although the sources of abbreviated forms are sometimes blurred and confused, these forms are sometimes the only possible form to be used. Jamet (2009, p. 20) observes that in 'gym shoes', only the abbreviated form is possible, while "the use of the full form 'gymnasium shoes' would be abnormal or impossible in the same position" (ibid).

1.3 Statement of the problems

The study sheds light on various problematic areas in the process of abbreviation in general and in the UN context in particular; these include:

1. The unavailability of clear-cut rules for the formation, definition and classification of abbreviated forms, giving rise to the question of whether to form, translate, transliterate or borrow them in the process of translation.
2. The marginalization of abbreviation as a tool of word formation in Arabic. This may be attributed to the view that abbreviation is foreign to the Arabic language, unlike the majority of western languages, including English, which accept and employ abbreviation. Thus, this topic was not given its due attention in the linguistic studies of the Arabic language. The study will discuss and verify these views depending on linguistic and terminological evidences.
3. The lack of a specialized dictionary or database for abbreviated forms in the UN context. This makes the work of translators, editors and revisers more difficult, given the fact that the time constraints sometimes hinder the work of UN translators as terminology producers.

1.4 Hypotheses

1. The Standard ISO 704; namely, section *B.2.4 Creation of abbreviations*, which basically focuses on abbreviation as a method of term formation, can be adopted as a model for the formation, definitions and classification of abbreviated forms both in English and Arabic.
2. A universal classification of English and Arabic abbreviated forms in the UN context can be reached based on a phonological criterion, i.e., on the way these abbreviated forms are pronounced. The abbreviated forms, which are pronounced syllabically are treated like words and are more inclined to be lexicalized, while other abbreviated forms which are not pronounced as words are less inclined to be lexicalized, and are only shortened representations of the full forms.
3. Modification of abbreviated forms to improve their pronounceability as words by adding letters or sounds from their referents other than the initials is a productive and accepted method both in English and Arabic.

4. Rearrangement of letters can improve the quality of abbreviated forms with regard to their pronounceability, usability and adaptability as potential word forms; it is an important procedure in producing abbreviated forms that are pronounced as regular words.
5. Arabic can use its potential to create abbreviated forms as equivalent for the English ones in the UN context and this can be proved via the UN documents and databases.

1.5 Aims of the study

1. It sheds light on the major difficulties and terminological obstacles of abbreviated forms in order to propose adequate translational and terminological practices in the absence of clear-cut rules to be adhered to.
2. It attempts to establish the main types of English and Arabic abbreviated forms, which are currently used, especially in the UN context, and to provide some solutions for their adequate formation and translation.
3. It addresses the standardization of abbreviated forms in terms of formation, definitions, usage and classification, with special reference to the UN context to examine whether Arabic can follow the western languages' methods of formation, definitions, and types of abbreviated forms.
4. It also addresses the shortcomings of the terminological tools used to process abbreviated forms in the UN context.

1.6 Scope of the study

The study will limit itself to the formation, definitions and classification of abbreviated forms in English and Arabic in the UN context as well as the translation of English abbreviated forms into Arabic and vice versa in the same context. It will investigate the subject from lexical and terminological perspectives. The data for analysis will be mainly selected from UNTERM, the UN terminology central database, as the UN is rich in these terminological phenomena. English-Arabic language pair will be used for the purpose of the study as this language pair is the pair that I use in my daily work. The study focuses on contemporary English and Arabic and does not cover historical or typological aspects of languages. The main audience of this study is supposed to be translators, terminologists, UN text producers, revisers and language users in a wide range of knowledge fields.

1.7 Significance of the study

Abbreviation is a linguistic tool that can be of a great value if properly exploited. The formation of new words via abbreviation adds to the repertoire of language and this is an essential factor in the growth and sustainability of languages. Moreover, abbreviated forms are more economical and easier to use, write, and memorize and thus, they can play a significant role in achieving linguistic economy by saving save time, effort, space, and even

costs. Ultimately, this would contribute to easier and more concise multilingual communication. Furthermore, the findings of the study would provide guidance for people working in a broader range of topics and environments. It is recommended in multilingual terminologies to “establish rules for abbreviations in other languages as well” (Drewer et al., 2020, p. 8). Three main elements in abbreviation need to be addressed in order to establish a clear idea about this linguistic tool and make use of it in translation as a part of multilingual communication; these are the definitions, formation and classification of abbreviated forms. The study derives its significance from the fact that the formation, definitions, classification, and translation of abbreviated forms from Arabic into English and vice versa are rarely studied in the academia in general and in the UN context in particular.

1.8 Methodology

The study intends to examine the phenomenon of abbreviation from lexical and terminological perspectives so as to establish the definitions and main types of English and Arabic abbreviated forms that are currently in use and provide some solutions for their adequate formation and translation. The empirical material is mainly taken from the main and central UN terminology database UNTERM, namely, all the English and Arabic abbreviated term entries in UNTERM. Certain methods for dealing with abbreviated forms on the part of translators/terminologists will be reviewed so as to see which approaches are more valid and can be applied. Being an international standard that can cover many languages, ISO 704 will be critically reviewed to examine whether or not it can be adopted as a model for the formation, definition and classification of abbreviated forms in English and Arabic. The capacity of the Arabic language to produce abbreviated forms will also be examined. Having a clear idea about the topic of the study, a number of research questions have been prepared, they would set the best framework for exploring this topic. The answers to these questions can help in proving or disproving the hypotheses of the study (see 3.3).

1.9 Structure of the dissertation

This dissertation is structured as follows: Chapter One provides a general introduction to the dissertation topic and a preview of abbreviated forms. It also sheds light on the structure of the dissertation and importance of abbreviated forms in language. Chapter Two provides a brief review of word formation processes in English and Arabic; one of these processes is abbreviation, which covers various types of abbreviation processes. The chapter reviews in detail the literature on abbreviated forms in English and Arabic with reference to their definitions, formation and classification. It discusses varying views of authors and linguists in this regard. The discussions, review of results, and concluding remarks are also included at the end of the chapter. Chapter Three presents the methodology of the study and proceeds, as is described in the methodology steps stated in section 1.8 above. Chapter Four contains the analysis of the study; it examines all the abbreviated forms included in the UN main terminology databases as regards their formation, definition, and typology in English and Arabic. It also examines the procedures applied for dealing with abbreviated forms in the process of translation, the capacity of the Arabic language to produce and employ abbreviated forms, and the results of the analyses. Chapter Five discusses the results of the analysis and Chapter Six presents the conclusions of the whole dissertation.

Chapter 2 Literature Review

2.1 Introduction

Abbreviation is a complex process that is rooted in the distant past of many languages. Some abbreviated forms trace back to the Sumerian and Rome eras (Cannon, 1989, p. 99). Zerkina, Kostina, & Pitina remarked that abbreviation is a universal phenomenon that exists in all languages, not only in living languages but also in dead languages. Some examples from Latin are still in use in our days such as *i.a. (inter alia)* – “among other things”, *ibid. (ibidem)* – “in the same place” (2015, p. 140). Besides, some abbreviated forms have an influence on term choice, in that the shortened form is sometimes preferable to the full forms.

However, the use of abbreviated forms is opposed by some authors for several reasons, among them the view that abbreviated forms can obscure their full forms and lead to miscomprehension and obstruction of smooth communication. As long as “the chief merit of language is clearness” (Bloom, 2000, p. 1), the use of unfamiliar forms, including abbreviations, would so much detract from this goal. Accordingly, it is preferable to “employ those terms which the bulk of people are accustomed to use” (ibid).

This chapter provides a general review of previous and current research on abbreviated forms and introduces the framework for the areas that pertain to the main focus of the research described in this dissertation. The literature addresses the clarification of restrictions in the formation, typology and definitions of abbreviated forms, and this may help to provide some general regularities or rules for the lexical system of abbreviated forms. Thus, the review examines previous studies governing abbreviated forms in English and Arabic with reference to definitions, formation and typology of abbreviated forms. The review aims at examining the main hypotheses and verifying them via the answers to the proposed research questions, analyzing the results and reaching conclusions and findings that might support or deny the hypotheses. The approach adopted combines qualitative and quantitative methods and it is in line with current practice in grounded research work.

2.2 Overview of word formation in English and Arabic

Abbreviated forms can perform a vital role in filling the gap emerging from the ever-increasing number of new concepts and objects and the need to signifying them under the information revolution we are witnessing. Thus, abbreviated forms have been sources of many new words in language; these words appear and enter the lexicon by way of abbreviation. Kostina, Zerkina, & Pesina (2015, p. 705) and Bussmann (1996, p. 1) considered the processes of abbreviation ‘very’ productive methods of word formation in English. Moreover, abbreviations sometimes constitute bases for other abbreviations, e.g., *TDL* for **T**unable **D**iode **L**aser, where the acronym *laser* is abbreviated to *L*.

Kostina, Zerkina, & Pesina held that the majority of abbreviated forms are derived from words or phrases, such as “*QT (Quiet)*, He got married on the QT – didn’t even tell his mother; *XO (extra old about cognac)*” (Kostina, Zerkina, & Pesina, 2015, p.708). Furthermore, abbreviated forms may “conceptualize events and situations. E.g. *GOLF (Gentlemen Only Ladies Forbidden)*” (ibid). As a method of word formation, abbreviation is

considered a minor process, as only few words can be generated by employing this method (Jamet, 2009, p. 20). However, some abbreviation processes can be remarkably effective in the production of new terms (Sager, 1997, p.38). Hence, abbreviation processes are considered by many linguists as word formation processes. Before embarking on the topic of abbreviation, it is worth having a brief overview of word formation processes in English and Arabic.

2.2.1 Word formation in English

Word formation in English covers various processes that are employed to create new words; the most common methods of word formation in English include derivation, compounding, borrowing, conversion, backformation, coinage, reduplication, eponymy, analogical creation, and blending as well as acronymy, clipping and other abbreviation processes.

2.2.1.1 Derivation

Generally, derivation refers to coining new words from already existing words by using affixes with the roots of words; it involves various processes “such as the creation of adjectives from nouns (professional<profession), nouns from verbs (computer<compute), adjectives from verbs (conceivable< conceive), and verbs from nouns (eulogize< eulogy)” (Bussmann, 1996, p. 294).

2.2.1.2 Compounding

This is an important process of word formation in English. Compounding refers to the merger of two or more words to create another complex word. “Generally, one of the words is the head of the compound and the other(s) its modifier(s). In *bucksaw*, *saw* is the head, which is modified by *buck*” (Delahunty & Garvey, 2010, p.132).

2.2.1.3 Borrowing

Taking a foreign word or expression from one language and adopting and incorporating it into another language. Some examples from English are: *Algebra* (from the Arabic word الجبر = al jabr), and *debut* (from French *début* = to begin).

2.2.1.4 Conversion

In conversion, the word class is changed, but its form is kept unchanged. For example, the change of nouns to verbs as in *Google* → *to google*, or verbs to nouns, e.g., *to throw* → *a throw*. In some cases, adjectives become verbs as in *cool* → *to cool* (Štekauer & Lieber, 2005, p. 418).

2.2.1.5 Back-formation

This process refers to “the reanalysis of a longer word which is already in use (e.g. editor, peddler) and the subsequent formation of a new shorter word (e.g. to edit, to peddle) by the deletion of actual or supposed affixes” (Booij, Lehmann, & Mugdan, 2000, p. 872).

2.2.1.6 Coinage

The invention or origination of a new word without building the coinage on already established word formation processes, or on the morphological resources of the language (Delahunty & Garvey, 2010, p. 136), e.g., Kleenex.

2.2.1.7 Reduplication

The repetition of a part of word or a full word to create a new word. McArthur (1992, p. 854) noted that in most cases, the repetition is not full, but there is some element of contrast, e.g., *mish-mash* and *hanky-panky*.

2.2.1.8 Eponymy

“A personal name from which a word has been derived: John B. Stetson, the 19c US hatter after whom the stetson hat was named” (ibid, p. 378).

2.2.1.9 Creation by analogy

The formation of new words in analogy to other preexisting words or patterns, where the new words are coined in conformity with the old forms or patterns. McArthur pointed out that the word “*cavalcade* (a procession of horses and riders) prompted the formation of *camel-cade* (a procession of camels) and *motorcade* (a procession of cars)” (ibid, p. 63).

There are other special word formation methods such as blending, acronymy and clipping; they will be discussed in the next sections (see 2.3).

2.2.2 Word formation in Arabic

The current era is characterized by the emergence of a huge number of new terms and concepts, especially in the languages of advanced and industrial countries. These terms have to be rendered to Arabic in order to cope with these developments. Abbreviation is one of the means to which Arabic can resort in order to find equivalents for these foreign (scientific) terms. Although some linguists believe that abbreviation is not one of the traditional means of word formation in Arabic and that derivation should be the main and first method of word formation, many scientific and technical terms are signified by abbreviated forms in Arabic.

On the other hand, some authors oppose the use of abbreviation as a process of word formation in the Arabic language because of the vagueness of abbreviated forms, a matter that can lead to incomprehension. Thus, they believe that using two or more words is better than the formation of a vague abbreviated form (Ash Shihābi, 1965, p. 157). Besides, some linguists reject abbreviation as they believe that the Arabic language is a derivative language that does not employ such methods as abbreviation to generate new words, and that derivation in Arabic is based on fixed patterns.

Although academies are soldiering on trying to cope with the onslaught of words, knowledge, at the end of the day, flows past them and overwhelms them in many cases. Often the real language planning goes on in the work of scientists, journalists, and technical writers, who coin new terms on the fly based on English and French (sometimes German and Italian) models. Thus, scholars do not always have a say in the matter before some terms become part of common discourse or before the academies have a chance to act.

The main word formation processes in Arabic include al Ishtiqāq (derivation), an Naḥt (blending), al Qiyās (analogic creation), al Irtijāl (coinage), al Majāz (metaphor), al Kināyah (metonymy), at Ta'rīb (arabicization) and at Tarjamah (translation) (Hilāl, 2004, p. 165).

2.2.2.1 Derivation

'الاشتقاق' (al ishtiqāq = derivation) is the main word formation process in Arabic. Generally speaking, al ishtiqāq refers to coining a new word from an existing word. The main process of derivation involves adding affixes to a word root or changing its vowelism so as to coin a new word which is semantically related to the root. The new words are built on specific morphological patterns called 'الأوزان' (al awzān), and this is similar to affixing in English.

The root is a form composed of three consonants; the first is *F* (ف), the second is 'A (ع), and the third is *L* (ل). In the process of general (small) derivation, the root consonants are not changed in any way; they are the basis from which new words are derived. The root is "a relatively invariable discontinuous bound morpheme, represented by two to five phonemes, typically three consonants in a certain order, which interlocks with a pattern to form a stem and which has lexical meaning" (Ryding, 2005, p. 47).

The pattern on which a new word is built is a morpheme composed of the consonants of the root with one or more vowels interspersed among them (ibid). Ryding described the pattern "as a kind of template onto which different roots can be mapped" (ibid, p.48). He noted that "the components of MSA pattern-formation include: six vowels (three long: /aa/, /ii/, /uu/; three short: /a/, /i/, and /u/); seven consonants (ʔ, t, m, n, s, y, w); and the process of

gemination” (ibid). Some grammarians cited ten letters, which can be added to roots to derive new words by changing their vowelings; to memorize them easily, these letters can be gathered into two words in Arabic: ‘اليوم تنساه’ (al yawm tansāh), or into the phrase ‘سألتُمُونِهَا’ (sa’altumūnīha).

Main types of derivation in Arabic

There are three main types of derivation in Arabic: ‘الاشتقاق الصغير’ (*al ishtiqaq aṣ ṣaghīr* = small derivation), ‘الاشتقاق الكبير’ (*al ishtiqaq al kabīr* = big derivation), it is also called ‘القلب’ (*al qalb* = metathesis), and ‘الاشتقاق الأكبر’ (*al ishtiqaq al akbar* = the bigger derivation), it is also called ‘الإبدال’ (*al ibdāl* = root transformation). Furthermore, Arabicization and *naḥt* are other source of word formation in Arabic (Al Maghribi, 1908).

2.2.2.1.1 Small (or simple) derivation

‘الاشتقاق الصغير’ (*al ishtiqaq aṣ ṣaghīr*) is the main type of derivation in Arabic. This process refers to the creation of new words from existing roots by adding affixes or changing the vowelings of root, as is discussed above. Elmgrab stated that “this method is the most practical process in creating new terms which has been used throughout the history of language” (2011, p. 494).

2.2.2.1.2 Big derivation

‘الاشتقاق الكبير’ (*al ishtiqaq al kabīr*) is also called ‘القلب’ (*al qalb* = metathesis). It refers to changing the order of root consonants (or sounds) to produce a new word with the same or related meaning to that of the root, e.g., ‘جَذَبَ’ (*jadhaba* = draw; pull) and ‘جَبَذَ’ (*jabadha* = draw; pull) (Hilāl, 2004, p. 254). Ibrāhīm noted that “big derivation depends on the shift and substitution of the three letters in six different ways to give six words or nouns, which have a semantic relationship” (2010, p. 615).

2.2.2.1.3 Bigger derivation

‘الاشتقاق الأكبر’ (*al ishtiqaq al akbar*) is also called ‘الإبدال’ (*al ibdāl* = root transformation); this type of derivation involves the replacement of one of the root consonants (or sounds) with a letter that is not part of the root to produce word or words with the same or related meaning, e.g., ‘قَشَطَ’ (*qashaṭa* = abrade) and ‘كَشَطَ’ (*kashaṭa* = abrade), ‘هديل’ (*hadīl* = cooing of a pigeon) and ‘هدير’ (*hadīr* = cooing of a pigeon), etc. (Aṣ Ṣāliḥ, 2004, pp. 210-211).

Some philologist added a fourth type to the above-mentioned three types:

2.2.2.1.4 Biggest derivation

‘الاشتقاق الكبّار’ (*al ishtiqaq al kubbār*); it is also called ‘النحت’ (*an naḥt* = blending). Stetkevych pointed out that “In the process of the creation of new vocabulary, the simple derivation has played the most prominent role” (1970, p.7). This type of derivation (*al ishtiqaq al kubbār*) will be discussed in section (2.4.4.2).

2.2.2.1.5 How derivation works?

The small derivation is the main and first method of word formation in Arabic. A new word is created following one of the Arabic morphological patterns ‘أوزان’ (*awzān*), e.g., the word ‘خالق’ (*khāliq* = creator), which is derived from the root ‘خ ل ق’ (*kh l q* = which is related to

the meaning of creation) following the pattern ‘فاعل’ (fā’il = doer), or the word ‘مخلوق’ (makhlūq = created), which is derived from the same root ‘خ ل ق’ following the pattern ‘مفعول’ (maf’ūl = done; performed). Words which are derived from the same root are always related in meaning. Hence, it can be said that the core meaning of the root remains, but components can be changed or expanded to create a new word by altering one or more internal vowels of the word following one of the patterns. The following table provides more examples and details:

Root	Derived word	Transliteration	Meaning	Pattern
‘ح م ل’ (h m l)	‘حَمَلَ’	ḥamala	to carry	‘فَعَلَ’ (fa’ala)
	‘جُمْلَ’	ḥiml	burden, weight	‘فِعْلَ’ (fi’l)
	‘حَمَلْ’	ḥamal	lamb	‘فَعْلَ’ (fa’al)
	‘حُمْلَ’	ḥaml	pregnancy	‘فَعْلَ’ (fa’l)
	‘حَمَّلَ’	ḥammala	charged with	‘فَعَّلَ’ (fa’‘ala)
	‘حُمْلَةٌ’	ḥamlah	campaign	‘فُعْلَةٌ’ (fa’lah)
	‘حَامِلَ’	ḥāmil	pregnant	‘فَاعِلَ’ (fā’il)
	‘حَمَّالَ’	ḥammāl	porter	‘فَعَّالَ’ (fa’‘āl)
	‘حَامِلَةٌ’	ḥāmilah	carrier	‘فَاعِلَةٌ’ (fā’ilah)
	‘حُمُولَةٌ’	ḥumūlah	load	‘فُعُولَةٌ’ (fu’ūlah)
	‘اِخْتَمَلَ’	iḥtamala	suppose	‘اِفْتَعَلَ’ (ifta’ala)
	‘تَحَمَّلَ’	taḥammala	endure or bear	‘تَفَعَّلَ’ (tafa’‘la)
	‘تَحَامَلَ’	taḥāmala	be prejudiced against	‘تَفَاعَلَ’ (tafā’ala)
	‘مَحْمُولَ’	maḥmūl	portable	‘مَفْعُولَ’ (maf’ūl)

Table 2 – Derivations of the root ‘ح م ل’ (h m l)

Table (2) above shows that at least 14 words can be derived from the three-letters root ‘ح م ل’ (ḥ m l). The meanings of all these words have to do with the meaning of the root. Furthermore, words which are derived from one root can have inflectional affixes to express various grammatical meanings such as ‘حَمَلَتْ’ (ḥamalat = she carried), or ‘تَحْمِلُ’ (taḥmilu = she is carrying), ‘يَحْمِلُ’ (yaḥmilu = he is carrying), ‘نَحْمِلُ’ (naḥmilu = we are carrying), etc. The root *h-m-l* has to do with *carrying* and most words that are derived from this root have a meaning related to *carrying* in a way or another. This is achieved, as is mentioned earlier, by changing the vowel of the word or by adding certain consonants (affixes) and this method is very productive in Arabic.

2.2.2.2 Al qiyās ‘القياس’ (analogical creation or creation by analogy)

Analogy refers to the “creation of new forms in comparison with already existing forms” (El-Falaky, 2015); in other words, al qiyās is forming new words or morphological patterns that are analogous to existing words or patterns, which are based on already existing formation rules. For example, the formulation of the pattern ‘فِعَالَةٌ’ (fi’alah) to coin words that indicate professions, e.g., ‘جِزَارَةٌ’ (jizārah = butchery), ‘نِجَارَةٌ’ (nijārah = carpentry), etc.

2.2.2.3 Al Irtijāl (coinage)

Al Irtijāl in the clearest sense of the word is invention; for example, when a speaker utters a word that is novel in its meaning or form, e.g., 'كأس رنونة' (ka's ranunāt = lasting [drinking] vessel), where the word 'رنونة' is a new coinage with a new form that is not known or used before, or the word 'مارية' (Mariyah, a name), which is used for a new meaning: 'لؤلؤية' (lu'lu'iyyah = pearly, has the color of a pearl) (Hilāl, 2004, pp. 320-321).

2.2.2.4 Al Majāz (metaphor)

The figurative use of a word or expression that goes beyond its original meaning for a relation or link. Majāz is one of the factors of enriching the language by giving words new meanings, e.g., 'رأيت أسداً يتكلم' (ra'aytu asadan yatakallamu = I have seen a lion speaking). This sentence can be understood as 'I have seen a brave man speaking', especially that there is a link, which is 'speaking', an evidence that what is meant is a 'brave man' not a lion, the wild animal (ibid, pp. 334-335).

2.2.2.5 Al Kināyah (metonymy)

A type of metaphor, which refers to saying something and meaning another. It means "the replacement, under certain conditions, of a word by another word which has a logical connection with it (from cause to effect, from containing to contained, from physical to moral, by apposition etc.)" (Bosworth, van Donzel, Lewis, & Pellat, 1986, p. 116). For example, the expression 'كثير الرماد' (kathīr ar ramād) "having a great quantity or ash" to express generosity, hospitality: in fact the abundance of ash implies successively abundance of fire, then of wood and of cooking for a large number of guests" (ibid, p.117).

2.2.2.6 At Ta'rib (Arabicization)

The transference of words from other languages and using them in the Arabic language (Hilāl, 2004, p. 377). In other words, it is the introduction of foreign words into the Arabic language and adapting them to the characteristics of the Arabic language such as the phonetic system or structural patterns. For example, the word *television* has been arabicized to 'تلفاز' (tilfāz n. = television set), 'تلفز' (talfaza v. = to televise), 'تلفزة' (talfazatun = televising), 'متلفز' (mutalfaz = televised [transmitted by T.V]), etc.

2.2.2.7 At Tarjamah (translation)

Translation is the transference of words, meanings and styles from one language to another (ibid, p. 406).

2.3 The main types of abbreviated forms

Studying the methods of word formation both in English and Arabic clearly reveals that some methods are based on abbreviation processes. Hence, it is suitable to discuss the main types of abbreviated forms in English and Arabic here. The typology of abbreviated forms provided by ISO 704 is proposed to be the standard typology of abbreviated forms in general. The abbreviated form *ISO* refers to the International Organization for Standardization. One of the main tasks of ISO is to prepare international standards. The Organization is composed of many technical committees, each one of them is responsible for a particular subject and their work is carried out in cooperation with a large number of national bodies (ISO 704,

2022, p. v). ISO 704 deals with the principles and methods of terminology work; it aims at facilitating communication among humans through clear language. Furthermore, it aims at providing “a common theoretical framework and to explain how this framework should be implemented by organizations or individuals involved in terminology work” (ibid, p. vi). This standard states the main methods of term formation, which are the coinage of new terms, use of existing forms, and translingual borrowing (ibid, p.64). As for the methods of coining new terms, the authors include derivation, compounding and creation of abbreviation. The latter involves a number of processes such as acronymy, initialism, clipping, etc. This part of ISO 704 (creation of abbreviations) together with some other processes like blending and alphanumeric forms are proposed to be the basis for the typology adopted in the current study. Among the reasons for the adoption of this part of ISO 704 is that it is used in the field of specialized translation and terminology management throughout the world including international organizations such as the UN, the EU, and so on; it is intended to be a semiotic approach to abbreviated forms that can cover all types of abbreviated forms regardless of individual languages. Furthermore, ISO 704 addresses these forms from a translingual point of view; in other words, it can be applied to all languages, especially that one of the main aims of the study is to look at abbreviated forms from a translational perspective. Therefore, ISO 704 is a good methodological guideline for the typology and definitions of abbreviated forms in the context of UN language and usage. Before delving into the details, the following is a brief description of the types and definitions of abbreviated forms in ISO 704:

2.3.1 Abbreviation:

An abbreviated form

created by omitting words and/or parts of a word making up a term. In some cases, the first letter of a word suffices. Still other abbreviations are created by replacing parts of the *term* by an arbitrary string of characters. In others, the first letters of short phrases are grouped together. Such *abbreviations* can end with a full stop. (ISO 704, 2022, p. 65); for example, *p.* for page (ibid, p.66).

2.3.2 Acronym:

An abbreviated form coined by “combining initial letters or syllables from each or some of the elements of the full form. The new designation is pronounced syllabically like a word” (ibid, p.65), e.g., “*UNESCO*” for “United Nations Educational, Scientific and Cultural Organization” (ibid, p.66).

2.3.3 Initialism:

An abbreviated form “created by using the first letter (or sound) of each or some of the elements of the *full form* of a *term*. *Initialisms* are always pronounced letter by letter” (ibid, p.65), e.g., *PC* for personal computer (ibid, p.66).

2.3.4 Blend:

An abbreviated form resulting “from fusing two or more words, after one or more of them have been clipped” (ibid, p.65); they are considered a part of compounding. For example, information + entertainment = infotainment (ibid).

2.3.5 Clipping:

An abbreviated form “formed by truncating the front, middle or back portion of a *term*. Both ends can also be truncated” (ibid, p.65). For example, *prefab* for prefabricated house (ISO 704, 2022, p.66).

2.3.6 Alphanumeric form:

“A code made up of combinations of letters, numbers or both shall be considered *symbols*, if they do not represent words in a *natural language* or *abbreviations*” (ibid, p.52). For example, “A4 (paper format, 210 mm x 297 mm)” (ibid).

2.3.7 Mixed form:

An abbreviated form that “can be formed by any combination of formation processes” (ibid, p. 66), e.g., *SSD technology* for solid-state drive technology. This form is composed of initialism + compounding (ibid).

2.3.8 Short form:

These forms “use fewer words to designate the same *concept* than the corresponding *full forms*. In some cases, they are pronounced as their written form suggests. In some cases, they are non-pronounced, i.e. the relevant *full form* is pronounced instead” (ibid, p. 65); for example, “*Group of Twenty-four*” for “Intergovernmental Group of Twenty-four on International Monetary Affairs” (ibid, p.66).

2.3.9 Symbol:

Symbols are not addressed in detail in ISO 704; however, the following definition can be gathered from the discussion of symbols in ISO 704: Symbols are signs, marks, letters, characters, shapes, or any other things that represent concepts. “They can communicate information directly under difficult circumstances (e.g., traffic signs, airport signs)” (ibid, pp. 50-51).

2.4 Review of Abbreviated forms in English and Arabic

Abbreviation in general, as the name suggests, refers to the use of an abbreviated form of a word or a group of words. It can cover all other processes of abbreviation such as acronymy, clipping, blending, initialism, etc. as they all involve some sort of abbreviation. On the other hand, *abbreviation* as a term refers to one type of abbreviated form resulting from abbreviating a word or a phrase in writing, while pronouncing it as a full word or full words such as *Nov.* for *November*.

Some abbreviated forms involve a compounding process, as is the case with blending, which is achieved by two processes: clipping followed by compounding, e.g., *Envisat* from *Environmental Satellite* (UNTERM), where two words are backclipped and then combined into one compound term. According to ISO 704, compounding “involves combining existing words or lexical units into a *new term* that contains two or more roots but designates a single *concept*” (2022, p. 64).

Abbreviated forms in MSA are created according to the *naḥt* (blending) method, which involves taking parts or letters from a number of words and blending them in one word (Oughlici, 2008, p. 164), (Hijāzi, 2000, p. 97), (Ṣālih, 2000, p. 1017), (Hasan, 1996, p. 128), (As Sāmarrā'i, 1987, p. 108), and others. This is similar to the view of Stockwell & Minkova (2001, p.7) who considered acronyms a special type of blends. Carstairs-McCarthy defined acronym as a “blend incorporating only the initial letters of its components, e.g. *NATO* for *North Atlantic Treaty Organization*” (2002, p. 141). Similarly, Plag proposed that when blends are created from the initials of multiword phrases and read as ordinary words, they are considered acronyms (2003).

Some examples of abbreviated forms can be found in classical Arabic. The acronym ‘كشاجم’ (Kushājim) stands for the name of the writer Abu al Fath Maḥmūd bin al Husayn (d. 360 AH = 971 CE); this acronym is made up of the initials of the words, which indicate his qualities and the arts he mastered: ‘ك’ (k) for ‘كاتب’ (kātib = writer), ‘ش’ (sh) for ‘شاعر’ (shā'ir = poet), ‘أ’ (a) for ‘أديب’ (adīb = author), ‘ج’ (j) for ‘جدل’ (jadal = argument) and ‘م’ (m) for ‘منطق’ (mantīq = logic) (Al Amīni, 1977, p. 4). One can also cite ‘مانش’ (Mānsh), which is an acronym for the full name of Muḥammad bin Ibrāhīm bin Nāṣir ash Shimmiri (At Tonji, 1999, p.723). Many abbreviations were formed in the works of ancient authors, commentators, compilers, and authority narrators, and are still in use nowadays. These forms are used only in writing with full pronunciation such as ‘أهـ’ (i.h) for ‘انتهى’ (intaha = finished or done), ‘الخـ’ (ilkh) for ‘إلى آخره’ (ilā ākhirih = etc.), ‘عمـ’ for ‘عليه السلام’ (a'.m [a'layh as salām] = peace be upon him), etc.

The current chapter examines the use and formation of the various types of abbreviated forms in contemporary English and Arabic.

2.4.1 Abbreviations

2.4.1.1 Abbreviations in English

“An abbreviation (from Latin “*brevis*”, meaning short) is a shortened form of a word or phrase” (Khalilova, 2012, p. 12), (Dribniuk, 2009, p. 207), and (Bhagavan & Priyadarshani, 2013, p. 28). This type of abbreviated form is created by the omission of a part or parts from one word or a group of words, as in *abbr.* for *abbreviation*, *bldg.* for *building*. The resulting form is pronounced as a full word or full words as in: ‘HQ’, which is pronounced fully as ‘Headquarters’. Thus, abbreviation is a word formation process (Bussmann, 1996, p.1; and Pop & Sim, 2009, p.557) that involves a loss of material (*ibid*). Arnold pointed out that an abbreviation is “a shortened form of a written word or phrase used in a text in place of the whole for economy of space and effort” (1986, p. 144), e.g., *bPoA* for *Brussels Programme of Action* (UNTERM). Abbreviations first appear in the written mode of language, and then gradually find their way into the spoken language; thus, without a writing system, abbreviations would not exist. According to Zaika (2015, p. 3), “the graphic form is more important for the shortenings than for other language unit”.

From a terminological point of view, an abbreviation is a “designation [...] formed by omitting words or letters from a longer form and designating the same concept” (International Organization for Standardization [henceforth, ISO 1087-1], 2000, p.7). Wright & Budin (1997, p. 332) called this type of abbreviated form the ‘abbreviations proper’ and defined it as “the creation of an abbreviated form by omitting parts of a word or of the words making up a term” (*ibid*). An abbreviation can be made of the first letter of a word as in *p.* for *page*; or by grouping the initials of words or phrases as in *etc.* for *et cetera* (*ibid*).

There is a semi-agreement among linguists and authors on the definition and method of formation of abbreviation. However, there is no agreement on the view that abbreviation in its narrower sense is a method of word formation and the majority of works state that an abbreviation is rather an orthographic representation of full words or phrases.

Pronunciation is important here, and comprises a means by which abbreviation can be distinguished from other types of abbreviated forms such as initialisms and acronyms. Ginzburg, Khidekel, Knyazeva, & Sankin observed that sometimes “letter abbreviations are given ‘pronunciation spelling’ as for instance *dejay* (= D.J. = disc jokey), *emce* (= M.C. = master of ceremonies) in which case they tend to pass over into true acronyms” (1979, p. 189). However, some Latin abbreviations which were added to the English language such as *et al.*, *etc.*, and *i.a.*, have different pronunciation methods. For example, *etcetera* is abbreviated as *etc.* and pronounced fully as *etcetera*. This can be considered a typical abbreviation. *Et alia* is shortened as *et al.* and pronounced as its written form suggests (*et al*). *Inter alia* is abbreviated as *i.a.* but is often pronounced as *among others* instead of the Latin full form.

2.4.1.2 Abbreviation in Arabic

From a linguistic point of view, Ibn Mandhūr stated that:

"واختصار الكلام: إيجازه. والاختصار في الكلام: أن تدع الفضول وتستوجز الذي يأتي على المعنى، وكذلك الاختصار في الطريق. والاختصار في الجز: أن لا تستأصله. والاختصار: حذف الفضول من كل شيء" (ابن منظور، 1984، ص 243).

"الإختصار" (ikhtiṣār = abbreviation) is derived from the root 'خصر' (khaṣara: to abbreviate or shorten); it also refers to dropping the redundant parts of everything. The verb 'يستوجز' (yastawjizu = to telescope) also refers to 'directly getting to the point or meaning' or 'using the shortest ways'" (Ibn Mandhūr, 1984, p. 243).

There are many synonyms for the word 'abbreviation' in Arabic like brevity, brief, summary, abstract, shorthand, etc. Ibn Fāris, the pioneer of the 'naḥt (blending) theory' in Arabic, defined abbreviation as follows:

"فالاختصار: أخذ أوساط الكلام وترك شعبه، وقصد معانيه" (ابن فارس، 1983، ص 29).

"Abbreviation: taking the gist of the speech, dropping the redundant parts, and expressing its meanings" (Ibn Fāris, 1983, p. 29).

Therefore, abbreviation refers to taking a part of a word or a term and using it instead of the source form in writing, while pronouncing it as a full form, e.g., 'أ.د.' (alif dāl) for 'الأستاذ الدكتور' (al ustādh ad duktor = professor doctor); 'ص' (ṣād) for 'صفحة' (ṣafḥah = page).

Al-Kasimi (2008, p. 490) described abbreviation as one letter, or more, that is used to refer to a single word or a number of words. Abbreviation is usually the initial letter/letters of the word/words of the source form, e.g., 'م' (m) for 'ميلادية' [milādiyyah = A.D. [anno domini]], 'ر.د.' (R.D. [raḍīya Allāhu 'anh] = May God be pleased with him), etc. Naṣīr (1987, p. 117) pointed out that an abbreviation is usually pronounced as single letters. He added that "abbreviations were common in the past due to the need for them, particularly when a word or more are frequently recurrent in writing and also in reading in a certain context" (ibid). As is obvious, Naṣīr confused abbreviation with initialism (see 2.3.3) as he stated that an abbreviation is pronounced as a string of single letters. Al-Kasimi (2008, p.490) and Hazīm (2010, p. 99) provided a similar definition, adding that abbreviations are often used by authors, translators and indexers as shortened forms for the words, which recur in their works such as dictionaries, encyclopedias and indices in order not to repeat them. Hazīm noted that abbreviations have been used in Arabic for a long time, e.g., 'د' (d) for 'بلد' (balad = country), 'ت' (t) for 'قرية' (qaryah = village), etc. (ibid). The main point in abbreviation, as one type of abbreviated form, is that it is used only in writing and is pronounced as a full word/ full words, e.g., 'ص.ب.' (Ṣ.B) for 'صندوق بريد' (ṣundūq barīd = P.O. Box).

Al Aqtash addressed two types of abbreviation in MSA (he called abbreviation 'المختصر الرمزي' 'al mukhtaṣar ar ramzi al awā'ili = initial symbolic abbreviation); they are : a) graphical abbreviation units (graphemes); and b) morphemic abbreviation units (morphemes). He stated that the first type (graphical initial symbolic abbreviation) is a type of reduction, which is confined to the written mode of language as was known to the classical Arabic. An abbreviation is a reduced written form of the full form, but it is pronounced as a full word/ full words (Al Aqtash, 2011, p. 82); this definition is very similar to the English concept of abbreviation. Al Aqtash gave general examples of this type of abbreviated form in MSA such

as 'د' (d) for 'دكتور' (doctor), 'كم' (كيلومتر) for km (kilometer) (ibid), although the latter is rather a symbol.

2.4.2 Acronyms

2.4.2.1 Acronyms in English

The term *acronym* had been first coined by David Davis of Bell Laboratories in the middle of the 20th century. This type of abbreviated form is created from the initials (or parts) of a number of words, and is pronounced as an ordinary word. Some examples of acronyms are *NASA*, *Laser*, *scuba*, *radar*, etc. (Fontenelle, 2014, p. 146), (Dribniuk, 2009, p.207), (Pop & Sim, 2009, p.558), (Bussmann, 1996, p.13), (Pütz, 1991, pp.371–372), (Landau, 1984, p. 41), and others. This method is currently "so popular, especially in America, that a word 'acronym' has been coined for it. The first world war produced a few; Anzac (Australian and New Zealand Army Corps), Dora (Defence of the Realm Act), Wrens (Women's Royal Naval Service)" (Bloom, 2000, p.3).

Wright & Budin pointed out that "many acronyms are created in the same way that initialisms are created, but they are pronounced as if they were a single word" (1997, p.332), e.g., *SARS* for 'severe acute respiratory syndrome'. Acronyms may replace longer terms with shorter and simpler ones and in certain cases, abbreviated forms have become more commonly used than the actual words. Acronym is perhaps the most common type of abbreviated form by which new lexical units are coined. In some cases, an acronym can also be coined by including parts that are larger than the initials of words. Arnold pointed out that an acronym can generate new linguistic units "not by combining existing morphemes and proceeding from sound forms to their graphic representation but the other way round — coining new words from the initial letters of phrasal terms originating in texts" (1986, p. 143).

The literature shows that acronyms often behave like regular words with respect to pronunciation and grammar. For example, they take the pluralization 's', the definite article, etc.

2.4.2.1.1 Double acronymy

Sometimes, the acronym is itself abbreviated and used in the formation of another acronym or abbreviated form; this can be called a *double acronym*, e.g., *LIED*, which stands for *Laser Initiating Explosion Devise*; and *USAID*, which stands for *U.S. Agency for International Development* (UNROD). Melenciuc (2014, p. 105) illustrated that this process is one of the means of discourse economy. He noted that the word "*Laser* in about 500 word combinations may be and is often re-abridged" (ibid), as is the case with "LIF – Laser Interference Filter; LFL – Laser Flash Lamp" (ibid).

2.4.2.1.2 Backronyms or reverse acronyms

Some acronyms are formed in a way that they have the same forms of existing words; such forms are called backronyms or reverse acronyms, e.g., *DREAMS* for *determined, resilient, empowered, AIDS-free, mentored and safe women* (UNTERM). The word *backronym* is in turn a blend made up of a combination of parts of the two words *backward* and *acronym*. Backronyms involve a great deal of creativity and often carry a semantic association or

connotation. For example, the backronym *NOTA* stands for *Northeast Ohio Translators Association*; the founders of this association preferred to use this backronym and called their newsletter *Nota Bene*, which is originally a Latin phrase meaning *mark well* and is used to call attention to something important. It is used in current English, especially in legal texts. Such forms are sometimes used on purpose in order to make use of their connotations (Melenciuc, 2014, p. 105). Moreover, backronyms can be used to name products or companies, making use of the connotation of these backronyms (ibid). These forms can also be used to name treaties, diseases, etc., e.g., *SALT* for *Strategic Arms Limitation Talks*, and *SAD* for *Seasonal Affective Disorder (or Depression)* (ibid).

In various examples, additional letters or sounds from the source words are used in order to amend the acronym so that it would be pronounceable like a word. Cannon (1989, p.115) observed that “sometimes, the first letter of an acronym is pronounced as an abbreviation composing the acronym's first syllable, e.g., *VTOL*”. In some instances, sounds or letters are added to the acronym to make it pronounceable. Hence, “*ARVN* requires an additional vowel to pronounce it as the acronym that it is, and this fact explains the variant spelling *Aroin*” (ibid, p. 116). However, the first example of Cannon, *VTOL*, can be considered another type of abbreviated form; namely, a mixed form (see 2.3.7), since it contains an initialism followed by an acronym. In some examples, the initials of short function words (such as conjunctions, definite articles, prepositions, etc.) are included in forming acronyms to make them pronounceable like words, although such elements are not recommended to be included in the formation of abbreviated forms by the majority of works. An example of such acronyms is *STARS*, which stands for *Space Technology and Research Students* (UNTERM).

Stockwell & Minkova (2001, p.7) stated that acronyms may be created from units larger than letters, for example, “*COMECON* stands for the Council for Mutual Economic Assistance – the organization of the pre-1990 East European counterpart to the Common Market” (ibid). However, the above-mentioned example may be controversial because it can be considered a blend, as it combines segments from two or more words and these segments are syllables or units larger than initial letters.

Based on their method of formation and on their components, acronyms can be classified into a number of types. Baum (1962, p. 49) noted that there are two types of acronyms:

Acronyms “formed only from the first letter of each major unit in a phrase, is what one can call a pure acronym or acronym of the first order [, such as] *Asdic* (Anti-submarine Detection Investigation Committee)” (ibid); and acronyms which are not created from only initial letters, but they can include “two initial letters” of one of the words of the full form, as is the case with “*Radar* (radio detection and ranging)” (ibid). Baum called the first type “a pure acronym or acronym of the first order” and the second type “acronym of the second order” (ibid).

Vişan (2013, p. 3) pointed out that the acronym is sometimes made up of only initials of base units, and this is similar to the term ‘pure acronym’ used by Baum (1962). However, the initials of prepositions or conjunctions, adverbials, parts of compound adjectives, and other weak forms are sometimes included in the formation of acronyms (ibid). Blends are sometimes categorized under acronyms and this eliminates the usefulness of the term acronym as it “is not sharply demarcated” (ibid, pp. 49–50). Baum’s classification of

acronyms into pure and impure seems more valid and convenient as it describes exactly the methods acronyms are formed.

2.4.2.2 Acronyms in Arabic

In Arabic, an acronym is defined as a word made up of the initials of a group of words or of a phrase (Naṣīr, 1987, p. 115). According to Yousif, an acronym is a complex term abbreviated in a way that it can be pronounced as a regular word. The parts which are combined to form the acronym are syllables that are carefully selected as in: *HARDER* (Harmonization of Design Rules and Rationale Project); *HAZID* (Hazard Identification), etc. (Yousif, 2010, p. 316). However, according to the traditional definition of blends, the examples given by Yousif represent blends rather than acronyms. Al Aqtash (2011, p. 85) called this type of abbreviated form 'المختصر الرمزي الاوائلي من أصل عربي' (Arabic morphemic initial symbolic abbreviation) and added that it is an imitation of non-Arabic abbreviated forms by combining the initials of the words of the full form to generate a single word. 'Symbolic abbreviation' here is different from the concept of symbols in English. Symbols are almost exclusively generated in European languages in areas like mathematics and science to use as standard notations, particularly in formulas and scientific equations, measures, etc.

Some acronyms coincide with words that already exist in the Arabic language, and can be understood without the need for recalling the full form. This is the same concept of backronym in English, e.g., 'مآب' (Ma'āb = place of return) for 'مؤسسة آل البيت' (Mu'assasat Āl al Bayt = Āl al Bayt Foundation), 'باسم' (bāsim = smiling; bright-faced) for 'البنك الآلي السعودي' (al Bank al Āli as Su'ūdi lil Mustalahāt = the Saudi Automated Term Bank), etc.

In MSA, there are many examples that are borrowed from English and pronounced as they are in English such as 'الأتو، الأوبك، الأوابك، اليونيسيف، الناتو' (NATO, UNICEF, OAPIC, OPIC respectively). Examples from Arabic origin include 'شمعة' (sham'a = candle) from 'شبكة' (shabka = network) 'شبكة المعلومات العربية' (Arab Educational Information Network)⁽⁴⁾, and 'داعش' (dā'ish), which refers to 'الدولة الإسلامية في العراق والشام' (ISIS), a hard-liner terror group fighting in Syria and Iraq⁽⁵⁾.

The concept of acronym in Arabic is seemingly similar to that of English. Yousif (2010, p. 316) noted that an acronym can be pronounced as a regular word and added that "a blending process is also involved in the creation of acronyms such as *sonar* (Sound Navigation and Ranging), *glocalization* (globalization & localization), ..." (ibid). The majority of the examples provided by Yousif (2010) are English ones and he did not provide examples from Arabic. Furthermore, the example 'glocalization' mentioned earlier is a blend rather than an acronym, because an acronym is coined from the initials of each word of the source form, while in 'glocalization', larger parts of words are blended together and there is a phonetic overlap at some point between the two words making up this blend.

Al-Kasimi (2008, p.492) called this type of abbreviation 'المختزل المنحوت/منحوت الاوائلي' (the blended abbreviation/initial blending) and defined it as "the blending of initial letters into

⁽⁴⁾ See (www.shamaanet.org)

⁽⁵⁾ See: http://en.wikipedia.org/wiki/Islamic_State_of_Iraq_and_the_Levant;
<http://www.memri.org/report/en/0/0/0/0/0/7119.htm>, ISIS, FSA, etc.

one word which is pronounced as an ordinary word". According to Al-Kasimi, blended abbreviations fall into two types: a) Arabicized blended abbreviations, e.g., 'ايدز' (AIDS), 'رادار' (radar) and 'ليزر' (laser); and b) Arabic blended abbreviations such as 'أمل' (Amal), 'حماس' (Hamās), 'حشد' (Hashd) (ibid). Similarly, Sālīh, pointed out that the modern abbreviations (acronyms) are created according to the Arabic naḥt method by taking the initial letters of a phrase and blending them as abbreviations that are pronounced as ordinary words (2000, pp. 1017-1018). Hazīm proposed the term 'النحت الاستهلاكي' (initial blending) for this type of abbreviated form (acronym), which is formed by blending a word from the initial letters for a number of at least three words to replace them in use (2010, p.99).

In some acronyms, the letters are rearranged to give the word a specific connotation in addition to its original meaning, or to make it pronounceable; for instance, this rearrangement of letters is used in 'وفا' (WAFA), which is derived from the words 'وكالة الانباء الفلسطينية' (Wakālat Al Anbā' Al Felastīniyyah = Palestinian News Agency). The abbreviated form of this name should read 'واف' (WAF), but this word (which can be considered an acronym) does not have any (or a strong) connotation. However, the rearrangement of the letters of this expression produced 'وفا' (WAFA), which is similar in pronunciation and meaning to the word 'وفاء' (wafā' = trustfulness, a special connotation desired by the authors). These acronyms, which coincide with already established words in Arabic are also called backronyms; it is the same concept as English backronyms. It is noted that weak forms such as the definite article 'ال' (al), prepositions, conjunctions are usually dropped and are not parts of abbreviated forms.

2.4.2.2.1 Hybrid acronymy

The literature shows that Arabic sometimes employs a hybrid method to produce abbreviated forms by translating the Arabic phrase into English, taking the word initials of the English translated phrase and creating a new word by combining these initials. This can be called hybrid acronymy. The following is an example:

'أحسن' (شبكة تعريب العلوم الصحية) = AHSN (Arabization of Health Sciences Network)

To make the abbreviated form pronounceable, some letters or sounds are sometimes added to the abbreviated form. In other cases, the initials of conjunctions or articles are included to amend the pronunciation of the abbreviated form as in the above-mentioned example 'أحسن', where the short vowel /ə/ (or fathā in Arabic) is added after the sound /s/ to make the word pronounced as *Aḥsan*.

In some instances, hybrid acronyms begin with two-consonant cluster, a case that contradicts the rules of Arabic syllable and word structure. To address this issue, the first two letters are taken from the first word, one being a consonant and the second a vowel, with the initial of each word of them in a phrase and then the abbreviated form is formed out of all these letters. In other cases, a short vowel is inserted between the two consonants to make the abbreviated form pronounceable. Inserting a vowel between two consonants clusters is called *anaptyxis* and is used to aid pronunciation ("anaptyxis", n.d.)

These techniques are the most common in forming Arabic abbreviated forms that are derived from English origins. Such abbreviated forms can be Arabicized and used as Arabic

words to which the Arabic pronunciation rules are applicable. In case that there are non-Arabic sounds in the English abbreviated form, these sounds are replaced by Arabic sounds, as in *OCHA* (Office for the Coordination of Humanitarian Affairs), where the sound /tʃ/ is replaced by 'تش'.

2.4.2.2.2 A creative style in acronymy

Arabic names of institutions and entities can be occasionally shortened into acronyms carrying established Arabic names with suitable connotations, e.g., 'تواد' (Tawād, meaning harmony or concord) from 'حزب التجمع الوطني الأردني الديمقراطي' (Jordanian National Democratic Rally Party). This phenomenon exists in English as well; it is called backronym or reverse acronym, e.g., 'PEN': the worldwide association of writers. PEN originally stands for "Poets, Essayists and Novelist" ("PEN international," 2004). Another example is:

PreView (Project of Risk Evaluation, Vulnerability, Information and Early Warning) (UNTERM).

بريفيو (مشروع تقييم المخاطر وقابلية التعرض لها وتوفير المعلومات بشأنها والإنذار المبكر بها)

This seems a valid and usable method of telescoping lengthy terms to acronyms, which can be grasped without recalling their referents and thus, the terms formed using this method are syntactically and semantically accepted, e.g., 'حماس' (Hamās = enthusiasm), 'أمل' (AMAL = hope) and 'حشد' (HASHD = mobilization). This feature is also visible in acronyms derived from non-Arabic origins such as the hybrid acronyms mentioned earlier. In other words, some abbreviated forms derived from English origins are modified to gain familiar connotations and this has more advantages than if they remain in their original form as in:

SIDC: Saudi Industrial Development Company.

This acronym is derived from the English translation of a company name should read 'سدك' (sidc), but the first and last letters 'س' (s) and 'ك' (k) were replaced by the letters 'ص' (ṣ) and 'ق' (q) respectively so that the abbreviated form would read 'صدق' (ṣidq = truth, honesty, etc.); i.e., features that are considered positive in the field of commerce (Abu Salīm, 1996, p. 269).

In addition to practical considerations, creativity plays a significant role in forming acronyms. In the afore-mentioned example, the name 'أحسن' (AHSAN = better), which is the abbreviated form of 'شبكة تعريب العلوم الصحيّة', is derived from the hybrid acronym *AHSN* which stands for *Arabization of Health Sciences Network* (the English translation of the Arabic full form). This abbreviated form literally means 'better' in Arabic, a name (rather, an adjective) which carries a positive connotation in the field of health. These acronyms no doubt indicate that MSA can accommodate and employ such linguistic tools in forming new terms and adding them to the language without any complications or extraordinariness. Some examples given earlier are formed directly from the Arabic phrases without having to resort to hybrid abbreviation (translating the Arabic words into English and then forming an acronym from the translation).

2.4.3 Initialisms

2.4.3.1 Initialisms in English

An initialism is an abbreviated form “created by using the first letter (or sound) of each term element to form a designation. Initialisms are pronounced by spelling out the letters” (Wright & Budin, 1997, p. 332). Some examples of initialisms are: UN, EU, DNA, etc. An initialism can also be made up of syllables from the components of the full form (ISO 1087-1, 2000, p.7). Initialism is also referred to as alphabetism in some studies; both refer to the same concept.

It seems that the main difference among linguists lies not in the definition so much as in the taxonomy. For example, Fontenelle (2014, p. 146) and Bauer & Huddleston (2002, p. 1632) held the view that initialisms can cover both alphabetisms and acronyms. This can be a valid argument as the mechanism used in these processes involves taking the initials of words. On the other hand, Braber, Cummings, & Morrish (2015, p. 386), Dribniuk (2009, p. 207) and Stockwell & Minkova (2001, p. 8) considered initialisms a kind of acronym which is read as strings of separate letters. Algeo divided initialisms into abbreviated forms pronounced as acronyms as in *AIDS* and abbreviated forms pronounced as alphabetisms as in *HIV* (2010, p. 289).

The main feature of initialisms is that they are pronounced as strings of separate letters and this difference should be kept in mind. When such an abbreviated form is pronounced like a regular word, it is an acronym rather than an initialism. Yet, some abbreviated forms are pronounced both ways, as is the case with *ISO* which can be read as a regular word and can be spelled out as letters.

In some literature, initialism is used to include abbreviations, alphabetisms and acronyms, (Khalilova, 2012), (Rúa, 2002), and (Huddleston & Pullum, 2002). The main argument for this classification may be that these three types of abbreviated forms are made up of the *initial* letters of full forms. Dribniuk, among others, divided initialisms in English into three types: initialisms which are read alphabetically, initialisms which are read like words, and initialisms which have the same form and pronunciation of other words (2009, p.207). In other words, he classified initialisms into proper initialisms, acronyms and backronyms. However, pronunciation constitutes the main factor for differentiating abbreviations which are pronounced fully, initialisms which are pronounced as strings of separate letters, and acronyms which are pronounced as ordinary words.

2.4.3.2 Initialisms in Arabic

Initialism is created from the initial letters of a multi word term or phrase. This process involves taking the initial letters of each word, dropping the definite articles, affixes, prepositions, conjunctions and relative pronouns, and then writing the initialism with separate letters which are pronounced as full letters. For example, ‘س ج’ (sīn jīm), where ‘س’ (sīn) stands for ‘سؤال’ (su’āl = question) and ‘ج’ (jīm) for ‘جواب’ (jawāb = answer), or ‘س ج ع س’ (jīm ‘ayn sīn) which stands for ‘الجمهورية العربية السورية’ (Arab Republic of Syria), where the letters are spelled out. Khalīfah (1994, p. 22) suggested that if the initialism can be pronounced as a word and is consistent with the Arabic phonetic system, it can be ‘blended’ as an acronym (ibid).

Al-Kasimi called this type of abbreviated form 'مختزل الاوائل' (initial abbreviation) and provided the same description about its method of formation, but he emphasized that initialisms are confined to multi-word names and titles (Al-Kasimi, 2008, p.491). Oughlici called this type of abbreviated form 'النحت الهجائي الاستهلاكي' (initial alphabetical blending); it is an abbreviated form created by joining the initial letter of a word or initial letters of a number of words together and spelling out these letters; for example, 'ش.و.ن.ت' (shīn.wāw.nūn.tā') for 'الشركة الوطنية للنشر والتوزيع' (ash sharikah al waṭaniyyah lin nashr wat tawzī' = the National Corporation for Publishing and Distribution), where the letters are spelled out (2008, pp. 154-155). As is apparent, Arab linguists give different names to the same type of abbreviated form (initialism), and sometimes they do not differentiate between initialisms and other types of abbreviated forms such as abbreviations and acronyms.

2.4.4 Blends

2.4.4.1 Blends in English

A blend is a word resulting from combining segments of two words, or a full word and a segment of another word (Sanap, 2014, p. 39), (Wagner, 2010, p. 5), (Dribniuk, 2009, p. 207), (Plag, 2003, pp. 121-122), (Bauer & Huddleston, 2002, p.1636), (Adams, 2001, pp.138-139), (O'Grady, Dobrovolsky, & Aronoff, 1997, p. 139), (O'Grady & Guzman, 1996, p. 159), among others. Rúa (2006, p. 678) added that a blend can also be created from parts of more than two words.

Wagner defined a blend as "a combination of two or more words to create a new one, usually by taking the beginning of the other word and the end of the other one. So new words like *spork* (**s**poon + **o**rk), *fanzine* (**f**an + **z**ine) [...] are created" (Wagner, 2010, p. 5). In some studies, the term *portmanteau word* is used to refer to blend. This term was introduced by Lewis Carroll in his novel *Through the Looking Glass* (1882): "'Well, 'slithy' means 'lithe and slimy.' 'Lithe' is the same as 'active.' You see it's like a portmanteau—there are two meanings packed up into one word'" (Parker, 2005, p. 61). Currently, the term blend is mostly used instead of *portmanteau word*. However, portmanteau is used occasionally to refer to lexical blending and sometimes to refer to a subcategory of blends (Renner, Maniez, & Arnaud, 2012, p. 2).

Some linguists held the view that blending is a type of compounding in English, while others opined that as long as it involves a process of shortening or abbreviation, blending is a type of abbreviated form. O'Grady, Dobrovolsky, & Aronoff pointed out that blending occurs "on the borderline between compounding and blending" (1997, p.139). Furthermore, some authors do not treat such forms as blends but as complex clippings, clipped compounds, or clipping compounds.

According to Štekauer & Lieber, blends and compounds are formed in the same way except that in blending, the resulting form is reduced in an unpredictable way (2005, p.217). Rúa considered clipped compounds or clipping compounds a subtype of blends in which initial splinters of two words are combined to form a new word, e.g., *Alcan* from *Alaska* and *CANada* (2004, p.64). Lehrer is also of the view that blending is a type of compounding formed by combining a full word with a segment of word, or by combining two segments of words (2007, p.115). In the same vein, ISO 704 stated that blending is a type of compounding which involves two processes, the first is clipping (which is an abbreviation

process) and the second is compounding. Blending is achieved by combining two or more words, after at least one of them has been clipped (2022, p.65). Similarly, Carstairs-McCarthy stated that blending involves compounding or it is a type of compounding, and that this compounding is formed by means of clipped words (Carstairs-McCarthy, 2002, p. 65).

However, in compounding two or more full words or free morphemes are combined to create a new word with a new meaning. Braber, Cummings, & Morrish defined compounding as “the process of joining at least two free lexical morphemes or simple lexemes to form a complex lexeme” (2015, p.90). Another difference between compounding and blending in English is that compounding, just like derivation, belongs to the major or main word formation processes, while blending is less common and is a minor word formation process (O’Grady, Dobrovolsky, & Aronoff, 1997, p. 151) and (Plag, 2003, P.13). Moreover, abbreviation, from the perspective of Linguistics, is a method of word formation that is based on the shortening of words (Crystal, 2008a, p. 1), and one of the processes of creating new words through abbreviation is blending; for example, *brunch*, *Interpol*, and *Eurovision* (ibid, p.57). Plag noted that abbreviations are similar to blends, in that both involve the combination of segments of words; in other words, both involve a loss of material (2003, pp.121-122).

Wright & Budin (1997, p. 333) stated that “blends are pronounced as ordinary words, but at least one word-element larger than a single letter is included to form the abbreviated form, e.g., *ALGOL* for *algorithm language*, and *radar* for *radio detecting and ranging*” (ibid). Lehrer (2007, p. 120) noted that in the formation of blends, “symbols other than letters may be used as in: *3-peat* <*three+ repeat* ‘repeat three times’ ” (ibid). However, the example *3-peat* is made up of letters and a numeral and is, therefore, an alphanumeric form rather than a blend (see 2.3.6).

The parts of words that are combined to form the blend are usually below the level of morphemes, e.g., *CLI* and *VAR* from **C**limate **V**ariability respectively in the blend *CLIVAR* (UNTERM). These parts are sometimes called splinters. A splinter can come in three forms; it can be a syllable, a segment of word that is longer than a syllable, e.g., “*Digi-* and *-alt* in *Digiralt* (from *digital radar altimeter*)” (Rúa, 2006, p. 676), or a segment of word that is shorter than a syllable. In case that a splinters is smaller than a syllable, it is composed of “the syllable onset (i.e., the prevocalic consonant or consonants); the onset and the nucleus (prevocalic consonants + vowel); or the rhyme (vowel + postvocalic consonants or coda)” (Rúa, 2002, p. 38). Some examples Rúa gave for splinters that are shorter than syllables are “*SP-* in *SPIRE* (‘SPatial Inertial Reference Equipment’), *FLE-* in *FLEMIS* (‘FLExible Management Information System’), or *smo-* and *-og* in *smog* (‘SMOke and fOG’)” (ibid).

Some splinters may acquire independent meanings and become sources for new words. For example, the splinter *gate*, which has been taken from the name *Watergate*, a corruption scandal that occurred in 1972 regarding the abuse of power which was committed by the U.S. administration and led to the resignation of the U.S. President Richard Nixon, acquired the meaning of *scandal* and is used in “the formation of quite a number of similar scandalous names: *Irangate*, *Shuttlegate*, *milliongate*, etc.” (Kuznetsov, 2015, p. 5). Furthermore, some splinters become so frequent that they gain the status of morphemes. For instance, the splinter *-ware* which is clipped from the word *software* has been used to

form new blends which have to do with computer programs such as *courseware*, *freeware* and *shareware*.

Blending may involve an overlap of letters or sounds; this occurs when parts of the words share the same phonetic material at the point of connection between the two words. The overlap can be phonological as in *brainiac* from *brain* + *maniac*, phonological and orthographic at the same time as in *netizen* from *net* + *citizen*, or orthographic as in *smog* from *smoke* + *fog* (Bauer, Lieber, & Plag, 2013, p. 448). Lehrer gave some examples of three source words as in: *skafrocuban* from *ska* + *Afro* + *Cuban* (music); *Intelevisionary* from *Intel* + *television* + *visionary* (2007, p. 120). Yet, such examples are very rare.

In view of the reviewed literature, blends can be formed by the following methods:

1. Combining the first segments of two words, e.g., *cyborg* from *cybernetic* and *organism* (Wagner, 2010, p. 4).
2. Taking a full word and combining it with a segment of another word, e.g., *guesstimate* from *guess* and *estimate* (ibid), *slimnastics* from *slim* and *gymnastics* (Arnold, 1986, p. 141), *painstation* from *pain* and *playstation* (Bauer, Lieber & Plag, 2013, p. 446).
3. Taking a segment of a word (splinter) and combining it with a full word. For example, *narcoma* from *narcotics* and *coma* (Lehrer, 2007, p. 117), *Brangelina* from *Brad* and *Angelina*, or *Bennifer* from *Ben* and *Jennifer* (Wagner, 2010, p. 4).
4. Taking the first segment of one word and merging it with the final segment of another word; these segments are not morphemes. For example, the blend *brunch* is taken from the first segment of *breakfast* and the last segment of *lunch* (Bhagavan & Priyadarshani, 2013, p. 30), (Wagner, 2010, p. 4) and (Hatch & Brown, 1995, p. 211).

Some authors adopted a semantic approach to classify blends. Arnold (1986, p.142) distinguished between two types of blends: The first is additive blends; they are coined from a full form made up of two words linked by 'and'. For example, *brunch* from *breakfast and lunch*. The elements of blends in this type are either identical or similar in meaning, or "at least members of the same lexico-grammatical class of words: *French-English > Frenglish*" (ibid). The second type of blends in Arnold's view is the "restrictive blends". He explained that this type can be used as an attributive phrase in which "the first element modifies the second: *cine(matographic pano)rama > cinerama*" (ibid).

Arnold's classification can be applied to all types and methods of blending; in other words, blends can be either additive (expressing the meanings of the parts of the blends respectively) or restrictive (in which one part of the blend modifies or gives a restrictive meaning to the other part). However, this classification would be too loose and subject to many interpretations, depending on the reader or user of the blend. Thus, unlike Arnold's classification, a structural classification of blends would be more reliable and attainable, because a good classification should include all the possibilities involved in the formation of blends.

2.4.4.2 Blends in Arabic

The Arabic concept of *naḥt* (blending) is similar to the concept of blending in English. Amīn (1956, p.391) called blending 'الإشتقاق الكبّار' (al ishtiqāq al kubbār = the biggest derivation) and defined it as combining segments of two or more words to form a single word that

implies the meanings of these words. Hammādi stated that blending is the creation of a word by dropping some segments from two words and combining the remaining segments in one word called a blended word by linguists (1980, p. 187). 'Ali (2006, pp.451-452) defined blending (*naḥt*) as a term used by Arab grammarians to refer to a word formation process whereby a new word is coined out of two or more independent words, a process similar to 'blending' or 'fusion' in English. The following are some examples of blending in MSA:

'كهروطيسي' (kahrotīsi) from 'كهربي ومغناطيسي' (electromagnetic)
 'اوراسيا' (Orasia = Eurasia) from 'اوروپا وآسيا' (Europe + Asia)
 'دابخن' (ḍabkhan = smog) from 'دباب و دخان' (ḍabāb + Dukhān = fog + smoke)
 'سرنم' (sarnama) from 'سار أثناء النوم' (sāra athnā an nawm = to sleepwalk)

The blend often carries the meanings of its source words, e.g., 'صلكة' (ṣalkalah = nephrectomy or removal of a kidney), which is blended from 'استئصال' (isti'sāl = removal) and 'الكلى' (al kilyah = kidney) (Al Hamad, 2005, pp. 279-280). 'Ali pointed out that "morphologically, this term derives from the root *naḥt* 'to carve, hew, chisel'. Thus, Arabic blends are words, mostly of quadriliteral roots, which are 'chiseled' out of other words, so to speak" (2006, pp.451-452). The examples given by MSA linguists are identical to the concept of blending in English. However, the parts that are retained in blending are often the first parts or syllables of the source words, as is shown in the above-mentioned example.

Blending differs from derivation, which is the main method of word formation in Arabic and other Semitic languages, in that derivation is a process of lengthening the word structure, while blending is a process of shortening the word structure. Classical Arabic linguists stated a number of types of *naḥt* and gave almost the same examples for each type, and so did the MSA linguists who addressed the topic of *naḥt* in Arabic; their views and discussions are very similar. Many examples of these types can be found in MSA. Hasan (1996) cited the following types of *naḥt* and provided examples for them:

Referential *naḥt*, as in 'درعي' (Dar'ami = related to Dār al 'Ulūm), derived from 'دار العلوم' (Dār al 'Ulūm = House of Sciences College in Egypt); it means that someone is affiliated with Dār al 'Ulūm. The verb blend 'تدرعم' (tadar'ama = to become Dar'ami) can be derived from this referential blend. Based on the same structure, it is possible to form the blend 'مركب حديدوكي' (murakkab ḥadīdoki) for ferroferric compound, or 'حرماي' (ḥarmā'i) for hydrothermal (ibid, p.126).

The second type in Hasan's classification is the verbal *naḥt*; it is the process of blending a verb from a sentence or phrase; it occurs in the pattern 'فعلل' (fa'lala) which is a quadriliteral verb in Arabic, in the same pattern of the classical Arabic verb blend 'بسم' (basmala = to say bism Allāh ar Raḥmān ar Raḥīm [In the name of God the most Compassionate the most Merciful]). Hasan wondered if we can blend the word 'الفضلة' (al fadhlakah = explanatory statement) from the phrase 'فذلك هو كذا' (fadhālika huwa kadha = then that is so) and the word 'الفتلة' (al fanqalah) from 'فإن قيل كذا' (fa in qīla kadha = if this is said), why cannot we blend similar structures like 'فصب العينه' (fa'saba al 'ayyinah) which means 'قام بتحليل الفضالة' (to analyze the insoluble residues in the sample) and term this process as 'الفعصبة' (al fa'sabah)? We can also blend the verb 'تحكم' (taḥmaka) from the phrase 'حلل تحليلًا ميكانيكيًا' (to conduct a mechanical analysis), etc. (ibid, p. 127).

The third type is the blending of structures of larger than trilateral roots. Ibn Fāris gave more than 200 examples of this kind such as the verb 'برقش' (barqasha = to variegate; to color) which is blended from the verbs 'برش' (barasha = to have a different color) and the verb 'رقش' (raqasha = to speckle), etc. This can be called 'النحت التأصيلي' (etymological blending) (ibid).

The fourth type is "forming a word from the initial letters of two or more words; the new word has a new meaning reflecting the meanings of the source words. Some linguists called this process *initial blending*, although it corresponds to acronymy in the English language" (ibid). Some linguists considered this method of formation a type of *naḥt*, while others categorized it under abbreviation or creation, e.g., *NATO*, *NASA*, etc. (ibid, p.128). However, Hasan (1996) confined the examples of this type of blending to acronyms and abbreviations and did not refer to other types of abbreviated forms such as clippings, initialisms, etc. This classification may be a repetition of the typology provided by the old school of linguists such as Ibn Fāris and his peers.

Bellaci added two other types of *naḥt*:

1. Particle *naḥt*: for example, some grammarians say that 'لكن' (lākinna = but) is blended from 'لكن' (lākin = but) and 'ان' ('anna = that); the 'hamza' letter is omitted for mitigation and the 'n' letter of 'lākin' is omitted due to the occurrence of two successive consonants.
2. Mitigation *naḥt*: such as 'بلحارث' (Balhārith) which is blended from 'بني الحارث' (Bani al Hārith = the children or tribe of al Hārith) due to the very close articulation positions of the sounds /n/ and /l/. (Bellaci, 1999, p.3)

2.4.5 Clipping

2.4.5.1 Clipping in English

Clipping is converting a multi-syllabic word to mono-syllabic word, e.g., *math* for *mathematics*, *blog* for *weblog*, *camo* for *camouflage*, etc. A clipping can be created from multiple-word expressions as in *ANT* for *The Antarctic Treaty* (UNTERM).

The process of clipping is also referred to as shortening or truncation. Lappe added other terms for clippings: "stump words, diminutives, and, if the base form is a personal name, hypocoristics" (2007, p.1). However, diminutives are simply words used to express endearment as in: *Kate* (or *Katie*) for *Kathryn*, or to imply that something is small, e.g., *duckling*, which is used to refer to a baby duck. Trask noted that "a diminutive suffix" may be added in the formation of clippings as in *veggie* from *vegetarian* and the Australian umpire from *umpire*" (Trask, 1994, p.16), although *veggie* does not refer to a vegetarian, but to any kind of vegetable, and the American short form for *umpire* is *ump*. Diminutives do not necessarily involve a process of clipping. For instance, *Nick* is the short form for *Nickolas*, which looks like a clipping; however, *Jim* is the short form for *James*, and *Nastya* is short for *Anastasia*, and this is not just a case of clipping. Proper names may also be subject to clipping and this is called hypocorism. A hypocorism is an "expression with a **diminutive** semantic component that is formed by **suffixes** (*cigarette*), short forms (*Phil*), or syllable doubling (*choo-choo*), and so on" (Bussmann, 1996, p. 527); other examples: *Tony* from *Anthony*, *Liz* from *Elizabeth*, *Joe* from *Joseph*, etc. Yule is of the view that "a word-formation process in which a longer word is reduced to a shorter form with -y or -ie at the end (e.g. *telly*, *movie*)" (2017, p.807). Stockwell & Minkova (2001, p. 10) and Kuznetsov (2015, p. 3)

observed that clippings are not only created from single words but can be formed from phrases as in *mob* from *mobile vulgus* and *zoo* from *zoological gardens*.

2.4.5.1.1 Types of clipping formation

Many classifications were provided for clippings, based on their method of formation, i.e., the parts that are clipped from the full forms. Crystal (2008a, p.1), Katamba (1994, p.125) and Allan (1986, p.239), among others, divided clipping into three categories: Fore-clipping (cutting off the first part), backclipping (cutting off the last part), and fore-back clipping (cutting off the first and last parts ;Katamba (1994) calls it middle clipping).

Another classification stated that clipping can fall into four types: “back clipping, fore-clipping, middle clipping, and complex clipping” (Bhagavan & Priyadarshani, 2013, p. 30). Like Katamba (1994), Bhagavan & Priyadarshani called Fore-back clipping ‘middle clipping’, which refers to trimming the edges of a word and keeping the middle part, as is the case with *flu* for *influenza* (ibid). As for the fourth type, they stated that “complex clipping is removing multiple parts from multiple words as in *sitcom* from situation comedy” (ibid). In the above-mentioned classification, the abbreviated form *sitcom* given as an example of complex clipping looks more like a blend than clipping, as it combines two parts from two separate words.

Unlike others, Huddleston & Pullum divided clippings into two main types:

1. **Plain clippings**, which consist of the three main types of clippings mentioned above. They use the term Ambi-clippings for back-fore clipping.
2. **Embellished clippings**, in which other operations apply to the residue to produce a longer word. For example, *Turps* (turpentine) + -s, *rugger* (rugby football) + -er, etc. They add that the words in -ers are semi-jocular and distinctively BrE or AusE. (2002, p. 1636)

From the many examples found in the literature, back-clipping seems to be the most common method of clipping and English has a tendency towards back-clipping, for example: **prof** from professor and **lab** from laboratory. When forming clippings, there may be a change in spelling, but the pronunciation remains the same, as in **mike** which is a clipping for the name *Michael*. Sometime, clippings undergo alterations to make them pronounceable as in *trank* (a clipping for *tranquillizer*), where the ending -nk is preferred to -nq.

Splinters can also be used in the formation of clippings and they may have independent meanings. With frequent use, some splinters acquire specific meanings and give rise to new morphemes. Fandrych assumed that “clipping shares a large degree of arbitrariness with blending: it neither considers stress nor syllable or morpheme structures” (2008, p. 116). She, thus, argued that clipping may produce ‘free splinters’ that can remain as independent elements after shortening (ibid). These clippings (free splinters) are often lexicalized as new entries, e.g., *blog* from *weblog*.

Clipping has been and is still a source of the formation of many words that enter the lexicon as new entries and become independent words used in our daily life. Many of these clippings are lexicalized as new words in the English language, such as *tox* (from toxicology), *bute* (from phenylbutazone), *phone* (from telephone), etc. This is an indication that this process is one of the productive methods of words formation in English.

2.4.5.2 Clipping in Arabic

In Arabic, clipping is the reduction of a word to a shorter form by cutting one or more letters from it. Clipping is not common in Arabic, as syllables or letters (sounds) cannot be subtracted from Arabic words except in rare cases as in 'ناد' (nād) from 'نادي' (nādi), where the last letter (i) of the word is clipped; and 'فاطم' (Fātim) from 'فاطمة' (Fātimah), where the last letter (ة) of the word is clipped. This case often occurs with personal names which come after the vocative particles 'a' and 'ya'. Fischer (2002, p. 96) and Edzard (2009, p. 558) pointed out that after the vocative particles 'a' and 'ya', personal names and words frequently employed in exhortations are often clipped, and this is called 'ترخيم' (tarkhīm) in Arabic. Fischer stated that clipping "affects the inflectional endings and the preceding consonants: يا عاذل ya adhila (عاذلة adhilat) 'O blamer (fem.) يا عثم! ya uthma (عثمان = Uthmanu) 'O Uthman!'" (2002, p.96), and in this case, it is called back-clipping. Kaye used the word *admiral* as an example of clipping. It is among the Arabic loanwords that are coming into English through the intermediary of French. This word refers to 'the highest ranking officer in the navy', equivalent to a general in the army' (Medieval Latin *admiralis* and Middle French *amiral*) originally from Arabic *Amir al-bahr* 'commander of the sea', where the last word *bahr* has been deleted due to the process of clipping (Kaye, 2007, p. 26).

Sometimes, one letter of the word is omitted, e.g., 'واد' (wād) from 'وادي' (wādi = valley), where the last letter (i) of the word is clipped. Clipping can occur at the beginning of a word as in 'ذا' (dha) from 'هذا' (hādhā = this) and 'عل' ('alla) from 'لعل' (la'alla = maybe; perhaps) (fore-clipping), in the middle of the word as in 'مذ' (mudh) from 'منذ' (mundhu = since) (middle-clipping), or at the end of the word (back-clipping) as in 'ناد' (nād) from 'نادي' (nādi = club).

Fischer cited examples of clipping in Arabic where the first segment of the word is dropped (fore-clipping) like the imperative 'عم صباحا' 'im sabahan' Good morning!', this form is actually a clipping from 'أُنعِم صباحاً' *an'im sabahan* (ibid, p. 129). Clipping also occurs in some other verbs, "notably 'doubly weak' verbs, undergo even farther reaching truncation, for instance in the case of the imperative *fiḥ* [فِ] of the doubly weak verb *wafā* [وَفَى] 'to fulfill'" (Edzard, 2009, p. 557). Edzard observed that clipping occurs in a more systematic way in the context of blending, where a process of clipping occurs at the last segment of the first word and first segment of the second. He added that "clipped prefixes in neologisms such as *bay-thaqāfi* 'بيثقافي' 'intercultural' and *qab-tàrikhī* 'قبثاريخي' 'prehistorical' have not always caught on in common language use" (ibid, p. 558).

Hazīm stated that clipping is the use of a shortened word in writing and pronunciation, and gave many examples all of them are taken from English. He added that this type of abbreviated form is not known to the Arabic language; rather, it is taken from the foreign terms which have been Arabicized like *bus*, *fax*, *kilo*, etc. (Hazīm, 2010, p. 101). However, the examples cited earlier by some other authors like Fischer and Edzard show that clipping is used in the Arabic language but at a limited level compared with other types of abbreviated forms.

To sum up, there are three main types of clippings in Arabic:

1. Fore-clipping, when the first segment of the source word is cut off, as in 'عل' ('alla) from 'لعل' (la'alla = maybe ; perhaps).

2. Back-clipping, when the end of the source word is cut off as in 'ناد' (nād) from 'نادي' (nādi = club).
3. Middle clipping, when a part in the middle of the word is cut off, as in 'مذ' (mudh) from 'منذ' (mundhu = since).

2.4.6 Alphanumeric forms

2.4.6.1 Alphanumeric forms in English

Another type of abbreviated form is the so-called *alphanumeric form*; it is created by combining both letters and numerals, and sometimes symbols and punctuation marks to replace a complex term or phrase. Such forms abound in the language of science, computer technology, social media, industry, and many other fields. Some examples of alphanumeric forms are: *K9* for canine, *W3C* for the World Wide Web Consortium, *G7* for Group of Seven, etc. An alphanumeric form can also be a combination of multiple letters and numerals as in: *REN21* for *Renewable Energy Policy Network for the 21st century* (UNTERM). Another example from German is *DSPL 42* which stands for 'Die Doktoratsstudienprogrammleitung 42' (lit.: The Directorate of Doctoral Studies Program [at the University of Vienna], DSPL 42).

The *American Heritage® Dictionary of the English Language* stated that the word *alphanumeric* is an adjective that refers to a term created by combining letters and numbers. *Alphanumeric* can also refer to a term "consisting of or using letters, numbers, punctuation marks, and mathematical and other conventional symbols: *an alphanumeric code*" ("alphanumeric", n.d.). The symbols that are combined with the numerals are in most cases alphabetic characters, punctuation marks or signs, but rarely image-related symbols. In Wikipedia, '*alphanumericals*' are defined as "a combination of alphabetical and numerical characters. More specifically, they are the collection of Latin letters and Arabic digits" ("Alphanumericals", n.d.). Many other sources provided the same or similar definition of alphanumeric forms including Skyes (1982, p.26); McArthur (1992, p.32), and others. To sum up, an alphanumeric form is a type of abbreviated form that is made up of a combination of alphabetical forms and numerical characters. Throughout the literature review, there have been a number of types of alphanumeric forms such as rebuses, numeronyms, abbreviation-numeral hybrids:

2.4.6.1.1 Rebus

Some alphanumeric forms are created by combining letters or segment of words with numerals or characters, where the letter is spelled out and the sound or syllable of the numeral is fully pronounced, e.g., *apprec8* for *appreciate*, *B4U* for *before you*, etc. These forms are called rebuses. The word rebus comes originally from Latin and it means 'thing'. Woodcock pointed out that "in a linguistic sense, rebuses are symbols which represent entire words or parts of words, whereas, by contrast, letters represent sounds" (Woodcock, 1968, p. 1). Moreover, a rebus can be created from pictures, letters, or symbols to represent certain words or phrases. These words resemble the sounds of the used pictures, letters or symbols. Crystal defined rebuses as "words and sentences made out of a combination of letters, pictures, or logograms, such as *c u l8r* 'see you later'" (Crystal, 2008b, p. 184).

2.4.6.1.1.1 Old rebuses

According to Crystal, “A rebus is a message which, in its original definition, consists entirely of pictures that are used to represent the sounds of words, rather than the objects they refer to” (2008b, p. 39). The traditional concept of rebus refers to the use of pictures to replace sounds, e.g., the pictures of an eye () , a bee () , and a leaf () can be combined together  (“eye-bee-leaf”) to represent the phrase *I believe* (Allen, 2010, p.3). Traditional (pictorial) rebuses may be used for educational purposes, particularly as reading aids for children or new learners. Woodcock pointed out that one of the benefits of rebuses is that they are sometimes used as illustration methods in teaching children, making use of the novelty of the idea and facilitating the readability of the texts for children whose reading ability is still limited (Woodcock, 1968, p.3). Rebuses have been used for centuries; they were used even in ancient languages like the hieroglyphic language of ancient Egypt (Allen, 2010, p.3). Thus, it can be noted that such rebuses existed even before the emergence of alphabetic writing or they were the earliest forms of writing. Another example of old rebuses is *IOU* which refers to I owe you; this form appeared in 1618. The only difference between the old and modern rebuses is the medium in which they are communicated (Crystal, 2011, p. 5). In 1867, the English poet Charles Bombaugh wrote a poem in which he used many rebuses to represent phrases; he wrote: “I wrote 2 U B 4” (Hinchman & Sheridan-Thomas, 2014, p. 129). This was used to replace the sentence *I wrote to you before*. In the same poem, Bombaugh wrote: “He says he loves U 2 X S/U R virtuous and Y's.” (“He says he loves you to excess. You are virtuous and wise.”) (ibid). This shows that joining letters, numerals, and characters to represent words, phrases and sentences is not a new phenomenon that is associated with the emergence of the computer and internet technologies.

2.4.6.1.1.2 Modern rebuses

After the rise of the Internet and mobile technologies, several means of electronic communication appeared such as emails, messenger and other chatting applications, online forums and blogs, Short Messaging Services (SMS), social media applications such as Facebook, Telegram, Twitter, Viber, WhatsApp, Instagram, and many others. This medium of communication can be called the language of the Internet; Crystal (2006), has suggested the term “Netspeak” to refer to the language used when communicating through computer or other electronic media. . Netspeak is defined as the “jargon, abbreviations, and emoticons typically used by frequent internet users” (“netspeak”, n.d.). Para pointed out that *netspeak* is a term used alternatively to stand for “*Netlish, Weblish, Internet language, Cyberspeak, Electronic discourse, Electronic language, Interactive online discourse, Computer-Mediated Communication*, and various computer related locution” (Para, 2016, p. 189).

With the recent developments in social media networks and internet applications, rebuses have become more popular. Some of these applications are limited as regards the number of characters allowed to post such as SMS, Twitter, etc. For instance, until 2017, the characters limit per post in Twitter was 140 and this changed recently when the allowed number of characters was increased to 280 per tweet. Furthermore, comments on a YouTube post are limited to 200 characters, etc. This necessitates the use of shorter expressions and requires economy in writing. One of the means employed to achieve linguistic economy is the use of abbreviated forms including alphanumeric forms and rebuses. Thus, modern rebuses abound in these informal contexts; for example, *4U* for ‘for you’, *cul8r* for *see you later*, etc.

Such forms can also be used in the usernames of internet accounts as in emails and other social media applications. Today, rebuses are frequently used in netspeak and SMS via mobile phones. Users usually try to convey their message to the reader with the least number of characters. Pictures or images are rarely used in contemporary English rebuses; instead, emoticons or smileys are used to express specific meanings or feelings. Therefore, many researchers call these alphanumeric forms rebus-like forms rather than rebuses.

Crystal observed that some alphanumeric forms “are like rebuses, in that the sound value of the letter or numeral acts as a syllable of a word, or are combinations of rebus and letter initial: *B4N* [‘Bye for now’], *CYL* [‘See you later’], *L8R* [‘later’]” (2006, p. 90). Hence, these forms are sometimes called rebuses. Yule noted that in contemporary English, a process similar to rebus is used where symbols represent sounds of words, verbs, letters, pronouns, etc., e.g., *nd2spk2u2nite* which replaces a longer phrase: (“(I) need to speak to you tonight”) where 2 refers to *to*, *u* to *you*, *c* to *see* (Yule, 2017, p. 601). He defined this method as “a process used in writing in which a pictorial representation of an object is used to indicate the sound of the word for that object” (ibid, p. 820).

2.4.6.1.2 Numeronyms

Some alphanumeric forms (numeronyms) are formed by taking the first letter and the last letter of a lengthy term and writing the number of the remaining letters in between as a digit, e.g., *m17n* for *multilingualization*, where the number of letters between the first letter and last letter is 17. Some researchers claimed that the first numeronym of this kind was “*S12n*”, a username given by an administrator to Jan Scherpenhuizen, an employee at DEC (Digital Equipment Corporation), as this name is very complicated and difficult to use as a username for his account; besides, this name is too difficult to pronounce. Therefore, it was abbreviated to the numeronym “*S12n*” (Borisova, 2015, p. 7). The last letter can be dropped in some examples of numeronyms and this method is very useful in abbreviating complicated and lengthy terms, e.g., *P45* for *Pneumonoultramicroscopicsilicovolcanoconiosis*. Cole (1989, pp. 205–206) stated that the numeronym *P45* has been firstly coined in 1935 as an abbreviation for the very complicated term *Pneumonoultramicroscopicsilicovolcanoconiosis*. In some cases, a numeral is used to replace the number of repeated words that have the same initial, e.g., *M-4* for *Microwave Multi-Media Modules Initiative*, and *W3C* for *World Wide Web Consortium*. Another type of numeronyms is created by combining characters and numerals to represent large numbers by character-numeral compounds, e.g., *Y2K* for the *Year 2000*.

2.4.6.1.3 Abbreviation-numeral hybrid

Some alphanumeric forms are created by combining abbreviated forms with numerals; this form can be found in all contexts such as information technology, e.g., *Win10* for windows 10 (the operating system), *CAT-5* for Category 5 Cable (networking); military terms, e.g., *US1* for Unclassified Sensitive Information, Level 1; brand or product names, e.g., *LAV-C2* for Light Armored Vehicle - Command & Control; biology, e.g., *SAP90* for Synapse-Associated Protein 90; space, e.g., *ROCSAT-1* for Republic of China Satellite - Flight 1; Video games, e.g., *FIFA 20*, *NBA 2K20*; names of standards, e.g., *ISO 704*; names of celebrities or famous people, e.g., *CR7* which refers to the Portuguese football player Cristiano Ronaldo, etc. These forms are also employed in the language of the United Nations, for example: *COP21* which stands for ‘the twenty-first session of the Conference of the Parties to the United Nations

Framework Convention on Climate Change' (UNTERM). Yousif (2010, p. 317) gave an interesting example: *BLG 10* which stands for a lengthy term: the 10th session of the Sub-Committee on Bulk Liquids and Gases. Yousif asserted that "the impact of the resulting linguistic economy is compounded when the abbreviated denomination is repeatedly used in the same text, as it is often the case in committees' and working groups' reports" (ibid).

Alphanumeric forms can serve purposes other than abbreviation and linguistic economy; they can be used as learning aids for school children or new learners. Borisova noted that "the main function of a numeronym in any written text is to heighten the informativeness and capacity of a message, and, simultaneously, shorten it and "hide" its meaning from readers who don't belong to the specific community" (2015, p. 7). Alphanumeric forms can also serve as names or terms for many new discoveries, or designations for concepts. Many alphanumeric forms are being lexicalized and used as words or terms, as is the case with the above-mentioned term *P45*. Herring confirmed that netspeak and internet jargon are being frequently included in the dictionaries (2013, p. 6).

To sum up, alphanumeric forms can be created according to the following methods:

1. An alphanumeric form is created by combining both letters and numerals, and sometimes symbols and punctuation marks to replace a complex term or phrase. In some examples, the initial letters represent full words and the numerals represent real numbers, e.g., *G20* for the *Group of Twenty* (UNTERM). Letters and numerals, and sometimes only numbers, can be used to refer to a specific meaning related to that number, as is the case with *404* which refers to *page not found error*. Crystal (2006, p.21) observed that "in everyday conversation, terms from the underlying computer technology are given a new application among people who want their talk to have a cool cutting-edge". One of the examples he gave is "he's 404" to mean "he's not around" (ibid).
2. Some alphanumeric forms (numeronyms) are formed by taking the first letter and the last letter of the term and writing the number of the remaining letters in between as a digit, e.g., *a11y* for *accessibility*, where the number of letters between the first letter and last letter is 11.
3. The numeral in a numeronym can be used to represent a real number but is a part of the term or the abbreviated form as in: *Y2K38* (a computer system problem usually called the year 2038 problem) where *Y* refers to *Year*, *2K* to *2000* and *38* to the year.
4. Numerals in numeronyms can serve as symbols that are not connected to the sound or form of the words they represent, e.g., *P3P* for *Platform for Privacy Preferences Project*. Kairbayeva & Zhumabekova gave similar examples of numeronyms used in the language of the Internet such as *W3C* for *World Wide Web Consortium*, and *3Com* for *Computer, Communications and Compatibility* (2017, p. 179).
5. Alphanumeric forms (rebus) can be created by combining letters and numerals to represent words or parts of words that have an identical pronunciation, e.g., *B4* for *before*; *CU2* for *see you too*, etc.
6. The numeral in a rebus can replace the sound of a letter or of a syllable, e.g., *w8* for *wait*, *l8r* for *later*, etc.

7. The numeral in a rebus can represent the sound or syllable of a word or part of word, e.g., *G4U* for *good for you*.
8. In some cases, the shape of the numeral or character is used in the rebus to represent a letter with a similar shape, e.g., *id10t* for *idiot*, *M33t* for *meet*, *t#3* for *the* where the character # is similar in shape to the letter *h*. In other cases, a group of numerals are combined together to represent a word composed of a group of letters that are similar in shape to the numerals used to represent them, e.g., *1457* for *last* where the numeral *1* stands for the letter *l*, *4* for *A*, *5* for *S*, and *7* for *T*.
9. "Numerals can be used to replace letters that don't exist in the Roman alphabet; for example, a *2* is used to show an Arabic glottal stop, so that *insha'llah* 'God willing' appears as *insha2llah*" (Crystal, 2008b, p. 125). This case is used in Arabic texts.
10. Letters, numerals or typographic symbols can be used in rebuses to represent words, parts of words or "noises associated with actions: *b* be, *2* to, *@* at, *x* 'kiss'" (ibid, p. 37).
11. Emoticons, smileys, or some characters or symbols that look like emoticons are sometimes used to express particular meanings, e.g., *8-)* which refer to *cool* or *sunglasses* when the shape of the smiley looks like a face smiling or wearing a sunglasses. Crystal noted that in the case of emoticons, the shape of the symbol is more important than its pronunciation, as it gives the emoticon its meaning (when read sideways, with the head to the left), e.g., *:-)* 'smile', *;-)* 'wink' (ibid, p. 38).
12. Some alphanumeric forms are created by combining an abbreviated form with a numeral; these forms can be called 'abbreviation-numeral hybrids', e.g., *COVID-19* which stands for Coronavirus disease 2019, an infectious respiratory disease identified in 2019 in Wuhan, China.

2.4.6.2 Alphanumeric forms in Arabic

The alphanumeric form is also important in Arabic; this form is made up of letters and numbers to denote a term or phrase. Yousif defined alphanumeric forms as "units consisting of a combination of letters/words and numbers" (2010, p. 317). This type of abbreviated form abounds in the language of science and also in the academia.

In some cases, the letter represents an abbreviated form of a term or phrase and the number is a complimentary description of this word or term. For example:

3-مج = vol. 3

1ط = 1st ed.

4 جنيف = Geneva IV ⁽⁶⁾

Some of these forms are just written representations of the full forms in Arabic; in other words, they are pronounced as full words and written abbreviated. Thus, '3-مج' is

⁽⁶⁾ "also called the Geneva IV talks, were peace negotiations between the Syrian government and the Syrian opposition under the auspices of the United Nations. The talks took place between February and March 2017, trying to resolve the Syrian Civil War" ("Geneva peace talks on Syria (2017)," 2017).

pronounced as 'المجلد الثالث' (al mujallad ath thālith = the 3rd Volume). They are used in specific contexts such as archiving, documentation, etc.

Most of the examples of this type of abbreviated form are introduced to Arabic by way of translation as equivalent forms for the foreign forms. Another example is 'ريو+20' which is the Arabic equivalent for the English form *Rio+20*. The latter is an alphanumeric form standing for *the United Nations Conference on Sustainable Development (UNCSD)* which was organized in pursuance of General Assembly Resolution 64/236 (A/RES/64/236) ("United Nations Conference on Sustainable Development", n.d.).

The linguistic economy gains in such units are considerable and very obvious. In the above-mentioned example, an alphanumeric form of three elements (one word, one symbol and numeral) is substituted for a lengthy phrase of 21 words. The structure of alphanumeric form can include a combination of symbols, numbers, letters, full words, and even abbreviated forms. The word here often represents a phrase and thus it is a short form of a longer term and the number represents a date, version (could be of products, brands, etc.), series, and so on.

Alphanumeric forms are often pronounced as they are written and the language of science makes a good use of such forms in all languages, including Arabic. Chemical and mathematical symbols can also come in the form of alphanumeric forms in Arabic as in:

°90 (جيب الزاوية 90 درجة) جا 90° for $\sin 90^\circ$ (Sine 90°)
°90 (جيب تمام الزاوية 90 درجة) جتا 90° for $\cos 90^\circ$ (Cosine 90°).

2.4.6.2.1 Rebuses

Some alphanumeric forms or rebuses can also be found in the Arabic language of the internet or Netspeak. This kind of informal, colloquial language is mainly used by young people in specific contexts such as chatting, SMS, and social media applications like Facebook, twitter, snapchat, etc. Roman letters are used to write Arabic words and sometimes, letters are combined with Arabic numerals and this hybrid language is sometimes called Arabizi ("عربيزي" 2006). Each Roman letter is written represent an Arabic letter or sound; for example, the letter b represents the Arabic letter ب, t represents ت, and so on. As for the Arabic sounds or letters that do not exist in English, certain numerals are used to transcribe them. Although there is no unified method for the transcription of these numerals, the following are the most common used numerals and their phonetic values (ibid):

Numeral/ character	Arabic phonetic value (spelled out)	Romanization	Example	English transliteration	Meaning
2	ء همزة (hamzah)	'	masa2 al5ayr	Masā' al khayr	Good evening
3	ع ('ayn)	'	3eni	'ayni	My eye
4	ذ (dhāl)	Dh	4eeb	Dhīb	Wolf
5	خ (khā')	Kh	9aba7 al5ayr	Ṣabāḥ al khayr	Good morning
6	ط (tā')	T	6bee3i	Ṭabī'i	Normal
6'	ظ (dhā')	DH	6'reef	Dharīf	Funny
7	ح (hā')	H	7flt t5rj	Haflat takharrij	Graduation party
7'	خ (khā')	Kh	a7'bar	Akhabār	News
8	ق (qāf)	Q	l8ra2 Ketabk	lqra' kitābak	Read your book
9	ص (ṣād)	S	3a9eer	'aṣīr	Juice
9'	ض (ḍād)	D	9rt 9'ab6	Ṣār ḍābit	He became an officer

Table 3 – Rebuses in Arabic netspeak

2.4.7 Mixed forms

2.4.7.1 Mixed forms in English

Mixed forms are created by combining initialisms or initial letters with full words. These forms usually represent compound terms. According to Arnold, mixed forms are units of “initial abbreviations in which the first element is a letter and the second a complete word. The examples are: *A-bomb* for *atomic bomb*, *V-sign* [...] used for expressing victory or the hope for it” (1986, p. 145). Yousif described mixed forms as “terms that combine full-fledged words with abbreviations or acronyms: *INF code* (Code for the Carriage of Irradiated Nuclear Fuel, Plutonium and High-Level Wastes in Flasks on Board Ships), *NAP test* (Necessary Additional Pressure Test)” (2010, p.318). Mixed forms can also be formed by combining an abbreviated form with a full word, e.g., *Bsale* /bi: seɪl/ for big sale, or an abbreviated form with another abbreviated form, e.g., *EIS-SSA* for *Environmental Information Systems in Sub Saharan Africa* (UNTERM). Thus, some terms formed in this method undergo more than one process of word formation or abbreviation. For instance, *DVD-ROM* which undergoes multiple abbreviation processes; it is composed of initialism and acronym and stands for *digital versatile disc-read only memory*. A mixed form which is made up of a combination of an acronym and an initialism or vice versa is sometimes called an acronym-initialism hybrid, e.g., *WLAN* /ˌdʌblju: 'læn/ for Wireless Local Area Network, *JPEG* /'dʒeɪpeɪdʒ/ 'Joint Photographic Experts Group', *C-SPAN* /si: spæn/ for Cable-Satellite Public Affairs Network, etc. The first part is pronounced as a single letter and the second as a full word.

Such examples as *V-sign*, which were reviewed earlier are interesting, as they exhibit “the connection between the lexical system and paralinguistic means of communication, that is gestures, mimics and prosodic means” (Arnold, 1986, p. 145). Mixed forms are apparent means of linguistic economy because they abbreviate long phrases or terms into considerably shortened terms.

The most common type of mixed forms is made up by combining initial letters and full words; in other words, initial letters are the first element of a mixed form and full words are the second elements, or vice versa. Another type of mixed forms is composed by combining

an abbreviated form with another abbreviated form as in *T-Con* for Temporary Conservatorship (law), which combines initialism with acronymy. Sometimes, the letters and elements of a mixed form are reordered as in: *H-SAF* which stands for *Satellite Application Facility on Hydrology* (UNTERM), where the order of the letters constituting the mixed form were changed and the *H* of *Hydrology* was forwarded to the beginning of the abbreviated form instead of the end of the structure.

2.4.7.2 Mixed forms in Arabic

In Arabic, mixed forms are made up of a combination of words and abbreviated forms or vice versa, e.g., *Arab IGF* which stands for 'المنتدى العربي لحوكمة الإنترنت' for the English term *Arab Internet Governance Forum* (ibid). Yousif considered mixed forms as "terms that combine full-fledged words with abbreviations or acronyms: *INF code* (Code for the Carriage of Irradiated Nuclear Fuel, Plutonium and High-Level Wastes in Flasks on Board Ships), *NAP test* (Necessary Additional Pressure Test)" (2010, p.318).

Examples of mixed forms in Arabic are very rare in the literature and most of them are taken from other languages, particularly from English, by way of transliteration or full translation. However, a few examples can be found in Arabic such as in: 'كوريا-ج' (South Korea), and in Mathematics, some symbols come in the form of mixed forms such as 'معامل س' (mu'āmil sīn = X-Factor), and 'معامل ص' (mu'āmil ṣād = Y-Factor); these are numbers or symbols used in mathematics and when multiplied together, they form a product. Some examples are made up of a full word followed by a letter which represents another word, e.g., 'أميركا ش' (lit. N-America) for 'أميركا الشمالية' (North America). Thus, the abbreviated part here 'ش'(N) for 'الشمالية' (ash shamāliyyah = North) is only a written representation of the full word, i.e., it is an abbreviation, and is pronounced as a full word. Al-Kasimi (2008, p.495) referred to this type of abbreviated form as "hybrid abbreviation" and added that it is created from the initials of the words of the full form. Some of these letters are read separately as in initialisms, and other letters are read as acronyms. For example, the hybrid abbreviation *MS-DOS* which is composed of two parts; the first part is pronounced as /əm əs/ and the second part is pronounced as /dos/ and the whole unit is pronounced as /əm əs dos/. Al-Kasimi stated that he did not find any example of hybrid abbreviation in the Arabic language (ibid). However, mixed forms can be found in Arabic despite the fact that their use is limited. Moreover, all the above-mentioned English mixed forms can be rendered in Arabic mixed forms by way of transliteration. Thus, the same above-mentioned example can be used in Arabic with the same pronunciation: 'أم.أس-دوس' /əm əs dos/.

2.4.8 Short forms

2.4.8.1 Short forms in English

A short form, as the name suggests, is a shorter form of a longer term or title. This type of abbreviation is formed by shortening a multiple-word phrase to fewer words and sometimes to one word, e.g., *the convention for the Convention for the Protection of the World Cultural and Natural Heritage* (UNTERM). According to Valeontis & Mantzari, "the short form is an abbreviated form of a complex term or name of considerable length in words. It uses fewer words in order to designate the same concept" (2006, p. 6).

From terminological perspective, ISO 704 stated that short forms are created by reducing long full forms and using “fewer words to designate the same *concept* than the corresponding *full forms*” (ISO 704, 2022, p.65). Wright & Budin (1997, p.332) defined a short form as the introduction of a lengthy complex term by using fewer words, but this process does not involve abbreviation or initialization, e.g., *Group of Twenty-four* for the “full form *Intergovernmental Group of Twenty-four on International Monetary Affairs*” (ibid). It can be noted that this type of abbreviated form abounds in the texts of the UN, especially in legal texts. For example, *the Report for The Africa Data Revolution Report 2016*. In most cases, the full form is shortened to one word preceded by a definite article. They usually need a context to explain their full forms. Some short forms are not meaningful without the definite article, e.g., *the Fed* which stands for *the Federal Reserve System*, the central banking system of the United States of America.

Like alphanumeric forms and mixed forms, short forms can be means of maximum abbreviation in which very lengthy terms are abbreviated to very simple forms in a text, e.g., *the Commission for the International Commission of Inquiry on Darfur* (UNTERM), or *the Convention for the European Convention for the Protection of Human Rights and Fundamental Freedoms* (ibid). This type of abbreviation is a very useful tool of linguistic economy that helps in the facilitation of communication and simplification of lengthy and complex terms.

2.4.8.2 Short forms in Arabic

In Arabic, a short form involves reducing a long phrase or term to a shorter form by removing some of its words and confining to one word or to fewer words for the sake of brevity and avoiding the repetition of long terms and phrases. For example, *المبادئ التوجيهية* (Operational Guidelines) for ‘المبادئ التوجيهية لتنفيذ اتفاقية التراث العالمي’ (Operational Guidelines for the Implementation of the World Heritage Convention)⁽⁷⁾. In this example, two words substituted seven words; this type of shortening abounds in legal and official texts, e.g., *السجل* (as sijill = the register) or ‘سجل الأضرار’ (sijill al aḍrār = register of damage) for ‘سجل الأمم المتحدة للأضرار الناشئة عن تشييد الجدار في الأرض الفلسطينية المحتلة’ “The Register of Damage for the United Nations Register of Damage Caused by the Construction of the Wall in the Occupied Palestinian Territory” (Couvreur, 2016, p. 125).

In most cases, the short form is composed of one word to replace a phrase or a lengthy term, e.g., ‘المحكمة’ (al Maḥkamah = the Court) for ‘المحكمة الجنائية الدولية’ (al Maḥkamah aj Jinā’iyyah ad Duwaliyyah = the International Criminal Court). Short forms are often used in long texts in order to avoid repeating lengthy phrases or terms in the same text. This type of abbreviation is characterized by linguistic economy, in that too lengthy terms are reduced to smaller forms made up of one or two words. The context in such type of abbreviated form should be always present in order to determine the full form of this short form. The review shows that this type of abbreviated form is rarely addressed in the literature of Arabic abbreviated forms.

⁽⁷⁾ <https://whc.unesco.org/archive/opguide05-arb.pdf>

2.4.9 Symbols

2.4.9.1 Symbols in English

Symbols are important parts in human communication, as they can bridge the barriers of the languages of the world; they can be letters, characters, words, sounds, gestures, images, etc. Symbols were among the first forms of human communication, as is the case with the drawings and symbols used in ancient civilizations. In its simplest sense, a symbol is something that represent or stands for something else.

Cuddon described symbol as “an object, animate or inanimate, which represents or ‘stands for’ something else” (2013, p. 699), whereas according to Bussmann, it is “a class of signs in which the relation between the sign and the denoted state of affairs rests exclusively upon convention. The meaning of a symbol is established within a given language or culture” (1996, p. 1157). A symbol can also be a logo or silhouette that refers to something like an entity or institution; or a thing that denotes an object (ibid). Similarly, Danesi (2009, p. 281) defined symbol as a “sign that represents or refers to something in an arbitrary, conventional way”; he added that a symbol can be “any sign referring to an abstract notion” (ibid). Allot provided the same definition for symbol and added that the resemblance between the symbol and its referent is not exact and that the relation between the symbol and the object it represents is accidental or conventional, especially when the symbol is a material object denoting an immaterial or abstract thing (Allott, 2012, p. 281). According to Oxford Learner's Dictionary online, “symbol (for something) a sign, number, letter, etc. that has a fixed meaning, especially in science, mathematics, and music” (“symbol”, n.d.).

Symbols can be used metaphorically to imply figurative meanings in addition to their literal meanings. Hence, at the level of words, *lion* symbolizes courage, *black* symbolizes evil or death, etc. Barker asserted that “the use of metaphor, which involves the replacement of one signifier by another, is a symbolic act. Indeed language is clearly a symbolic system that relies on metaphor to the point that all language use is metaphorical” (2004, p. 196). A symbol is a thing that denotes something else, it can be a letter, character, mark, word, image, color, etc.; in other words, anything can be a symbol. An example of colors as symbols is *the Reds*, which stands for Liverpool English football club, and *the Blues*, which stands for Chelsea English football club, etc.

Owing to their short forms, some symbols like letters, characters, images, etc., are very economical in terms of space and, therefore, they are exploited in labels, headings, tables, diagrams, equations, and so on. Pettersson observed that symbols are important tools in modern societies; by the use of symbols, space is saved and shorter units are used in conveying longer texts. However, texts may be more efficient than symbols in conveying detailed or abstract information (1999, p.1). ISO 704 stressed that “symbol systems facilitate international communication, as their visual representation of *concepts* functions independently of any given *natural language*. They can communicate information directly under difficult circumstances (e.g. traffic signs, airport signs” (2022, pp. 50-51). Hence, symbols can facilitate the organization and understanding of meanings. However, “only non-linguistic representations that represent *concepts* are considered *symbols*” (ibid).

2.4.9.1.1 Linguistic symbols

Letters, parts of words and words can function as symbols. Some letters are used to symbolize specific meanings; for instance, the letter e- is used as a prefix to refer to something that is *electronic* as in *e-mail*, *e-learning*, *e-cigarette*, etc. In the language of science, symbols play an important role as names for units of measurements, quantities, elements, and so forth. One of the main domains in which symbols are formed, organized, used, and standardized is the International System of Units (SI). Wikipedia stated that:

The International System of Units (SI, abbreviated from the French *Système international (d'unités)*) is the modern form of the metric system and is the most widely used system of measurement. It comprises a coherent system of units of measurement built on seven base units, which are the second, metre, kilogram, ampere, kelvin, mole, candela, and a set of twenty prefixes to the unit names and unit symbols that may be used when specifying multiples and fractions of the units. The system also specifies names for 22 derived units, such as lumen and watt, for other common physical quantities. ("International System of Units", 2001)

According to SI, quantity and dimension symbols are written in a specific way. Thus, area is represented by L^2 , velocity by LT^{-1} , force by LMT^{-2} , etc. (Taylor & Thompson, 2008, p. 11). It is recommended to write these symbols with single Latin or Greek italicized letters (ibid, p.23). Such recommendations and rules would enhance the quality of scientific language. Some examples of SI units are: *Pa*, *pascal*; *m*, *meter*; Ω , *ohm*; $m\ kg/(s^3\ A)$, etc. (ibid, p.39). Another rule in SI is to print unit names in upright roman font and treat them as ordinary nouns. When they are not at the beginning of a sentence, names of units are written with lower-case letters.; for instance, the symbol $^{\circ}C$ should be written as *degree Celsius* (ibid, p.40). Other examples of unit names and their symbols:

"unit name	symbol
joule	J
hertz	Hz
meter	m
second	s
ampere	A
watt	W" (ibid).

IUPAC (The International Union of Pure and Applied Chemistry) provided many examples of symbols used in the field of Geometry. It stated that the symbol is formed by combining the abbreviation of polyhedrons (three dimensional shapes), followed by a hyphen and the number of attached atoms, e.g., *TPY-3* for *trigonal pyramid*; *TS-3* for *T-shape*; *OC-6* for *octahedron*, etc. (Favre & Powell, 2014, p. 1218). The International Union of Pure and Applied Physics (IUPAP) has also produced many names and symbols for units, elements, and quantities. The IUPAP-IUPAC joint working party has published a report in 2016 in which it announced the names of some recently discovered elements. Such elements are usually named after the person who discovered them or the place in which they were discovered. Symbols for these elements were created by taking two letters of the full name of the element. For example, Element 115 was given the name *Moscovium* in reference to the city in which it was discovered, and it was given the symbol *Mc*. Moscow was "the location of the Joint Institute for Nuclear Research in Dubna, which was the home of the accelerator used to initiate the reactions leading to this element" (McKellar, 2016, p. 1).

In Physics, symbols representing physical quantities are formed by using Latin or Greek single or two letters, “with or without modifying signs (subscripts, superscripts, primes, etc.)” (Cohen & Giacomo, 1987, p. 2); for example, C_g (g = gas) C_p (ibid). As for unit symbols, they are created by abbreviating the full name of the unit to one letter, or two letters the first one of which is capitalized. If the full name of the unit is not a proper name, it is typed in a small letter without dots and without the s of pluralization, e.g., W for *Watt*, m for *metre*, Wb for *weber*, etc. (ibid, p.4). Furthermore, “An intensive molar quantity is usually denoted by attaching the subscript m to the symbol for the corresponding extensive quantity, (e.g., volume, V ; molar volume, $V_m = V/n$)” (ibid, p.7). Cohen & Giacomo recommended to write chemical element symbols with roman (upright) font without a dot, while “the nucleon number (mass number, baryon number) of a nuclide is shown as a left superscript (e.g., ^{14}N)” (ibid, p.9). It has been apparent that a large number of scientific symbols are made up of letters (whether Greek or Latin), characters and numerals, i.e., in terms of their forms, these symbols are alphanumeric forms.

2.4.9.1.2 Iconic symbols (image-related symbols)

Another type of symbols is the image-related symbol which can be a picture, logo, drawing, etc.; they are also called graphical or iconic symbols. An icon is a kind of visual or image-related symbol that represents an idea, concept, or object. There are many image-related symbols in our everyday life, for example, the smileys, traffic signs, currency symbols, zodiac symbols, etc. Iconic symbol is a symbol that visually resembles the object or concept it stands for; an image or logo is considered an iconic symbol, e.g.,  for Bluetooth. ISO 704 stated that there should be a visual resemblance between the iconic symbol and its referent where the meaning of the symbol is clear and needs no further explanation. However, some symbols show less or even no visual resemblance between the symbol and the concept they represent. In this case, the meaning can be inferred “only by general agreement” (ISO 704, 2022, p. 51). Pettersson called these forms ‘pictorial symbols or representational symbols’; they are simple images that resemble their referents. They take one of the following forms: “*silhouettes*, shadows, or profiles with no surface detail. A traffic sign with a silhouette of a locomotive, to denote a railroad crossing, is an example of a pictorial symbol” (Pettersson, 1999, p. 2). Cuddon cited some examples of images and their symbolisms; he stated that “scales, for example, symbolize justice; the orb and sceptre, monarchy and rule; a dove, peace; a goat, lust; the lion, strength and courage; the bulldog, tenacity; the rose, beauty; the lily, purity; the Stars and Stripes, America and its States” (Cuddon, 2013, p. 699).

Characters and punctuation marks are also used to form symbols, e.g., the exclamation mark used in the traffic sign  to illustrate or refer to danger or that you are approaching a hazard or a place to stop. The emojis and smileys used to communicate in the textspeak and netspeak contexts usually make use of such characters and punctuation marks to form these symbols. A symbol can be anything that refers to a specific meaning; it can be a picture, logo, color, person, word, sentence, etc. Furthermore, some authors consider the linguistic units of language in general as symbols. For Harley, language is “a system of symbols and rules that enable us to communicate. Symbols are things that stand for other things: Words, either written or spoken, are symbols. The rules specify how words are ordered to form sentences” (2014, p. 5).

Compared with regular language, i.e., words and sentences, image-related symbols take less time and effort to be perceived. In academia, presentations of studies and researches

depend on image-related symbols to a large extent. It can be said that a picture is worth a thousand words. Thus, image-related symbols are very important in the communication of messages; symbols can be internationally recognized irrespectively of any language, e.g., the image-related symbols used in roads, industry, weather forecast, computer, trade, etc. ISO 704 has emphasized this view and considered symbols significant tools that facilitate global communication, “as their visual representation of *concepts* functions independently of any given *natural language*. They can communicate information directly under difficult circumstances (e.g. traffic signs, airport signs)” (ISO 704, 2022, pp.50-51). Indeed, the current era is witnessing many changes in language as a means of communicating messages among the language users. Danesi observed that the ‘Print Age’ dictated the use of alphabetic writing in general, and in writing messages in particular, whereas “the current Internet Age encourages different modes of writing (visual and audio) to be utilized in tandem with alphabetic (and nonalphabetic) scripts in the composition of messages” (Danesi, 2017, p. 4).

2.4.9.2 Symbols in Arabic

A symbol is sometimes considered a type of abbreviated form in Arabic. Al-Kasimi defined symbol as “a letter, number or sign indicating a concept, thing, case, or object” (2008, p.488). Symbols abound in the language of science and they distinguish it from general language; they are used in equations, pictures, tables, illustrations, diagrams, etc. There is no complete integrated system of scientific symbols in the Arabic language for writing mathematical and chemical equations, units of measurement, nomenclature, diagrams, and illustrations. Therefore, when a scientific book is translated into Arabic, the translator may resort to using some symbols in Latin letters (ibid, p.496).

However, some Arabic language academies and some researchers addressed this issue and carried out some studies in this regard. In an attempt to organize the use of symbols in the Arabic scientific language, the Arabic Language Academy in Cairo tasked three of its specialized scientific committees (namely, the committees for physics, mathematics and chemistry) to prepare a bulletin of Arabic equivalents for the international systems of scientific symbols, units and nomenclatures in order to unify their use in various Arabic scientific institutions such as schools, universities, research centers, and industrial bodies (Mukhtār, 1986). In the mid-1980s, and based on the “Red Book” compiled by the by the Commission for Symbols, Units and Nomenclature (SUN) of the International Union of Pure and Applied Physics (IUPAP), the committee prepared a comprehensive study on the standardization of symbols, units and nomenclature in Arabic scientific language in general and in mathematics, physics and chemistry in particular. They based their bulletin on a number of criteria to select the symbols and units such as:

1. The use of the normal Arabic alphabetical letters ‘أ, ب, ج, ...’ for the foreign Latin letters (a, b, c, ...). The Arabic letter should be selected from the name of the unit or quantity, e.g., ش (sh) for الشغل (ash shughl = work), كج (Kg) for كيلو جرام (kilogram).
2. The use of Greek letters such as α , β , γ , etc., which have been in use in the living languages as scientific symbols to represent common units, symbols or quantities, e.g., ω for ‘تردد دائري’ (taraddud da’iri = angular frequency).
3. The use of the international mathematical letters, symbols or signs that indicate specific operations or meanings in their current forms such as (+, -, ÷). When a symbol is affected by its direction as in (>, $\int$, $\sqrt{}$, .), the direction is converted from right to left.

4. Mathematical equations are written from right to left according to the Arabic writing system.
5. A symbol indicating a vector is distinguished by adding an arrow above it in handwriting and in bold font in typing. A symbol indicating a mean is distinguished by adding a dash above it.
6. Chemical symbols were already approved by the Academy, and are used currently in the scientific teaching and writing.
7. Additional superscript or subscript letters can be added to the left or right of the symbol, whether it is a mathematical, physical or chemical, in case that it is necessary to add these letters for the sake of more clarity or description, e.g., χ for 'قابلية كهربائية' for the English symbol χ_e (electric susceptibility) (ibid, p.24).

The bulletin contained an Arabicized version of the coherent system of units which covers many systems such as the International System of Units (SI) and other systems (ibid).

Hazīm defined symbol as a form that is agreed on by authors in a science or an art to indicate a meaning, concept, or thing. Symbols can be signs, shapes, or drawings, such as the signs of multiplication, addition, subtraction and division, or the use of the sign < between two numbers to refer that the first number is bigger than the second, or the sign > to refer to the opposite, etc. (Hazīm, 2010, pp.100-101).

Al-Kasimi stated that there are three types of symbols:

- A. **Literal symbols:** Some symbols may come in the form of letters, as is the case with the letter 'س' (s) which denotes the unknown in the language of algebra.
- B. **Numeric symbols:** Symbols may take the form of numbers which may consist of one or several digits arranged according to a specific mathematical system.
- C. **Sign symbols:** A symbol can be a sign. The most common signs used in the Arabic language are mathematical signs and punctuation marks, e.g., +, -, =, %, etc. (ibid, pp.488-489).

The majority of definitions of abbreviated forms cited in the works of Arabic authors resembles the definitions of abbreviated forms in the English language. On the other hand, similar definitions are often provided for each type of abbreviated form. The disagreement over definitions is not very serious, although these definitions do not cover all types of abbreviated forms in Arabic. The disagreement lies rather in the typology of abbreviated forms. Abbreviations, initialisms, blends, and acronyms are seemingly the most commonly used abbreviated forms in Arabic. However, some types of abbreviated forms such as alphanumeric forms and clippings are rarely addressed and sometimes not addressed at all in the works of Arabic authors, either due to their limited use in Arabic in general, or due to the newness of these forms for the Arabic language compared with English, or it could be attributed to the lack of knowledge as regards these forms. However, these abbreviated forms exist in Arabic and are found in certain contexts.

2.5 Punctuating abbreviations

Generally speaking, there are no strict rules for the punctuation of abbreviated forms, as there are different methods of reference work and it can be said that the choice is a matter of preference. For example, the *APA Publication Manual* recommends that “titles such as *PhD* should not be punctuated, whereas other reference works recommend the opposite” (Drewer et al., 2020, p. 7). In some contexts of scientific language, the use of periods after abbreviated forms is not common, as is the case with “SI units, which are never used with periods, as well as to chemical elements, currencies, and clipped terms” (ibid). Abbreviations are usually followed by a period, e.g., *Gen.* for *general*. However, it is common in British English to use abbreviations without periods, e.g., *Dr*, *Mr*, while they are still punctuated with periods in American English. Initialisms in English are not punctuated with periods when the letters represent full words, e.g., *EEC* for *European Economic Community*, *FBI* for *Federal Bureau of Investigation*, etc. (Quirk, Greenbaum, Leech, & Svartvik, 1985, p. 1581). Yet, some initialisms in American English can take periods alternatively, e.g., *USA* or *U.S.A.*, *US* or *U.S.* In this regard, Mattia noted that the practice of using periods with initialisms is “rapidly declining” (2003, p. xvi). Acronyms are usually (but not always) written without periods, e.g., *NASA*, *OCHA*, etc. Some examples show that both cases are possible, e.g., *ASAP*, *A.S.A.P.*, or *asap*.

When abbreviations have the same form of established words, it is a good practice to follow them by periods to differentiate them from full words, e.g., *no.* for *number*, *fig.* for *figure*, etc. Although there are no strict rules for the use of periods in abbreviated forms, it is noted that American English tends to use periods more often than British English does.

Similarly, there are no strict rules for the punctuation of abbreviated forms in Arabic. The letters constituting the abbreviations and initialisms are usually followed by a period, except for the last letter which is often not followed by a period, e.g., ‘ج.ع.د.’ (J.’A.D) for ‘الجيش العربي الاردني’ (aj Jaysh al ‘arabi al Urduni = Jordanian Arab Army) (Al Aqtash, 2011, pp. 82-83). Another example is ‘ص.ب.’ (S.B) for ‘صندوق بريد’ (ṣundūq barīd = P.O. Box), where only the first letter is followed by a period. Zaki cited some examples of abbreviations and initialisms from classical Arabic where two or more letters are taken from the full form and followed by a period as in ‘ر.ه.’ (rḥh.) for ‘رحمه الله’ (rahīmahu Allah = may Allah have mercy on him), ‘أنا.’ (ana.) for ‘أنبأنا’ (‘anba’na = informed us), etc. (1912, p. 37). However, some authors suggested the use of the initial letters of phrases or terms without the use of periods, for example: ‘ع ط أ ت ك’ (‘ATATK) for ‘علم الاطياف الالكتروني للتحليل الكيميائي’ (electron spectroscopy for chemical analysis); Ṣālīḥ preferred to spell out this initialism as a string of separate letters (‘عين طاء ألف تاء كاف’ = ‘ayn ṭā’ alif tā’ kāf) (Ṣālīḥ, 2000, p. 1020). Likewise, Khalīfah used the initialism ‘ج م ع’ (JM’A = jīm mīm ‘ayn) for ‘جمهورية مصر العربية’ (Jumhūriyyat Miṣr al ‘arabiyyah = Arab Republic of Egypt), without the use of periods after the letters (1994, p.22).

2.6 Typology of abbreviated forms

2.6.1 Typology of abbreviated forms in English

Different and sometimes contradicting views have been introduced as regards the types of abbreviated forms in English. Wright & Budin (1997, pp.332-333) classified abbreviated forms of terms into six types: short forms, abbreviations proper, initialisms, acronyms, mixed forms, and blends. In the same book, Sager (1997, p. 38) categorized clippings under compression and considered it a very productive method of term formation. Ginzburg, Khidekel, Knyazeva, & Sankin classified lexical abbreviation into “ellipsis or substantivisation, initial letter or syllable abbreviations (also referred to as acronyms), blending, etc.” (1979, p. 188), while Kreidler proposed three types of ‘reductions’: acronyms, back-formations, and clippings, and associated blends with clippings; he namely called them ‘multiple clippings’ (Kreidler, 1979, p. 24). Felber (1984, p. 179) distinguished between three types of shortened terms: abbreviations, initialisms and acronyms. He subcategorized initialism into terms which are pronounced letter by letter, e.g., *ftc* for *fast time constant*; and terms which are pronounced as words, e.g., *laser* for *light amplification by stimulated emission of radiation*. The classification of Felber is different from others’, in that clippings and blends are categorized under acronyms and acronymy is categorized under initialism. For him, an acronym is an initialism read as a word, while other authors considered an acronym a separate type of abbreviated form. He explained that acronyms are created when the elements of a complex term are clipped and blended, e.g., *roowaste* for radioactive waste, and *lineae* for linear accelerator. However, these two examples are blends rather than acronyms, because an acronym is usually made up of initials of a multiple-word term, while the examples Bauer gave are made up of segments larger than initials. Marchand (1960, p. 2) classified blending and clipping under non-grammatical syntagmas as these forms are “not made up of full linguistic signs” (ibid), whereas Bauer (1983, p.232) proposed to group acronyms, initialisms, clippings, blends, manufactured words, and back-formations together as unpredictable forms rather than shortenings.

Within this typological inconsistency of abbreviated forms, Quirk, Greenbaum, Leech, & Svartvik (1985, pp. 1581-1582) stated that acronyms are of two types: acronyms which are read letter by letter (initialisms), and acronyms which are read as words. The two concepts, i.e., acronym and initialism, were not clearly categorized. Initialism was considered a type of acronym, whereas it has been shown in the discussion of previous sections that acronym and initialism are two different types of abbreviated forms. Some views state that abbreviation is one of the word formation processes just like derivation and compounding. O’Grady & Guzman (1996, p. 160) included clippings, blends and acronyms in these abbreviation processes.

Huddleston & Pullum (2002, p. 1632) included initialism, clipping and blending (in addition to word-manufacture (which refers to coinage), back-formation, and phonological modification) in “minor word formation processes”, because they do not produce new words that have new meanings, or “words of a distinct morphological structure”. They maintained that such abbreviated forms “are based on spelling rather than on pronunciation, and hence they are irrelevant to languages without an established writing-system” (ibid). However, some abbreviated forms are not based on existent full forms in the languages in which they are used; rather, they are borrowed from other languages so as to

give them a generic characteristic and use them in all contexts regardless of the languages or regions in which they are used. This method is useful in the unification of terms; an example is the term *ISO* for the *International Organization for Standardization*. As the abbreviated form of this organization varies from one language to another (*IOS* in English [from *International Organization for Standardization*], *ION* in German [from *Internationale Organisation für Normung*], *OIN* in French [from *Organisation internationale de normalisation*], etc.), the founders of the organization opted for *ISO* which is taken from the Greek word 'isos' which refer to 'equal'⁽⁸⁾.

Gramley & Pátzold (2004, p. 38) argued that shortenings include back formations, initialisms, clippings or stump words and ellipses, whereas Crystal (2008a, p. 57) divided abbreviations into initialisms, acronyms, clippings, and blends, and Mattiello (2012, p. 152) proposed a similar typology of various "morphological processes" in which she listed the above-mentioned four types in addition to backformation (*ibid*).

Another typology is proposed by Dvorinovich (2012) in which he classified abbreviated forms into two main types: initial abbreviations and combined abbreviations:

- 1) initial:
 - alphabetic – where words are pronounced as letters in the Alphabet: BBC, MP, PC etc.;
 - letter-sound: VTOL [vi:tol] = VerticalTake-Off and Landing;
 - acronyms – words are read as they supposed to be pronounced according to the reading rules: NATO ['neitou], UFO ['ju:fou], LASER ['leizər].
- 2) combined, which means connection of truncation with initial abbreviations: Univac = Universal automatic computer. (Dvorinovich, 2012, pp. 2-3)

In Dvorinovich's typology, letter-sound abbreviations are confused with combined abbreviations as both can refer to mixed forms. Besides, his classification misses some types of abbreviated forms such as blends and abbreviations.

Kuznetsov (2015, p.3), Khalilova (2012, p.12), Dribniuk (2009, p.209), and Ginzburg, Khidekel, Knyazeva, & Sankin (1979, p.188) classified abbreviated forms in general into graphical abbreviated forms and lexical abbreviated forms. Kuznetsov added that graphical abbreviated forms include abbreviation, clipping, and blending (*ibid*). Kostina, Zerkina, & Pesina (2015) provided a similar but more detailed classification:

- I. Graphic Type: Occasional. E.g. [...], *Mea* (*Municipal Employers Association*); Standard. E.g. *P/E* (*probable error*) [...];
- II. Lexical Type: Clippings: Back-clipping. E.g. *Adm* (*administration*) [...]; Fore-clipping. E.g. *to fess* (*confess*) [...]; Fore – and back – clipping. E.g. *tec* (*detective*) [...]; Middle-clipping. E.g. *Pty* (*party*). (Kostina, Zerkina, & Pesina, 2015, p. 708)

Other types of abbreviations in their typology are:

1. Initialisms: Alphabetic. E.g. *TA* (*transfer agent*) [...]; Acronyms. E.g. [...] *WINGS* (*warrants into negotiable government securities*) [...]. Alphabetic acronyms. E.g. *T-bond* (*Treasury bond*) [...].
2. Mixed abbreviations: Clipping + initialism. E.g. *Sy G* (*Secretary General*) [...]. Blends. E.g. *Spansule* (*span+ capsule*) [...]; Contracture. E.g. *La* (*Louisiana*) [...]. Partially abbreviated words. E.g. *G8* (*Group of Eight*), *G77* (*Group of Seventy Seven*). (*ibid*)

⁽⁸⁾ <https://www.iso.org/about-us.html>

Generally speaking, graphical abbreviations refer to those forms which are written abbreviated but are pronounced as full words, while lexical abbreviations are written abbreviated and pronounced as they are written. In the above-mentioned typology by Kostina, Zerkina, & Pesina (2015), abbreviated forms are classified into two main types: graphic and lexical. Graphic abbreviation in turn is subclassified into occasional and standard. An example given by Kostina, Zerkina, & Pesina for occasional graphic abbreviations is *Mea* (*Municipal Employers Association*). Based on its pronunciation, it seems that *Mea* could be an acronym rather than an abbreviation; in other words, it belongs to the lexical type rather than to the graphic type of abbreviated forms. The second main type of abbreviated forms in the typology of Kostina, Zerkina, & Pesina is the *lexical type*; it covers clippings, initialisms, and mixed abbreviations. Kostina, Zerkina, & Pesina cited *Pty* as an example of middle-clipping, whereas it is rather an abbreviation because it is pronounced fully and is only a graphical representation of the full form. On the other hand, there was a confusion of types with other authors, because what Kostina, Zerkina, & Pesina called here an alphabetic acronym is a mixed form for others as in the example *T-bond*. Tenny called such forms ‘acronisms’, and maintained that an acronism is composed of two parts, one is an acronym and the other is an initialism, i.e., one part of the form is pronounced as a syllable and the other part as a full letter, e.g., *LSAT*, which is pronounced as *L + SAT* (Tenney, 2012). Also, Kostina, Zerkina, & Pesina categorized clipping + initialism under mixed abbreviations (Partially abbreviated words) such as *G8* (*Group of Eight*), whereas it is rather an alphanumeric form, because it is coined by combining an initialism or a letter with a numeral.

In Wagner’s view, acronyms and initialisms are in turn classified into the following types:

- Acronyms containing non-initial letters (*Interpol* - **I**nternational **C**riminal **P**olice **O**rganization, *radar* - **r**adio **d**etection **a**nd **r**anging)
- Pronounced as a combination of initialism and acronym (*CD-ROM*, *JPEG*)
- Recursive initialisms, in which the abbreviation refers to itself (*PHP* - *PHP* *hypertext preprocessor*)
- Pseudo-initialisms, which consist of a sequence of characters that when pronounced as intended, invoke other, longer words (*IOU* – *I owe you*, *CU* – *See you*). This kind of initialism is frequently seen on the internet.
- Initialisms whose last abbreviated word is often redundantly included anyway (*PIN number*) (*Acronym and Initialism*). (Wagner, 2010, p. 5)

The review has shown other cases of inconsistency in the typology and naming of abbreviated forms in the works of some linguists and researchers. For instance, Wagner (ibid) classified blends and acronyms under acronyms containing non-initial letters. There were other examples which raise some issues regarding typology such as *CD-ROM* and *JPEG*, where she considered them acronyms, whereas they can fall under mixed forms, and *Interpol* which she considered an acronym, whereas it is deemed a blend by others.

Bhagavan & Priyadarshani classified abbreviated forms (they called them shortenings) according to their methods of formation into two types. The first type includes the words which are created from a syllable or two syllables of the original words. For example, *fridge* from refrigerator, *bike* from bicycle, *blog* from weblog (2013, p. 30). This type is considered a clipping by other authors. The second type includes initial shortenings which are new words created from the initial letters such as *M.P.* from *Member of Parliament* (ibid); this type of

abbreviation is rather an initialism. In other words, the classification of Bhagavan & Priyadarshani is limited to clippings and initialisms.

The disagreement on types of abbreviated forms extends even to the sub-types themselves. Harley (2004, p.369) argued that “there seems to be a fairly general process determining the categorial status of abbreviations which distinguishes acronyms from initialisms”. In some studies, acronyms are classified under blends, and in other studies, blends are deemed subtypes of acronyms. Stockwell & Minkova (2001, p. 7) considered acronyms a special type of blends, and so did Carstairs-McCarthy (2002, p. 124) who defined acronym as a “blend incorporating only the initial letters of its components, e.g. *NATO*”. Similarly, Plag maintained that the blends which are used only in writing are considered acronyms; he added that the creation of such forms involve joining initial letters of multiple words and reading the new form as an ordinary word (2003, p. 13). Harley (2006, p. 96) argued that both acronyms and initialisms are kinds of ‘extreme clipping’ in which initial letters of the full forms are used “to stand in for the whole phrase” (ibid).

However, the majority of studies sets pronunciation as a criterion to differentiate between the various types of abbreviated forms such as acronyms, initialisms and abbreviations. An acronym is usually read as a regular word, initialism is read as a sequences of letters, and abbreviation is read as a full word/ full words (Vişan, 2013, p. 2), (Bhagavan & Priyadarshani, 2013, p. 28), (Pop & Sim, 2009, p. 557), (Moropa, 2007), (Pütz, 1991, p. 373), (Arnold, 1986, p. 142), and others. Unlike other authors who were mentioned above, Carstairs-McCarthy (2002, pp. 65–66) pointed out that when an abbreviated form is pronounced as a string of separate letters, it is an abbreviation rather than an acronym.

The distinction between initialisms and acronyms is sometimes not clear-cut but rather arbitrary. Many speakers do not distinguish between the two, especially when they pronounce an acronym as a string of letters or vice versa and hence, they confuse acronyms with initialisms. There appears to be another problematic area, in that the pronunciation in some examples is not an adequate criterion to differentiate between acronyms and initialisms. Vişan observed that “phonological rules do not predict why some formations such as *OD* (< Over-Dose), or *BO* (< Body Odour) cannot be acronyms (since they can be easily pronounced as one word)” (2013, p. 3). However, these examples are rather lexicalized initialisms. “*OD*” is a rare example of an abbreviated verb: He *OD'd* on heroin. When we found *him*, he was *OD'ing* on heroin. In spoken English usage, *BO* is probably more common than ‘body odour’.

Other lexical abbreviated forms like clippings and blends are usually pronounced as regular words, while mixed forms, and short forms are often pronounced as they are written. Alphanumeric forms in general are pronounced as strings of initials followed by numbers, and sometimes full words followed by numbers, and the same applies to letter or word symbols.

The main point which has been clear throughout the review is that there is no unified typology of abbreviated forms in English; there is no agreement amongst linguists on the main types of abbreviated forms and even on the subtypes. Besides, the same types are sometimes known by different terms; for example, the concept initialism is called

alphabetism by others, blending is called portmanteau words by others, clipping is called shortening by others, and so on. Furthermore, there is inconsistency over the subtypes themselves, in that some types are classified as subtypes of each other. Nevertheless, the main typology of abbreviated forms in English is attainable; it needs to be simplified to the clearly defined nine types which are abbreviations, acronyms, initialisms, blends, clippings, alphanumeric forms, mixed forms, short forms, and symbols. Each type of these nine abbreviated form types can be in turn sub-classified into various types. Figure 1 below shows the main types of abbreviated forms in English which were found throughout the literature review and discussion of the English part:

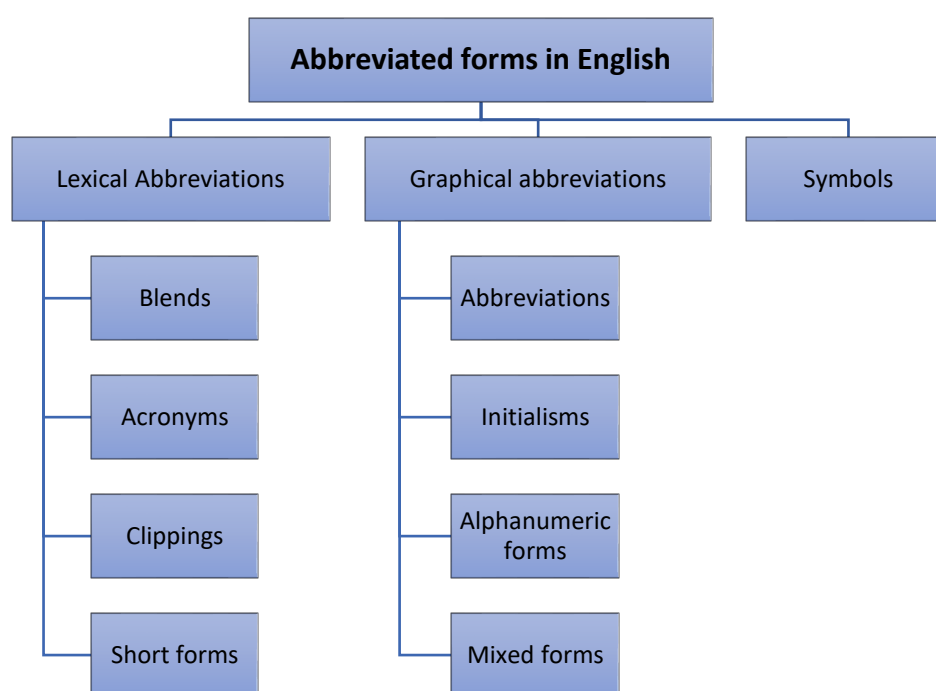


Figure 1- Typology of abbreviated forms in English

2.6.2 Typology of abbreviated forms in Arabic

The typology of abbreviated forms is based mainly on the method of their formation and pronunciation. Generally speaking, the main types of abbreviated forms in Arabic are abbreviations, blends, acronyms, and initialisms. There are other types addressed in the works of Arab linguists and authors; they will be reviewed in the following discussion.

In addition to the traditional concept of *naḥt* (blending) in Arabic, Al Qunaybi (1992) argued that there are two other main types of abbreviated forms which are considered subtypes of *naḥt*: 'النحت الرمزي' (an *naḥt* ar ramzi = symbolic blending) and 'النحت من المركبات' (an *naḥt* min al murakkabāt = blending from compounds).

The second type, compounding, is not relevant to the current study, while the first type, 'النحت الرمزي' (an *naḥt* ar ramzi = symbolic blending), falls into two subtypes:

- a. 'النحت الرمزي الحرفي' (an *naḥt* ar ramzi al harfi = literal symbolic blending): this form is created by "taking one or two letters from the beginning, middle or end of the word, or referring to it by letters or symbols other than its original letters. This type is abundant in European languages and is called the symbol" (ibid, p.227). In classical Arabic, literal symbolic blending was used in the glorious Quran, *Ḥadīth*, lexicography, algorithm, geometry, astronomy, prosody, etc., e.g., 'د' (d) for 'بلدة' (baldah = town), 'ج' (j) for 'جمع' (jam' = plural), 'ع' (a) for 'موضع' (mawḍi' = place or position), etc. In MSA, literal symbolic blending is used in various fields such as the language of science, international organizations, etc., e.g., 'سم' (cm) for 'السنتمتر' (centimeter), 'م°' (C°) for 'الدرجة المئوية' (centigrade degree), etc. (ibid, pp. 227-231). However, not all of the above-mentioned examples are considered symbols in the European languages. Some of these 'symbolic blends', such as 'سم' (cm) for 'السنتمتر' (centimeter), 'م°' (C°) for 'الدرجة المئوية' (centigrade degree) are considered symbols according to the English concept of 'symbol' (see 2.4.9.1.1). Other examples are used in specific and limited areas, such as 'د' (d) for 'بلدة' (baldah = town), but they differ from the concept of symbol in the European languages. Symbols are almost exclusively generated in European languages in areas like mathematics and science to use as standard notations, particularly in formulas and scientific equations, measures, etc.
- b. 'النحت الرمزي الاوائي' (an *naḥt* ar ramzi al awā'ili = initial symbolic blending): It is formed by combining initials of the words of a compound term; sometimes, it is made up of the first two letters of the word in a compound term. Al Qunaybi stated that this type of abbreviated form is called acronym in English and that it can be read as a normal word, as in 'ليزر' (*laser*). However, this type of abbreviated form can be pronounced as a string of separate letters as in the abbreviated form 'د. د. ت' (D.D.T) (ibid, p. 232).

Hazīm (2010) excluded abbreviation from blending, but he considered acronymy a part of it. He classified abbreviated forms in Arabic into:

1. 'النحت' (an *naḥt* = blending): this refers to the same concept of blending which has been circulated in classical Arabic and in MSA.
2. 'المنحوت الاعجمي المعرب' (al manḥūt al a'jami al mu'arrab = Arabicized foreign blends): this form is created by transliterating a foreign blend to Arabic, e.g., 'ترانزستور' (transistor)

from *transfer* and *resistor*, 'الإنتربول' (Interpol) from *international* and *police*, 'الإنترنت' (Internet) from *interconnected* and *network*, etc. (ibid, p. 99).

3. 'النحت الاستهلاكي' (an naht al istihlālī = initial blending): this is a term Hazīm suggested for 'acronym' in the languages of the West; it proliferated since the mid-20th century and increased enormously in the following decades. Hazīm defined initial blending as an abbreviated form coined by "blending a group of initial letters of at least three words to replace their full form in use" (ibid). A large number of acronyms has entered the Arabic language in the second half of the 20th century such as *laser*, *radar*, *Awacs*, etc. (ibid, p.102).

In his review of the types of abbreviated forms in Arabic, Hazīm also cited three other 'phenomena' which he considered similar to initial blending; they are:

1. 'المختصرات' (al mukhtaṣarāt = abbreviations): these are "letters used by authors, translators and indexers to abbreviate the words which recur in their works such as dictionaries, encyclopedias and indices in order not to repeat the full forms" (ibid, p.99). The Arabic language employed abbreviations for centuries; for example, they were used by linguists and dictionary compilers as in 'ة' (t) for 'قرية' (qaryah = village), 'جج' (J.J) for 'جمع الجمع' (jam' al jam' = plural of plural), and so on (ibid).
2. 'الرموز' (ar rumūz = symbols): a symbol is "a form agreed upon by authors of a specific science or art to indicate certain meaning or concept"; it can be a sign, shape, drawing, or letter, e.g., X to indicate *the unknown* (ibid, pp. 100-101).
3. 'تقصير أو قصر الالفاظ' (taqṣīr al alfādh = clipping): this refers to the use of a shortened word in writing and pronunciation, e.g., *phone* from *telephone*, *van* from *caravan*, etc. (ibid, p.101)

Hazīm noted that among these three phenomena, abbreviations are the most similar phenomenon to initial blending (acronymy), but the main difference between them is that acronyms are pronounced as ordinary words, while abbreviations are written and pronounced as strings of separate letters. Furthermore, acronyms are lexicalized as new linguistic materials, whereas abbreviation are merely written representations of their full forms (ibid, pp. 101-102).

According to their language origin, acronyms in Hazīm's classification fall into two types:

1. 'نقل المنحوت في لغة اجنبية نقلاً حرفياً الى العربية' (foreign blends transliterated into Arabic), e.g., 'الإنتربول' (al interpūl = the Interpol) (from: international + police).
2. 'النحت الاستهلاكي العربي' (native Arabic initial blends), e.g., 'أمل' (Amal = hope) for 'أفواج المقاومة اللبنانية' (Afwāj al Muqāwamah al Lubnāniyyah = Lebanese resistance brigades) (ibid, p. 98).

Based on the same criteria, Hazīm classified abbreviations into three types:

1. 'مختصر عربي خالص' (pure Arabic abbreviations), e.g., 'م' (m) for 'ممتاز' (mumtāz = excellent), 'ج' (j) for 'جيد' (jayyid = good), 'ج ج' (j.j) for 'جيد جداً' (jayyid jiddan = very good), 'ل' (L) for 'مقبول' (maqbul = accepted), 'ض' (ḍ) for 'ضعيف' (ḍa'if = weak); these are abbreviated forms used to grade the marks of students in examinations.
2. 'مختصر عربي مأخوذ من ألفاظ معربة' (abbreviations taken from Arabicized words), e.g., 'كغ' (Kg) for 'كيلوغرام' (Kilogram), 'ل' (l.) for 'لتر' (liter), etc. However, such examples are not abbreviations, but rather symbols in ISO terms.

3. 'مختصر معرب من أصول غير معربة' (Arabicized abbreviations taken from non-Arabicized roots), e.g., 'تي ان تي' (for TNT) (ibid, p. 100).

Another typology can be gathered from the discussion of Al Aqtash (2011) who proposed three main types of abbreviated forms in Arabic:

1. **Naht**: this type of abbreviation is formed by combining segments of two or more words to coin a single word (Al Aqtash, 2011, p.6).
2. 'مركب المختصر الرمزي' (symbolic abbreviation compound). Al Aqtash considered this type of abbreviation new to the Arabic language; it is formed in MSA and was rare in classical Arabic (ibid, p.74). The general concept of abbreviation is based on truncation or clipping from the word/words, the symbolic abbreviation compounds are usually generated from single words and rarely from more than one word; they are linguistic symbols rather than lexical units (ibid, p. 75). Such forms may become terms and some of them may acquire general use. In classical Arabic, symbolic abbreviation compounds were used in various fields such as the prophetic *ḥadīth* as in 'م' ('m' for 'تم' 'tamm' = done), 'الخ' for 'إلى آخره' ('ila ākhirih' = etc.), 'صح' (ṣ.h) for 'صحيح' (ṣahīh = correct), 'رض' for 'رضي الله عنه' (R.D. for radiya Allāhu a'nh = May God be pleased with him), etc. (ibid, pp. 77-78).
3. 'المختصر الرمزي الاوائي في الحداثة' (initial symbolic abbreviation in MSA). Al Aqtash denied that initial symbolic abbreviation in MSA is related to the Arabic concept of *naht*; it is rather derived from the modern western languages. Even in the western languages, the initial symbolic abbreviation is a new phenomenon; it emerged with the emergence of the industrial and information revolution. It is called acronym and is created by including the initials of the source form words (ibid, p. 82). He divided initial symbolic abbreviation into two types:
 - a. 'المختصر الرمزي الاوائي الخطي' (graphemic initial symbolic abbreviation): this type of abbreviation is used in the written mode of language; it is similar to the forms which were used in classical Arabic where the grapheme is not related to the phoneme at the pronunciation and sound levels; instead, the full morphological form is recalled. General examples borrowed from other languages are *dr.*, *km.*, etc., whereas some examples from the English translation of the Arabic form include 'ج.ر.ف' (J.R.F) for 'مؤسسة نهر الاردن' (Mu'assasat Nahr al Urdun = Jordan River Foundation), 'ه.ر.و' (HRW) for 'منظمة حقوق الانسان' (Human Rights Watch). However, examples of abbreviations can be found in the Arabic language, such as 'ج.ع.د' (J.A.D) for 'الجيش العربي الاردني' (aj Jaysh al 'arabi al Urduni = Jordanian Arab Army), etc. (ibid, pp. 82-83).
 - b. 'المختصر الرمزي الاوائي الصرفي' (morphemic initial symbolic abbreviation): this type is widely used in the European languages, where symbolic abbreviation became one of the most effective methods of word formation and contribution of new entries to dictionaries; that is, they have a pragmatic value in the four fundamental language skills, i.e., reading, writing, speaking and listening (ibid, p. 83). Al Aqtash stated that this method has entered MSA, and falls into two types:
 1. 'المختصر الرمزي الاوائي من أصل غير عربي' (morphemic initial symbolic abbreviation of non-Arabic origin): this type in turn is of two types: 'نقل حرفي' (literally transposed abbreviations), e.g., 'ناتو' (NATO); and 'المختصر المهجن' (hybrid abbreviations), e.g.

‘جت’ (JETT) from ‘النقلات الأردنية السريعة للسياحة’ (Jordan Express Tourist Transport) (ibid, pp. 83-85)

2. ‘المختصر الرمزي الاوائي من أصل عربي’ (morphemic initial symbolic abbreviation of Arabic origin), this type of abbreviation is an imitation of the non-Arabic abbreviation by taking the initial letters of the words of a full form and joining them in one unit to generate a single word which has a lexical meaning that already exists in the Arabic language, and which can be understood without the need for recalling its full form, e.g., ‘مآب’ (Ma’āb = place of return) for ‘مؤسسة آل البيت’ (Mu’assasat Āl al Bayt = Āl al Bayt Foundation), ‘أمل’ (Amal = hope) for ‘أفواج المقاومة اللبنانية’ (Afwāj al Muqāwamah al Lubnāniyyah = Lebanese Resistance Brigades), etc. (ibid, pp. 85-86).

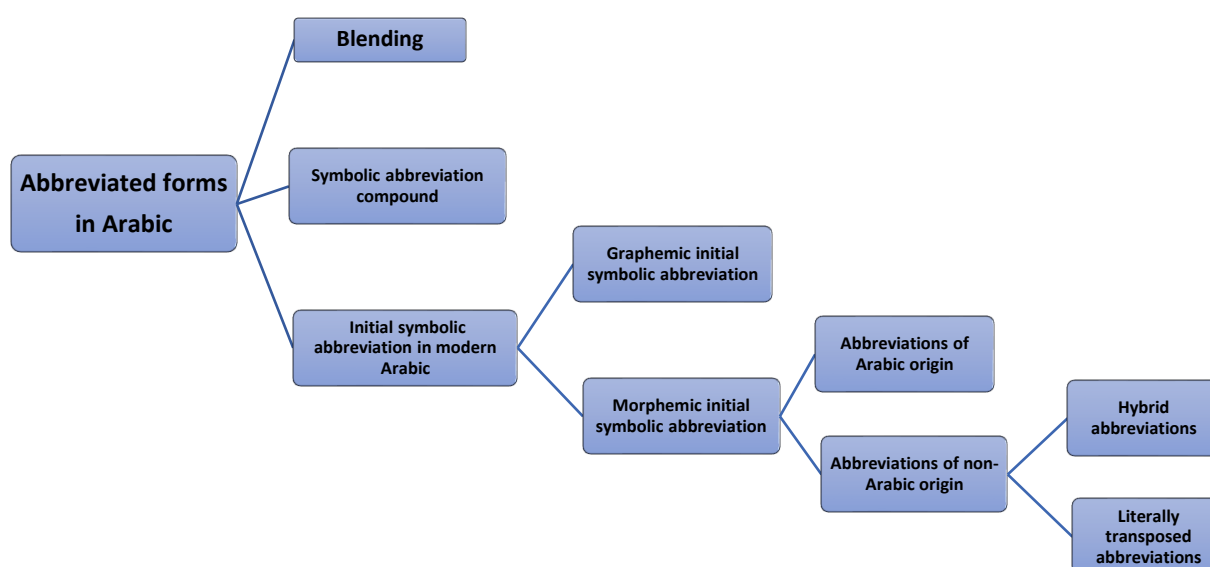


Figure 2 - Typology of Abbreviated forms in Arabic (Al Aqtash, 2011)

Gacek (2009) cited the main categories of abbreviated forms encountered in old (classical) Arabic texts in general:

1. Suspensions: by suspension, Gacek means the process of abbreviation which is achieved through “truncation of the letters at the end of the word, e.g., *المص* (*al-muṣannif*) or *تد* (*ta’āla*)” (ibid, p.2). As is obvious, this process is similar to the English back-clipping. However, unlike in English, it is not pronounced as it is written; rather, it is pronounced as a full word and, thus, it is closer to the concept of abbreviation in English and Arabic.
2. Contractions: Gacek described this process as “abbreviating by means of omitting some letters in the middle of the word, but not the beginning or the ending, e.g. *قه* (*qawluhu*)” (ibid). This type of abbreviation is similar to middle-clipping in English. Nonetheless, as long as it is pronounced as a full word or full words, it should be considered an abbreviation.
3. “Sigla: using one letter to represent the whole word, e.g. *م* (*matn*)” (ibid). As in the previous type, if this letter is pronounced as a full word, it is considered an abbreviation.

4. Abbreviation symbols: according to Gacek, this type represents “symbols in the form of logographs used for whole words” (ibid), for example, “horizontal stroke (sometimes hooked at the end)” to refer to the word “sanah (‘year’)” (ibid). Another example for abbreviation symbols is “the suspension فت (for *fa-ta’ammalhu/hā* – ‘reflect on it’), used in manuscripts for → notabilia or side-heads” (ibid). Again, if the last example is pronounced as a full form or phrase, it is an abbreviation, and if it is pronounced as its written form suggests, it can be considered a clipping.
5. “Contraction of a group of words into one ‘portmanteau’ word (*naḥt*)” (ibid). This type of abbreviation is very similar to the above-mentioned types of abbreviation, as in: “*basmalah* (*bi-sm Allāh*), *ḥamdalah* (*al-ḥamd li-Llāh*) and *ṣalwalah* (*ṣalla Allāh ‘alayhi*)” (ibid). However, his definition and interpretation for this type of abbreviated form differs from almost all the opinions of other authors. He stated that *naḥt* refers to the same concept of acronym which is coined “from the abbreviation of, in most cases, the initial letters of each word in the construct” (ibid).

Al-Kasimi (2008) categorized abbreviated forms in Arabic under three main types: symbols, abbreviations, and acronyms. These three main types are divided in turn into a number of sub-types:

1. ‘الرمز’ (symbol):
 - (a) ‘الرموز الحرفية’ (literal symbols), e.g., ‘س’ (s) for ‘unknown’.
 - (b) ‘الرموز الرقمية’ (numerical symbols), e.g., numbers.
 - (c) ‘الرموز العلامية’ (semiotic (or sign) symbols), e.g., ‘+’ for ‘plus’ (زائد – علامة الجمع) (ibid, pp.488-489).
2. ‘المختصر’ (abbreviation): “this is one or more letters used to indicate one or more words. It is usually the initial letter of the word or initial letters of the words of the full form that are used” (ibid, p.490). Al-Kasimi cited a number of examples of abbreviation such as ‘ق.م’ (q.m.) for B.C. (before Christ) (ibid).
3. ‘المختزل’ (shortening): Al-Kasimi (ibid, p.491) explained that this is “a type of abbreviation applied to the names that are composed of more than one word. It is composed of the initial letters of the full form and is of three subtypes, particularly in English”:
 - (a) ‘مختزل الاوائل’ (initial shortening = initialism), e.g., ‘ج.م.ع.’ (J.M.A) for A.R.E (Arab Republic of Egypt).
 - (b) ‘المختزل المنحوت/منحوت الاوائل’ (initial blending/blended shortening = acronym): 1) Arabicized blended shortening, e.g., laser, radar, etc.; 2) Arabic blended shortening, e.g., ‘جستن’ (Justin) for ‘الجمعية السعودية للعلوم التربوية والنفسية’ (Saudi Society for Educational and Psychological Science); and 3) blended shortening from the foreign equivalent of the Arabic name, e.g., ‘الالكسو’ (al Alikso) for ‘المنظمة العربية للتربية والعلوم’ (ALECSO); and 3) blended shortening from the foreign equivalent of the Arabic name, e.g., ‘الالكسو’ (al Alikso) for ‘المنظمة العربية للتربية والعلوم’ (ALECSO);
 - (c) ‘المختزل الهجين’ (acronym-initialism hybrid), e.g., ‘أم.أس.دوس’ for MS-DOS (ibid, pp.491-495).

It is apparent from the review of this section that the literature on abbreviated forms in Arabic does not cover all the possible types of abbreviated forms that were reviewed in the English language or in ISO 704. Some typologies are varying, and others are limited and incomprehensive, while the names of abbreviated forms differ in many examples. For instance, Hijāzi (2000, p.96) does not differentiate between acronym, initialism or

abbreviation. Similarly, Edzard (2009, p. 557) points out that in the context of Arabic linguistics, 'truncation' makes sense as an umbrella term for various types of morphophonological shortening. He adds that 'acronymity' can be subsumed under the category of 'clipping' (ibid, p.558). Al Qunaybi (1992) cites three types of abbreviations in Arabic: 1) 'النحت' (blending); 2) 'النحت الرمزي' (symbolic blending); and 3) 'النحت من المركبات' (blending of compounds). He excludes the latter from the study of abbreviation and divides 'النحت الرمزي' (symbolic blending) into two subtypes: The first one is 'النحت الرمزي الحرفي' (literal symbolic blending) and the second is 'النحت الرمزي الاوائي' (initial symbolic blending). Al Qunaybi states that literal symbolic blending is the same as the concept of *symbol* in the European languages; it is formed by taking one or two letters from the beginning, middle or end of the word, and sometimes referring to the word by letters or symbols other than its original letters (Al Qunaybi, 1992).

The second type of symbolic blending in Al Qunaybi's classification is what he calls 'النحت الرمزي الاوائي' (initial symbolic blending); he states that this type of abbreviation is called *acronymy* in English. He adds that it can be pronounced as joined letters (normal word) like 'ليزر' (laser), or as separate letters as in the abbreviated form 'د. د. ت' (D.D.T) (1992, p. 232). However, the second example 'د. د. ت' (D.D.T) is an initialism rather than an acronym, because it is pronounced as separate letters. The same view is provided by Hazīm (2010, p.100) and this reflects again the varying viewpoints as regards the typology of abbreviated forms. As for clipping, Hazīm states that it is only used in foreign languages and that the Arabic language did not know this type of abbreviation but in the form of Arabicized terms like bus, fax, kilo, etc. (Hazīm, 2010, p. 101). On the contrary, Edzard (2009, p. 557) points out that in the context of Arabic linguistics, the term 'truncation' [clipping] makes sense as an umbrella term for various types of morphophonological shortening. He asserts that 'acronymity' can be subsumed under the category of 'clipping' (ibid, p. 558).

Al Aqtash states that *naht* is rare whether in classical Arabic or in MSA, while he points out that the general concept of abbreviation is based on clipping or truncation from the text. Just like Hazīm (2010), Al Aqtash confuses symbols with abbreviations, because most of the examples he gives for symbols can rather be considered abbreviations. He defines abbreviation which he calls 'المختصر الرمزي الاوائي الخطي' (graphemic initial symbolic abbreviation) as a form corresponding to the English concept of abbreviation, as kind of graphical shortening in which the letters are only a written representation of the full form. Al Aqtash maintains that when reading the abbreviation, the full form is used, and he categorizes abbreviation under acronymy. According to the given examples, the other type of acronyms in Al Aqtash's classification is acronym, which he calls 'المختصر الرمزي الاوائي الصرفي' (morphemic initial symbolic abbreviation) (ibid, p.83). Thus, he classifies acronyms into two types: abbreviations (or initialisms) and acronyms.

Gacek describes *sigla* as a letter used to represent a whole word, e.g. م for متن (m for matn) (2009, p. 2). The term *sigla* comes from Latin; it is the plural form of siglum which is a diminutive of signum that means *sign*. *Sigla* refers to the concept of symbol in English; such forms are used in the field of science as in the symbols of chemical and physical elements. However, not all symbols involve a process of abbreviation whether in English, Arabic or other languages. This type of symbols can also be considered an abbreviated form as the

letter-abbreviation is an initial that is taken from the full form and is only written, while it is often pronounced as a full word, although it is sometimes pronounced as a single letter.

Commenting on the term *naht* in Arabic, Gacek points out that it represents the same concept of acronymy, because it is often a word created from the initial letters of the words composing the source form (ibid). However, *naht* can be defined as taking parts of two or more words and blending them as one word representing the full phrase or sentence; these parts are larger than initials.

Abbreviated forms have been given different names in the literature. In many cases, linguists give different names to the same form. For example, abbreviation, a type of abbreviated form created by taking a letter or letters of the full form, is named 'المختصر الرمزي الاوائلي الخطي' (graphemic initial symbolic abbreviation) by Al Aqtash (2011); and 'suspension' by Gacek (2009). Al-Kasimi (2008) calls initialism 'مختزل الاوائل' (initial shortening). As for acronym, it is named 'النحت الرمزي الاوائلي' (initial symbolic *naht*) by Al Qunaybi (1992); 'النحت الاستهلاكي' (initial blending) by Hazīm (2010), 'المختصر الرمزي الاوائلي الصرفي' (morphemic initial symbolic abbreviation) by Al Aqtash (2011) and 'المختزل المنحوت/منحوت الاوائل' (initial blending/blended shortening) by Al-Kasimi (2008). Gacek (2009) terms clipping as 'contraction', while mixed forms are named 'المختزل الهجين' (hybrid shortening) by Al-Kasimi (2008). The symbol is named 'مركب المختصر الرمزي' (literal symbolic blending) by Al Qunaybi (1992), 'النحت الرمزي الحرفي' (symbolic abbreviation compound) Al Aqtash (2011) and 'sigla' and 'abbreviation symbol' by Gacek (2009).

Some researchers propose typologies of abbreviated forms from a different perspective, namely from the language origin. Thus, Hazīm classifies acronyms in general according to language origin into two types: 1) Arabicized foreign blends (transliteration of foreign blends to Arabic), e.g., 'الإنتربول' (Interpol); and 2) native Arabic initial blends, e.g., 'أمل' ('Amal') from 'أفواج المقاومة اللبنانية' (Hazīm, 2010, p. 98). As for abbreviations, Hazīm classifies them into three types: 1) pure Arabic abbreviations, e.g., 'ض' (d) for 'ضعيف' (da'if = weak); 2) abbreviations taken from Arabicized words, e.g., 'م' (m) from 'متر' (meter); and 3) Arabicized abbreviations whose referents are not Arabicized, e.g., 'تي ان تي' for TNT (ibid, p. 100). Similarly, Al Aqtash classifies acronyms which he calls 'المختصر الرمزي الاوائلي الصرفي' (morphemic initial symbolic abbreviation) into two types: 1) acronyms of non-Arabic origin, e.g., 'ليزر' (laser); and 2) acronyms of Arabic origin, e.g., 'مآب' (Ma'āb = place of return) for 'مؤسسة آل البيت' (Mu'assasat Āl al Bayt = Āl al Bayt foundation). Furthermore, he subclassifies acronyms of non-Arabic origin into two types: a) literally transposed (transliterated) acronyms, e.g., 'ناتو' (NATO); and b) hybrid acronyms, e.g. 'جت' (JETT) from 'النقلات الأردنية السريعة للسياحة' (Jordan Express Tourist Transport) (Al Aqtash, 2011, p. 83-85). Al-Kasimi (2008, pp.492-494) divides acronyms into three types: 1) Arabicized acronyms, e.g., laser, radar, etc.; 2) Arabic acronyms, e.g., 'جستن' (Justin) for 'الجمعية السعودية للعلوم التربوية والنفسية' (Saudi Society for Educational and Psychological Science); and 3) acronyms created from the foreign equivalent of the Arabic name, e.g., 'الالكسو' (ALIKSO) for 'المنظمة العربية للتربية والعلوم والثقافة' (Arab League Educational, Cultural and Scientific Organization).

Arabic linguists, such as Hijāzi, Al-Kasimi and others have not covered all the available abbreviated forms in Arabic such as alphanumeric forms, short forms, etc. Most of them state that *naht* (blending) is a type of abbreviation in Arabic, whereas some linguists including Al Aqtash and Hazīm exclude *naht* from abbreviation in Arabic. Hazīm (2010, p. 99) defines abbreviation as a phenomenon that is similar to blending (which he considers the

weakest means and last resort of word formation in Arabic), but not part of it. Sāliḥ (2000) cites only 'المختصر' (al mukhtaṣar' = abbreviation, by which he meant initialisms) and 'منحوت البدوء' (manḥūt al bidū' = initial blending, by which he means acronyms), although he refers to initialism, while Oughlici (2008, p.155) regards both abbreviation and acronymy as parts of blending in Arabic.

The definitions of abbreviated forms in Arabic follow the English model to a large extent and that is one of the reasons for reviewing the English abbreviated forms first. The review and discussion of this section show that Arabic can employ the same nine types of abbreviated forms employed in English in addition to hybrid acronymy. Therefore, the suggested typology of Arabic abbreviated forms includes nine types: abbreviation, acronyms, initialisms, blends, clippings, alphanumeric forms, mixed forms, short forms, and symbols, as is shown in figure 3 below:

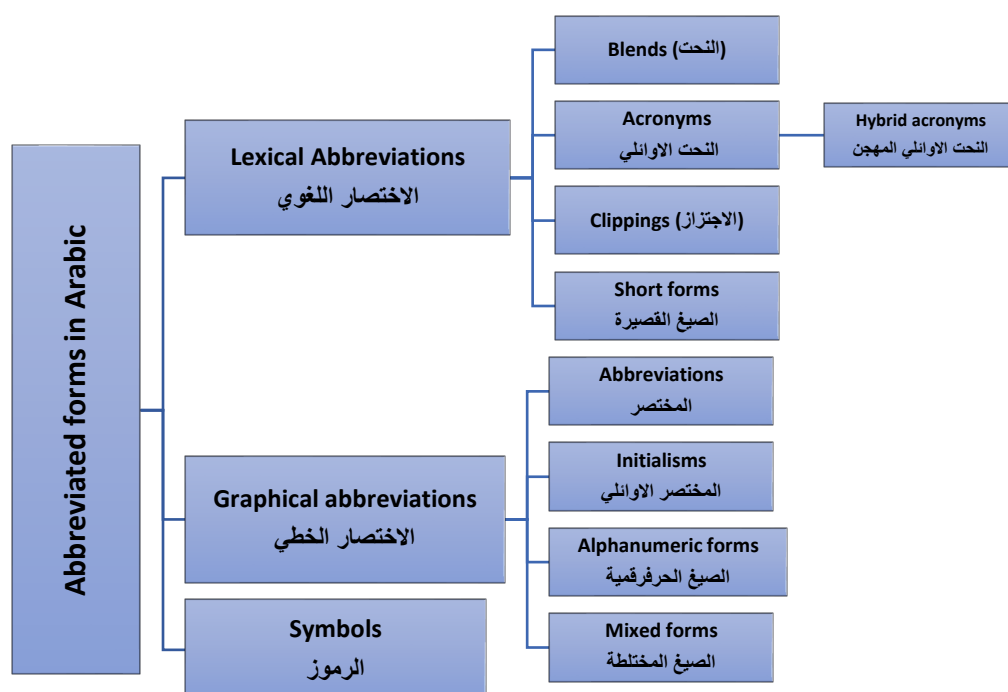


Figure 3 - Suggested typology of abbreviated forms in MSA

The following table shows the types of abbreviated forms reached throughout the review and discussion of the literature of English and Arabic as well as ISO 704. The definitions, methods of formation and types extracted from the literature review are the most common among linguists and authors. Of course, there are other different views, but they are rare:

Abbreviated form	ISO 704	English	Arabic
1. Abbreviation	1-a An abbreviated form created by omitting words and/or parts of a word making up a term. In some cases, the first letter of a word suffices. Still other abbreviations are created by replacing parts of the <i>term</i> by an arbitrary string of characters. In others, the first letters of short phrases are grouped together. Such <i>abbreviations</i> can end with a full stop. (ISO 704, 2022, p. 65); for example, <i>p.</i> for page (ibid, p.66).	1-b “a shortened form of a written word or phrase used in a text in place of the whole for economy of space and effort” (Arnold, 1986, p. 144), and others. For example, <i>abbr.</i> for <i>abbreviation</i>, <i>bldg.</i> for <i>building</i> (ibid). (see 2.4.1.1).	1-c One letter, or more, that is used to refer to a single word or a number of words. The abbreviation is usually the first letter of the word or the first letters of the words of the full form, e.g., ‘م’ (m) for (‘ميلادية’ [mīlādiyyah = A.D. [anno domini]], ‘رض’ (R.Ḍ. [raḍiya Allahu ‘anh] = May God be pleased with him), etc. (Al-Kassimi, 2008, p. 490).
2. Acronym	2-a An abbreviated form coined by “combining initial letters or syllables from each or some of the elements of the full form. The new designation is pronounced syllabically like a word” (ibid, p.65), e.g., “<i>UNESCO</i>” for “United Nations Educational, Scientific and Cultural Organization” (ibid, p.66).	2-b A word formed by taking one or more initial letter(s) of several words and combining them as one word; this combination is pronounced as a regular word, e.g., <i>NATO</i>, <i>NASA</i>, <i>Laser</i>, <i>scuba</i>, <i>radar</i>, etc. (Braber, Cummings, & Morrish, 2015, p. 249), and others.	2-c A word made up of the initials of a group of words or of a phrase; it is pronounced as a regular word (Naṣīr, 1987, p. 115). For example, ‘مآب’ (Ma’āb = place of return) for ‘مؤسسة آل البيت’ (Mu’assasat Āl al Bayt = Āl al Bayt Foundation) (Al Aqṭash, 2010, p. 86).
3. Initialism	An abbreviated form “created by using the first letter (or sound) of each or some of the elements of the <i>full form</i> of a <i>term</i>. <i>Initialisms</i> are always pronounced letter by letter” (ibid, p.65), e.g., <i>PC</i> for personal computer (ibid, p.66).	3-b An abbreviated form “created by using the first letter (or sound) of each term element to form a designation. Initialisms are pronounced by spelling out the letters” (Wright & Budin, 1997, p. 332), e.g., <i>FBI</i> for the Federal Bureau of Investigation and <i>CIA</i> for The Central Intelligence Agency.	3-c An abbreviated form created by taking the first letter of a word or first letters of a number of words and spelling out these letters, e.g., ‘ش.و.ن.ت’ (shīn.wāw.nūn.tā) for ‘الشركة الوطنية للنشر والتوزيع’ (ash Sharikah al Waṭaniyyah lin Nashr wat Tawzī’ = the National Corporation for Publishing and Distribution) (Oughlici, 2008, pp. 154-155).
4. Blend	4-a An abbreviated form resulting “from fusing two or more words, after one or more of them have been clipped” (ibid, p.65); they are considered a part of compounding. For example, information + entertainment = infotainment (ibid).	4-b An abbreviated form composed of “a combination of two or more words to create a new one, usually by taking the beginning of the other word and the end of the other one. So new words like <i>spork</i> (<i>spoon</i> + <i>fork</i>), <i>fanzine</i> (<i>fan</i> + <i>magazine</i>) [...] are created” (Wagner, 2010, p. 5).	4-c A word coined by combining segments of two or more words to form a new single word which implies the meanings of these words, e.g., ‘دُابْخَان’ (ḍabkhān = smog) from ‘دُابَاب و دُخَان’ (ḍabāb + dukhān = fog + smoke) (Amīn, 1956, p.391).

5. Clipping	5-a An abbreviated form “formed by truncating the front, middle or back portion of a <i>term</i> . Both ends can also be truncated” (ibid, p.65). For example, <i>prefab</i> for prefabricated house (ibid, p.66).	5-b An abbreviated form in which a word is shortened by cutting off a part of it without changing its meaning, e.g., <i>blog</i> from <i>weblog</i> , <i>camo</i> from <i>camoufl/age</i> . (Rúa, 2006, p. 676), (Trask, 1994, p. 16), and (Bauer, 1983 p. 233).	5-c A word reduced to a shorter form by cutting one or more letters from it. Clipping occurs in specific cases in Arabic; for example, after the vocative particles ‘a’ and ‘ya’ where personal names and words are often clipped (Edzard, 2009, p. 558) and (Fischer, 2002, p. 96). Clipping “affects the inflectional endings and the preceding consonants: يا عاذل ya adhila (عاذلة adhilatu) ‘O blamer (fem.)! يا عثم ya uthma (= عثمان Uthmanu) ‘O Uthman!’” (ibid).
6. Alphanumeric form	6-a “A code made up of combinations of letters, numbers or both shall be considered <i>symbols</i> , if they do not represent words in a <i>natural language</i> or <i>abbreviations</i> ” (ibid, p.52). For example, “A4 (paper format, 210 mm x 297 mm)” (ibid).	6-b An abbreviated form consisting of a combination of letters/words and numbers; it can also contain punctuation marks, and mathematical as well as other conventional symbols, e.g., <i>W3C</i> for the World Wide Web Consortium, <i>G7</i> for Group of Seven, etc. (Skyes, 1982, p.26), (McArthur, 1992, p.32), and others.	6-c An abbreviated form “consisting of a combination of letters/words and numbers” (Yousif, 2010, p.317), used to represent a term or a phrase. In some cases, the letter represents an abbreviated form of a word or a phrase and the number is a complimentary description of this word or term. For example, 3-مج (Mj-3 = vol. 3), 1-ط (T1 = 1 st ed.), 4-جنيف = Geneva IV.
7. Mixed form	7-a An abbreviated form that that “can be formed by any combination of formation processes” (ibid, p. 66), e.g., <i>SSD technology</i> for solid-state drive technology. This form is composed of initialism + compounding (ibid).	7-b An abbreviate form “in which the first element is a letter and the second a complete word. The examples are: <i>A-bomb</i> for <i>atomic bomb</i> , <i>V-sign</i> [...]used for expressing victory or the hope for it” (1986, p. 145).	7-c An abbreviated form that is made up of a combination of words and abbreviated forms or vice versa, e.g., <i>NAP test</i> for Necessary Additional Pressure Test (Yousif, 2010, p.318). A few examples can be found in Arabic, as in: ‘كوريا-ج’ (South Korea), and in Mathematics, some symbols come in the form of mixed forms such as ‘معامل س’ (mu’amil sin = X-Factor), and ‘معامل ص’ (mu’amil sād = Y-Factor).
8. Short form	8-a These forms “use fewer words to designate the same <i>concept</i> than the corresponding <i>full forms</i> . In some cases, they are pronounced as their written form suggests. In some cases, they are non-pronounced, i.e. the relevant <i>full form</i> is pronounced instead” (ibid, p. 65); for example, “ <i>Group of Twenty-four</i> ” for “Intergovernmental Group of Twenty-four on International Monetary Affairs” (ibid, p.66).	8-b A shorter version of a phrase; in other words, it is a reducing a longer phrase of term to fewer words and sometimes to one word e.g., <i>the convention for the Protection of the World Cultural and Natural Heritage</i> (UNTERM).	8-c A word or words used to replace a longer phrase or term by removing some of its words and reducing it to one word or to fewer words for the sake of brevity, e.g., ‘السجل’ (as sijill = the register) or ‘سجل الأضرار’ (sijill al aḍrār = register of damage) for ‘سجل الأمم المتحدة للأضرار الناشئة عن تشييد الجدار في الأرض الفلسطينية المحتلة’ “The Register of Damage’ for ‘the United Nations Register of Damage Caused by the Construction of the Wall in the Occupied Palestinian Territory” (Couvreur, 2016, p. 125).
9. Symbol	9-a Symbols are not addressed in detail in ISO 704; however, the following definition can be gathered from the discussion of symbols in ISO 704: Symbols are signs, marks, letters, characters, shapes, or any other things that represent concepts. “They can communicate information directly under difficult circumstances (e.g., traffic signs, airport signs)” (ibid, pp. 50-51).]	9-b “Something that stands for something else in a conventional way. A flag, for example, stands for a country. White is a symbol of mourning for Chinese people, while black is the color of mourning in Western societies” (Danesi, 2009, p.281).	9-c “a letter, number, or sign indicating a concept, thing, case, or object” (Al-Kassimi, 2008, p.488). They can be letters, e.g., ‘س’ (sīn) for the ‘unknown’ in Algebraic language, signs, e.g., ? for the interrogative mark, numbers as in the signs used for numbers in mathematics, e.g., 9 for nine, etc. (ibid, pp. 488-490).

Table 4 - Abbreviated forms in ISO 704, and in the English and Arabic Literature

2.7 Arabic Abbreviated Forms in the UN Context

The main reason for the use of abbreviation is the need to achieve fast communication via saving time, space, and effort in addition to the facilitation of multilingual communication by producing concise and abbreviated terms. Furthermore, the scientific and technological developments have necessitated the use of shortened expressions to keep pace with the tremendous number of new terms and accelerating pace of the new emerging concepts. The current section will examine the use of Arabic abbreviated forms in the UN context. A similar survey on the English and Arabic abbreviated forms in the UN context will be covered in the analysis chapter (Chapter 4).

Although abbreviation can play a role in the formation of words and terms in Arabic, the tendency by some Arabic linguists to rely on derivation and rule out other mechanisms of word formation has been one of the main reasons behind the shortage of terminology, a problem from which the Arabic language still suffers. There is a serious terminological gap in Arabic, particularly in the scientific and technological fields, owing to many factors, among them the inadequate attention paid to the study of word formation mechanisms and the domination of derivation over other mechanisms like compounding and blending. In fact, the presence of Arabic abbreviated forms is weak in the UN context, as will be shown in the analysis chapter. This may be attributed to the fact that there are no serious efforts to make use of this procedure to generate Arabic terms (abbreviated forms) and disseminate them in the UN documents and publications, as well as failure to keep special records of abbreviated forms for future usage.

On the other hand, many authors call for the use of such methods as abbreviation in producing new terms. Hasan (1996, p. 129) enquires why abbreviation which is an authentic characteristic of Arabic is not exploited, while it can facilitate the scientific performance of Arabic, given the fact that the advanced languages of Europe have no problem in exploiting even alien linguistic tools, such as blending, to fill the gap in scientific terms and create well-formed terminology. The main features of well-formed terms in Arabic are brevity, precision of expression, and the possibility to relate, annex, pluralize, etc. Annexation (‘إضافة’ = *idāfah*) in Arabic

occurs when two nouns (or an adjective and a noun) are linked together and immediately follow each other. It is comparable to a genitive or attributive construction, where the first noun (or adjective) is the head constituent and the second noun is the attribute. (Abu-Chacra, 2018, p.80)

Hasan adds that English, for example, resorted to blending, which is not one of its original methods of creating new words, as a response to the need imposed by modern life, e.g., the blend ‘brunch’ (ibid). Furthermore, it has been shown in the previous sections that abbreviation has been employed in Arabic for a long time and in spite of all the opposing views and reservations, the need for shortened expressions and fast communication cannot be avoided, especially in the current era.

The main difference between abbreviation and other word formation processes is that abbreviated forms do not follow strict linguistic rules determining their structure. Therefore, there is a need to set specific guidelines for this word formation process in order to make

the utmost use of it in the Arabic language so as to achieve many linguistic advantages including the facilitation of communication.

Frequency of abbreviated forms is an important factor for their acceptability and usage. Thus, it can be observed that some abbreviated forms which gained international frequency are easily accepted and added to the vocabulary of languages, e.g., *UNICEF*, *OPEC*, etc. Once the abbreviated form is used by many speakers in a speech community, it would be of a similar status to that of the full form, with the advantage of linguistic economy. Therefore, it may become unnecessary to explain the referents of the abbreviated form or use the full form. Furthermore, abbreviated forms become new designations associated with the same concept as the full form, and this can apply to many UN terms like *ILO*, *FAO*, etc. They replace the long forms even in official texts. However, Arabic falls short in this regard compared with other languages, as will be discussed in the following sections.

2.7.1 Advantages and disadvantages of abbreviated forms in Arabic

One of the challenges raised by some Arabic authors is that abbreviation processes are not original Arabic method but are borrowed from foreign languages and they, therefore, must be disregarded. Furthermore, they violate the Arabic language integrity and identity because other traditional means of word formation, particularly derivation, are sufficient. Oughlici argues that abbreviation is the least effective mechanism of word formation in MSA and of the lowest influence due to its weak relation to the Arabic language (2008, p.165). He states that *naḥt*, which covers all types of abbreviation in Arabic, is “a double-faced linguistic fact”; on the one hand, it revives language, enables it to reflect a lot by a little via shortening a long phrase to one word”, and, on the other hand, “it might kill the language by filling it with vague, strange and incomprehensible abbreviated forms instead of the longer and clearer phrases” (ibid). However, the view that abbreviation [*naḥt*] might “kill” the language seems to be exaggerated as a language cannot be filled with these forms; rather, abbreviated forms are often used to shorten the most recurrent long expressions in texts. Even in global languages like English, many abbreviated forms are unfamiliar at their first use, because they are not roots of words but letters from words. Furthermore, abbreviated forms have been receiving an increasing attention in the English language as well as other languages. Although some scholars do not recommend the use of abbreviation for the only reason of economy of space, time, and effort, abbreviated forms appear in various kinds of writings, academic texts, bulletins, dictionaries, standards, etc.

As for the English language, some authors do not recommend the use of abbreviated forms in scientific and technical fields if they lead to ambiguity and miscomprehension. For example, in medical register, medical abbreviated forms may lead to ambiguity and can be homonymous and representing multiple full forms. The abbreviated form *CBC* (Complete Blood Count (blood test)) can have 28 homonyms only in medical and scientific language, while it has 238 homonyms in general (“CBC”, n.d.). However, the traditional procedure followed to disambiguate such forms for the reader or user is to define or spell out the abbreviated term the first time it is used.

Another opinion advises to avoid the use of abbreviated forms as much as possible, because resorting to abbreviation would result in poor quality language. In their quantitative and qualitative systematic study of acronyms, Pottegård et al. (2014) have found that in the

course of time, the increase in using acronyms in some document titles in the field of medicine is associated with a remarkable lowered quality of these abbreviated forms (2014, p. 2).

In the UN context, some abbreviated forms become independent, in that they are used alone without any need for explaining them; in other words, they supersede their full forms. The origin of the abbreviated form becomes not so important as long as the meaning of the abbreviated form is known to the reader or hearer. González notes that when a familiar phrase or term needs to be shortened, “native speakers resort to the calque, prompted by the need to give the *designatum* the maximum semantic transparency. This principle finds a perfect application in ‘abbreviations’ ” (1991, p. 167).

Contrarily, there is another view which states that abbreviation is an authentic Arabic method of word formation. Ṣāliḥ (2000, p. 1017) has traced abbreviation back to the classical Arabic blending word formation process and attributed this to the need to contain the increasingly emerging foreign terms. Although Oughlici (2008) rejects the use of abbreviation in Arabic, he opposes the view that abbreviation is a pure European concept; he believes that “in our Arabic heritage, there have been sufficient evidences of the use of abbreviations for centuries” (ibid, p.163). Hijāzi (2000, p. 97), Ḥasan (1996, p. 128) and As Sāmarrā’i (1987, p. 106) are also of the opinion that abbreviation is an authentic Arabic tool; Ḥasan states that “we are the pioneers of abbreviation, although we did not advance in this subject”. He gives several examples which had been formed for centuries, like ‘أه’ (i.h. for ‘intah = finished), ‘نا’ (na for ḥaddathana = told us), ‘الخ’ (ilkh. for ila ākhirih = et cetera), etc. (1996, p. 128). However, many of these linguists do not recommend the use of abbreviation in forming new terms.

Hence, abbreviation has existed for centuries in the Arabic language which is a flexible language that is capable of employing symbols, abbreviated forms, and other forms. On the other hand, abbreviation in English and other western languages is not formed through the traditional method of affixation or compounding but mainly via combining the initial letters of titles or phrases. This view is contradictory to the view of some Arab authors such as Maṭlūb (2001, p. 28) and Al Aqṭash (2011, p. 83) who opine that abbreviation is based on affixation which does not belong to the structural features of the Arabic language, as the latter depends on derivation in the first place.

2.7.2 Formation: current and suggested methods

Several methods have been proposed for the creation of abbreviated forms in Arabic. All these methods are achievable with adherence to the Arabic phonetic system and derivation rules. Some of the formation methods entail a great deal of manipulation and creativity. As is shown in the literature chapter, some Arabic acronyms are homonymous with already lexicalized forms, which makes them easier to pronounce or recall, and obtain the connotations of the homonyms to give the abbreviated forms implied meanings, e.g., ‘واع’ (Wā’ = aware or conscious) from ‘وكالة الأنباء العراقية’ (INA: Iraqi News Agency), ‘أمل’ (Amal = hope) for ‘أفواج المقاومة اللبنانية’ (Afwāj al Muqāwamah al Lubnāniyyah = Lebanese Resistance Brigades) which has an implied meaning referring to reviving the hope in the Shia community to get their rights of which they were deprived. Moreover, the meaning of the full form is usually reflected in the abbreviated form and this is obvious in the formation of

blends and clippings. For instance, when forming a blend from two or more words, the semantic field of the blend is similar to the words from which it is formed, because the blend contains the semantic features of both words, e.g., 'حيمَن' (*ḥayman*) for 'حيوان منوي' (*ḥaywān manawī* = sperm). This was stated centuries ago by Ibn Fāris (308–395 A.H/ 920–1004 A.C) in his dictionary *Maqāyīs al Lughah* (Ibn Fāris, 1979, pp. 328-329):

"أن تؤخذ كلمتان وتنحت منهما كلمة تكون آخذة منهما جميعاً بحظ"

(lit.: to take two words and blend from them one word that indicates their meanings)

Yousif believes that abbreviated forms in Arabic are problematic because individual letters [rather, consonants] do not produce meaningful forms. Hence, he emphasizes that

consonants and vowels have to be combined to generate the two basic syllables in Arabic: *cv/cvc*, where "c" stands for consonant and "v" for vowel (Roman 1990: 6–8). Abbreviations can therefore be inconsistent with the standard lexical system of Arabic. (Yousif, 2010, p. 314)

Since these forms offer considerable gains in terms of space, time and effort, they have become one of the main characteristics of specialized discourse. Yousif suggests two approaches to deal with this challenge: the first is translating the full source language form (henceforth: SL) into the target language (henceforth: TL) and the second is transposing the SL form to the TL; he rules out the formation of Arabic equivalent abbreviated terms for the English ones (ibid, p. 314). Notwithstanding, the use of diacritics (short vowels) in Arabic in such a case can address this issue; for example, the acronym 'فتح' (*fath*) is composed of three successive consonants but separated by the diacritic 'فتحة' (*fathah*) between the first and second consonants.

Frequency is a decisive factor in the acceptability of new abbreviated forms especially if they observe the principle of linguistic economy; for example, 'يُونُوبِس' (UNOPS), is accepted and preferred to the full form by all languages of the UN, even in Arabic by way of borrowing, thanks to a number of factors which are its frequent use, easy pronunciation compared with the full long form, economy in space and effort, easy memorization, and clarity owing to its simplicity. In spite of the objections by many translation sections to the use of Arabic abbreviated forms in the UN context, such forms can be used to achieve many gains in terms of linguistic economy, explicitness and easy use.

2.7.3 Dealing with abbreviated forms in the UN context

In the context of the UN translation practices from Arabic to English and vice-versa, abbreviated forms are often (but not always) coined in English, which can be regarded as the source language if this language pair is considered, and they are then rendered in the Arabic language following a number of approaches. However, it can be noted that some terms are borrowed from other languages and used in English as main entries in the UN main terminology database, and in the Arabic part as well. For example, the acronyms *RAPIDE* which is taken from French to stand for *Réseau africain pour l'intégration et le développement* (UNTERM). The following are the main approaches of dealing with abbreviated forms in the UN context:

2.7.3.1 Full translation

If one examines UNTERM (the main and central UN terminology database), it becomes clear that no abbreviated forms are coined as Arabic equivalents for the English abbreviated forms except in rare examples like 'ردمك' (radmak) for (ISBN). Usually, full translation is the main, and sometimes the only, approach in rendering English abbreviated forms to Arabic. It can be noted that the English-Arabic manual of UN abbreviations prepared by the UNOV Arabic translation service in 1997 contains thousands of English abbreviated forms, but none of these abbreviated forms has an Arabic abbreviated form as its equivalent, and only full Arabic translations are provided for them.

However, the *modus operandi* in the UN context is that the abbreviated form is translated fully into Arabic followed by the abbreviated form transliterated between two brackets. In other words, the main approach in UN documents and publications is to enclose the transliteration of the abbreviated form in parentheses immediately following the full form, e.g., 'الإيفاد' (al īfād = the IFAD) for 'الصندوق الدولي للتنمية الزراعية' (The International Fund for Agricultural Development) (UNTERM). Arabic texts avoid - as much as possible - treating abbreviated forms as lexical borrowings.

2.7.3.2 Transliteration

The use of Arabic abbreviated forms is not recommended by many language and translation service sections⁽⁹⁾. However, abbreviated forms and symbols are used in writing as symbols in the documentation process of resolutions, publications, documents, etc. For example, 'A/-' for 'General Assembly' and 'CRC/C/-' for 'Committee on the Rights of the Child', 'A/C.4/Sub.2/' for 'UN. General Assembly. 4th Committee.Subcommittee 2', etc. In this regard, the same English symbols (in Latin letters) are used as universal codes in all UN official languages including Arabic.

It is no doubt advantageous to adopt the same abbreviated form in multilingual contexts as a common form that can facilitate more accurate and concise international communication; for instance, the term *UNESCO* is used in all UN official languages including Arabic by way of transliteration. González pointed out that it is sometimes favored in international communication to use the original acronyms referring to these bodies or organizations as a kind of common code as in the acronym *GATT* (General Agreement on Tariffs and Trade) which is used in its original form among the different languages of the EU (González, 1991, p. 161). This applies even to most of the Arabic texts in which SL abbreviated forms are transposed to Arabic by way of transliteration, e.g., 'سير نظام الجات' (sayr nedhām aj jāt) for 'functioning of the GATT system' (ibid).

It can be observed that many acronyms in UN texts are rendered in Arabic by way of transliteration, e.g., 'الأونسيترال' (UNCITRAL) for 'لجنة الأمم المتحدة للقانون التجاري الدولي' (United Nations Commission on International Trade Law). It has been shown in the *naht* section that many Arabic authors resort to transliteration in dealing with foreign abbreviated forms; among those authors one can cite (Sa'īd, 2001), (Hazīm, 2010), (Ṣālīh, 2000), and (Naṣīr, 1987).

⁽⁹⁾ see 'عبد المجيد حسن: دليل الترجمة والتحرير' <http://english2arabic.com/omar/sattarsite/tranguide.htm>, in addition to my personal contact with Arabic translation service at UNOV.

In the UN news headlines, the transliterated Arabic abbreviated forms are often used instead of the full forms, e.g.,

الأونكتاد: الاقتصاد العالمي لا يزال في حالة تفكك⁽¹⁰⁾

UNCTAD: Global economy is still in a state of disarray

أنموفيك: عدد صواريخ الصمود 2 المدمرة بلغ 52 صاروخا⁽¹¹⁾

UNMOVIC: Number of destroyed Al-Samoud-2 missiles is 52.

إسكوا تنظم اجتماعا حول وضع العراق والمنطقة في فترة ما بعد الحرب⁽¹²⁾

ESCWA to convene post-war meeting on Iraq and the region

Commonly used SL abbreviated forms which have gained global status can be transliterated without considering their origins. They can be used as regular Arabic nouns with linked letters such as 'اليونيسيف' (lit. the UNICEF). As is obvious, some SL abbreviated forms are dealt with like proper names; they follow the rule of proper names which are usually not translated but rather transliterated. Pym (2004, p. 92) recommended to transliterate proper names rather than translating them. Some acronyms are used in the titles of a documents or reports, and then they are explained in the body of the text, e.g.,

"يونيدو تنظم ورشة عمل تمهيدا لإعادة افتتاح مشروع إنتاج الكلور في العراق
21/12/2004 - نظمت منظمة الأمم المتحدة للتنمية الصناعية "يونيدو" اليوم ورشة عمل لافتتاح مشروع لإعادة
تأهيل إنتاج الكلور في العراق... الخ".

"UNIDO is organizing a workshop in preparation for reopening the chlorine production project in Iraq.

21/12/2004 - United Nations Industrial Development Organization (UNIDO) has organized a workshop ... etc."⁽¹³⁾

However, ArabTerm (the Arabic term bank at the UN) cites only the Latin-letter abbreviated form after the Arabic full translation, e.g., 'وحدة الطاقة المساعدة' (APU), for Auxiliary Power Unit (APU), or just the full translation without any abbreviation e.g., 'طريقة الإشعال بمصدر خارجي', 'باستخدام الكرة الداخلية' for FM process⁽¹⁴⁾.

2.7.3.3 Short forms

Another main method of dealing with English abbreviated forms in the UN context is the use of short forms. It is often used in UN Arabic texts such as reports or resolutions. This method involves reducing the multiple-word term to one word (or fewer words); for instance, the word 'المجلس' (al majlis = the board) in:

⁽¹⁰⁾ <http://www.un.org/arabic/news/story.asp?NewsID=19643#.UlX6pdJgecc>

⁽¹¹⁾ <http://www.un.org/arabic/news/story.asp?newsID=528#.Ulxy69Jgecc>

⁽¹²⁾ <http://www.un.org/arabic/news/story.asp?newsID=1175#.Ul291dJgecc>

⁽¹³⁾ https://news.un.org/ar/story/2004/12/32172#.UpUfDNJwo_f

⁽¹⁴⁾ <http://www.arabterm.org/index.php?id=41&L=1>

وتأتي هذه التعيينات تنفيذًا لقرار الجمعية العامة الصادر في كانون الأول/ ديسمبر 2006 بإنشاء مجلس سجل الأمم المتحدة للأضرار الناشئة عن تشييد الجدار في الأرض الفلسطينية المحتلة والمحافظة عليه. ومن المتوقع أن يبدأ المجلس عمله في الرابع عشر من أيار/مايو الجاري باجتماع في مقر الأمم المتحدة في جنيف⁽¹⁵⁾

English:

These appointments come in implementation of the General Assembly resolution issued in December 2006 to establish and maintain the **Board** of the United Nations Register of Damage caused by the construction of the Wall in the Occupied Palestinian Territory. **The Board** is expected to begin its work on the fourteenth of May, with a meeting at the United Nations headquarters in Geneva.

In English, the short form 'The Board' stands for the full form "Board of the UN Register of Damage caused by the construction of the wall in the Occupied Palestinian Territory" ⁽¹⁶⁾. In the above-mentioned example, a very lengthy term composed of thirteen words was reduced to two words (one word preceded by a definite article) where the linguistic economy gains achieved by the use of such abbreviated form is very obvious.

2.7.3.4 Arabic abbreviated forms as equivalents

In spite of the limited use of Arabic abbreviated forms in the UN context, some SL abbreviated forms may form their TL equivalents as abbreviated forms by translating their content into Arabic and then using the initials of the Arabic phrase; this method resembles the English method of acronymy and can apply to initialisms too, as in the following examples from UNTERM:

'ردمك' (radmak): 'الرقم الدولي المعياري للكتاب' (Ar Raqm ad Duwali al Mi'yāri lil Kitāb) for ISBN (International Standard Bibliographic Number).

'أ ل ك' (ALK [alif lām kāf]) for 'أمريكا اللاتينية والكاريبي' (Amrīka al Lātīniyyah wal Kāribi) for LAC (Latin America and the Caribbean).

'م م ع' (MM'A [mīm mīm 'ayn] = 'مرافق المفاتيح العمومية' [Marāfiq al Mafātīḥ al 'Umūmiyyah]) for PKI (public key infrastructure).

2.7.3.5 Borrowing (Arabicization)

Borrowing is a common strategy among different languages which borrow and lend abbreviated forms; it is not uncommon practice among living languages. Zerkina, Kostina, & Pitina point out that many languages are currently taking the English language as their main source of borrowing abbreviated forms, whereas in the past, the English language itself used to borrow a large number of abbreviated forms from other languages. As long as these languages are living ones, they are like living beings in a way that they interact, take from other languages and give back to them. Although it is recommended to deal with all six official UN languages on equal basis, it is currently apparent that the English language can be considered the main language of the UN and it is a source from which other languages borrow words, including abbreviated forms.

⁽¹⁵⁾ <http://www.un.org/arabic/news/story.asp?NewsID=7272#.UqKK1tJDucc>

⁽¹⁶⁾ <https://news.un.org/en/story/2007/05/218492-ban-ki-moon-appoints-experts-board-un-register-damage-caused-construction-wall>

In borrowing, the terms are adapted to the TL language so that they would not violate the phonetic and grammatical rules of the TL language but preserve the SL meaning. When conveyed to Arabic, abbreviated forms sometimes undergo modification in order to match the Arabic phonetic system, e.g., 'جات' (GATT) for 'الاتفاقية العامة عن التعريفات الجمركية والتجارة' (General Agreement on Tariffs and Trade). In Arabic, it is written as 'الجات' (al jāt) (lit. the GATT) or 'اتفاقية الجات' (The GATT Agreement) (UNTERM). Since the sound /g/ does not exist in standard Arabic, the sound 'j' is used instead, while in spoken Arabic, the sound /g/ is used easily. Thus, borrowing is sometimes an indispensable approach especially with internationally established abbreviated forms, e.g.,

هابيتات تفتتح مكتباً لها في جنوب السودان للمساعدة في إعادة إعمار الجنوب⁽¹⁷⁾

HABITAT is opening an office in South Sudan to assist reconstruction of the South.

Gonzalez recommended that "when dealing with international bodies, only the delegations of the respective countries can propose the translation and, where appropriate, the acronym" (1991, p. 162). Even in languages of the same family, abbreviated forms of the same full form can differ from one language to another, particularly the names of organizations, e.g., *NATO* (Eng.) = *OTAN* (Fr.), and this would be more obvious with languages belonging to different families such as Arabic and English (ibid, p. 166). The reason for this is that although they are closely related, German and English are Germanic (truly agglutinative) and Romance languages depend on the insertion of prepositions and feature a different word order. In a nutshell, examples from UN texts show that the procedures for dealing with abbreviated forms include full translation, transliteration, short forms, Arabic equivalent, and borrowing.

⁽¹⁷⁾ <https://news.un.org/ar/story/2006/08/55622>

2.8 Concluding Remarks

1. ISO 704 covers most of the types of abbreviated forms in English and Arabic, although there are some differences in the definitions and methods of formation between ISO 704 and the English and Arabic literature concerning abbreviated forms. Some types in ISO 704 come under other categories, as is the case with alphanumeric forms and mixed forms.
2. No comprehensive typology has been found in the literature. Eight main types of abbreviated forms are found throughout the literature review in addition to symbols. Hence, there are nine overall types of abbreviated forms in English; they are abbreviations, acronyms, initialisms, blends, clippings, alphanumeric forms, mixed forms, short forms, and symbols.
3. Abbreviated forms are categorized in different ways in the literature, and there are different points of view for classifying them. However, the main types can be pinpointed and defined in a logical way depending on their method of formation and the way they are pronounced.
4. The definitions and typologies of abbreviated forms in the Arabic literature follow to a large extent the English models. In many cases, different names are given to the same form, while some types of abbreviated forms are not covered in the Arabic literature, either due to their rarity in Arabic or due to the newness of the topic for the Arabic language compared with English.
5. There are no clear-cut lines between types of abbreviated forms in Arabic. Some linguists propose language-based typologies composed of 1) pure Arabic abbreviations; 2) abbreviations taken from Arabicized words; and 3) Arabicized abbreviations with foreign source words. Arabic can employ the same nine types of abbreviated forms employed in English. Hence, the suggested general typology of Arabic abbreviated forms includes abbreviations, acronyms, initialisms, blends, clippings, alphanumeric forms, mixed forms, short forms, and symbols.
6. Theoretically, the large number of examples that can be found in classical Arabic and MSA is an evidence that abbreviation has been employed in Arabic for long centuries and this is a proof that this language is flexible and capable of employing symbols, abbreviations, acronyms, etc.
7. In the UN context translation practices of Arabic-English and vice versa, abbreviated forms are often formed in English and then conveyed to Arabic by various means such as full translation, transliteration, equivalent formation, etc. Yet, only a few abbreviated forms are created from an Arabic origin. Full translation is preferable to other approaches and there are rare attempts to find or form Arabic equivalent abbreviated

forms. Thus, it becomes clear that Arabic avoids the use of abbreviated forms not because it is incapable of abbreviation, but because there are no sufficient studies and efforts to make use of this procedure.

8. Generally speaking, the difficulty found in accepting new abbreviated forms is a universal phenomenon; all languages face such difficulty, and this includes English, Arabic, and other languages. When abbreviated forms are ambiguous in terms of their roots, this may lead to unclear meaning and ambiguous words. In this case, full translation of SL abbreviated forms is preferable to producing Arabic equivalent abbreviated forms, because full translation would produce more meaningful expressions than the vague abbreviated forms. However, unfamiliar scientific terms, including abbreviated forms, which are unpalatable at first become familiar to the ear and more acceptable as they circulate and are used more frequently.
9. The challenging task faced by terminologists/translators is whether to translate the abbreviated form, find a TL abbreviated form as an equivalent for it, borrow it in the TL or find a hybrid equivalent for it. In Arabic, it becomes more challenging due to the lack of equivalent abbreviated forms. The solution depends mainly on the terminologist/translator's knowledge and experience as well as the availability of terminology tools such as multilingual databases. Sometimes, it is important and more meaningful to adopt the SL abbreviated form in the TL if it represents a very technical term in order to convey the same concept by retaining a common code in multilingual communication which is an important factor in terminology work. This procedure is more welcomed in technical communication. In case of borrowing a foreign abbreviated form, it is important to maintain the peculiarities of the TL language in terms of its phonetic and derivative systems and this includes adapting the abbreviated form to conform to these systems.

Chapter 3 Methodology and Analysis

3.1 Introduction

The literature review showed a lack of consolidated rules for the formation and classification of abbreviated forms in English and to a larger extent in Arabic. Furthermore, it was unclear whether the best procedure in dealing with SL abbreviated forms is to form, translate, transliterate, or borrow them in the TL. To facilitate the work of translators and terminologists, particularly in the UN context, a specialized dictionary or database for abbreviated forms would be of a great assistance to translators and terminology users given the fact that the time constraints sometimes hinder the work of UN translators as terminology producers.

For this end, UNTERM (the UN main and central terminology database) was critically analyzed to find out how abbreviated forms in English and Arabic can be formed, classified, used, and translated as well as how can they be defined. Abbreviated forms were accessed directly from the UNTERM, as is shown in figure 4 below:

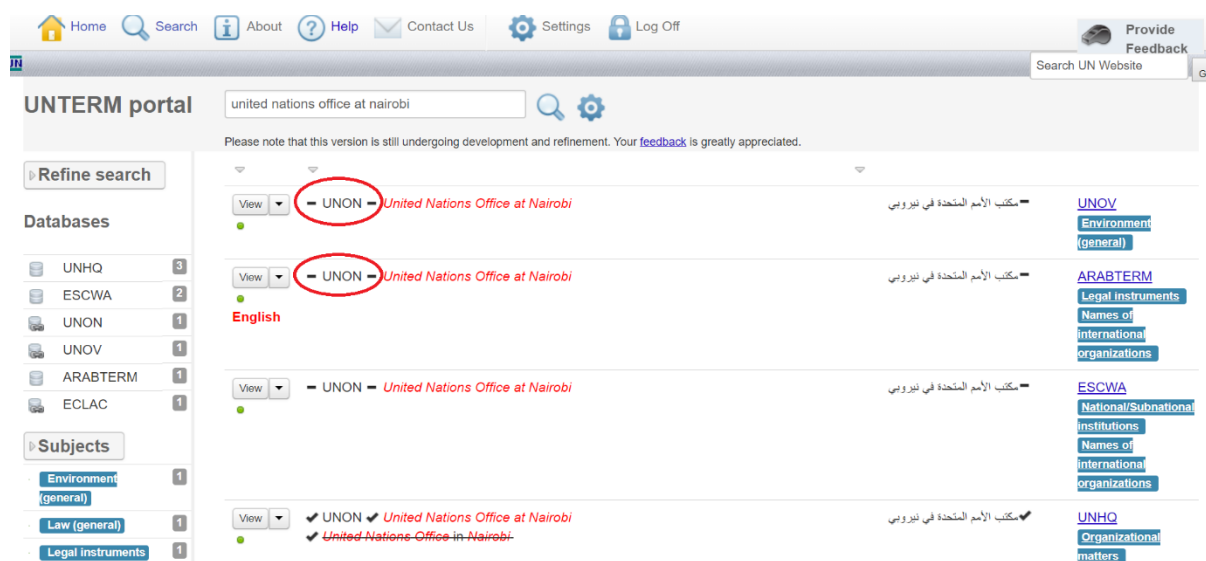


Figure 4 - UNTERM - The United Nations Terminology Database

The analysis is conducted to examine the abbreviated forms from lexical and terminological perspectives so as to establish the main methods of formation, definitions and types of English and Arabic abbreviated forms that are currently used, and to provide some solutions for the difficulties faced in their formation and translation. The English-Arabic language pair will be used for the purpose of the study as this language pair is the one that I use in my daily work. The study focuses on contemporary English and Arabic used in the UN context and does not cover historical or typological aspects of languages. The capacity of the Arabic language to create abbreviated forms in the UN context was also investigated throughout the analysis. The empirical material of the study was taken from UNTERM, which covers all

types of texts and publications of the UN. Certain methods for addressing abbreviated forms on the part of translators/terminologists were analyzed to see which of these methods can be applied.

Being an international standard that can cover many languages, ISO 704 was critically reviewed to examine whether or not it can be adopted as a model for the definitions, formation and classification of abbreviated forms in English and Arabic. The data collection process was conducted manually as the entries are not listed in a way that allows their extraction in a single coordinated process.

3.2 Research Hypotheses

1. The Standard ISO 704; namely, section *B.2.4 Creation of abbreviations*, which basically focuses on abbreviation as a method of term formation, can be adopted as a model for the formation, definitions and classification of abbreviated forms both in English and Arabic.
2. A universal classification of English and Arabic abbreviated forms in the UN context can be reached based on a phonological criterion, i.e., on the way these abbreviated forms are pronounced. The abbreviated forms which are pronounced syllabically are treated like words and are more inclined to be lexicalized, while other abbreviated forms, which are not pronounced as words are less inclined to be lexicalized, and are only shortened representations of the full forms.
3. Modification of abbreviated forms to improve their pronounceability as words by adding letters or sounds from their referents other than the initials is a productive and accepted method both in English and Arabic.
4. Rearrangement of letters can improve the quality of abbreviated forms with regard to their pronounceability, usability and adaptability as potential word forms; it is an important procedure in producing abbreviated forms that are pronounced as regular words.
5. Arabic can use its potential to create abbreviated forms as equivalent for the English ones in the UN context and this can be proved via the UN documents and databases.

3.3 Research Questions

Having a clear idea about the topic of the study, a number of research questions have been prepared to set the best framework for exploring this topic. The answers to these questions can help in proving or disproving the hypotheses of the study:

RQ1: How can each type of abbreviated form be created and defined in the UN context compared with the methods of formation and definitions in the literature and in ISO 704?

RQ2: Which types of abbreviated forms are used in the UN context?

RQ3: What are the most frequent types of abbreviated forms used in the UN context (both in English and Arabic)?

RQ4: What procedures can be used to improve the quality of abbreviated forms in the UN context?

RQ5: How are abbreviated forms rendered in the process of translation in the UN context?

RQ6: Can Arabic use its potential to create abbreviated forms as equivalents for the English ones in the UN context?

3.4 Data Collection

The methodology for data collection was carried out by selecting the material for the analysis from the UN abbreviated forms which are compiled in UNTERM as the data for the analysis and implementation of the research questions and hypotheses.

The data for analysis included all the abbreviated form entries compiled in the UN terminology databases in their SL (English) and TL (Arabic). These entries were extracted and analyzed in order to determine the use of abbreviated forms, their methods of formation, how can they be defined and classified, and how they were translated into Arabic (which is often a recipient language in our case).

The abbreviated forms were ordered alphabetically in order to be extracted one by one without missing any of them. This task was tedious and time-consuming as all the English and Arabic abbreviated forms in UNTERM were extracted manually; their total number in English was 2155 entries, while in Arabic they were 165 entries. These abbreviated forms were contained and documented in all types of UN documents and covered the entire UN terminology databases of all UN duty stations and regional commissions. Although it was not possible to list all the entries found in the databases and annex them to the current study due to copyright and access restrictions, these entries were analyzed one by one so as to determine their methods of formation, definitions, types, and how they are translated.

One reason for choosing these samples was that they contain all types of abbreviated forms in a wide range of subjects used in the UN context. These forms can reflect many aspects that would answer the research questions stated in section (3.3) to validate or invalidate the hypotheses proposed in the current study, especially that they represent most, if not all, the methods used to produce, translate and deal with abbreviated forms in English and Arabic. This would make the study more realistic and give the results of the study more credibility, as the data collected for the analysis and case study is taken from the UN context. The main criterion for the selection of UNTERM is the fact that the UN is rich in these abbreviated forms and it constitutes a fertile ground for the investigation of abbreviated forms in terms of definitions, methods of formation, typologies, and translation practices. The English-Arabic language pair was used in the current study.

3.5 Data Analysis

The analysis steps were designed in a way that makes them effective sources in answering the above-mentioned research questions and thereby proving or disproving the hypotheses of the study. The typology and definitions stated in ISO 704 were first introduced in (2.3) as this typology is proposed to be the main method for the definitions of abbreviated forms in general. Then the English and Arabic literature was reviewed as regards the definitions and types of abbreviated forms in both languages. The definitions were determined from the discussion and findings of the literature review depending on the various views of authors, followed by a summative view based on analysis of the literature (see 2.4). To add a practical nature to the theoretical aspect of the definitions, they were compared with the definitions found in the analysis of the abbreviated forms extracted from the UN terminology databases (see 4.2), and with those stated in ISO 704 (see 2.3) in order to reach a final statement on the method of formation and definition for each type of abbreviated form.

For the analysis of types and their frequency, UN documents were examined for samples; all the abbreviated form entries in UNTERM were examined with respect to their method of formation and pronunciation to determine their types (see 4.3), and the most frequently used types (see 4.4).

To examine how abbreviated forms were produced and which procedures were applied in order to improve their quality, the data was qualitatively analyzed as regards the use of additions, omissions, rearrangement of letters, modification and other procedures which might be used to produce pronounceable abbreviated forms in English and Arabic. (see 4.5)

Another step was taken to analyze how abbreviated forms were treated in the process of translation, i.e., how English abbreviated forms were rendered in Arabic in the UN context. For this purpose, the English abbreviated forms were examined one by one and compared with their Arabic counterparts to check whether they were fully or partially translated into Arabic, transliterated, borrowed, or they form their Arabic equivalents as abbreviated forms (see 4.6). This step was also time and effort consuming due to the large volume of the extracted data.

Thus, the analysis combined both a qualitative approach (how the abbreviated forms were produced, dealt with, rendered, etc.) and a quantitative approach (their ratios and percentages of frequency, most frequently used types, most frequently used methods of formation, translation, etc.).

To further verify the potentiality of Arabic to produce abbreviated forms in the UN context, a case study was designed, in which a random sample of forty abbreviated forms from UNTERM is taken; these English abbreviated forms have no Arabic equivalent abbreviated forms in the UN terminology main database. This was an attempt to create Arabic abbreviated forms as equivalents for the English ones (see 4.8).

3.6 Analysis tools

- A quantitative analysis was performed to examine the productivity of each type of abbreviated form, based on the rate of occurrence of the types included in the data collected from the UN terminology databases. This involved performing a statistical analysis on the total number of abbreviated forms contained in the UN terminology databases, number of types of abbreviated forms, most frequently used types, the methods used in dealing with abbreviated forms in the process of translation and the most frequently used methods, etc.
- A quality control analysis was performed to determine how abbreviated forms were rendered from English which is often the SL in the UN context to Arabic which is often a recipient language. This included procedures like full translation, borrowing, formation of equivalent Arabic abbreviated forms, short forms, etc.

To answer the research questions, the analysis of the data was designed according to the following phases:

1. The first phase: Abbreviated forms were extracted manually from the English abbreviations part of UNTERM together with their Arabic counterparts. Then, they were manually double-checked to avoid missing any abbreviation entries. Afterward, they were categorized according to their types depending on their method of formation and pronunciation. This phase also involved stating the definitions and methods of formation of abbreviated forms in the UN context which can be deduced through the analysis of the UN terminology databases. This step was associated with the comparison of these forms with the definitions and methods of formation for the abbreviated forms reached throughout the review of the literature and definitions and methods of formation of the abbreviated forms stated in ISO 704, because the latter is suggested as a model to be referred to in the formation and definition of abbreviated forms. Depending on the comparison, a final version of the definitions of each type of abbreviated form and their methods of formation is to be concluded.
2. The second phase: After setting up the definitions of abbreviated forms, a typology of abbreviated forms was deduced after these abbreviated forms had been studied according to their methods of formation and the number of types was counted.
3. The third phase: After the types of abbreviated forms have been determined, the frequency of each type of these abbreviated forms was counted, then they were ordered according to the most frequently used type. The resulting data was submitted to statistical analysis, including the total number of abbreviated forms contained in the UN terminology databases. Once the abbreviated forms had been extracted from the raw data, they were categorized according to their method of formation to find out which word formation processes were used the most.

4. The fourth phase of the analysis examined the procedures used to improve the quality of abbreviated forms, such as addition, omission, rearrangement of letters, and other procedures which may be used to produce pronounceable abbreviated forms that are compatible with the phonetic systems of English and Arabic. For this end, abbreviated forms were entirely analyzed and checked as regards their method of formation, whether they were created from all or some of the parts constituting their full forms, how they can be pronounced, for example, as full forms, strings of letters, ordinary words, etc. All these entries were statistically and qualitatively analyzed.
5. In the fifth phase, the analysis considered whether Arabic could produce abbreviated forms in the UN context just like other languages. The analysis included the examination of the strategies used to render the English abbreviated forms in Arabic, the approaches used in dealing with abbreviated forms in the process of translation, and the most frequent method used in this regard. An analysis was performed to determine the most commonly used method of rendering them; this covered strategies like full translation, transliteration, borrowing, transferring abbreviated forms in their original language form into the TL (Arabic), and so on. To verify whether Arabic can use its potential to create abbreviated forms as equivalents for the English ones in the UN context, a case study has been designed (see 4.8) in which a random sample of forty English abbreviated forms that have no Arabic equivalent abbreviated forms in the UN terminology main database has been taken. This part of the analysis addresses the implementation of abbreviation in Arabic in the UN context.

Chapter 4 The Results

4.1 Introduction

The analysis section analyzes the data collected from UNTERM to examine how abbreviated forms are created and defined in the UN context compared with the methods of formation and definitions in the literature and in ISO 704. The analysis explored the types of abbreviated forms used in the UN context and the most frequently used word formation processes in the production of abbreviated forms in the UN context. Furthermore, the analysis covered the procedures used to improve the quality of abbreviated forms, the ways abbreviated forms are rendered in the process of translation, and the potential of the Arabic language to generate abbreviated forms in the UN context just like other UN official languages. In sum, the analysis was designed to answer the research questions stated in the methodology chapter (see 3.3). The research questions were designed in a way that their answers can help in proving or disproving the hypotheses of the study (see 3.2). In other words, the research questions are used as tools to verify whether the research hypotheses proposed in the methodology chapter are valid or not. The content of the analysis is ordered according to the research questions and their answers, and the analysis phases were as follows:

4.2 How can each type of abbreviated form be created and defined in the UN context compared with the methods of formation and definitions in the literature and in ISO 704? (RQ1)

The answer to this question can provide indications whether *hypothesis 1* is valid or not. The following methods of formation and definitions of each abbreviated form type were reached throughout the analysis:

4.2.1 Abbreviations

In ISO 704: See Table 4 (1-a)

In the literature review: See Table 4 (1-b)

In the UN context: The analysis of UN abbreviated forms shows that the definition and method of formation of abbreviation were similar to those in the literature and in ISO 704. However, the main point to be taken into consideration is that abbreviations are written in short forms but pronounced as full words; in other words, they are just written representations of full forms. It has been obvious that most abbreviations are created from the initials of source words. Occasionally, some source words are excluded in the formation of abbreviations as in *IACG* for *Inter-Agency Consultative Group for Space Science* (UNTERM). In rare cases, the first two letters instead of the first letter of one or more source words are included in the formation of abbreviations, for instance, *CagM* for *Commission for Agricultural Meteorology* (ibid). Similarly, initials of conjunctions are included in rare cases as in *AoC* for *Alliance of Civilizations* (ibid). No Arabic abbreviations are found in UNTERM.

Suggested definition and method of formation: ISO 704 definition and method of formation cover most aspects of the concept abbreviation; however, ISO 704 does not state that an abbreviation is only a written version of words or phrases and is pronounced as a full form, while this is the main point to be taken into consideration in the definition of abbreviation. Accordingly, the definition could be modified as follows:

Abbreviation is a telescoped form of a word or phrase, which is formed by the omission of letters or segments of a word/words of its full form. It is written in a shorter form but pronounced as a full word/ full words.

4.2.2 Acronyms

Methods of formation and definitions of acronym were as follows:

In ISO 704: See Table 4 (2-a)

In the literature review: See Table 4 (2-b)

In the UN context: The analysis of UN abbreviated forms shows that the definition and method of formation of acronyms are very similar to those in the literature and in ISO 704. However, sometimes, some elements of the full form are excluded in the formation of acronyms, e.g., *ACCORD* for *Association of Southeast Asian Nations and China Cooperative Operations in Response to Dangerous Drugs* (UNTERM). Besides, not only the initials are included, but the first two or (rarely) three letters of one of the words might be included, e.g., *ACICOL* for *the African Conference on International Commercial Law* (ibid). These two or three letters may constitute a syllable and this case is stated in the definition of Standard ISO 704: for example, *surfactant* for **surface active agent**. The procedure of including more than initial letters is also covered in the definition and methods of formation reviewed in the literature which states that an acronym may be created from one or more initial letter(s). Hence, the definition and method of formation of ISO 704 is concise and comprehensive at the same time and can be adopted.

Suggested definition and method of formation: The definition and method of formation stated in ISO 704 are adopted: “*Acronyms* are created by combining initial letters or syllables from each or some of the elements of the *full form*. The *new term* is pronounced syllabically like a word” (ISO 704, 2022, p. 65).

4.2.3 Initialisms

Methods of formation and definitions of initialism were as follows:

In ISO 704: See Table 4 (3-a)

In the literature review: See Table 4 (3-b)

In the UN context: The analysis of UN abbreviated forms shows that the definition and method of formation of initialism are very similar to those in the literature and in ISO 704. However, it has been obvious that in some instances, not all the elements of the source

form are taken as parts of the initialism as in *OCB* for *Organized Crime and Illicit Trafficking Branch* (UNTERM). In rare cases, the first two letters instead of the initial letter of one or more source words are included in creating initialisms, e.g., *IFJU* for *the International Federation of Fruit Juice Producers* (ibid). Similarly, initials of conjunctions are excluded in the formation of initialisms, except in rare cases, as in *MTPE* for *Mission to Planet Earth* (ibid). Hence, the definition of ISO 704 is concise and comprehensive at the same time, and can be adopted.

Suggested definition and method of formation: The definition and method of formation stated in ISO 704 are adopted: “*Initialisms* are created by using the first letter (or sound) of each or some of the elements of the *full form* of a *term*. *Initialisms* are always pronounced letter by letter” (ISO 704, 2022, p.65).

4.2.4 Blends

In ISO 704: See Table 4 (4-1)

In the literature review: See Table 4 (4-b)

In the UN context: The analysis of UN abbreviated forms shows that the definition and method of formation of blends are similar to those examined in the literature and in ISO 704. Throughout the analysis of UN abbreviated forms, it can be concluded that a blend is a word coined by merging segments of two or more words, or a full word and segment or segments of other word or words, e.g., *ChinaSat* for *China Telecommunications Broadcast Satellite Corporation* (UNTERM). However, many blends in the UN terminology databases are not created from all words of the source form, e.g., *COBOL* for *Country Office in the Plurinational State of Bolivia* (ibid). No blends are formed in the Arabic part of abbreviations in the UN main terminology database.

Suggested definition and method of formation: The analysis shows that the definitions and methods of formation of blends are very similar to each other and to those stated in ISO 704. The latter elaborates that blending involves two processes: the first is clipping the words of the source form and the second is compounding them in one word (ISO 704, 2022, p.65). ISO 704 covers almost all aspects of the definition and method of formation of blends. Based on the analysis, the definition of ISO 704 can be adopted with a slight modification by adding that the blend is pronounced as an ordinary word:

Blend is a word coined by merging segments of two or more words, or a word and a segment of another word to coin a new word that carries the meanings of the full form. A blend is pronounced as an ordinary word.

4.2.5 Clippings

In ISO 704: See Table 4 (5-a)

In the literature review: See Table 4 (5-b)

In the UN context: The analysis shows that definitions and methods of formation of clippings are similar to those stated in ISO 704 and the literature review. In the UN context, clipping can be defined as an abbreviated form in which a word is shortened by cutting off a part of it often without changing its meaning. All of the clippings in the UN terminology databases are formed by the back-clipping method, e.g., *STAT* for *Statistics Division* (UNTERM). No Arabic clipping was formed in the Arabic part of the UN main terminology database.

Suggested definition and method of formation: The definitions and methods of formation are similar, and ISO 704 definition can be adopted with some modification: a clipping often carries the same meaning of the full form and it is pronounced as its written form suggests. Thus, the suggested definition and method of formation can be as follows:

Clipping is an abbreviated form in which a word is trimmed in various ways; it often carries the same meaning of the full form. Clipping can be created by trimming the first, middle, last, or first and last segments of its longer form; it is pronounced as its written form suggests, as an ordinary word.

4.2.6 Alphanumeric forms

In ISO 704: See Table 4 (6-a)

In the literature review: See Table 4 (6-b)

In the UN context: The definition and method of formation of alphanumeric forms that can be derived from the analysis are similar to those found in the literature and in ISO 704. An alphanumeric form is a type of abbreviation consisting of a combination of letters/words and numbers; it can also contain punctuation marks, and mathematical as well as other conventional symbols. In some instances, not all the elements of the source form are included as parts of the alphanumeric forms as in *PARIS21* for *Partnership in Statistics for Development in the 21st Century* (ibid). Sometimes, letters are added to make the alphanumeric forms pronounceable; these letters are not taken from the source forms, e.g., *UNISPACE III* for *Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space* (ibid). In rare cases, a metaphorically related word not contained in the original source form (full form) is used, e.g., *HABITAT II* for *United Nations Conference on Human Settlements* (ibid). In the Arabic part of the UN main terminology database, no Arabic alphanumeric forms are generated.

Suggested definition and method of formation: in ISO 704, alphanumeric forms are categorized under symbols rather than under abbreviated forms “if they do not represent words in a natural language or *abbreviations*” (ISO 704, 2022, p.52).

ISO 704 could be slightly modified. An alphanumeric form can be made up of a letter, abbreviated form, or a word and a number. The number comes at the end of the unit, but sometimes it comes at the beginning followed by the letter, abbreviated form or word. The definition of the literature review gives more details, but it should be also amended, and the above-mentioned possibilities should be added. Thus, the following definition for alphanumeric form can be proposed:

Alphanumeric form is an abbreviated form consisting of a combination of letters/words and numbers; it can also be created from a number followed by a letter, abbreviated form or word.

4.2.7 Mixed forms

In ISO 704: See Table 4 (7-a)

In the literature review: See Table 4 (7-b)

In the UN context: Most mixed forms are composed using an abbreviated form followed by another abbreviated form, e.g., *STP-M* for *solar-terrestrial physics-meteorology* (UNTERM). In some instances, some elements of the source form are excluded in the formation of mixed form as in *KSAT* (K-SAT) for *Kongsberg Satellite Services* (ibid). In rare cases, the first two letters instead of the first letter are included, e.g., *SADC-HYCOS* for *Western and Central Africa Hydrological Cycle Observing System* (ibid), or the initials of conjunctions are included in the formation of mixed form as in: *Pan-STARRS* for *Panoramic Survey Telescope and Rapid Response System* (ibid). As for Arabic, no mixed forms are formed in the UN terminology databases.

Suggested definition and method of formation: In addition to the definition in the literature, the analysis shows that a mixed form can be also constructed from a full word plus an abbreviated form, or an abbreviated form followed by another abbreviated form. Hence, the suggested definition could be as follows:

Mixed form is an abbreviated form in which the first element is a letter or an abbreviated form and the second a full word. It can also be created from a full word followed by an abbreviated form, or an abbreviated form followed by another abbreviated form.

4.2.8 Short forms

In ISO 704: See Table 4 (8-a)

In the literature review: See Table 4 (8-b)

In the UN context: The analysis shows that the definition and method of formation of short forms are very similar to those in the literature and in Standard ISO 704. This process refers to the reduction of a lengthy term to a shorter form by using fewer words or one word, e.g., *SWITCH* for *European Union's SWITCH programme* (ibid). In some instances, a metaphorically related word not contained in the original full form (phrase) is used instead of the full form as in *Galileo* for *European Satellite Navigation System* (ibid). No Arabic short forms are formed in the Arabic part of UNTERM.

Suggested definition and method of formation: The analysis shows that definitions from all sources are similar. However, it can be added to ISO 704 definition that sometimes, the short form can be confined to one word of the source form to designate the same concept. The suggested definition and method of formation can be as follows:

Short form is a reduced version of a longer phrase or term used to designate the same concept of the phrase or term. It can be reduced to fewer words and sometimes to one word.

4.2.9 Abbreviated forms in Arabic

As for Arabic abbreviated forms in the UN context, they are formed either by transliteration: 154 out of 2155 (7.1 %) of all abbreviated forms in UNTERM, and 154/165 (93.3%) of abbreviated forms written in Arabic, or by full translation into Arabic (no Arabic abbreviated form): 1815 out of 2155 (84.2 %) of all abbreviated forms in UNTERM.

4.2.10 Suggested definitions of abbreviated forms based on the review of ISO 704, English and Arabic literature, and the UN context

Abbreviation: a telescoped form of a word or phrase, which is formed by the omission of letters or segments of a word/words of its full form. It is written in a shorter form but pronounced as a full word/ full words.

Acronym: an abbreviated form coined “by combining initial letters or syllables from each or some of the elements of the *full form*. The *new term* is pronounced syllabically like a word” (ISO 704, 2022, p. 65).

Initialism: an abbreviated form “created by using the first letter (or sound) of each or some of the elements of the *full form* of a *term*. *Initialisms* are always pronounced letter by letter” (ibid).

Blend: a word coined by merging segments of two or more words, or a word and a segment of another word to coin a new word that carries the meanings of the full form. A blend is pronounced as an ordinary word.

Clipping: an abbreviated form in which a word is trimmed in various ways; it often carries the same meaning of the full form. Clipping can be created by trimming the first, middle, last, or first and last segments of its longer form; it is pronounced as its written form suggests, as an ordinary word.

Alphanumeric form: an abbreviated form consisting of a combination of letters/words and numbers; it can also be created from a number followed by a letter, abbreviated form or a word.

Mixed form: an abbreviated form in which the first element is a letter or an abbreviated form and the second a full word. It can also be created from a full word followed by an abbreviated form, or an abbreviated form followed by another abbreviated form.

Short form: a reduced version of a longer phrase or term used to designate the same concept of the phrase or term. It can be reduced to fewer words and sometimes to one word.

4.3 Which types of abbreviated forms are used in the UN context? (RQ2)

The second research question is about the types of abbreviated forms used in the UN context. The answer to this question can help investigating *Hypothesis 2*. After setting up the definitions and methods of formation of abbreviated forms, these abbreviated forms were categorized according to their methods of formation and pronunciation. Thus, based on their pronunciation, abbreviated forms can be classified into two groups. The first group is the abbreviated forms which are pronounced as ordinary words; this group includes acronyms, blends, clippings and short forms. The second group represents the abbreviated forms which are pronounced as strings of letters, or letters and full words and vice versa; this group includes alphanumeric forms, mixed forms and initialisms. Some abbreviated forms are only written representations of their full forms; in other words, they are written as abbreviated forms but are pronounced as full forms, as in the case of abbreviations. The first group can be called lexical abbreviated forms, and the second graphical abbreviated forms, because the abbreviated forms in the first group are more inclined to be lexicalized, while the abbreviated forms in the second group are less inclined to be lexicalized. Based on their method of formation, the analysis of abbreviated forms in the UN terminology databases showed that the following are the types of abbreviated forms used in the UN context:

1. abbreviations
2. acronyms
3. initialisms
4. blends
5. clippings
6. alphanumeric forms
7. mixed forms
8. short forms.

As for Arabic, no obvious results could be obtained as regards the types of abbreviated forms due to the rarity of Arabic abbreviated forms in the UN context. Only eleven original Arabic abbreviated forms are found in UNTERM, two of which are acronyms and the remaining nine are initialisms.

4.4 What are the most frequent types of abbreviated forms used in the UN context (both in English and Arabic)? (RQ3)

After the categorization of types of abbreviated forms, the frequency of each type of these abbreviated forms was counted and then they were ordered according to the most frequently used type. The answer to this research question can also help in the investigation of *hypothesis 1*. A statistical analysis was performed for this purpose; it covered the total number of abbreviated forms contained in the English part of UNTERM; their number amounted to 2155 abbreviated forms. Thus, the quantitative analysis was based on the rate of occurrence of the types included in UNTERM. The types of abbreviated forms are abbreviations, acronyms, initialisms, blends, clippings, alphanumeric forms, mixed forms, and short forms. Acronyms are the most frequent abbreviated forms followed by initialisms, abbreviations, mixed forms, blends, alphanumeric forms, clippings, and short forms, respectively. In Arabic, the analysis shows that Arabic abbreviated forms are formed in the UN context by transliteration, full translation, Arabic abbreviated form as equivalents in rare cases, and in some cases, there is neither translation nor equivalent abbreviation:

1. Total number of acronyms: 969/2155; (45%) of total abbreviated forms in UNTERM.
2. Total number of initialisms: 594/2155; (27.5%) of total abbreviated forms in UNTERM.
3. Total number of abbreviations: 241/2155; (11.1%) of total abbreviated forms in UNTERM.
4. Total number of mixed forms: 218/2155; (10.1%) of total abbreviated forms in UNTERM.
5. Total number of blends: 81/2155; (3.7%) of total abbreviated forms in UNTERM.
6. Total number of alphanumeric forms: 24/2155; (1.1%) of total abbreviated forms in UNTERM.
7. Total number of short forms: (18/2155); (0.8%) of total abbreviated forms in UNTERM.
8. Total number of clippings: 10/2155; (0.4%) of total abbreviated forms in UNTERM.

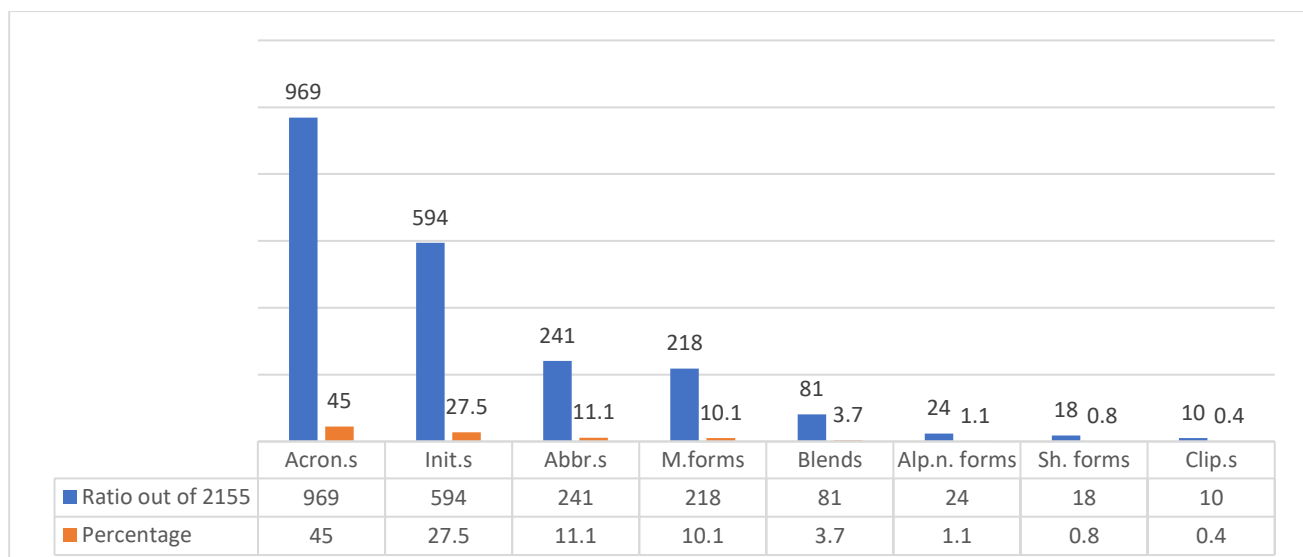


Chart 1 – Most frequent abbreviated forms in UNTERM

4.5 What procedures can be used to improve the quality of abbreviated forms in the UN context? (RQ4)

In response to this research question, an analysis was performed on procedures used to improve the quality of abbreviated forms, such as addition, omission, rearrangement of letters, and other procedures which were used to produce pronounceable abbreviated forms that are compatible with the phonetic system of English and Arabic. For this end, abbreviated forms were entirely analyzed and checked as regards their method of formation, whether they were created from all or some of the words constituting their full forms, and how they can be pronounced, for example, as full forms, string of letters, ordinary words, etc. All these entries were quantitatively and qualitatively analyzed. The answer to this research question would assist in the validation or invalidation of *hypotheses 3 and 4*.

It is known that initial letters or syllables are included only from the main words, while weak forms such as conjunctions, articles, and affixes are not recommended to be included in the formation of abbreviated forms. However, the analysis shows that these weak forms are occasionally included in order to make the abbreviated form pronounceable and of a better quality. Moreover, backronyms are also used in producing acronyms and even some other abbreviation types to give them specific connotations or semantic associations. In other instances, and for the same reason, some words in the full form are excluded, in addition to some other procedures. The analysis reveals the following results:

- The total number of abbreviated forms made up of only (pure) initials: 1600 out of 2155, which makes 74.2 % of all abbreviated forms in UNTERM.
- In a large number of abbreviated forms, some source words are excluded in the creation of the abbreviated form, e.g., *NARA* for *National Aquatic Resources Research and Development Agency*, *ICPA* for *International Corrections and Prisons Association for the Advancement of Professional Corrections*, and *MLICT* for *Model Law on International Credit Transfers of the United Nations Commission on International Trade Law* (UNTERM). The ratio of abbreviated forms in which some source words are excluded is 375 out of 2155 and the percentage is 17.4% of all abbreviated forms in UNTERM.
- Sometimes, two letters of one word (syllable) instead of the initial letter are included in the creation of abbreviated forms, e.g., *RECTAS* for *Regional Centre for Training in Aerospace Surveys*, *MPAC* for *Micro-Particles Capture*, *PARIS21* for *Partnership in Statistics for Development in the 21st Century*, etc. This is used in 175 out of 2155 abbreviated forms in UNTERM; this number constitutes 8.1% of all abbreviated forms in UNTERM.
- Backronyms are used in 109 out of 2155 abbreviated forms in UNTERM, e.g., *SAFER* for *Services and Applications for Emergency Response*, *CHAIN* for *Collaborative Harmonised Amphetamine Initiative*, *CHAMP* for *Challenging Mini-Satellite Payload*, etc. This number constitutes 5% of all abbreviated forms in UNTERM.
- Initials of prepositions or conjunctions are included in 69 out of 2155 abbreviated forms in UNTERM, e.g., *Pan-STARRS* for *Panoramic Survey Telescope and Rapid Response System*, *MOA* for *memorandum of agreement*, *COMI* for *Centre of Main Interests* (ibid), etc. This number constitutes 3.2 % of all abbreviated forms in UNTERM.

- In some instances, letters not belonging to the source form are added to the abbreviated form, e.g., *UNISPACE III* for *Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space*, *HOPE* for *H-II Orbiting Plane*, and *MERSEA* for *Marine Environment and Security for the European Area* (UNTERM). This procedure is applied in 41 out of 2155 abbreviated forms in UNTERM; the number constitutes 1.9 % of all abbreviated forms in UNTERM.
- Three letters of one word are sometimes included in producing the abbreviated form, e.g., *SCINDA* for *Scintillation Network Decision Aid*, *ProMIS* for *Programme Management Information System*, and *SPARRSO* for *Space Research and Remote Sensing Organization* (ibid). This is the case in 37 out of 2155 abbreviated forms in UNTERM; this number constitutes 1.7 % of all abbreviated forms in UNTERM.
- Metaphorically related words that are not contained in the original full form (phrase) are used in 11 out of 2155 abbreviated forms in UNTERM: for example, *UN-Habitat* for *United Nations Human Settlements Programme* (ibid). The word *habitat* refers to the human settlement programme, *PERSEPOLIS* for *Participatory Experiences Empowering Local Initiatives in Iran* (ibid); “Founded by Darius I in 518 B.C., Persepolis was the capital of the Achaemenid Empire” in ancient Iran (UNESCO World Heritage Centre, n.d.). This number constitutes 0.51% of all abbreviated forms in UNTERM.
- Double acronyms are found in seven out of 2155 abbreviated forms in UNTERM. In this procedure, an acronym involves another acronym as in: *LARES* for *Laser Relativity Satellite*, *COSSA* for *CSIRO Office for Space Science Applications*, and *ISAC* for *ISRO Satellite Centre* (ibid). The number of double acronyms constitutes 0.3% of all abbreviated forms in UNTERM.
- Initials of articles are included in producing five out of 2155 abbreviated forms in UNTERM: for example, *ABRIXAS* for *A Broad band Imaging X-ray All-sky Survey*, and *COTS* for *commercial off-the-shelf* (ibid). This number constitutes 0.2% of all abbreviated forms in UNTERM.
- Four letters of one word are included in one out of 2155 abbreviated forms in UNTERM, e.g., *INTEGRAL* for *International Gamma-Ray Astrophysics Laboratory* (ibid); this number constitutes 0.04% of all abbreviated forms in UNTERM.
- Rearrangement of letters is used in the formation of three out of 2155 abbreviated forms in UNTERM; this number constitutes 0.14% of all abbreviated forms in UNTERM. For example, *MARPOL* for *International Convention Covering Prevention of Pollution of the Marine Environment* (ibid).

	Procedure	Ratio	Percentage
1.	From only (pure) initials	1600/2155	74.20%
2.	Some words excluded	375/2155	17.40%
3.	Two letters included	175/2155	8.10%
4.	Initial of preposition or conjunction included	69/2155	3.20%
5.	Letter added	41/2155	1.9%
6.	Three letters included	37/2155	1.7%
7.	Initial of article included	5/2155	0.20%
8.	Four letters included	1/2155	0.04%
9.	Letters rearranged	3/2155	0.14%

Table 5 – Overall quality improvement procedures used in the formation of abbreviated forms in UNTERM

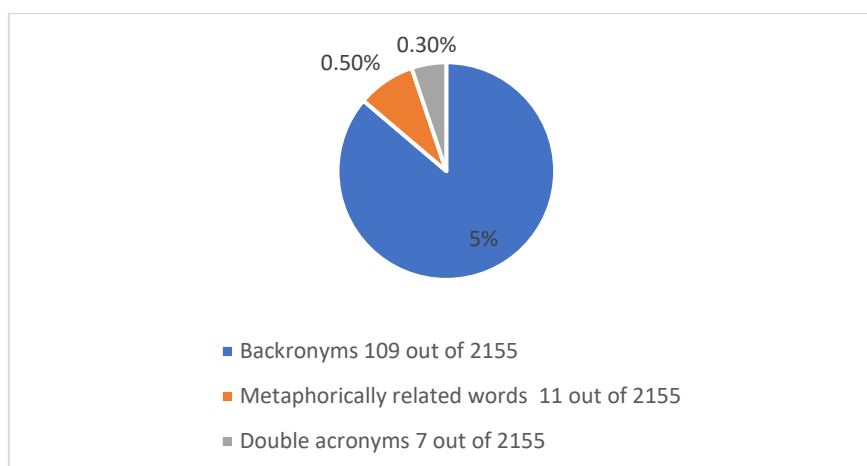


Chart 2 – Backronyms, double acronyms and metaphorically related words used in the formation of abbreviated forms in UNTERM

4.6 How are abbreviated forms rendered in the process of translation in the UN context? (RQ5)

To answer this question, an analysis was performed on the strategies used to render the English abbreviated forms into Arabic; what were the approaches used in dealing with abbreviated forms in the process of translation, and what was the most frequent method used in this regard? The answer to this research question would assist in the validation or invalidation of *hypotheses* 3 and 4. A statistical analysis was performed to determine the most commonly used methods of rendering abbreviated forms; this included strategies like full translation, transliteration, borrowing, transferring abbreviated forms in their original language form into the TL (Arabic), and so on. The analysis showed that in the process of translation into Arabic, English abbreviated forms were treated according to the following procedures :

- The total number of Arabic abbreviated form entries in UNTERM (written in Arabic): 165/2155 (7.6 %) of all abbreviated forms in UNTERM.
- Only full translation into Arabic (no Arabic abbreviated form): 1815 out of 2155 abbreviated forms in UNTERM were only fully translated; this constitutes 84.2% of all English abbreviated forms in UNTERM, for example, *DAMAGE* for *Debris Analysis and Monitoring Architecture for the Geosynchronous Environment* was only fully translated into Arabic as 'النموذج الحاسوبي لتحليل ورصد الحطام الموجود في بيئة المدار' (UNTERM), and no equivalent abbreviated form was created in Arabic.
- Equivalent abbreviated form (written in Arabic but not formed in Arabic): 135 out of 2155 abbreviated forms in UNTERM have their counterparts in Arabic; this constitutes 6.2% of all abbreviated forms in UNTERM. However, the majority of Arabic abbreviated forms is only rendered by transliteration of the English ones, rather than being created from the Arabic full form, e.g., *DAMA* for *demand assignment multiple access* was rendered to 'داما' and fully translated as 'خدمة تخصيص القنوات لمستعملين متعددين عند الطلب' (ibid).
- Arabic abbreviated forms (formed in Arabic as equivalents for the English abbreviated forms): only 11 out of 2155 English abbreviated forms in UNTERM are rendered to Arabic abbreviated forms; this constitutes 0.51 % of all abbreviated forms in UNTERM, e.g., *GTSN* (Global Telemetered Seismograph Network) was rendered to 'ش ع ق هـ' (Sh.'A.Q.H) from 'المتقدم للوجستيات الطوارئ للتطبيب عن بعد في حالات الكوارث' = Ash *Shabakah al 'Ālamiyyah li Qiyās al Hazzāt al Arḍiyyah* (ibid).
- Transliteration: Total number of abbreviated forms rendered in Arabic by transliteration is 154 out of 2155 abbreviated forms in UNTERM; this constitutes 7.1% of all abbreviated forms in UNTERM. On the other hand, this constitutes 154/165 (93.3%) of all Arabic abbreviated forms (they are written in Arabic but not created from Arabic origin; rather, they were rendered in Arabic by way of transliteration), e.g., 'ديلتاس' (Daltās = النظام الساتلي) (المتقدم للوجستيات الطوارئ للتطبيب عن بعد في حالات الكوارث) for *DELTA*SS (Disaster Emergency Logistic Telemedicine Advanced Satellite Systems) (ibid).

- Many abbreviated forms are borrowed in English from other languages in UNTERM. The analysis shows that the total number of abbreviated forms which are taken from other languages is 255 out of 2155 abbreviated forms in UNTERM. This constitutes 11.8% of all English abbreviated forms in UNTERM.
- The total number of abbreviated forms with no Arabic translation: 284 out of 2155 (13.1%) of all abbreviated forms in UNTERM, e.g., *CRISTA* (Cryogenic Infrared Spectrometer and Telescope for the Atmosphere).
- The total number of abbreviated forms which are included with their English forms in the Arabic abbreviations field in UNTERM: 27 out of 2155 (1.2 %) of all abbreviated forms in UNTERM, e.g., *URBACT* (European Union's Urban Development Network Programme) (UNTERM).

	Procedures used in rendering English abbreviated forms to Arabic	Ratio	Percentage
1.	Total Arabic abbreviated forms	165/2155	7.6%
2.	Full translation	1815/2155	84.2%
3.	No Arabic translation or abbreviation	284/2155	13.1%
4.	Transliteration	154/2155	7.1%
5.	Equivalent but not of Arabic origin	135/2155	6.2%
6.	Kept in English in the Arabic field	27/2155	1.2%
7.	Arabic equivalent abbreviated form	11/2155	0.51%

Table 6 – Overall statistics of Arabic abbreviated forms in UNTERM

4.7 Analysis of individual abbreviated forms

This section analyzes each type of abbreviated forms in terms of their methods of formation, quality improvement procedures, and how they were dealt with in the process of translation. The results of the analyses were as follows:

4.7.1 Methods of formation

The methods of formation of each type of abbreviated form were analyzed and the following results became clear:

4.7.1.1 Abbreviations

Abbreviations are created by taking initial letters or segments of a number of words, or telescoping a word/words to a shorter form, while pronouncing the abbreviation in its full form, i.e., as a full word / full words. The total number of English abbreviations is 241 out of 2155 abbreviated forms in the English part of the UN terminology databases, e.g., *CAGM* for *Commission for Agricultural Meteorology* (UNTERM). Abbreviations constitute 11.1% of the total number of abbreviated forms in UNTERM. Most abbreviations are created from pure initials of source words; the percentage is 97% of total abbreviated forms in English (see chart 3). As for Arabic abbreviations, none are formed in the Arabic part of UNTERM.

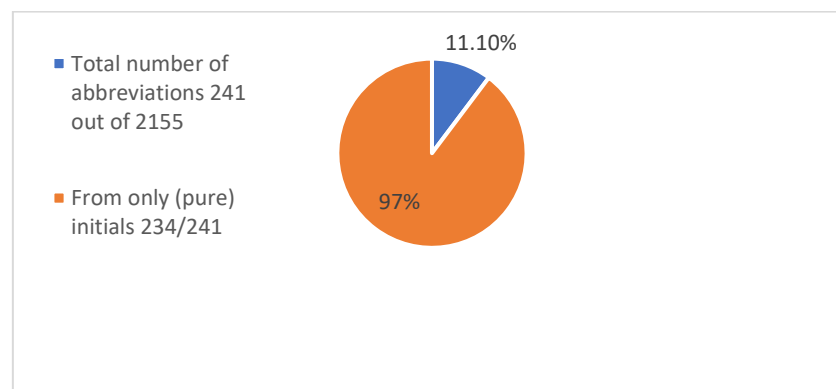


Chart 3 – English abbreviations in UNTERM

4.7.1.2 Acronyms

Acronyms in the UN context are coined from the initial letters of words in a phrase representing a complex term. Almost 80% of the acronyms in the UN context are created from the initial letters of their source words (full forms); for example, *COMPASS* for *CTBTO Organizational Management Programme Achievement Status System* (ibid). In the same context, no Arabic acronyms are formed in the Arabic part of UNTERM (UNTERM here refers to all of the main UN terminology databases, because it contains all of these databases).

4.7.1.3 Initialisms

The total number of English initialisms in the UN terminology databases is 594 out of a total of 2155 abbreviated forms. Thus, initialisms represent 27.5% of the total number of abbreviated forms in UNTERM. Almost all initialisms are created from the initials of source words: 592 out of 594 initialisms in UNTERM are created from the initial letters of their full

sources, e.g., *PSA for Programme on Substance Abuse* (UNTERM); this constitutes (99.6%) of initialisms.

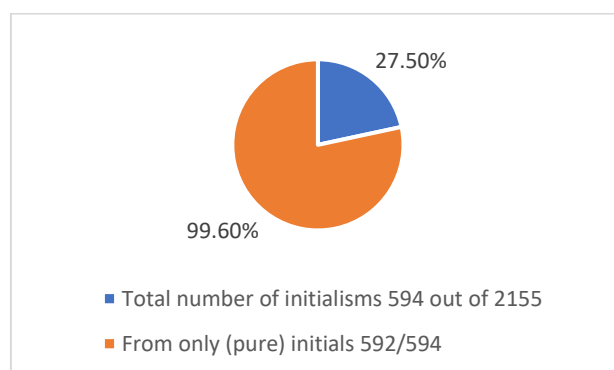


Chart 4 – English initialisms in UNTERM

In Arabic, only a few examples of Arabic initialisms are formed and entered in the Arabic part of UNTERM as equivalents for the English initialisms, e.g., 'م م ع' (m.m.'a [mīm mīm 'ayn] = PKI) for 'مرافق المفاتيح العمومية' (marāfiq al mafātīh al 'umūmiyyah = public key infrastructure) (ibid). The total number of Arabic initialisms created from Arabic full forms as equivalents for the English initialisms is nine, their ratio is 9/594 and percentage is 1.5% of the total number of English initialisms in UNTERM.

4.7.1.4 Blends

Blends in the UN context are coined by merging segments of two or more words, or a word and a segment of another word, e.g., *POSAT* for *Portuguese satellite*; its Arabic equivalent is 'ساتل برتغالي' (Portuguese satellite) – a full translation (ibid). The total number of blends is 81 out of 2155 abbreviated forms in the English part of UNTERM, i.e., blends constitute 3.7% of the total number of abbreviated forms in the UN terminology databases. No Arabic blends are formed in the Arabic part of UNTERM.

4.7.1.5 Clippings

Clipping in the UN context is formed by truncating part of a word or a term and using the remaining part of the word to refer to the same concept of the term. The analysis shows that only back-clipping is used in the formation of clippings in UNTERM, e.g., *ANT* for *The Antarctic Treaty* (ibid). The total number of English clippings is 10 out of 2155 abbreviated forms in UNTERM. In other words, clippings constitute 0.4% of the total number of English abbreviated forms in UNTERM. Two clippings in UNTERM match the forms of already existing words in English, e.g., *PRO* for Project Personnel Section (ibid); this constitutes two out of 10 clippings in UNTERM which equals to 20% of the total number of clipping in UNTERM. As for Arabic clippings, none is found in the Arabic part of UNTERM.

	Methods of formation	Ratio	Percentage
1.	First part, 1 syllable (back-clipping)	5/10	50%
2.	First part, 2 syllables (back-clipping)	2/10	20%
3.	First part, 2 syllables + full word (back-clipping)	3/10	30%

Table 7 – Methods of formation of English clippings in UNTERM

4.7.1.6 Alphanumeric forms

Alphanumeric forms in the UN context are mainly formed by combining letters and numbers, e.g., *LAVHTLV-III* for *lymphadenopathy-associated virus human T-lymphotropic virus, type III* (UNTERM). The total number of alphanumeric forms is 24 out of 2155 abbreviated forms in UNTERM. In other words, alphanumeric forms constitute 1.1% of the total number of abbreviated forms in UNTERM. They are created from combinations of letters or abbreviated forms followed by numbers or vice-versa. As for Arabic alphanumeric forms in the UN context, not a single Arabic alphanumeric form is found in the Arabic part of UNTERM.

4.7.1.7 Mixed forms

Mixed forms in the UN context are created by combining a letter with a full word or vice versa, an abbreviation with a full word or vice versa, or an abbreviated form with another abbreviated form. The total number of mixed forms in English is 218 out of 2155 abbreviated forms in UNTERM. In other words, mixed forms constitute 10.1% of the total number of abbreviated forms in UNTERM. Most mixed forms are made up of an abbreviated form followed by another abbreviated form, e.g., *UNRCC-AP* for *United Nations Regional Cartographic Conference for Asia and the Pacific* (ibid). Only full translation is entered as an equivalent of this term: 'مؤتمر الأمم المتحدة الإقليمي لرسم الخرائط لآسيا والمحيط الهادئ' (ibid). As for Arabic, no mixed forms are formed in the Arabic part of UNTERM. The total number of mixed forms found in UNTERM (written in Arabic) is 11 out of 218 (5%).

4.7.1.8 Short forms

Short forms in the UN context are coined by shrinking long phrases to shorter forms via reducing them to fewer words, and sometimes to one word. The total number of short forms is 18 out of 2155 abbreviated forms in UNTERM. This ratio constitutes 0.8% of the total number of abbreviated forms in UNTERM. 15 out of 18 short forms are converted to one word (of which four appear as compounds created from two words), e.g., *SHARES* for *sharing of experience in space fellowship programme* (Arabic equivalent in UNTERM: "برنامج الزمالات المسمى" تقاسم الخبرة في ميدان الفضاء (ibid); this constitutes 83.3% of total short forms in UNTERM, while two out of the 18 short forms (11%) are reduced to two words, e.g., *Practice Guide* for *UNCITRAL Practice Guide on Cross-Border Insolvency Cooperation* (ibid). One out of 18 is reduced to four words (out of six words): *Special Committee on Illegal Drugs* for *Senate Special Committee on Illegal Drugs of Canada* (ibid); that is 5.5% of total short forms in UNTERM. In some instances, a metaphorically related word not contained in the original full form (phrase) is entered instead of the full form, e.g., *SOLAR* for *X-ray Observatory Satellite* (ibid); this occurred in two out of 18 short forms (11%). As for Arabic short forms in the UN context, none are found in the Arabic part of UNTERM.

	Reduction	Ratio	Percentage
1.	To one word	15/18	83.3%
2.	To two words	2/18	11%
3.	To four words out of six	1/18	5.5%

Table 8 – Methods of reduction in the formation of English short forms

4.7.2 Quality improvement procedures

Several quality improvement procedures are applied in the formation of abbreviated forms in the UN context; the main purpose of these procedures is to make the abbreviated forms pronounceable and sometimes to make them match already existing words. The following is a preview of these procedures applied with each type of abbreviated form in UNTERM:

4.7.2.1 Abbreviations

The analysis of abbreviations in UNTERMS showed that in some instances, not all the words from the source form are included as parts of the abbreviation, e.g., *IACG* for *Inter-Agency Consultative Group for Space Science* [only full translation is provided as an equivalent for this term in Arabic: 'الفريق الاستشاري المشترك فيما بين الوكالات لعلوم الفضاء' (UNTERM). In rare cases, the first two letters instead of the first letter of one or more source words are included in the abbreviation, e.g., *AFSPC* for *United States Air Force Space Command* [only full translation is provided as an equivalent for this term in Arabic: 'قيادة الفضاء التابعة للقوات الجوية الأمريكية' (ibid). Similarly, initials of conjunctions are included in rare cases, e.g., *AoC* for *Alliance of Civilizations* [only full translation is provided as an equivalent for this term in Arabic: 'تحالف الأمم المتحدة للحضارات' (ibid). Table 9 shows the ratios and percentages of the use of these procedures:

	Quality improvement procedure	Ratio	Percentage
1.	Some words excluded	20/241	8.20%
2.	Two letters included	7/241	2.90%
3.	Initial of preposition or conjunction included	5/241	2%
4.	Letter added	1/241	0.40%
5.	Initial of article included	1/241	0.40%

Table 9 – Quality improvement procedures in the formation of English abbreviations in UNTERM

4.7.2.2 Acronyms

In many examples in the UN context, addition, omission, and some other procedures are applied to improve the quality of acronyms and make them pronounceable forms. In 16.3% of the acronyms, the first two letters instead of only the first letter are included as in *ALIVE* for *Alert Interface via EGNOS* [only full translation as Arabic equivalent: 'واجهة الإنذار بواسطة إيغنوس' (ibid), while the percentage of taking three letters from one word of the source of the acronym is (3.7%); that is 36 out of 969 acronyms, e.g., *COMSTAC* for *Commercial Space Transportation Advisory Committee* [only full translation as Arabic equivalent: 'اللجنة التجارية الاستشارية المعنية بالنقل الفضائي التجاري' (ibid). Initials of prepositions or conjunctions, and articles are included in 5.9% of the acronyms, e.g., *COTS* for *commercial off-the-shelf* [only full translation as Arabic equivalent: 'منتجات تجارية متاحة في السوق' (ibid). In many examples, some words of the full form are excluded in producing acronyms, e.g., *DASH* for *Demonstrator of Atmospheric Reentry System with Hyper Velocity* [only full translation as Arabic equivalent: 'الجهاز الايضاحي لنظام العودة إلى الغلاف الجوي الفائق السرعة' (ibid); this takes place in 161 out of 969 (16.6%). In some cases, letters are added to make the acronym pronounceable, although these letters are not parts of the source form; this procedure is used in 31 out of 969 acronyms in the English part which constitutes 3.1% of the total number of English acronyms in UNTERM, e.g., *MERSEA* for *Marine Environment and Security for the European Area* [only full translation as Arabic equivalent: 'برنامج البيئة والأمن البحريين' (ibid).

المنطقة الأوروبية (UNTERM). Table 10 below shows the ratios and percentages of the use of these procedures:

	Quality improvement procedure	Ratio	Percentage
1.	Some words excluded in the formation of acronym	161/969	16.60%
2.	Two letters included in the formation of acronym	158/969	16.30%
3.	Preposition or conjunction included in the formation of acronym	56/969	5.70%
4.	Three letters included in the formation of acronym	36/969	3.70%
5.	Letter added in the formation of acronym	31/969	3.10%
6.	Initial of article included in the formation of acronym	2/969	0.20%
7.	Four letters included in the formation of acronym	1/969	0.10%

Table 10 – Quality improvement procedures in the formation of English acronyms

4.7.2.1.1 Backronyms and metaphorically related words

Backronyms are employed in producing acronyms and even some other abbreviation types to give them specific connotations or semantic associations, e.g., *CHAIN* for *Collaborative Harmonised Amphetamine Initiative* [this term has no Arabic equivalent] (ibid). The number of backronyms is relatively significant; it constitutes around 11% of the total number of acronyms. Double acronyms are also found in the English part; that is an acronym which is made up of an initial of another acronym in addition to the initials of other words in the source form, e.g., *LARES* for *Laser Relativity Satellite* [only full translation as Arabic equivalent: 'ساتل لدراسة النسبية العامة بأشعة الليزر' (ibid). The percentage of double acronyms is 0.7%. In rare cases, a metaphorically related word not contained in the original full form (phrase) is entered instead of the full form, e.g., *PERSEPOLIS* for *the Participatory Experiences Empowering Local Initiatives in Iran* [the equivalent of this term is transliterated into Arabic as 'برسيبوليس' (ibid). This occurred in two out of 969 acronyms in UNTERM (0.2%). Table 11 below shows the ratios and percentages of the use of backronyms, double acronyms and metaphorically related words in the formation of English acronyms:

	Backronyms and metaphorically related words	Ratio	Percentage
1.	Backronym	106/969	10.90%
2.	Double acronym	7/969	0.70%
3.	Metaphorically related word not contained in the original full form	2/969	0.20%

Table 11 – Backronyms and metaphorically related words in the formation of English acronyms

4.7.2.3 Initialisms

In the UN context, initialisms are created from the initial letters of a group of words. Sometimes, some elements of the source form are excluded in the formation of initialisms, e.g., *OCB* for *Organized Crime and Illicit Trafficking Branch* [only full translation is provided as an equivalent for this term in Arabic: 'الفرع المعني بالجريمة المنظمة والاتجار غير المشروع' (ibid). In rare cases, the first two letters instead of the first letter of one or more source words are included in forming initialisms, e.g., *IFJU* for *International Federation of Fruit Juice Producers* [this term has no Arabic equivalent in UNTERM] (ibid). Similarly, initials of prepositions or conjunctions are included in rare cases, e.g., *MTPE* for *Mission to Planet Earth* [only full translation is provided as an equivalent for this term in Arabic: 'البعثة الى كوكب الأرض' (ibid). Table 12 below shows the ratios and percentages of the use of these procedures:

	Quality improvement procedure	Ratio	Percentage
1.	Some words excluded	42/594	7%
2.	Two letters included	2/594	0.3%
3.	Initial of preposition or conjunction included	3/594	0.5%
4.	Initial of article included	2/594	0.3%

Table 12 – Quality improvement procedures in the formation of English initialisms

4.7.2.4 Blends

Blends in the UN context are coined by merging segments of two or more words into one word. However, the analysis showed that in many cases, not all the elements of the source form are included as parts of the blend, e.g., *INTERCENTER* for ***International Centre of Sociological, Penal and Penitentiary Research and Studies*** (UNTERM) [only full translation is provided as an equivalent for this term in Arabic: 'المركز الدولي للبحوث والدراسات في علم الاجتماع والعقوبات والسجون' (ibid)]. The ratio for such blends is 50 out of 81 of the total number of blends in UNTERM, i.e., 61.7% of blends. In five out of 81 blends (6.1%), there is an overlap between the initial segments of the first and second words composing the blend as in *AFREF* from ***African Geodetic Reference Frame*** [only full translation is provided as an equivalent for this term in Arabic: 'الإطار المرجعي الجيوديسي لأفريقيا' (ibid)].

4.7.2.5 Clippings

No quality improvement procedures are applied in the formation of clippings in the UN context. Backronyms are used in two cases in the formation of clippings in the UN context, e.g., *ANT* for the ***Antarctic Treaty*** (ibid), no Arabic equivalent is provided for this clipping in UNTERM. The ratio for this type of abbreviated form is two out of ten clippings and this number constitutes 20% of all clippings in UNTERM.

4.7.2.6 Alphanumeric forms

The analysis shows that in many examples, some words of the source form are excluded in the creation of the alphanumeric forms, e.g., *RESAP II* for the ***second phase of the Regional Space Applications Programme for Sustainable Development*** (ibid). The full translation of this term in UNTERM is 'المرحلة الثانية من برنامج التطبيقات الفضائية الاقليمي من أجل التنمية المستدامة' and the equivalent abbreviated form is 'برنامج ريساب الثاني' (= Second RESAP Programme). Such forms constitute 12 out of 24 alphanumeric forms in UNTERM (50%). In one out of 24 alphanumeric forms, the first two letters instead the first letter are included (4.1%) and the same applies to taking three letters from one word of the source form, e.g., *PARIS21* for ***Partnership in Statistics for Development in the 21st Century*** (ibid). The full translation of this term in UNTERM is 'الشراكة في مجال الإحصاء من أجل التنمية في القرن الحادي والعشرين' and the equivalent abbreviated form is 'شراكة الإحصاء 21' (Partnership for Statistics 21) (ibid). Sometimes, letters are added to make the alphanumeric forms pronounceable; these letters are not included from the source form, and this procedure is used in 3 out of 24 alphanumeric forms in the English part, i.e., 12.5% of the total number of English alphanumeric forms in UNTERM, e.g., *UNISPACE+50* for ***Fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space*** (ibid). In addition to full translation, this form is conveyed to Arabic by way of transliteration as 'اليونيسبيس+50' (ibid). In rare cases, a metaphorically related word not contained in the original source form (full form) is used, e.g., *HABITAT II* for ***United Nations Conference on Human Settlements***

(UNTERM). The equivalent abbreviated form for this alphanumeric form is 'الموئل الثاني' (Al Maw'il ath Thāni = the second Habitat). Maw'il is the term used in Arabic within the UN context to refer to Habitat. This occurred in one out of 24 alphanumeric forms (4.1%). Chart 5 below shows the ratios and percentages of the use of these procedures:

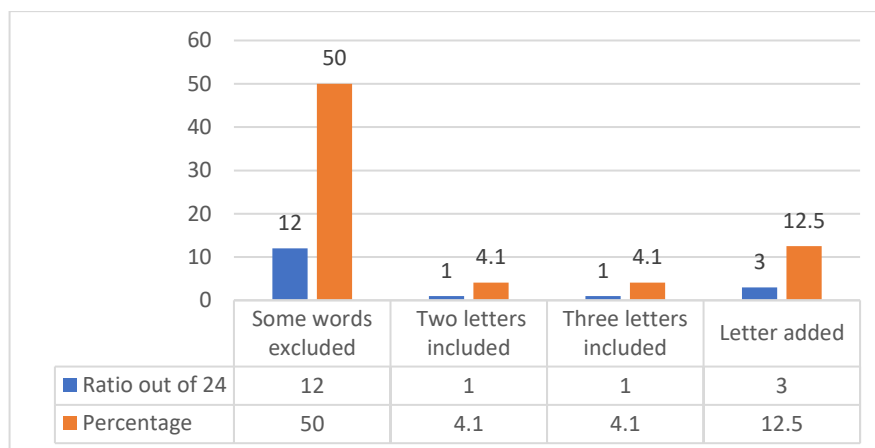


Chart 5 – Quality improvement procedures in the formation of English alphanumeric forms

4.7.2.7 Mixed forms

To improve the quality of mixed forms, some examples in UNTERM exclude some elements of the source form in the formation of mixed forms, e.g., *WG-Edu* for **Working Group on Earth Observation Education, Training and Capacity-Building** (ibid), only full translation is provided as an equivalent for this term in Arabic: 'الفريق العامل المخصص للتعليم والتدريب' (ibid). In rare cases, the first two letters instead of the first letter are included in the formation of mixed form, e.g., *MPAC* for **Micro-Particles Capture** (ibid), only full translation is provided as an equivalent for this term in Arabic: 'أسر الجسيمات الصغيرة' (ibid). Similarly, initials of conjunctions are included in rare cases, e.g., *Pan-STARRS* for **Panoramic Survey Telescope and Rapid Response System** (ibid), only full translation is provided as an equivalent for this term in Arabic: 'مقرب الرصد البانورامي ونظام الاستجابة السريعة' (ibid). Chart 6 below shows the ratios and percentages of the use of these procedures in the formation of English mixed forms:

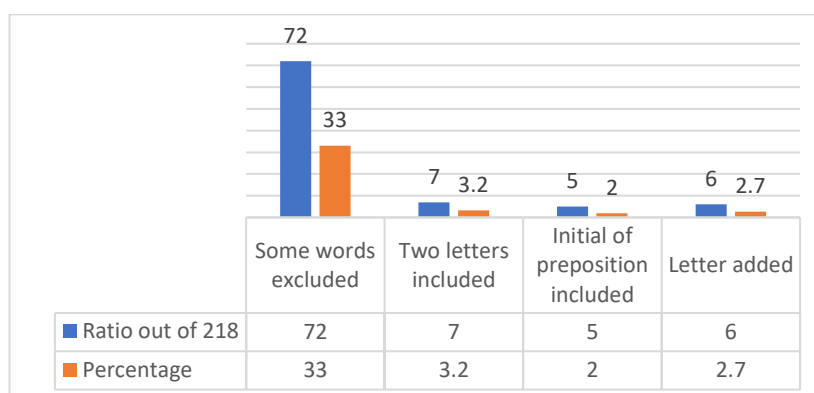


Chart 6 – Quality improvement procedures in the formation of English mixed forms

4.7.2.7.1 Mixed forms –Backronym, metaphorically related word

Backronyms, e.g., *UN-SPIDER* for the United Nations Platform for Space-based Information for Disaster Management and Emergency Response, and metaphorically related words, e.g., *EUCAP NESTOR* for *European Union Mission on Regional Maritime Capacity Building in the Horn of Africa* (UNTERM), are also used in the creation of mixed forms in English; their ratios and percentages are as follows:

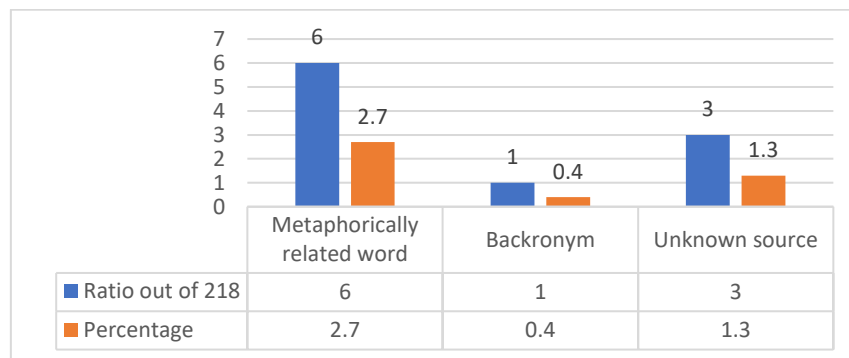


Chart 7 – Backronyms and metaphorically related words in the formation of English mixed forms

4.7.2.8 Short forms

Since short forms are coined by selecting one or two words from a multi-word term, no quality improvement procedures are needed in their formation in the UN context. 18 English short forms were found in UNTERM, one is left without translation and the rest 17 were only fully translated into Arabic. For example, in the English part of UNTERM, the term *World Association of Major Metropolises* is shortened to *Metropolis*, while in the Arabic part, it is fully translated into 'الرابطۃ العالمیة للمدن الکبری' without a short form as its equivalent (ibid).

4.7.3 Abbreviated forms borrowed from other languages

The total number of abbreviated forms which are borrowed from other languages in the English part of UNTERM is 255 out of 2155, this ratio makes a percentage of 11.8 % of all abbreviated forms in UNTERM; they are as follows:

4.7.3.1 Abbreviations

The English part of UNTERM preserves a number of abbreviations that are borrowed from other languages, e.g., *SGSICA* for *General Secretariat of the Central American Integration System* (from Spanish: *Secretaría General del Sistema de la Integración Centroamericana*) (ibid). The number constitutes 7% of the total number of English abbreviated forms in UNTERM. Table 13 below shows the ratios and percentages of abbreviations borrowed from other languages:

	Source language	Ratio	Percentage
1.	French	6/241	2.40%
2.	Spanish, German (apiece)	8/241	3.30%
3.	Portuguese	2/241	0.80%
4.	Greek	1/241	0.40%
5.	Arabic	0/241	0%
6.	From other languages (total)	17/241	7.00%

Table 13 – English abbreviations in UNTERM borrowed from other languages

4.7.3.2 Acronyms

The English part of UNTERM contains a number of acronyms which are borrowed from other languages, e.g., *RETCOD* for *Inter-American Drug Control Telecommunications Network* (from Spanish: **R**ed Interamericana de **T**elecomunicaciones para el **C**ontrol de **D**rogas), and *SARA* for *Radio Astronomy Amateur Satellite* (from French: **S**atellite pour **A**stronomie **R**adio **A**mateur) (UNTERM). These acronyms constitute 151 out of the 969 English acronyms in UNTERM and their percentage is 15.5% of the total number of English acronyms, as is shown below:

	Source language	Ratio	Percentage
1.	Spanish	78/969	8%
2.	French	51/969	5.20%
3.	Russian, German, Turkish (apiece)	4/969	0.4%
4.	Italian	3/969	0.30%
5.	Finnish	2/969	0.20%
6.	Chinese, Dutch, Portuguese, Indonesian, Slovak (apiece)	1/969	0.1%
7.	Arabic	0/969	0%
8.	Acronyms borrowed from other languages (total)	151/969	15.50%

Table 14 – English acronyms in UNTERM borrowed from other languages

4.7.3.3 Initialisms

The English part of UNTERM contains some initialisms that are borrowed from other languages, e.g., *ADI* for *Innovation Agency* (from Portuguese: **A**gência **d**e **I**novação) (ibid); their number constitutes 4.5% of the total number of English initialisms in UNTERM. Table 15 shows the ratios and percentages of initialisms borrowed from other languages:

	Source language	Ratio	Percentage
1.	French	17/594	2.80%
2.	Spanish, German (apiece)	3/594	0.50%
3.	Portuguese	2/594	0.30%
4.	Russian, Indonesian (apiece)	1/594	0.10%
5.	Arabic	0/594	0%
6.	Initialisms borrowed from other languages (total)	27/594	4.50%

Table 15 – English initialisms in UNTERM borrowed from other languages

4.7.3.4 Blends

A significant number of blends taken from other languages is preserved in the English part of UNTERM; these constitute 16 out of 81 blends of English blends in UNTERM or 19.7%, e.g., *FEDELAT* for *Latin-American Federation of Associations for the Study of Pain* (from Spanish: **Federación Latinoamericana** de Asociaciones para el Estudio del Dolor) (ibid). Table 16 below shows the ratios and percentages of blends taken from other languages:

	Source language	Ratio	Percentage
1.	French	3/81	3.7%
2.	Spanish	13/81	16%
3.	Arabic	0/81	0%
4.	Blends borrowed from other languages (total)	16/81	19.7%

Table 16 – English blends in UNTERM borrowed from other languages

4.7.3.5 Clippings

No clippings are borrowed from other languages in the English part of UNTERM.

4.7.3.6 Alphanumeric forms

No alphanumeric forms are borrowed from other languages in the English part of UNTERM.

4.7.3.7 Mixed forms

The English part of UNTERM preserves some mixed forms borrowed from other languages; these forms constitute 13 out of the 218 English mixed forms in UNTERM, which makes a percentage of 5.9% of the entire number of English mixed forms in UNTERM, e.g., *DG SANCO* for *Directorate-General for Health and Consumers* (from French: **Direction Générale** de la **Santé** et des **Consommateurs**) (UNTERM). Table 17 below shows the ratios and percentages of mixed forms borrowed from other languages:

	Source language	Ratio	Percentage
1.	French	5/218	2.2%
2.	Spanish	4/218	1.8%
3.	German	2/218	0.9%
4.	Russian, Dutch (apiece)	1/218	0.4%
5.	Arabic	0/218	0%
6.	Mixed forms borrowed from other languages (total)	13/218	5.9%

Table 17 – English mixed forms in UNTERM borrowed from other languages

4.7.3.8 Short forms:

No short forms are borrowed from other languages in the English part of UNTERM.

4.7.4 How are abbreviated forms rendered in the process of translation in the UN context? (RQ5)

To answer the fifth research question, the strategies and approaches used in the UN context to render each type of English abbreviated forms in Arabic have been analyzed in this part. These strategies include full translation, transliteration, borrowing, creating Arabic abbreviated forms as equivalents, etc. The results of the analysis show the following:

4.7.4.1 Abbreviations

203 out of 241 English abbreviations (84.2.1%) are only fully translated into Arabic without forming Arabic abbreviations as equivalents for them in UNTERM, while 38 out of 241 English abbreviations (15.7%) are left with neither Arabic equivalent abbreviations nor translation. Two out of 241 English abbreviations (0.8%) are kept in their English form in the Arabic part of UNTERM. Table 18 below shows the ratios and percentages of the use of these procedures:

	Procedure applied to render English abbreviations to Arabic	Ratio	Percentage
1.	Total Arabic abbreviations	0/241	0.00%
2.	Rendered in Arabic by transliteration	0/241	0.00%
3.	Only full translation	203/241	84.20%
4.	No Arabic translation or abbreviation	38/241	15.70%
5.	Kept in English in the Arabic field	2/241	0.80%
6.	Arabic equivalent abbreviations	0/241	0.00%

Table 18 – Arabic abbreviations in UNTERM

4.7.4.2 Acronyms

Only 132 out of 969 English acronyms (13.6%) have their counterparts in Arabic. They are rendered in Arabic by way of transliteration; for example, *ACAST* (Advisory Committee on the Application of Science and Technology to Development) (UNTERM) is rendered as 'أكاست' (Ākast) and the full Arabic translation is 'اللجنة الاستشارية المعنية بتطبيق العلم والتكنولوجيا' (ibid). All other English acronyms are only fully translated into Arabic; they are 837 out of 969 acronyms (86.3%), e.g., *AIDA* (Advanced Impact Detector Assembly) is only fully translated into 'مركب كشف الارتطامات المتقدم' (ibid) and no Arabic abbreviated form is coined for it. 122 out of the 132 Arabic counterparts of the English acronyms (92.4%) are transliterated. 837 out of 969 English acronyms (86.3%) are only fully translated into Arabic without Arabic equivalent acronyms, while 109 out of 969 English acronyms (11.2%) are left with neither Arabic equivalent acronyms nor translation. Eight out of 969 English acronyms (0.8%) are kept in their English form in the Arabic part of UNTERM. Finally, only two English acronyms form their Arabic counterpart as abbreviated forms in the Arabic part of UNTERM. However, they are rendered as Arabic initialisms rather than acronyms, e.g., *MESA* (Middle East and South Asia) was rendered to 'ش أ ج آ' (Sh. A. J. Ā) for 'الشرق الأوسط وجنوب آسيا' = ash Sharq al Awsaṭ wa Janūb Āsyā (ibid). Table 19 below shows the ratios and percentages of the use of these procedures:

	Procedure applied to render English acronyms to Arabic	Ratio	Percentage
1.	Rendered in Arabic by transliteration	122/969	12.70%
2.	Only fully translated	837/969	86.30%
3.	No Arabic translation or abbreviation	109/969	11.20%
4.	Kept in English in the Arabic field	8/969	0.80%
5.	Rendered to Arabic abbreviated forms	2/969	0.20%
6.	Total Arabic acronyms	132/969	13.60%

Table 19 – Arabic acronyms in UNTERM

4.7.4.3 Initialisms

Nine English initialisms form their equivalents in the Arabic acronym part of UNTERM: seven are kept in English, e.g., *CISG* is also entered as *CISG* in the Arabic part of UNTERM; and two are rendered in Arabic by way of transliteration. All other English initialisms are only fully translated into Arabic. Table 20 shows the ratios and percentages of the use of these procedures:

	Procedure applied to render English initialisms to Arabic	Ratio	Percentage
1.	Arabic initialisms as equivalents	9/594	1.50%
2.	Only full translation	512/594	86.00%
3.	No Arabic translation or abbreviation	74/594	12.40%
4.	Kept in English in the Arabic field	7/594	1.10%
5.	Rendered in Arabic by transliteration	2/594	0.30%
6.	Total Arabic initialisms	9/594	1.50%

Table 20 – Arabic initialisms in UNTERM

4.7.4.4 Blends

Only 15 out of 81 English blends (18.5%) have their counterparts in Arabic and they are rendered in Arabic by way of transliteration, e.g., *ROSAT* (from Roentgen satellite) is transliterated into 'روسات' (rosāt) (UNTERM). Other English blends are only fully translated into Arabic; they are 65 out of 81 (75.3%), e.g., *EUROLAS* (from **E**uropean **L**aser Ranging Service) is translated into 'الدائرة الأوروبية لقياس المسافات باستخدام الليزر' (ibid). 15 out of 81 (18.5%), or 15/15 (100%) of all blends are rendered in Arabic by way of transliteration, while 16 out of 81 English blends (19.7%) are left with neither Arabic equivalent blends nor translation. One out of 81 English blends (1.23%) is kept in the English form in the Arabic field. Finally, no Arabic abbreviated forms are coined as equivalents for the English blends in UNTERM. Table 21 below shows the ratios and percentages of the use of these procedures:

	Procedure applied to render English blends to Arabic	Ratio	Percentage
1.	Total number of Arabic blends (written in Arabic)	15/81	18.5%
2.	Transliteration	15/81	18.5%
3.	Full translation	65/81	75.3%
4.	No Arabic translation or abbreviation	16/81	19.7%
5.	Kept in English in the Arabic field	1/81	1.2%
6.	Arabic blends as equivalents	0/81	0%

Table 21 – Arabic blends in UNTERM

4.7.4.5 Clippings

Only one out of a total of 10 English clippings (10%) has its counterpart in Arabic; it is rendered in Arabic by way of transliteration. Therefore, in addition to the full translation, *INSOL International* (for International Federation of **Ins**olvency Professionals) is rendered to Arabic as 'انسول الدولي' (Insol International) (UNTERM). Seven out of 10 English clippings are only fully translated into Arabic; they constitute (70%) of total English clippings in UNTERM. Two out of 10 English clippings (20%) are left with neither Arabic equivalent clippings nor translation. Table 22 shows the ratios and percentages of the use of these procedures:

	Procedure applied to render English clippings to Arabic	Ratio	Percentage
1.	Total Arabic clippings	1/10	10%
2.	Rendered in Arabic by transliteration	1/10	10%
3.	Only full translation	7/10	70%
4.	No Arabic translation or abbreviation	2/10	20%
5.	Kept in English in the Arabic field	0/10	0%
6.	Arabic clippings as equivalents	0/10	0%

Table 22 – Arabic clippings in UNTERM

4.7.4.6 Alphanumeric forms

Only 4 out of 24 English alphanumeric forms (16.6%) have their equivalents in Arabic; they are rendered in Arabic by way of transliteration, e.g., in addition to full translation, *UNISPACE-82* (from Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space) is rendered in 'يونسبيس-82' (ibid). 15 out of 24 English alphanumeric forms are only fully translated into Arabic; they constitute (62.5%) of total alphanumeric forms in UNTERM, whereas 4 out of 24 English alphanumeric forms (16.6%) are left with neither Arabic equivalent forms nor translation. One out of 24 English alphanumeric forms (4.1%) is kept in English in the Arabic field: *I2ES* (from: International Import and Export Authorization System) (ibid) is kept the same in the abbreviated forms field of the Arabic part of UNTERM. Table 23 shows the ratios and percentages of the use of these procedures:

	Procedure applied to render English alphanumeric forms to Arabic	Ratio	Percentage
1.	Total Arabic alphanumeric forms	4/24	16.6%
2.	Rendered in Arabic by transliteration	4/24	16.6%
3.	Only full translation	15/24	62.5%
4.	No Arabic translation or abbreviation	4/24	16.6%
5.	Kept in English in the Arabic field	1/24	4.1%
6.	Arabic alphanumeric forms as equivalents	0/24	0%

Table 23 - Arabic alphanumeric forms in UNTERM

4.7.4.7 Mixed forms

The majority of English mixed forms are rendered in Arabic by way of translation; for example, USAID (full form: United States Agency for International Development) (ibid) is translated into Arabic as 'وكالة الولايات المتحدة للتنمية الدولية'. 159 out of 218 English mixed forms (72.9%) are only fully translated into Arabic without Arabic equivalent mixed forms, while 40 out of 218 English mixed forms (18.3%) are left with neither Arabic equivalent mixed forms nor translation. Eight out of 218 English mixed forms (3.6%) are kept in English in the Arabic

abbreviated forms field; none of these English mixed forms coined their Arabic abbreviated form equivalents in the UN context. Table 24 below shows the ratios and percentages of the use of these procedures:

	Procedure applied to render English mixed forms to Arabic	Ratio	Percentage
1.	Transliteration	11/218	5%
2.	Full translation	159/218	72.9%
3.	No Arabic translation or abbreviation	40/218	18.3%
4.	Kept in English in the Arabic field	8/218	3.6%
5.	Arabic equivalent mixed forms	0/218	0%
6.	Total Arabic mixed forms	0/218	0%

Table 24 - Arabic mixed forms in UNTERM

4.7.4.8 Short forms

Only one out of 18 English short forms (5.5%) has its counterpart in Arabic as a short form: Earthwatch (from System-wide Earthwatch) is rendered in Arabic as 'رصد الارض' from 'رصد الارض على مستوى المنظومة' (UNTERM). All other English short forms are only fully translated into Arabic; they are 17 out of 18 short forms (94.4%). Table 25 below shows the ratios and percentages of the use of these procedures:

	Procedure applied to render English short forms to Arabic	Ratio	Percentage
1.	Total Arabic short forms	1/18	5.5%
2.	Rendered in Arabic by transliteration	1/18	5.5%
3.	Only full translation	17/18	94.4%
4.	No Arabic translation or abbreviation	1/18	5.5%
5.	Arabic short forms as equivalents	0/18	0%

Table 25 - Arabic short forms in UNTERM

4.8 Can Arabic use its potential to create abbreviated forms as equivalents for the English ones in the UN context? (RQ6)

The results of the analyses show that Arabic abbreviated forms are very rarely used in the UN context. Only 11 Arabic abbreviated forms were found in the Arabic part of UNTERM compared to 2155 English abbreviated forms in UNTERM; this ratio constitutes 0.51 % of all English abbreviated forms in UNTERM (see 4.6). However, and based on the findings of the literature review, abbreviated forms can be created in Arabic just like in other languages. Therefore, and to further verify *hypothesis 5* which states “*Arabic can use its potential to create abbreviated forms as equivalents for the English ones in the UN context and this can be proved via the UN documents and databases*”, a case study has been carried out on a random sample of forty English abbreviated forms from UNTERM: five abbreviated forms from each English abbreviated form type. These English abbreviated forms have no Arabic equivalent abbreviated forms in the UN terminology main database. Then, I tried to create Arabic abbreviated form as equivalents for them. This part of the analysis can also answer *RQ5* which states: “*How are abbreviated forms rendered in the process of translation in the UN context?*”, and *RQ6* which states: “*Can Arabic use its potential to create abbreviated forms as equivalents for the English ones in the UN context?*”. Answers to these questions would shed light on the capacity of the Arabic language to create abbreviated forms in the UN context and the answers could help in proving or disproving *hypothesis 5*.

After that, the quality of the generated abbreviated forms was judged depending on a number of criteria. Many criteria can be used for the assessment of terms in general; these criteria include univocality, conformance to laws and standards, motivation/transparency, consistency, linguistic currency/common usage, appropriateness, brevity, pronounceability, and potential for derivation (Drewer et al., 2020, p. 14). However, some of these criteria are mutually contradictory and, thus, only the suitable ones should be selected according to the needs of the ‘company’ or organization for which they are created. Drewer et al. stated that “it is impossible to establish a universal hierarchy of these criteria, which means that you have to make company-specific decisions on their significance” (ibid). For the purpose of the current study, three criteria can be adopted for the assessment of the generated abbreviated forms: brevity, transparency, and pronounceability. Brevity is the main feature of abbreviated forms; it is already achieved in such forms. Drewer et al. stated that “shorter terms are a better choice given their linguistic economy and can improve pronounceability and/or ease of retention. They may also discourage readers from introducing their own truncations, which is something that should be avoided” (ibid, p. 19). Since “A *term* or *proper name* is transparent when the *concept* that it designates can be inferred, at least partially, without a *definition* or other type of information supplementing or replacing a definition” (ISO 704, 2022, p. 53), the criteria for the success of the abbreviated form is based on transparency which is one of the main requirements for the formation of terms in general. Drewer et al. pointed out that “a transparent (motivated) term enables the reader to grasp the concept that is named by a term in the most immediate and comprehensive fashion” (Drewer et al., 2020, p. 15). This can apply to many examples from the UN context, e.g., *G7*, *MDGs 2030*, etc. Other criteria that are of importance include the avoidance of ambiguity and being economical and pronounceable. Thus, the accepted forms should reflect a possibility for inference, economy, pronounceability, and clarity.

For the purpose of this analysis, the abbreviated forms success and unsuccess criteria are as follows:

Success and non-success criteria

- If the abbreviated form is pronounceable but inexplicit, it is considered unacceptable.
- If the abbreviated form is unpronounceable and inexplicit, it is considered unacceptable.
- If the abbreviated form is pronounceable and explicit, it is considered acceptable (and of a good quality).
- If the abbreviated form is pronounceable and partially explicit, it is considered acceptable.

The aim of this analysis is to verify whether or not Arabic abbreviated forms can be coined in the UN context just like in English. The results were as follows:

4.8.1 Abbreviations

4.8.1.1 English abbreviations rendered as Arabic abbreviations

	Eng. abbrev.	Translit. into ar	English full form	Arabic full translation	Ar abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AEON	اي إي أو أن	African Earth Observatory network	الشبكة الأفريقية لرصد الأرض	ش.أ.ر.ض	SH.A.R.D	All initials included	Yes	Partially
2	WCJLN	دبليو سي جي ال أن	World Criminal Justice Library Network	الشبكة العالمية لمكتبات العدالة الجنائية	ش.ع.م.ع.ج	SH. 'A.M. 'A.J	=	Yes	Partially
3	DGTTF	دي جي تي أف	UNDP Democratic Governance Thematic Trust Fund	الصندوق الاستئماني المواضيعي للحكم الديمقراطي التابع لبرنامج الأمم المتحدة الإنمائي	ص.أ.م.ح.د	S.A.M.H.D	=	Yes	Partially
4	GFATM	جي إف أي تي أم	Global Fund to Fight AIDS, Tuberculosis and Malaria	الصندوق العالمي لمكافحة الإيدز والسل والملاريا	ص.ع.م.أ.س.م	S. 'A.M.A.S.M	=	No	No
5	ICESCR	آي سي إي أس سي آر	International Covenant on Economic, Social and Cultural Rights	العهد الدولي الخاص بالحقوق الاقتصادية والاجتماعية والثقافية	ع.د.ح.ق.ج.ث	'A.D.H.Q.J.TH	=	No	No

Table 26 - English abbreviations rendered as Arabic abbreviations

Note: Although the words are pronounced fully but written abbreviated, abbreviations of more than five letters seem difficult to use.

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.1.2 English abbreviations rendered as Arabic acronyms

	Eng. abbrev.	Translit. into ar	English full form	Arabic full translation	Ar acron. equiv.	Translit.	QIP/ F.meth			Success criterion	
							Add.	Omis.	Rearg.	Pronounc.	Explicit
1	AEON	اي إي أو أن	African Earth Observatory network	الشبكة الأفريقية لرصد الأرض	→ شارض (18) كشاف	Shā'arḍ → kashāf	2 letters from 1 st & 2 nd words	Some words excluded	3 rd letter before the 1 st	Yes	yes
2	WCJLN	دبليو سي جي ال أن	World Criminal Justice Library Network	الشبكة العالمية لمكتبات العدالة الجنائية	→ شعمعج شمعة	Sa'ma'aj → 'sham'ah	External letter added	2 words dropped		Yes	Yes
3	DGTTF	دي جي تي تي أف	UNDP Democratic Governance Thematic Trust Fund	الصندوق الاستئماني المواضيعي للحكم الديمقراطي التابع لبرنامج الأمم المتحدة الإنمائي	→ صامحد-بام صامد	Sāmḥad-bām → sāmīd		one word dropped		Yes	Yes
4	GFATM	جي اف أي تي أم	Global Fund to Fight AIDS, Tuberculosis and Malaria	الصندوق العالمي لمكافحة الإيدز والسل والملاريا	→ صعماسم صمام	Ṣa'māsīm → sammām		2 words dropped		Yes	Yes
5	ICESCR	آي سي إي أس سي آر	International Covenant on Economic, Social and Cultural Rights	العهد الدولي الخاص بالحقوق الاقتصادية والاجتماعية والثقافية	عدهقجت	'adḥaqjath				No	No

Table 27 – English abbreviations rendered as Arabic acronyms

Note: Some quality improvement procedures can be applied to produce acronyms that are pronounceable and indicative. These procedures include taking more than initial letters from the full forms, rearrangement of letters, dropping some words, etc.

Success index:

Acceptable abbreviated forms: 4/5

Unacceptable abbreviated forms: 1/5

Good abbreviated forms: 4/5

⁽¹⁸⁾ “[The Africa Earth Observatory Network \(AEON\)](#) is a complex collaboration of organizations focused on every aspect of Earth Observation. Through several distinct research programs, the organization is digging deeply into the morphological history of the continent; exploring volcanic processes; uncovering new information about the “conflict diamond” industry, and linking sustainable practices to the technological capabilities of major research institutions” (Earthzine, 2011).

4.8.1.3 English abbreviation rendered as Arabic initialisms

	Eng. abbrev.	Translit. into ar	English full form	Arabic full translation	Ar init. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AEON	اي إي أو أن	African Earth Observatory network	الشبكة الأفريقية لرصد الأرض	شين ألف راء ألف	Shīn alif rā' alif	All initials included	Yes	Partially
2	WCJLN	دبليو سي جي ال أن	World Criminal Justice Library Network	الشبكة العالمية لمكتبات العدالة الجنائية	شين عين ميم عين جيم	Shīn 'ayn mīm 'ayn jīm	=	Yes	Partially
3	DGTF	دي جي تي أف	UNDP Democratic Governance Thematic Trust Fund	الصندوق الاستئماني المواضيعي للحكم الديمقراطي التابع لبرنامج الأمم المتحدة الإنمائي	صاد ألف ميم حاء دال باء ألف ميم ألف	Ṣād alif mīm ḥā' dāl bā' alif mīm alif	=	No	No
4	GFATM	جي إف أي تي أم	Global Fund to Fight AIDS, Tuberculosis and Malaria	الصندوق العالمي لمكافحة الإيدز والسل والملاريا	صاد عين ميم ألف سين ميم	Ṣād 'ayn mīm alif sīn mīm	=	Yes	Partially
5	ICESCR	آي سي إي أس سي آر	International Covenant on Economic, Social and Cultural Rights	العهد الدولي الخاص بالحقوق الاقتصادية والاجتماعية والثقافية	عين دال حاء قاف جيم ثاء	'ayn dāl ḥā' qāf jīm thā'	=	No	No

Table 28 - English abbreviations rendered as Arabic initialisms

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.1.4 English abbreviations rendered as Arabic blends

	Eng. abbr.	Translit. into ar	English full form	Arabic full translation	Ar blend equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AEON	اي إي أو أن	African Earth Observatory network	الشبكة الأفريقية لرصد الأرض	شبأرض	Shab'ard	Part of word + full word	Yes	Partially
2	WCJLN	دبليو سي جي ال أن	World Criminal Justice Library Network	الشبكة العالمية لمكتبات العدالة الجنائية	شبتبات	Shabtabāt	1 st part of 1 st word + final part of 3 rd word	Yes	No
3	DGTTF	دي جي تي تي أف	UNDP Democratic Governance Thematic Trust Fund	الصندوق الاستئماني المواضيعي للحكم الديمقراطي التابع لبرنامج الأمم المتحدة الإنمائي	صنحكم	Sanhukm	1 st part of 1 st word + 4 th full word	Yes	No
4	GFATM	جي إف أي تي أم	Global Fund to Fight AIDS, Tuberculosis and Malaria	الصندوق العالمي لمكافحة الإيدز والسل والملاريا	صنمكافحة	Sanmukāfah	1 st part of 1 st word + 3 rd full word	Yes	No
5	ICESCR	آي سي إي أس سي آر	International Covenant on Economic, Social and Cultural Rights	العهد الدولي الخاص بالحقوق الاقتصادية والاجتماعية والثقافية	عهدولي	'Ahduwali	1 st part of 1 st word + 2 nd full word	Yes	Yes

Table 29 - English abbreviations rendered as Arabic blends

Note: Some blends are not explicit (i.e., non-transparent), difficult to pronounce, and are, thus, unsuccessful.

Success index:

Acceptable abbreviated forms: 2/5

Unacceptable abbreviated forms: 3/5

Good abbreviated forms: 1/5

4.8.1.5 English abbreviation rendered as Arabic mixed forms

	Eng. abbr.	Translit. into ar	English full form	Arabic full translation	Ar mixed form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AEON	اي إي أو أن	African Earth Observatory network	الشبكة الأفريقية لرصد الأرض	شبكة-أرض	Shabakat-ARD	Full word + acronym	Yes	Partially
2	WCJLN	دبليو سي جي ال أن	World Criminal Justice Library Network	الشبكة العالمية لمكتبات العدالة الجنائية	ش.ع- معج	Sh.'A-Ma'aj	Abbrev. + acronym	Yes	Partially
3	DGTF	دي جي تي أف	UNDP Democratic Governance Thematic Trust Fund	الصندوق الاستئماني المواضيعي للحكم الديمقراطي التابع لبرنامج الأمم المتحدة الإنمائي	صامد-ب.أ.م.أ	Sāmid-B.A.M.A	Acronym + abbrev.	No	No
4	GFATM	جي اف أي تي أم	Global Fund to Fight AIDS, Tuberculosis and Malaria	الصندوق العالمي لمكافحة الإيدز والسل والملاريا	ص.ع - ماسم	Ṣ. 'A.-Māsim	Abbrev. + acronym	Yes	No
5	ICESCR	آي سي إي أس سي آر	International Covenant on Economic, Social and Cultural Rights	العهد الدولي الخاص بالحقوق الاقتصادية والاجتماعية والثقافية	عهد- ح.ق.ج.ث	'Ahd-Ḥ.Q.J.TH	Short form + abbrev.	Yes	No

Table 30 - English abbreviations rendered as Arabic mixed forms

Success index:

Acceptable abbreviated forms: 2/5

Unacceptable abbreviated forms: 3/5

4.8.1.6 English abbreviations rendered as Arabic short forms

	Eng. abbr.	Translit. into ar	English full form	Arabic full translation	Ar short form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AEON	اي إي أو أن	African Earth Observatory network	الشبكة الأفريقية لرصد الأرض	الشبكة، شبكة الرصد	Ash Shabakah, shabakat ar raṣd	Reduced to 1 or 2 words	Yes	Partially
2	WCJLN	دبليو سي جي ال أن	World Criminal Justice Library Network	الشبكة العالمية لمكتبات العدالة الجنائية	الشبكة، شبكة العدالة	Ash Shabakah, shabakat al ‘adālah	Reduced to 1 or 2 words	Yes	Partially
3	DGTTF	دي جي تي أف	UNDP Democratic Governance Thematic Trust Fund	الصندوق الاستئماني المواضيعي للحكم الديمقراطي التابع لبرنامج الأمم المتحدة الإنمائي	الصندوق، صندوق الحكم	Aṣ Ṣundūq, ṣundūq al ḥukm	Reduced to 1 or 2 words	Yes	Partially
4	GFATM	جي اف أي تي أم	Global Fund to Fight AIDS, Tuberculosis and Malaria	الصندوق العالمي لمكافحة الإيدز والسل والملاريا	الصندوق، صندوق مكافحة	Aṣ Ṣundūq, ṣundūq al mukāfahah	Reduced to 1 or 2 words	Yes	Partially
5	ICESCR	آي سي إي أس سي آر	International Covenant on Economic, Social and Cultural Rights	العهد الدولي الخاص بالحقوق الاقتصادية والاجتماعية والثقافية	العهد، عهد الحقوق	Al ‘ahd, ‘ahd al ḥuqūq	Reduced to 1 or 2 words	Yes	Partially

Table 31 - English abbreviations rendered as Arabic short forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.1.7 Total number of Arabic abbreviated forms that can be created as equivalents for the English five abbreviations

	English abbreviation rendered as	Good quality	Acceptable	Unacceptable
1	Acronym	4/5	4/5	1/5
2	Initialism		3/5	2/5
3	Abbreviation		3/5	2/5
4	Mixed form		2/5	3/5
5	Blend	1/5	2/5	3/5
6	Short form		5/5	0/5
7	Clipping	n/a	n/a	n/a
8	Alphanumeric form	n/a	n/a	n/a
	Total	5	19/30	11/30
From five English abbreviations taken from the UN Terminology main database, 19 Arabic abbreviated forms can be created and accepted as their equivalents, five of them are of a good quality, i.e., they meet the requirements of a good term which are transparency, linguistic economy, and pronounceability.				

Table 32 - Total no. of Arabic abbreviated forms created as equivalents for the English 5 abbreviations

4.8.2 Acronyms

4.8.2.1 English acronyms rendered as Arabic abbreviations

	Eng. acron.	Translit. into ar	English full form	Arabic full translation	Ar abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	EMA	إيما	European Medicines Agency	الوكالة الأوروبية للأدوية	و.أ.د	W.A.D	All initials included	Yes	Partially
2	EMOTA	إيموتا	European Multi-channel and Online Trade Association	الرابطة الأوروبية للتجارة المتعددة القنوات والتجارة بواسطة الإنترنت	ر.أ.ت.م.ت.أ	R.A.T.M.T.A	=	Yes	Partially
3	ENDIPP	أينديب	European Network on Drugs and Infections Prevention in Prison	الشبكة الأوروبية للخدمات المتعلقة بالعقاقير في السجون	ش.أ.خ.م.ع.س	SH.A.KH.M.'A.S	=	No	No
4	IRPA	إرپا	International Radiation Protection Association	الرابطة الدولية للوقاية من الإشعاعات	ر.د.و.ش	R.D.W.SH	=	Yes	Partially
5	KAO	كاو	Korea Astronomy Observatory	مرصد لعلم الفلك	م. ك. ع. ف	M.K.'A.F	=	Yes	Partially

Table 33 - English acronyms rendered as Arabic abbreviations

Note: All acronyms can form their Arabic equivalents as abbreviations, as they pose no problems since they are only graphical representations of their full forms. However, too lengthy abbreviations are difficult to use.

Success index:

Acceptable abbreviated forms: 4/5

Unacceptable abbreviated forms: 1/5

4.8.2.2 English acronyms rendered as Arabic acronyms

	Eng. acron.	Translit. into ar	English full form	Arabic full translation	Ar acron. equiv.	Translit.	QIP/ F.meth		Success criterion	
							Omission	Rearrangement of letters	Pronounc.	Explicit
1	EMA	إيما	European Medicines Agency	الوكالة الأوروبية للأدوية	واد ← دوا	Wād → dawa		last letter was moved to the beginning	Yes	Yes
2	EMOTA	إيموتا	European Multi-channel and Online Trade Association	الرابطة الأوروبية للتجارة المتعددة القنوات والتجارة بواسطة الإنترنت	راتج ← رتاج	Rātij → Ritāj	dropping some letters	2 nd , 3 rd letters place switched, رتاج means door or gate in Arabic	Yes	yes
3	ENDIPP	أينديب	European Network on Drugs and Infections Prevention in Prison	الشبكة الأوروبية للخدمات المتعلقة بالعقاقير في السجون	شاخعس	Shakh'as	-	-	No	no
4	IRPA	إرپا	International Radiation Protection Association	الرابطة الدولية للوقاية من الإشعاعات	ردوش ← رذع	Radosh → rad'	dropping one letter	taking 2 nd letter, it means prevention in Arabic	Yes	yes
5	KAO	كاو	Korea Astronomy Observatory	مرصد كوريا لعلم الفلك	مكعف	Mak'af	-	-	yes	no

Table 34 - English acronyms rendered as Arabic acronyms

Notes:

- Some acronyms can form their Arabic equivalents after applying some quality improvement procedures such as rearrangement of letters, as in دوا (dawa, similar to dawā' = medicine) above.
- Other acronyms can be rendered in Arabic by way of transliteration after stating the full translation the first time they appear in the text, e.g., IRPA, الرابطة (إرپا) الدولية للوقاية من الإشعاعات.
- Some full translations need to be corrected as in الشبكة الأوروبية للمناهضة للعقاقير which should be translated as الشبكة الاوربية لمناهضة العقاقير والوقاية من الامراض في السجون

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

Good abbreviated forms: 3/5

4.8.2.3 English acronyms rendered as Arabic initialism

	Eng. acron.	Translit. into ar	English full form	Arabic full form	Ar init. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	EMA	إيما	European Medicines Agency	الوكالة الأوروبية للأدوية	واو ألف ألف	Wāw alif alif	All initials included	Yes	Partially
2	EMOTA	إيموتا	European Multi-channel and Online Trade Association	الرابطة الأوروبية للتجارة المتعددة القنوات والتجارة بواسطة الإنترنت	راء ألف تاء ميم قاف تاء ألف	Rā' alif tā' mīm qāf tā' alif	=	yes	No
3	ENDIPP	أينديب	European Network on Drugs and Infections Prevention in Prison	الشبكة الأوروبية للخدمات المتعلقة بالعقاقير في السجون	شين ألف خاء عين سين	Shīn alif khā' 'ayn sīn	=	Yes	Partially
4	IRPA	إرپا	International Radiation Protection Association	الرابطة الدولية للوقاية من الإشعاعات	راء دال واو شين	Rā' dāl wāw shīn	=	Yes	Partially
5	KAO	كاو	Korea Astronomy Observatory	مرصد كوريا لعلم الفلك	ميم كاف عين فاء	Mīm kāf 'ayn fā'	=	Yes	Partially

Table 35 - English acronyms rendered as Arabic initialism

Note: All of the five acronyms can form their Arabic equivalents as initialisms, because the latter types pose no problems since it is only graphical representation of the full form. However, overly long initialisms are difficult to use and are not recommended.

Success index:

Acceptable abbreviated forms: 4/5

Unacceptable abbreviated forms: 1/5

4.8.2.4 English acronyms rendered as Arabic blends

	Eng. acron.	Translit. into ar	English full form	Arabic full translation	Ar blend equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	explicit.
1	EMA	إيما	European Medicines Agency	الوكالة الأوروبية للأدوية	اوردوا	Ordawa	1st part of 1st word + 1st part of 3rd word	Yes	Yes
2	EMOTA	إيموتا	European Multi-channel and Online Trade Association	الرابطة الأوروبية للتجارة المتعددة القنوات والتجارة بواسطة الإنترنت	رانيت	Rānit	1st part of 1st word + last part of last word	Yes	Partially
3	ENDIPP	أينديب	European Network on Drugs and Infections Prevention in Prison	الشبكة الأوروبية للخدمات المتعلقة بالعقاقير في السجون	شباقيير	Shabāqīr	1st part of 1st word + last part of 5 th word	Yes	No
4	IRPA	إريا	International Radiation Protection Association	الرابطة الدولية للوقاية من الإشعاعات	رادو	Rādo	1st part of 1st word + 1st part of 2 nd word	Yes	Partially
5	KAO	كاو	Korea Astronomy Observatory	مرصد كوريا لعلم الفلك	مرعلفل	Mar'ilfal	1st part of 1st word + 1st part of 3 rd word + 1st part of 4 th word	Yes	No

Table 36 - English acronyms rendered as Arabic blends

Note: Lengthy multi-word full forms are difficult to blend, since they often result in complicated, long and unclear forms. Besides, a blend is often created from two words; it can be made up of three words, but blending of more than that number of words would be impossible.

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

Good abbreviated forms: 1/5

4.8.2.5 English acronyms rendered as Arabic mixed forms

	Eng. acron.	Translit. into ar	English full form	Arabic full translation	Ar mixed form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	EMA	إيما	European Medicines Agency	الوكالة الأوروبية للأدوية	وك-ا.د	Wak-A.D	Clipping + abbrev.	Yes	Partially
2	EMOTA	إيموتا	European Multi-channel and Online Trade Association	الرابطة الأوروبية للتجارة المتعددة القنوات والتجارة بواسطة الإنترنت	راتم-قتاب	Rātim-qatab	Acronym + acronym	Yes	No
3	ENDIPP	أينديپ	European Network on Drugs and Infections Prevention in Prison	الشبكة الأوروبية للخدمات المتعلقة بالعقاقير في السجون	شاخ-ع.س	Shākh-A.S	Acronym + abbrev.	Yes	Partially
4	IRPA	إرپا	International Radiation Protection Association	الرابطة الدولية للوقاية من الإشعاعات	ر.د-واش	R.D-wāsh	Abbrev. + acronym	Yes	Partially
5	KAO	كاو	Korea Astronomy Observatory	مرصد كوريا لعلم الفلك	مر-عين.فاء	Mar-‘ayn fā’	Clipping + initialism	Yes	Partially

Table 37 - English acronyms rendered as Arabic mixed forms

Note: It seems that Arabic mixed forms are possible to use in the UN terminology databases since such forms are not lexical but graphical and thus pose no problems.

Success index:

Acceptable abbreviated forms: 4/5

Unacceptable abbreviated forms: 1/5

4.8.2.6 English acronyms rendered as Arabic short forms

	Eng. acron.	Translit. into ar	English full form	Arabic full translation	Ar short forms equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	EMA	إيما	European Medicines Agency	الوكالة الأوروبية للأدوية	الوكالة، وكالة الادوية	Al wakālah, wakālat al adwiyah	Reduced to 1 or 2 words	Yes	Partially
2	EMOTA	إيموتا	European Multi-channel and Online Trade Association	الرابطة الأوروبية للتجارة المتعددة القنوات والتجارة بواسطة الإنترنت	الرابطة، رابطة التجارة المتعددة	Ar rābitah, rābitat al tijārah al muta'addidah	Reduced to 1 or 3 words	Yes	Partially
3	ENDIPP	أينديب	European Network on Drugs and Infections Prevention in Prison	الشبكة الأوروبية للخدمات المتعلقة بالعقاقير في السجون	الشبكة، شبكة العقاقير	Ash shabakah, shabakat al 'aqāqir	Reduced to 1 or 2 words	Yes	Partially
4	IRPA	إربا	International Radiation Protection Association	الرابطة الدولية للوقاية من الإشعاعات	الرابطة، رابطة الوقاية	Ar rābitah, rābitat al wiqāyah	Reduced to 1 or 2 words	Yes	Partially
5	KAO	كاو	Korea Astronomy Observatory	مرصد كوريا لعلم الفلك	المرصد، مرصد كوريا	Al marṣad, marṣad korya	Reduced to 1 or 2 words	Yes	Partially

Table 38 - English acronyms rendered as Arabic short forms

Notes:

- Arabic short forms are more convenient as equivalents, as they are reductions of long terms, the important point here is that they need a context to be understood in the text.
- Acronyms were not rendered as alphanumeric forms. Only English alphanumeric forms can be rendered in Arabic alphanumeric forms, as only such forms can contain combinations of letters and numbers.

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.2.7 Total number of Arabic abbreviated forms that can be created as equivalents for the English 5 acronyms

	English acronym rendered as	Good quality	Acceptable	Unacceptable
1	Acronym	3/5	3/5	2/5
2	Initialism		4/5	1/5
3	Abbreviation		4/5	1/5
4	Mixed form		4/5	1/5
5	Blend	1/5	3/5	2/5
6	Alphanumeric form		5/5	0/5
7	Clipping	n/a	n/a	n/a
8	Short form	n/a	n/a	n/a
	Total	4	23/30	7/30
From five English acronyms in UNTERM, 23 Arabic various abbreviated forms can be created as their equivalents, four of them are of good quality, i.e., they meet the requirements of a good term which are transparency and pronounceability as well as linguistic economy.				

Table 39 - Total no. of Arabic abbreviated forms created as equivalents for the English 5 acronyms

4.8.3 Initialisms

4.8.3.1 English initialisms rendered as Arabic abbreviations

	Eng. initial.	Translit. into ar	English full form	Arabic full translation	Ar abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AGPP	أي جي بي بي	Plant Protection Service	ادارة وقاية النباتات	أ.و.ن	A.O.N	All initials included	Yes	Partially
2	ADHD	أي دي أج دي	Attention deficit/hyperactivity disorder	اضطراب نقص الانتباه/فرط النشاط	أ.ن.أ.ف.ن	A.N.A.F.N	=	Yes	Partially
3	EMU	إي أم يو	Economic and Monetary Union	الاتحاد الاقتصادي والنقدي الأوروبي	أ.ق.ن.أ	A.Q.N.A	=	Yes	Partially
4	IFA	أي أف أي	International Federation on Ageing	الاتحاد الدولي المعني بالشيخوخة	أ.د.ش	A.D.SH	=	Yes	Partially
5	IEA	أي إي أي	Integrated environmental assessment	التقييم البيئي المتكامل	ت.ب.م	T.B.M	=	Yes	Partially

Table 40 - English initialisms rendered as Arabic abbreviations

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.3.2 English initialisms rendered as Arabic acronyms

	Eng. initial.	Translit. into ar	English full form	Arabic full translation	Ar acron. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AGPP	أي جي بي بي	Plant Protection Service	ادارة وقاية النباتات	أون	Awn	All initials included	Yes	Partially
2	ADHD	أي دي أج دي	Attention deficit/hyperactivity disorder	اضطراب نقص الانتباه/فرط النشاط	انافن	Anāfan	=	Yes	No
3	EMU	أي أم يو	Economic and Monetary Union	الاتحاد الاقتصادي والنقدي الأوروبي	أقنا	Aqna	=	Yes	Partially
4	IFA	أي إف أي	International Federation on Ageing	الاتحاد الدولي المعني بالشيخوخة	آدم	Adam	Dropping one initial	Yes	Yes
5	IEA	أي إي أي	Integrated environmental assessment	التقييم البيئي المتكامل	تبم	Tabim	All initials included	Yes	No

Table 41 - English initialisms rendered as acronyms

Note: Although they are pronounceable, some acronyms cannot be inferred from their components and, thus, they cannot succeed as good terms.

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable: 2/5 abbreviated forms

Good abbreviated forms: 1/5

4.8.3.3 English initialisms rendered as Arabic initialisms

	Eng. initial.	Translit. into ar	English full form	Arabic full translation	Ar init. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AGPP	أي جي بي بي	Plant Protection Service	ادارة وقاية النباتات	ألف واو نون	Alif wāw nūn	All initials included	Yes	Partially
2	ADHD	أي دي أج دي	Attention deficit/hyperactivity disorder	اضطراب نقص الانتباه/فرط النشاط	ألف نون ألف فاء نون	Alif nūn alif fā' nūn	=	Yes	Partially
3	EMU	إي أم يو	Economic and Monetary Union	الاتحاد الاقتصادي والنقدي الأوروبي	ألف ألف نون قاف	Alif alif nūn qāf	=	Yes	Partially
4	IFA	آي أف أي	International Federation on Ageing	الاتحاد الدولي المعني بالشيخوخة	ألف دال ميم شين	Alif dāl mīm shīn	=	Yes	Partially
5	IEA	آي إي أي	Integrated environmental assessment	التقييم البيئي المتكامل	تاء باء ميم	Tā' bā' mīm	=	Yes	Partially

Table 42 - English initialisms rendered as Arabic initialisms

Note: Although they are pronounced as strings of separate letters, the initialisms formed in Arabic pose no problems at the lexical and semantic levels as they are only written aspects of their source forms; in other words, they are neither lexical nor full substitutes of their full forms. The same applies to abbreviations formed in Arabic.

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.3.4 English initialisms rendered as Arabic blends

	Eng. initial.	Translit. into ar	English full form	Arabic full translation	Ar blend equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AGPP	أي جي بي بي	Plant Protection Service	ادارة وقاية النباتات	ادنبات	Idanbāt	1 st 2 syl of 1 st word + middle part of 3 rd word	Yes	Partially
2	ADHD	أي دي أج دي	Attention deficit/hyperactivity disorder	اضطراب نقص الانتباه/فرط النشاط	نقشب/فرنشاط	Naqtab/ Farnashāt	1 st syl of 1 st word + middle part of 3 rd word/1 st syl of 1 st word + 2 nd full word	Yes	No
3	EMU	إي أم يو	Economic and Monetary Union	الاتحاد الاقتصادي والنقدي الأوروبي	اتقدي	Itāqdi	1 st syl of 1 st word + last syl of 3 rd word	Yes	No
4	IFA	آي أف أي	International Federation on Ageing	الاتحاد الدولي المعني بالشيخوخة	اتشيخ	Itshaykh	1 st syl of 1 st word + last syl of 4 th word	Yes	No
5	IEA	آي إي أي	Integrated environmental assessment	التقييم البيئي المتكامل	تقبيئي	Taqbī'i	1 st syl of 1 st word + 2 nd full word	Yes	Yes

Table 43 - English initialisms rendered as Arabic blends

Success index:

Acceptable abbreviated forms: 2/5

Unacceptable abbreviated forms: 3/5

Good abbreviated forms: 1/5

4.8.3.5 English initialisms rendered as Arabic mixed forms

	Eng. initial.	Translit. into ar	English full form	Arabic full translation	Ar mixed form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AGPP	أي جي بي بي	Plant Protection Service	ادارة وقاية النباتات	اوقا-نب	Awqa-nab	Blend + clipping	Yes	Partially
2	ADHD	أي دي أج دي	Attention deficit / hyperactivity disorder	اضطراب نقص الانتباه/فرط النشاط	أنا-ف.ن	Ana-F.N	Acronym + abbrev.	Yes	Partially
3	EMU	إي أم يو	Economic and Monetary Union	الاتحاد الاقتصادي والنقدي الأوروبي	اتحاد-أ.ن.أ	Ittihad-A.N.A	1st full word + abbrev.	Yes	Partially
4	IFA	آي أف أي	International Federation on Ageing	الاتحاد الدولي المعنى بالشيخوخة	ادم-ش	Adam-SH	Acronym + abbrev.	Yes	Partially
5	IEA	آي إي أي	Integrated environmental assessment	التقييم البيئي المتكامل	تقييم-ب.م	Taqyīm-B.M	1st full word + abbrev.	Yes	Partially

Table 44 - English initialisms rendered as Arabic mixed forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.3.6 English initialisms rendered as Arabic short forms

	Eng. Init.	Translit. into ar	English full form	Arabic full translation	Ar short form Equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	AGPP	أي جي بي بي	Plant Protection Service	ادارة وقاية النباتات	الادارة، ادارة الوقاية	Al idārah, idārat al wiqāyah	Reduced to 1 or 2 words	Yes	Partially
2	ADHD	أي دي أج دي	Attention deficit/hyperactivity disorder	اضطراب نقص الانتباه/فرط النشاط	الاضطراب، اضطراب النقص والفرط	Al idtirāb, idtirāb al naqs wal farṭ	Reduced to 1 3 words	Yes	Partially
3	EMU	إي أم يو	Economic and Monetary Union	الاتحاد الاقتصادي والنقدي الأوروبي	الاتحاد	Al ittiḥād	Reduced to 1 or 2 words	Yes	Partially
4	IFA	أي إف أي	International Federation on Ageing	الاتحاد الدولي المعني بالشيخوخة	الاتحاد، اتحاد الشيخوخة	Al ittiḥād, ittiḥād ash shaykhūkhah	Reduced to 1 or 2 words	Yes	Partially
5	IEA	أي إي أي	Integrated environmental assessment	التقييم البيئي المتكامل	التقييم، التقييم البيئي	At taqyīm, at taqyīm al bī'i	Reduced to 1 or 2 words	Yes	Partially

Table 45 - English initialisms rendered as Arabic short forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.3.7 Total number of Arabic abbreviated forms that can be created as equivalents for the English 5 initialisms

	English initialism rendered as	Good quality	Acceptable	Unacceptable
1	Acronym	1/5	3/5	2/5
2	Initialism		5/5	0/5
3	Abbreviation		5/5	0/5
4	Mixed form		5/5	0/5
5	Blend	1/5	2/5	3/5
6	Short form		5/5	0/5
7	Clipping	n/a	n/a	n/a
8	Alphanumeric form	n/a	n/a	n/a
	Total	2	25/30	5/30
From five English initialisms in UNTERM, 25 Arabic different abbreviated forms can be created as their equivalents, two of them are of a good quality, i.e., they meet the requirements of a good term which are transparency, linguistic economy, and pronounceability.				

Table 46 - Total no. of Arabic abbreviated forms created as equivalents for the English 5 initialisms

4.8.4 Blends

4.8.4.1 English blends rendered as Arabic abbreviations

	Eng. blend	Translit. into ar	English full form	Arabic full translation	Ar abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	MARPOL	ماربول	Marine Pollution Convention	اتفاقية التلوث البحري	أ.ت.ب	A.T.B	All initials included	Yes	Partially
2	AFREF	افريف	African Geodetic Reference Frame	الإطار المرجعي الجيوديسي لأفريقيا	أ.م.ج.أ	A.M.J.A	=	Yes	Partially
3	SENAD	سيناد	National Anti-Drug Secretariat	الأمانة الوطنية لمكافحة المخدرات	أ.و.م.م	A.O.M.M	=	Yes	Partially
4	EURASEC	يوراسيك	Eurasian Economic Community	الجماعة الاقتصادية للمنطقة الأوروبية الآسيوية	ج.أ.م.أ.أ	J.A.M.A.A	=	Yes	Partially
5	PANAFTEL	بانافتيل	Pan-African Telecommunications Network	الشبكة الأفريقية للاتصالات السلكية واللاسلكية	ش.أ.إ.س.ل	SH.A.A.S.L	=	Yes	Partially

Table 47 - English blends rendered as Arabic abbreviations

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.4.2 English blends rendered as Arabic acronyms

	Eng. blend	Translit. into ar	English full form	Arabic full translation	Ar Acron. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	MARPOL	ماربول	Marine Pollution Convention	اتفاقية التلوث البحري	أتب	Itab	All initials included	Yes	Partially
2	AFREF	افريف	African Geodetic Reference Frame	الإطار المرجعي الجيوديسي لأفريقيا	أمجد	Amjad	1 letter dropped	Yes	Yes
3	SENAD	سيناد	National Anti-Drug Secretariat	الأمانة الوطنية لمكافحة المخدرات	اومخ	Awmakh	All initials included	Yes	Partially
4	EURASEC	يوراسيك	Eurasian Economic Community	الجماعة الاقتصادية للمنطقة الأوروبية الآسيوية	جاما	Jāma	=	Yes	Partially
5	PANAFTEL	بانافتيل	Pan-African Telecommunications Network	الشبكة الأفريقية للاتصالات السلكية واللاسلكية	شاتسل	Shātsel	=	Yes	Partially

Table 48 - English blends rendered as Arabic acronyms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

Good abbreviated forms: 1/5

4.8.4.3 English blends rendered as Arabic initialisms

	Eng. blend	Translit. into ar	English full form	Arabic full translation	Ar init. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	MARPOL	ماربول	Marine Pollution Convention	اتفاقية التلوث البحري	ألف تاء باء	Alif tā' bā'	All initials included	Yes	Partially
2	AFREF	افريف	African Geodetic Reference Frame	الإطار المرجعي الجيوديسي لأفريقيا	ألف ميم جيم ألف	Alif mīm jīm alif	=	Yes	Partially
3	SENAD	سيناد	National Anti-Drug Secretariat	الأمانة الوطنية لمكافحة المخدرات	ألف واو ميم ميم	Alif wāw mīm mīm	=	Yes	Partially
4	EURASEC	يوراسيك	Eurasian Economic Community	الجماعة الاقتصادية للمنطقة الأوروبية الآسيوية	جيم ألف ميم ألف ألف	Jīm alif mīm alif alif	=	Yes	Partially
5	PANAFTEL	باناftيل	Pan-African Telecommunications Network	الشبكة الأفريقية للاتصالات السلكية واللاسلكية	شين ألف ألف سين لام	Shīn alif alif sīn lām	=	Yes	Partially

Table 49 - English blends rendered as Arabic initialisms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.4.4 English blends rendered as Arabic blends

	Eng. blend	Translit. into ar	English full form	Arabic full translation	Ar blend equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	MARPOL	ماربول	Marine Pollution Convention	اتفاقية التلوث البحري	اتبجري	Atbahri	1 st splinter of 1 st word+ 3 rd full word	Yes	Partially
2	AFREF	افريف	African Geodetic Reference Frame	الإطار المرجعي الجيوديسي لأفريقيا	الطريق	At Tarīq ⁽¹⁹⁾	1 letter from the middle of each word	Yes	Yes
3	SENAD	سيناد	National Anti-Drug Secretariat	الأمانة الوطنية لمكافحة المخدرات	أمكا	Amka	1 st splinter of 1 st word+ 2 nd splinter of 3 rd word	Yes	Partially
4	EURASEC	يوراسيك	Eurasian Economic Community	الجماعة الاقتصادية للمنطقة الأوروبية الآسيوية	جقراسيا	Juqrāsya	1 st letter of 1 st word+2 nd letter of 2 nd word + blend from 3 rd & 4 th word	Yes	Partially
5	PANAFTEL	باناقتيل	Pan-African Telecommunications Network	الشبكة الأفريقية للاتصالات السلكية واللاسلكية	شبسلكية	Shabsilkiyyah	1 st splinter of 1 st word + last full word	Yes	Yes

Table 50 - English blends rendered as Arabic blends

Note: The semantic association of backronyms can be exploited in the creation of Arabic blends, as is the case with the above-mentioned example *At Tariq*

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

Good abbreviated forms: 2/5

⁽¹⁹⁾ At Tariq 'الطريق' in Arabic means 'the road'

4.8.4.5 English blends rendered as Arabic mixed forms

	Eng. blend	Translit. into ar	English full form	Arabic full translation	Ar abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	MARPOL	ماربول	Marine Pollution Convention	اتفاقية التلوث البحري	اتفاقية-ت.ب	Ittifāqiyyat-T.B	Full word + init.	Yes	Partially
2	AFREF	افريف	African Geodetic Reference Frame	الإطار المرجعي الجيوديسي لأفريقيا	أ.م.ج-أفريقيا	A.M.J-Afrīqya	Init.+full word	Yes	Partially
3	SENAD	سيناد	National Anti-Drug Secretariat	الأمانة الوطنية لمكافحة المخدرات	أ.و-مكدرات	A.W-mukdirāt	Init.+blend	Yes	Partially
4	EURASEC	يوراسيك	Eurasian Economic Community	الجماعة الاقتصادية للمنطقة الأوروبية الآسيوية	ج.أ-اوراسيا	J.A-Orāsyā	Init.+blend	Yes	Partially
5	PANAFTEL	بانافتيل	Pan-African Telecommunications Network	الشبكة الأفريقية للاتصالات السلكية واللاسلكية	شات-سلا	Shat-Sala	Acorn.+acron.	Yes	Partially

Table 51 - English blends rendered as Arabic mixed forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.4.6 English blends rendered as Arabic short forms

	Eng. blend	Translit. into ar	English full form	Arabic full translation	Ar short form equiv.	Translit	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	MARPOL	ماربول	Marine Pollution Convention	اتفاقية التلوث البحري	الاتفاقية، اتفاقية التلوث	Al ittifāqiyyah, ittifāqiyyat at talawwuth	Reduced to 1 or 2 words	Yes	Partially
2	AFREF	افريف	African Geodetic Reference Frame	الإطار المرجعي الجيوديسي لأفريقيا	الإطار، إطار افريقيا	Al itār, itār afrīqya	Reduced to 1 or 2 words	Yes	Partially
3	SENAD	سيناد	National Anti-Drug Secretariat	الأمانة الوطنية لمكافحة المخدرات	الامانة، امانة مكافحة المخدرات	Al amānah, amānat mukāfaḥat al mukhaddirāt	Reduced to 1 or 3 words	Yes	Partially
4	EURASEC	يوراسيك	Eurasian Economic Community	الجماعة الاقتصادية للمنطقة الأوروبية الآسيوية	الجماعة، الجماعة الاقتصادية	Aj jamā'ah, aj jamā'ah al iqtisādiyyah	Reduced to 1 or 2 words	Yes	Partially
5	PANAFTEL	بانافتيل	Pan-African Telecommunications Network	الشبكة الأفريقية للاتصالات السلكية واللاسلكية	الشبكة، شبكة الاتصالات	Ash shabakah, shabakat al ittīṣālāt	Reduced to 1 or 2 words	Yes	Partially

Table 52 - English blends rendered as Arabic short forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.4.7 Total number of Arabic abbreviated forms that can be created as equivalents for the English five blends

	English blend rendered as	Good quality	Acceptable	Unacceptable
1	Acronym	1/5	5/5	0/5
2	Initialism		5/5	0/5
3	Abbreviation		5/5	0/5
4	Mixed form		5/5	0/5
5	Blend	2/5	5/5	0/5
6	Short form		5/5	0/5
7	Clipping	n/a	n/a	n/a
8	Alphanumeric form	n/a	n/a	n/a
	Total	3	30/30	0/30
From five English blends taken from the UN Terminology main database, 30 Arabic abbreviated forms can be created and accepted as their equivalents, three of them are of a good quality, i.e., they meet the requirements of a good term which are transparency and pronounceability, as well as linguistic economy.				

Table 53 - Total no. of Arabic abbreviated forms created as equivalents for the English 5 blends

4.8.5 Clippings

4.8.5.1 English clippings rendered as Arabic abbreviations

	Eng. clipping	Translit. into ar	English full form	Arabic full translation	Ar Abbrev. Equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	INSOL International	انسول انترناشنال	International Association of Restructuring, Insolvency and Bankruptcy Professionals	الرابطة الدولية لأخصائي إعادة الهيكلة والإعسار والإفلاس	ر.د.أ.إ.ه.إ.إ.	R.D.A.A.H.A.A	All initials included	No	No
2	SPATL	سباتل	Spatial Information Management and Decision Support Tools	إدارة المعلومات الفضائية وأدوات دعم اتخاذ القرارات	إ.م.ف.أ.د.إ.ق	A.M.F.A.D.A.Q	=	No	No
3	PRO	برو	Project Personnel Section	قسم موظفي المشاريع	ق.م.م	Q.M.M	=	Yes	Partially
4	GOV	غوف	Office of the Secretariat of the Governing Bodies	مكتب أمانة الهيئات التشريعية	م.أ.ه.ت	M.A.H.T	=	Yes	Partially
5	ANT	آنت	The Antarctic Treaty	معاهدة القطب الجنوبي	م.ق.ج	M.Q.J	=	Yes	Partially

Table 54 - English clippings rendered as Arabic abbreviations

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.5.2 English clippings rendered as Arabic acronyms

	Eng. clipping	Translit. into ar	English full form	Full translation	Ar Acron. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	INSOL International	انسول انترناشنال	International Association of Restructuring, Insolvency and Bankruptcy Professionals	الرابطة الدولية لأخصائيي إعادة الهيكلة والإعسار والإفلاس	رداهاء	Radāhā'	Dropping some words	Yes	Partially
2	SPATL	سباتل	Spatial Information Management and Decision Support Tools	إدارة المعلومات الفضائية وأدوات دعم اتخاذ القرارات	آفاق ⁽²⁰⁾	Āfāq	Dropping some words	Yes	Yes
3	PRO	برو	Project Personnel Section	قسم موظفي المشاريع	قمم	Qimam	All initials included	Yes	Yes
4	GOV	غوف	Office of the Secretariat of the Governing Bodies	مكتب أمانة الهيئات التشريعية	ماهت	Māhat	All initials included	Yes	Partially
5	ANT	آنت	The Antarctic Treaty	معاهدة القطب الجنوبي	مقج	Maqaj	All initials included	Yes	Partially

Table 55 - English clippings rendered as Arabic acronyms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

Good abbreviated forms: 2/5

⁽²⁰⁾ آفاق in Arabic means horizons

4.8.5.3 English clippings rendered as Arabic initialisms

	Eng. clipping	Translit. into ar	English full form	Arabic full translation	Ar init. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	INSOL International	انسول انترناشنال	International Association of Restructuring, Insolvency and Bankruptcy Professionals	الرابطة الدولية لأخصائيي إعادة الهيكلة والإعسار والإفلاس	راء دال خاء ألف هاء ألف ألف	Rā' dāl khā' alif hā' alif alif	All initials included	No	No
2	SPATL	سباتل	Spatial Information Management and Decision Support Tools	إدارة المعلومات الفضائية وأدوات دعم اتخاذ القرارات	ألف ميم فاء ألف دال ألف قاف	Alif mīm fā' alif dāl alif qāf	=	No	No
3	PRO	برو	Project Personnel Section	قسم موظفي المشاريع	قاف ميم ميم	Qāf mīm mīm	=	Yes	Partially
4	GOV	غوف	Office of the Secretariat of the Governing Bodies	مكتب أمانة الهيئات التشريعية	ميم ألف هاء تاء	Mīm alif hā' tā'	=	Yes	Partially
5	ANT	آنت	The Antarctic Treaty	معاهدة القطب الجنوبي	ميم قاف جيم	Mīm qāf jīm	=	Yes	Partially

Table 56 - English clippings rendered as Arabic initialisms

Note: According to the good term criteria, partially explicit terms are acceptable and could be considered transparent.

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.5.4 English clippings rendered as Arabic blends

	Eng. clipping	Translit. into ar	English full form	Arabic full translation	Ar blend Equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	INSOL International	انسول انترناشنال	International Association of Restructuring, Insolvency and Bankruptcy Professionals	الرابطة الدولية لأخصائيي إعادة الهيكلة والإعسار والإفلاس	ريكة	Raykalah	Dropping some words	Yes	Yes
2	SPATL	سباتل	Spatial Information Management and Decision Support Tools	إدارة المعلومات الفضائية وأدوات دعم اتخاذ القرارات	ادامة	Idāmah	Dropping some words	Yes	Yes
3	PRO	برو	Project Personnel Section	قسم موظفي المشاريع	قسموريع	Qismorī'	1 st syl of 1 st word + 1 st syl of 2 nd word + final syl of last word	No	No
4	GOV	غوف	Office of the Secretariat of the Governing Bodies	مكتب أمانة الهيئات التشريعية	مكانة	Makānah	Dropping some words	Yes	Yes
5	ANT	آنت	The Antarctic Treaty	معاهدة القطب الجنوبي	معجنوبي	Ma'janūbi	1 st syl of 1 st word + last full word	Yes	Yes

Table 57 - English clippings rendered as Arabic blends

Note: Some blends are not easy to pronounce and make no sense or indication to the full forms, while others are successful as they can be pronounced or indicate some sort of connotation.

Success index:

Acceptable abbreviated forms: 4/5

Unacceptable abbreviated forms: 1/5

Good abbreviated forms: 4/5

4.8.5.5 English clippings rendered as Arabic clippings

	Eng. clipping	Translit. into ar	English full form	Arabic full translation	Ar clippings equiv.	Translit.	QIP/ F.meth		Success criterion	
									Pronounc.	Explicit
1	INSOL International	انسول انترناشنال	International Association of Restructuring, Insolvency and Bankruptcy Professionals	الرابطة الدولية لأخصائيي إعادة الهيكلة والإعسار والإفلاس	أخصاء	Akhissā'		Back clipping of 2 nd word	Yes	Partially
2	SPATL	سباتل	Spatial Information Management and Decision Support Tools	إدارة المعلومات الفضائية وأدوات دعم اتخاذ القرارات	معكم ⁽²¹⁾	Ma'akum	Letter added	dropping some words	Yes	Yes
3	PRO	برو	Project Personnel Section	قسم موظفي المشاريع	وظف	Wadhaf		Fore & back clipping of 2 nd word	No	No
4	GOV	غوف	Office of the Secretariat of the Governing Bodies	مكتب أمانة الهيئات التشريعية	تشريع	Tashrī'		back clipping of 4 th word	No	No
5	ANT	آنت	The Antarctic Treaty	معاهدة القطب الجنوبي	قطجنوبي	Qutjanūbi		2 nd word back-clipped + 3 rd full word	Yes	Partially

Table 58 - English clippings rendered as Arabic clippings

Note: Abbreviated forms derived from multiple-word full forms cannot be rendered in clippings as a clipping is often derived from one word, and sometimes from two words.

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

Good abbreviated forms: 1/5

⁽²¹⁾ معكم (Ma'akum) in Arabic means 'with you'

4.8.5.6 English clippings rendered as Arabic mixed forms

	Eng. clipping	Translit. into ar	English full form	Arabic full translation	Ar Mix. unit Equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	INSOL International	انسول انترناشنال	International Association of Restructuring, Insolvency and Bankruptcy Professionals	الرابطة الدولية لأخصائيي إعادة الهيكلة والإعسار والإفلاس	رادو- عيكة	Rado-'Aykalah	Blend + blend, some words excluded	Yes	Partially
2	SPATL	سباتل	Spatial Information Management and Decision Support Tools	إدارة المعلومات الفضائية وأدوات دعم اتخاذ القرارات	امفض-أ.د.أ.ق	Amfaḍ-A.D.A.Q	Acron. + abbrev.	No	No
3	PRO	برو	Project Personnel Section	قسم موظفي المشاريع	قسم-م.م	Qism-mīm mīm	Short form + init.	Yes	Partially
4	GOV	غوف	Office of the Secretariat of the Governing Bodies	مكتب أمانة الهيئات التشريعية	مكأم-هآء تآء	Mak'am-hā' tāt	Blend + init.	Yes	Partially
5	ANT	آنت	The Antarctic Treaty	معاهدة القطب الجنوبي	م-قطجنوبي	M- qutjanūbi	Abbrev. + blend	Yes	Yes

Table 59 - English clippings rendered as Arabic mixed forms

Success index:

Acceptable abbreviated forms: 4/5

Unacceptable abbreviated forms: 1/5

Good abbreviated forms: 1/5

4.8.5.7 English clippings rendered as Arabic short forms

	Eng. clipping	Translit. into ar	English full form	Arabic full translation	Ar short form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	INSOL International	انسول انترناشنال	International Association of Restructuring, Insolvency and Bankruptcy Professionals	الرابطة الدولية لأخصائيي إعادة الهيكلة والإعسار والإفلاس	الرابطة، رابطة إعادة الهيكلة	Ar rābiṭah, rābitat í'ādat al haykalah	Reduced to 1 or 3 words	Yes	Partially
2	SPATL	سباتل	Spatial Information Management and Decision Support Tools	إدارة المعلومات الفضائية وأدوات دعم اتخاذ القرارات	الادارة، ادارة المعلومات	Al idārah, idārat al ma'lūmāt	Reduced to 1 or 2 words	Yes	Partially
3	PRO	برو	Project Personnel Section	قسم موظفي المشاريع	القسم، قسم المشاريع	Al qism, qism al mashārī'	Reduced to 1 or 2 words	Yes	Partially
4	GOV	غوف	Office of the Secretariat of the Governing Bodies	مكتب أمانة الهيئات التشريعية	المكتب، مكتب الامانة	Al maktab, maktab al amānah	Reduced to 1 or 2 words	Yes	Partially
5	ANT	آنت	The Antarctic Treaty	معاهدة القطب الجنوبي	المعاهدة، معاهدة القطب	Al mu'āhadah, mu'āhadat al quṭb	Reduced to 1 or 2 words	Yes	Partially

Table 60 - English clippings rendered as Arabic short forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.5.8 Total number of Arabic abbreviated forms that can be created as equivalents for the English five clippings

	English clipping rendered as	Good quality	Acceptable	Unacceptable
1	Acronym	2/5	5/5	0/5
2	Initialism		3/5	2/5
3	Abbreviation		3/5	2/5
4	Mixed form	1/5	4/5	1/5
5	Blend	4/5	4/5	1/5
6	Short form		5/5	0/5
7	Clipping	1/5	3/5	2/5
8	Alphanumeric form	n/a	n/a	n/a
	Total	8	27/35	8/35
From five English clippings taken from the UN Terminology main database, 27 Arabic abbreviated forms can be created as their equivalents, eight of them are of a good quality, i.e., they meet the requirements of a good term which are transparency, pronounceability and linguistic economy.				

Table 61 - Total no. of Arabic abbreviated forms created as equivalents for the English 5 clippings

4.8.6 Alphanumeric forms

4.8.6.1 English alphanumeric forms rendered as Arabic abbreviations

	Eng. alph. nu. form	Translit. into ar	English full form	Arabic full translation	Ar abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	SALT I	سولت-1	Strategic Arms Limitation Talks	محادثات الحد من الأسلحة الاستراتيجية الأولى	م.ح.أ.أ.أ	M.H.A.A.A	All initials included	Yes	Partially
2	AISAT-1	السات - 1	Algerian Satellite	الساتل الجزائري	س.ج	S.J	=	Yes	Partially
3	PARIS21	باريس 21	Partnership in <i>Statistics</i> for Development in the 21 st Century	الشراكة في الإحصاء من أجل التنمية في القرن الحادي والعشرين	ش.أ.ت.ق.ج.ع	SH.A.T.Q.H.'A	=	No	No
4	HLCD-3A	أج أل سي جي - ثري أي	High-level Conference on Development of Agribusiness and Agro-Industries in Africa	المؤتمر الرفيع المستوى المعني بتنمية الأعمال التجارية الزراعية والصناعات الزراعية في أفريقيا	م.ر.م.ت.أ.ت.ز. ص.ز.أ	M.R.M.T.A.T. Z.S.Z.A	=	No	No
5	FRA 2000	فرا 2000	Global Forest Resources Assessment	تقدير الموارد الحرجية في العالم	ت.م.ح.ع	T.M.H.'A	=	Yes	Partially

Table 62 – English alphanumeric forms rendered as Arabic abbreviations

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.6.2 English alphanumeric forms rendered as Arabic acronyms

	Eng. alph. nu. form	Translit. into ar	English full form	Arabic full translation	Ar acron. Equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	SALT I	سولت-1	Strategic Arms Limitation Talks	محادثات الحد من الأسلحة الاستراتيجية الأولى	محاسا	Mahāsa	2 letters included	Yes	Partially
2	AISAT-1	السات - 1	Algerian Satellite	الساتل الجزائري	ساج	Sāj	2 letters + initial included	Yes	Partially
3	PARIS21	باريس 21	Partnership in Statistics for Development in the 21 st Century	الشراكة في الإحصاء من أجل التنمية في القرن الحادي والعشرين	شات	Shāt	Some words dropped	Yes	Partially
4	HLCD-3A	أج أل سي جي – ثري أي	High-level Conference on Development of Agribusiness and Agro-Industries in Africa	المؤتمر الرفيع المستوى المعني بتنمية الأعمال التجارية الزراعية والصناعات الزراعية في أفريقيا	متانزسا	Matātzaṣa	=	No	No
5	FRA 2000	فرا 2000	Global Forest Resources Assessment	تقدير الموارد الحرجية في العالم	تمحع	Tamḥaʿ	All initials included	No	No

Table 63 – English alphanumeric forms rendered as Arabic acronyms

Note: Alphanumeric forms provide considerable economy, as very long terms are reduced to one or two words.

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.6.3 English alphanumeric forms rendered as Arabic initialisms

	Eng. alph. nu. form	Translit. into ar	English full form	Arabic full translation	Ar init. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	SALT I	سولت-1	Strategic Arms Limitation Talks	محادثات الحد من الأسلحة الاستراتيجية الأولى	ميم حاء ألف ألف ألف	Mīm ḥā' alif alif alif	All initials included	Yes	Partially
2	ALSAT-1	السات - 1	Algerian Satellite	الساتل الجزائري	سين جيم	Sīn jīm	=	Yes	Partially
3	PARIS21	باريس 21	Partnership in Statistics for Development in the 21 st Century	الشراكة في الإحصاء من أجل التنمية في القرن الحادي والعشرين	شين حاء ألف تاء قاف حاء عين	Shīn ḥā' alif tā' qāf ḥā' 'ayn	=	No	No
4	HLCD-3A	أج أل سي جي - ثري أي	High-level Conference on Development of Agribusiness and Agro-Industries in Africa	المؤتمر الرفيع المستوى المعني بتنمية الأعمال التجارية الزراعية والصناعات الزراعية في أفريقيا	ميم راء ميم ميم تاء ألف تاء زاي صاد زاي ألف	Mīm rā' mīm mīm tā' alif tā' zāy ṣād zāy alif	=	No	No
5	FRA 2000	فرا 2000	Global Forest Resources Assessment	تقدير الموارد الحرجية في العالم	تاء ميم حاء عين	Tā' mīm ḥā' 'ayn	=	Yes	Partially

Table 64 – English alphanumeric forms rendered as Arabic initialisms

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.6.4 English alphanumeric forms rendered as Arabic blends

	Eng. alph. nu. form	Translit. into ar	English full form	Arabic full translation	Ar blend equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	SALT I	سولت-1	Strategic Arms Limitation Talks	محادثات الحد من الأسلحة الاستراتيجية الأولى	محادلا	Muḥādala	1 st 2 syls of 1 st word + final syl of last word	Yes	Partially
2	AISAT-1	السات - 1	Algerian Satellite	الساتل الجزائري	ساري ⁽²²⁾	Sāri	1 st part of 1 st word + final part of 2 nd word	Yes	Yes
3	PARIS21	باريس 21	Partnership in Statistics for Development in the 21 st Century	الشراكة في الإحصاء من أجل التنمية في القرن الحادي والعشرين	احتنمية	Aḥtanmiyah	1 st part of 3 rd word+full 6 th word	Yes	Partially
4	HLCD-3A	أج أل سي جي - ثري أي	High-level Conference on Development of Agribusiness and Agro-Industries in Africa	المؤتمر الرفيع المستوى المعني بتنمية الأعمال التجارية الزراعية والصناعات الزراعية في أفريقيا	مؤتنمية	Mu'tanmiyah	1 st part of 1 st word+full 5 th word	Yes	Partially
5	FRA 2000	فرا 2000	Global Forest Resources Assessment	تقدير الموارد الحرجية في العالم	تقدحرج	Taqdḥarj	1 st part of 1 st word+1 st part of 3 rd word	Yes	Partially

Table 65 – English alphanumeric forms rendered as Arabic blends

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

Good abbreviated forms: 1/5

⁽²²⁾ ساري (Sāri) in Arabic means moving, especially at night.

4.8.6.5 English alphanumeric forms rendered as Arabic alphanumeric forms

	Eng. alph. nu. form	Translit. into ar	English full form	Arabic full translation	Ar alph. nu. form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	SALT I	سولت-1	Strategic Arms Limitation Talks	محادثات الحد من الأسلحة الاستراتيجية الأولى	محاد-1	Muḥād-1	Clipping + numeral	Yes	Partially
2	AISAT-1	السات - 1	Algerian Satellite	الساتل الجزائري	ساري-1	Sāri-1	Blend + numeral	Yes	Yes
3	PARIS21	باريس 21	Partnership in Statistics for Development in the 21 st Century	الشراكة في الإحصاء من أجل التنمية في القرن الحادي والعشرين	احتنمية-ق21	Aḥtanmiyah-q21	Blend + letter + numeral	Yes	Partially
4	HLCD-3A	أج أل سي جي - ثري أي	High-level Conference on Development of Agribusiness and Agro-Industries in Africa	المؤتمر الرفيع المستوى المعني بتنمية الأعمال التجارية الزراعية والصناعات الزراعية في أفريقيا	مؤتنمية-أ3	Mu'tanmiya-3a	Blend + numeral + letter	Yes	Partially
5	FRA 2000	فرا 2000	Global Forest Resources Assessment	تقدير الموارد الحرجية في العالم	تقدحرج-2000	Taqdḥarj-2000	Blend + numeral	Yes	Partially

Table 66 – English alphanumeric forms rendered as Arabic alphanumeric forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

Good abbreviated forms: 1/5

4.8.6.6 English alphanumeric forms rendered as Arabic mixed forms

	Eng. alph. nu. form	Translit. into ar	English full form	Arabic full translation	Ar mixed form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	SALT I	سولت-1	Strategic Arms Limitation Talks	محادثات الحد من الأسلحة الاستراتيجية الأولى	محاد-أ.أ.أ	Muḥād-A.A.A	Blend + abbrev.	Yes	Partially
2	AlSAT-1	السات - 1	Algerian Satellite	الساتل الجزائري	سات-ج	Sāt-J	Blend + init.	Yes	Partially
3	PARIS21	باريس 21	Partnership in Statistics for Development in the 21 st Century	الشراكة في الإحصاء من أجل التنمية في القرن الحادي والعشرين	الشراكة- أ.ت.ق.ح.ع	Ash sharākah-A.T.Q.H.'A	short form + abbrev.	No	No
4	HLCD-3A	أج أل سي جي - ثري أي	High-level Conference on Development of Agribusiness and Agro-Industries in Africa	المؤتمر الرفيع المستوى المعني بتنمية الأعمال التجارية الزراعية والصناعات الزراعية في أفريقيا	مؤرفيع-ت.أ.ت.ز.ص.ز.أ	Mu'rafī-T.A.T.Z.Ṣ.Z.A	Blend + init..	No	No
5	FRA 2000	فرا 2000	Global Forest Resources Assessment	تقدير الموارد الحرجية في العالم	تقد-مرع	Taqd-Mar'	Blend + blend	Yes	Partially

Table 67 – English alphanumeric forms rendered as Arabic mixed forms

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.6.7 English alphanumeric forms rendered as Arabic short forms

	Eng. alph. nu. form	Translit. into ar	English full form	Arabic full translation	Ar short form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	SALT I	سولت-1	Strategic Arms Limitation Talks	محادثات الحد من الأسلحة الاستراتيجية الأولى	المحادثات، محادثات الحد	Al muḥadathāt, muḥadathāt al ḥad	Reduced to 1 or 2 words	Yes	Partially
2	AISAT-1	السات - 1	Algerian Satellite	الساتل الجزائري	الساتل	As sātil	Reduced to 1 word	Yes	Partially
3	PARIS21	باريس 21	Partnership in Statistics for Development in the 21 st Century	الشراكة في الإحصاء من أجل التنمية في القرن الحادي والعشرين	الشراكة، شراكة التنمية	Ash sharākah, sharākat at tanmiyah	Reduced to 1 or 2 words	Yes	Partially
4	HLCD-3A	أج أل سي جي – ثري أي	High-level Conference on Development of Agribusiness and Agro-Industries in Africa	المؤتمر الرفيع المستوى المعني بتنمية الأعمال التجارية الزراعية والصناعات الزراعية في أفريقيا	المؤتمر، مؤتمر التنمية	Al mu'tamar, mu'tamar at tanmiyah	Reduced to 1 or 2 words	Yes	Partially
5	FRA 2000	فرا 2000	Global Forest Resources Assessment	تقدير الموارد الحرجية في العالم	تقدير الموارد	Taqdīr al mawārid	Reduced to 2 words	Yes	Partially

Table 68 – English alphanumeric forms rendered as Arabic short forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.6.8 Total number of Arabic abbreviated forms that can be created as equivalents for the English five alphanumeric forms

	English alphanumeric forms rendered as	Good quality	Acceptable	Unacceptable
1	Acronym		3/5	2/5
2	Initialism		3/5	2/5
3	Abbreviation		3/5	2/5
4	Mixed form		3/5	2/5
5	Blend	1/5	5/5	0/5
6	Short form		5/5	0/5
7	Clipping	n/a	n/a	n/a
8	Alphanumeric form	1/5	5/5	0/5
	Total	2	27/35	8/35
From five English alphanumeric forms taken from the UN Terminology main database, 27 Arabic abbreviated forms can be created as their equivalents, two of them are of a good quality, i.e., they meet the requirements of a good term which are transparency and pronounceability as well as linguistic economy.				

Table 69 - Total no. of Arabic abbreviated forms created as equivalents for the English 5 alphanumeric forms

4.8.7 Mixed forms

4.8.7.1 English mixed forms rendered as Arabic abbreviations

	Eng. mixed form	Translit. into ar	English full form	Arabic full translation	Ar abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Z-GIS	زي-جي آي أس	Centre for GeoInformatics	مركز المعلوماتية الجغرافية	م.م.ج	M.M.J	All initials included	Yes	Partially
2	SaTReC	سات-ريك	Satellite Technology Research Center	مركز أبحاث تكنولوجيا الفضاء	م.أ.ت.ف	M.A.T.F	=	Yes	Partially
3	CSSTE-LAC	سي أس أس تي إي-لاك	Centre for Space Science and Technology Education in Latin America and the Caribbean	مركز تدريس علوم وتكنولوجيا الفضاء في أمريكا اللاتينية والكاريبي	م.ت.ع.ت.ف.أ.ل.ك	M.T.'A.T.F.A.L.K	=	No	No
4	EU-SAFER	إي يو-سافر	European Seismic Early Warning for Europe project	مشروع الاتحاد الأوروبي للإنذار المبكر بالهزات الأرضية في أوروبا	م.أ.أ.إ.م.ه.أ.أ	M.A.A.A.M.H.A.A	=	No	No
5	FGAN-FHR	أفغان-أف أج آر	Research Institute for High-Frequency Physics and Radar Technique	معهد بحوث فيزياء الترددات العالية والتقنيات الرادارية	م.ب.ف.ت.ع.ت.ر	M.B.F.T.'A.T.R	=	No	No

Table 70 - English mixed forms rendered as Arabic abbreviations

Note: Abbreviations of more than five initials are difficult to use; they are overly long.

Success index:

Acceptable abbreviated forms: 2/5

Unacceptable abbreviated forms: 3/5

4.8.7.2 English mixed forms rendered as Arabic acronyms

	Eng. mixed form	Translit. into ar	English full form	Arabic full translation	Ar Acron. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Z-GIS	زي-جي آي أس	Centre for GeoInformatics	مركز المعلوماتية الجغرافية	ممر	Mamarr	All initials included	Yes	Partially
2	SaTReC	سات-ريك	Satellite Technology Research Center	مركز أبحاث تكنولوجيا الفضاء	مانف	Mataf	=	Yes	No
3	CSSTE-LAC	سي أس أس تي إي-لاك	Centre for Space Science and Technology Education in Latin America and the Caribbean	مركز تدريس علوم وتكنولوجيا الفضاء في أمريكا اللاتينية والكاريبي	متعتفالك	Mat'atafālak	=	No	No
4	EU-SAFER	إي يو-سافر	European Seismic Early Warning for Europe project	مشروع الاتحاد الأوروبي للإنذار المبكر بالهزات الأرضية في أوروبا	متانمهار	Matanmahār	=	Yes	No
5	FGAN-FHR	أفغان-أف أج آر	Research Institute for High-Frequency Physics and Radar Technique	معهد بحوث فيزياء الترددات العالية والتقنيات الرادارية	مبفتعتر	Mabfata'atar	=	No	No

Table 71 - English mixed forms rendered as Arabic acronyms

Success index:

Acceptable abbreviated forms: 1/5

Unacceptable abbreviated forms: 4/5

4.8.7.3 English mixed forms rendered as Arabic initialisms

	Eng. mixed form	Translit. into ar	English full form	Arabic full translation	Ar init. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Z-GIS	زي-جي آي أس	Centre for GeoInformatics	مركز المعلوماتية الجغرافية	ميم ميم جيم	Mīm mīm jīm	All initials included	Yes	Partially
2	SaTReC	سات-ريك	Satellite Technology Research Center	مركز أبحاث تكنولوجيا الفضاء	ميم ألف تاء فاء	Mīm alif tā' fā'	=	Yes	Partially
3	CSSTE-LAC	سي أس أس تي إي-لاك	Centre for Space Science and Technology Education in Latin America and the Caribbean	مركز تدريس علوم وتكنولوجيا الفضاء في أمريكا اللاتينية والكاريبي	ميم تاء عين تاء فاء ألف لام كاف	Mīm tā' 'ayn tā' fā' alif lām kāf	=	No	No
4	EU-SAFER	إي يو-سافر	European Seismic Early Warning for Europe project	مشروع الاتحاد الأوروبي للإنذار المبكر بالهزات الأرضية في أوروبا	ميم ألف ألف ألف ميم هاء ألف ألف	Mīm alif alif alif mīm hā' alif alif	=	No	No
5	FGAN-FHR	أفغان-أف أج آر	Research Institute for High-Frequency Physics and Radar Technique	معهد بحوث فيزياء الترددات العالية والتقنيات الرادارية	ميم باء فاء تاء عين تاء راء	Mīm bā' fā' tā' 'ayn tā' rā'	=	No	No

Table 72 - English mixed forms rendered as Arabic initialisms

Note: Initialisms of more than five initials are difficult to use, as they are too long.

Success index:

Acceptable abbreviated forms: 2/5

Unacceptable abbreviated forms: 3/5

4.8.7.4 English mixed forms rendered as Arabic blends

	Eng. mixed form	Translit. into ar	English full form	Arabic full translation	Ar blends equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Z-GIS	زي-جي آي أس	Centre for GeoInformatics	مركز المعلوماتية الجغرافية	مرجع	Marji'	One letter added	Yes	Partially
2	SaTReC	سات-ريك	Satellite Technology Research Center	مركز أبحاث تكنولوجيا الفضاء	مرفضاء	Marfaḍā'	Part of 1 st word + last full word	Yes	Partially
3	CSSTE-LAC	سي أس أس تي إي-لاك	Centre for Space Science and Technology Education in Latin America and the Caribbean	مركز تدريس علوم وتكنولوجيا الفضاء في أمريكا اللاتينية والكاريبي	مرعل	Mar'al	1 st part of 1 st word + 1 st part of 3 rd word	Yes	Partially
4	EU-SAFER	إي يو-سافر	European Seismic Early Warning for Europe project	مشروع الاتحاد الأوروبي للإنذار المبكر بالهزات الأرضية في أوروبا	مشبكر	Mashbakkir	1 st part of 1 st word + last part of 4 th word	No	No
5	FGAN-FHR	أفغان-أف أج آر	Research Institute for High-Frequency Physics and Radar Technique	معهد بحوث فيزياء الترددات العالية والتقنيات الرادارية	معدار	Ma'dār	1 st part of 1 st word + 2 nd part of last word	No	No

Table 73 - English mixed forms rendered as Arabic blends

Note: Blends from more than three words are unlikely to succeed, as they are unpronounceable and obscure.

Success index:

Acceptable abbreviated forms: 3/5

Unacceptable abbreviated forms: 2/5

4.8.7.5 English mixed forms rendered as Arabic mixed forms

	Eng. mixed form	Translit. into ar	English full form	Arabic full translation	Ar mixed form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Z-GIS	زي-جي آي أس	Centre for GeoInformatics	مركز المعلوماتية الجغرافية	مركز-م.ج	Markaz-M.J	Full word + init.	Yes	Partially
2	SaTReC	سات-ريك	Satellite Technology Research Center	مركز أبحاث تكنولوجيا الفضاء	مريح-ت.ف	Marbaḥ-T.F	Blend + init.	Yes	Partially
3	CSSTE-LAC	سي أس أس تي إي-لاك	Centre for Space Science and Technology Education in Latin America and the Caribbean	مركز تدريس علوم وتكنولوجيا الفضاء في أمريكا اللاتينية والكاريبي	م.ت.ع.ت-الك	M.T.'A.T-ALC	Abbrev. + acron.	No	No
4	EU-SAFER	إي يو-سافر	European Seismic Early Warning for Europe project	مشروع الاتحاد الأوروبي للإنذار المبكر بالهزات الأرضية في أوروبا	ماء-إمهاء	Mā'-Imhā'	Acron. + acron.	Yes	No
5	FGAN-FHR	أفغان-أف آر	Research Institute for High-Frequency Physics and Radar Technique	معهد بحوث فيزياء الترددات العالية والتقنيات الرادارية	معبحث-ف.ت.ع.ت.ر	Ma'baḥth-F.T.'A.T.R	Blend + abbrev.	No	No

Table 74 - English mixed forms rendered as Arabic mixed forms

Note: Too long mixed forms are difficult to use, as they are unpronounceable and obscure.

Success index:

Acceptable abbreviated forms: 2/5

Unacceptable abbreviated forms: 3/5

4.8.7.6 English mixed forms rendered as Arabic short forms

	Eng. Mixed form	Translit. into ar	English full form	Arabic full translation	Ar short form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Z-GIS	زي-جي آي أس	Centre for GeoInformatics	مركز المعلوماتية الجغرافية	المركز، مركز المعلوماتية	Al markaz, markaz al ma'lūmātiyyah	Reduced to 1 or 2 words	Yes	Partially
2	SaTReC	سات-ريك	Satellite Technology Research Center	مركز أبحاث تكنولوجيا الفضاء	المركز، مركز الأبحاث	Al markaz, markaz al abḥāth	Reduced to 1 or 2 words	Yes	Partially
3	CSSTE-LAC	سي أس أس تي إي-لاك	Centre for Space Science and Technology Education in Latin America and the Caribbean	مركز تدريس علوم وتكنولوجيا الفضاء في أمريكا اللاتينية والكاريبي	المركز، مركز التدريس	Al markaz, markaz at tadrīs	Reduced to 1 or 2 words	Yes	Partially
4	EU-SAFER	إي يو-سافر	European Seismic Early Warning for Europe project	مشروع الاتحاد الأوروبي للإنذار المبكر بالهزات الأرضية في أوروبا	المشروع، مشروع الإنذار المبكر	Al mashrū', mashrū' al indhār al mubakkir	Reduced to 1 or 3 words	Yes	Partially
5	FGAN-FHR	أفغان-أف آر	Research Institute for High-Frequency Physics and Radar Technique	معهد بحوث فيزياء الترددات العالية والتقنيات الرادارية	المعهد، معهد البحوث	Al ma'had, ma'had al buḥūth	Reduced to 1 or 2 words	Yes	Partially

Table 75 - English mixed forms rendered as Arabic short forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.7.7 Total number of Arabic abbreviated forms that can be created as equivalents for the English five mixed forms

	English mixed form rendered as	Good quality	Acceptable	Unacceptable
1	Acronym		1/5	4/5
2	Initialism		2/5	3/5
3	Abbreviation		2/5	3/5
4	Mixed form		2/5	3/5
5	Blend		3/5	2/5
6	Short form		5/5	0/5
7	Clipping	n/a	n/a	n/a
8	Alphanumeric form	n/a	n/a	n/a
	Total	0	15/30	15/30
From five English mixed forms taken from the UN Terminology main database, 15 Arabic abbreviated forms can be created and accepted as their equivalents, none of which is of a good quality.				

Table 76 - Total no. of Arabic abbreviated forms created as equivalents for the English 5 mixed forms

Note: Although some abbreviated forms are not good according to the requirements of good terms stated earlier, they can be accepted as equivalents, because even in English, not all the abbreviated forms in general are good terms. If such forms are accepted based on the success criteria, they can be used.

4.8.8 Short forms

4.8.8.1 English short forms rendered as Arabic abbreviations

	Eng. short form	Translit. into ar.	English full form	Arabic full translation	Ar Abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Metropolis	ميتروبوليس	World Association of Major Metropolises	الرابطة العالمية للمدن الكبرى	ر.ع.م.ك	R.'A.M.K	All initials included	Yes	Partially
2	Galileo	غاليليو	European Satellite Navigation System	النظام الأوروبي للملاحة الساتلية	ن.ا.م.س	N.A.M.S	=	Yes	Partially
3	LAWASIA	لواسيا	Law Association for Asia and the Pacific	الرابطة القانونية لآسيا والمحيط الهادئ	ر.ق.أ.م	R.Q.A.M	=	Yes	Partially
4	SOLAR	سولار	Solar Physics Satellite	ساتل الفيزياء الشمسية	س.ف.ش	S.F.SH	=	Yes	Partially
5	SWITCH	سويتش	European Union's SWITCH programme	برنامج "سويتش" التابع للاتحاد الأوروبي	ب.س.ت.أ.أ	B.S.T.A.A	=	Yes	Partially

Table 77 - English short forms rendered as Arabic abbreviations

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.8.2 English short forms rendered as Arabic acronyms

	Eng. short form	Translit. into ar.	English full form	Arabic full translation	Ar acron. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Metropolis	ميتروبوليس	World Association of Major Metropolises	الرابطة العالمية للمدن الكبرى	رعمك، راعي	Ra'mak. Ra'i	All initials included, or initials and non-initials	Yes	Partially
2	Galileo	غاليليو	European Satellite Navigation System	النظام الأوروبي للملاحة الساتلية	نامس	Nāmis	All initials included	Yes	Partially
3	LAWASIA	لواسيا	Law Association for Asia and the Pacific	الرابطة القانونية لآسيا والمحيط الهادئ	رقامة	Ruqāmah	=	Yes	yes
4	SOLAR	سولار	Solar Physics Satellite	ساتل الفيزياء الشمسية	سافش	Sāfish	Two letters included	yes	no
5	SWITCH	سويتش	European Union's SWITCH programme	برنامج "سويتش" التابع للاتحاد الأوروبي	بستار	Bastār	All initials included	Yes	Partially

Table 78 - English short forms rendered as Arabic acronyms

Note: If the TL abbreviated form is not successful, transliteration or full translation can be used.

Success index:

Acceptable abbreviated forms: 4/5

Unacceptable abbreviated forms: 1/5

Good abbreviated forms: 1/5

4.8.8.3 English short forms rendered as Arabic initialisms

	Eng. short form	Translit. into ar.	English full form	Arabic full translation	Ar init. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Metropolis	ميترابوليس	World Association of Major Metropolises	الرابطة العالمية للمدن الكبرى	راء عين ميم كاف	Rā' 'ayn mīm kāf	All initials included	Yes	Partially
2	Galileo	غاليليو	European Satellite Navigation System	النظام الأوروبي للملاحة الساتلية	نون ألف ميم سين	Nūn alif mīm sīn	=	Yes	Partially
3	LAWASIA	لواسيا	Law Association for Asia and the Pacific	الرابطة القانونية لآسيا والمحيط الهادئ	راء قاف ألف ميم	Rā' qāf alif mīm	=	Yes	Partially
4	SOLAR	سولار	Solar Physics Satellite	ساتل الفيزياء الشمسية	سين فاء شين	Sīn fā' shīn	=	Yes	Partially
5	SWITCH	سويتش	European Union's SWITCH programme	برنامج "سويتش" التابع للاتحاد الأوروبي	باء سين تاء ألف ألف	Yā' sīn tā' alif alif	=	Yes	Partially

Table 79 - English short forms rendered as Arabic initialisms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.8.4 English short forms rendered as Arabic blends

	Eng. short form	Translit. into ar.	English full form	Arabic full translation	Ar blend equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Metropolis	ميتروبوليس	World Association of Major Metropolises	الرابطة العالمية للمدن الكبرى	راكب	Rākub	1 st part of 1 st word + 1 st part of 4 th word	Yes	Partially
2	Galileo	غاليليو	European Satellite Navigation System	النظام الأوروبي للملاحة الساتلية	نورسات	Norsāt	1 st letter of 1 st word+2 nd &3 rd letters of 2 nd word+ 1 st part of 4 th word	Yes	yes
3	LAWASIA	لواسيا	Law Association for Asia and the Pacific	الرابطة القانونية لآسيا والمحيط الهادئ	رابقان	Rābqān	1 st part of 1 st word + 1 st part of 2 nd word	Yes	Partially
4	SOLAR	سولار	Solar Physics Satellite	ساتل الفيزياء الشمسية	ساتلفيز	Satilfiz	1 st part of 1 st word + 1 st part of 2 nd word	Yes	Partially
5	SWITCH	سويتش	European Union's SWITCH programme	برنامج "سويتش" التابع للاتحاد الأوروبي	مجاور	Mujāwir	Final part of 1 st word + 1 st part of last word	Yes	Partially

Table 80 - English short forms rendered as Arabic blends

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

Good abbreviated forms: 1/5

4.8.8.5 English short forms rendered as Arabic clippings

	Eng. short form	Translit. into ar.	English full form	Arabic full translation	Ar Abbrev. equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Metropolis	ميتروبوليس	World Association of Major Metropolises	الرابطة العالمية للمدن الكبرى	راب	Rāb	1 st word back-clipped	Yes	No
2	Galileo	غاليليو	European Satellite Navigation System	النظام الأوروبي للملاحة الساتلية	ملاح	Melāh	3 rd word back-clipped	Yes	No
3	LAWASIA	لواسيا	Law Association for Asia and the Pacific	الرابطة القانونية لآسيا والمحيط الهادئ	قان	Qān	2 nd word back-clipped	Yes	No
4	SOLAR	سولار	Solar Physics Satellite	ساتل الفيزياء الشمسية	سات	Sāt	1 st word back-clipped	Yes	No
5	SWITCH	سويتش	European Union's SWITCH programme	برنامج "سويتش" التابع للاتحاد الأوروبي	برنا	Barna	1 st word back-clipped	Yes	No

Table 81 - English short forms rendered as Arabic clippings

Note: Usually, clippings cannot be created from multiple-word terms; unless the full form is one word, it often cannot be a clipping.

Success index:

Acceptable abbreviated forms: 0/5

Unacceptable abbreviated forms: 5/5

4.8.8.6 English short forms rendered as Arabic mixed forms

	Eng. short form	Translit. into ar.	English full form	Arabic full translation	Ar mixed form equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Metropolis	ميتروبوليس	World Association of Major Metropolises	الرابطة العالمية للمدن الكبرى	راعل-م.ك	Ra'il-M.K	Blend + abbreviation	Yes	Partially
2	Galileo	غاليلىو	European Satellite Navigation System	النظام الأوروبي للملاحة الساتلية	نظام -ملسات	Nidhām-milsāt	full word + blend	Yes	Partially
3	LAWASIA	لواسيا	Law Association for Asia and the Pacific	الرابطة القانونية لآسيا والمحيط الهادئ	راء قاف-أ.م	Rā' qāf - A.M	Init. + abbrev.	Yes	Partially
4	SOLAR	سولار	Solar Physics Satellite	ساتل الفيزياء الشمسية	ساتل-ف.ش	Sātil-F.SH	Short form + abbrev.	Yes	Partially
5	SWITCH	سويتش	European Union's SWITCH programme	برنامج "سويتش" التابع للاتحاد الأوروبي	باء سين- اتور	Bā' sīn-Ator	Init. + blend	Yes	Partially

Table 82 - English short forms rendered as Arabic mixed forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.8.7 English short forms rendered as Arabic short forms

	Eng. Short form	Translit. into ar.	English full form	Arabic full translation	Ar short form Equiv.	Translit.	QIP/ F.meth	Success criterion	
								Pronounc.	Explicit
1	Metropolis	ميتروبوليس	World Association of Major Metropolises	الرابطة العالمية للمدن الكبرى	الرابطة، رابطة المدن	Ar rābiṭah, rābiṭat al mudun	Reduced to 1 or 2 words	Yes	Partially
2	Galileo	غاليليو	European Satellite Navigation System	النظام الأوروبي للملاحة الساتلية	النظام، نظام الملاحة	An nedhām, nedhām al milāḥah	Reduced to 1 or 2 words	Yes	Partially
3	LAWASIA	لواسيا	Law Association for Asia and the Pacific	الرابطة القانونية لآسيا والمحيط الهادئ	الرابطة، الرابطة القانونية	Ar rābiṭah, al rābiṭah al qānūniyyah	Reduced to 1 or 2 words	Yes	Partially
4	SOLAR	سولار	Solar Physics Satellite	ساتل الفيزياء الشمسية	الساتل، ساتل الفيزياء	As sātil, sātil al fizyā'	Reduced to 1 or 2 words	Yes	Partially
5	SWITCH	سويتش	European Union's SWITCH programme	برنامج "سويتش" التابع للاتحاد الأوروبي	البرنامج، برنامج سويتش	Al barnāmaj, barnāmaj switch	Reduced to 1 or 2 words	Yes	Partially

Table 83 - English short forms rendered as Arabic short forms

Success index:

Acceptable abbreviated forms: 5/5

Unacceptable abbreviated forms: 0/5

4.8.8.8 Total number of Arabic abbreviated forms that can be created as equivalents for the English five Short forms

	English Short form rendered as	Good quality	Acceptable	Unacceptable
1	Acronym	1/5	4/5	1/5
2	Initialism		5/5	0/5
3	Abbreviation		5/5	0/5
4	Mixed form		5/5	0/5
5	Blend	1/5	5/5	0/5
6	Short form		5/5	0/5
7	Clipping		0/5	5/5
8	Alphanumeric form	n/a	n/a	n/a
	Total	2	29/35	6/35
From five English short forms taken from the UN Terminology main database, 29 Arabic abbreviated forms can be created as their equivalents, two of them are of a good quality, i.e., they meet the requirements of a good term which are transparency, linguistic economy, and pronounceability.				

Table 84 - Total no. of Arabic abbreviated forms created as equivalents for the English 5 short forms

4.8.9 Summary

The current status of UNTERM shows that these 40 abbreviated forms have no Arabic equivalents. They represent but a sample of English abbreviated forms that have no Arabic equivalents; otherwise, the total number of such forms is much bigger than 40. The analysis revealed that only 11 out of 2155 abbreviated forms in the UN terminology databases form their Arabic equivalents as abbreviated forms; in other words, only 0.51%, while 99.49% of the English abbreviated forms have no Arabic abbreviated forms equivalents in the UN context. (See 4.6 and Table 6).

However, the analysis of the current case study which is designed to verify the capacity of the Arabic language to employ abbreviated forms in the UN context has shown the following results:

- Total number of English abbreviated forms: 40.
- Total number of possible (acceptable) Arabic equivalents for these 40 English abbreviated forms (including good terms): 195.
- Total number of possible (acceptable) Arabic equivalents for these 40 English abbreviated forms (excluding good terms): 169.
- Total number of successful Arabic abbreviated forms (good terms) created as equivalents for the 40 English abbreviated forms: 26.
- Total number of unacceptable Arabic abbreviated forms: 60.
- Furthermore, all or most of the 40 English abbreviated forms can be rendered in Arabic and accepted by way of transliteration.
- The most frequent types of abbreviated forms in Arabic (good terms) were acronyms (12), blends (11), and mixed forms, clippings and alphanumeric forms (1 each).
- The most frequent types of abbreviated forms in Arabic (acceptable terms) were short forms (40), mixed forms (32), initialisms (30), abbreviations (27), blends (18), acronyms (16), alphanumeric forms (4), and clippings (2) respectively.

	Acronyms	Blends	Mixed forms	Clippings	Alphanumeric forms	Abbreviations	Initialisms	Short forms	Total
Good terms	12/40	11/40	1/40	1/40	1/40	0/40	0/40	0/40	26/40
Acceptable terms	16/40	18/40	32/40	2/40	4/40	27/40	30/40	40/40	169/40

Table 85 - Results of the implementation of Arabic AFs in the UN context in ratio

	Acronyms	Blends	Mixed forms	Clippings	Alphanumeric forms	Abbreviations	Initialisms	Short forms	Total
Good terms	30%	27.5%	2.5%	2.5%	2.5%	0%	0%	0%	65%
Acceptable terms	40%	45%	80%	5%	10%	67.5%	75%	100%	422.4%

Table 86 - Results of the implementation of Arabic AFs in the UN context in percentage

Quality improvement procedures were also employed to produce abbreviated forms that are compatible with the Arabic pronunciation system. These included dropping some words in the formation of abbreviated forms, including the first two letters of one word, rearrangement of letters, and adding external letters. Table 87 below shows the ratios and percentages of these procedures:

QIP	Dropping some letters	Including the first two letters	Rearrangement of letters	Adding external letter
Ratio	20/40	7/40	3/40	3/40
Percentage	50%	17.5%	7.5%	7.5%

Table 87 – Quality improvement procedures for Arabic AFs in the UN context

4.9 Summary of Chapter Four

- Definitions: after making a comparison between the definitions in the literature, Standard ISO 704 and analysis of UN terminology databases based on the responses to RQ1, the final version of definitions was reached (see 4.2.10).
- The analysis reveals that there are eight types of English abbreviated forms employed in the UN context (4.3). As for Arabic, the use of original Arabic abbreviated forms is too limited to conclude statistical results from them. The total number of Arabic abbreviated forms in the UN context is eleven: two acronyms and nine initialisms. The typology of ISO 704 can be amended to include the eight types of English abbreviated forms found in the analysis. However, ISO 704 covered most of the types of abbreviated forms that are found in the literature review and in the analysis of abbreviated forms in the UN context. The analysis shows that two types of ISO 704 can be adopted in their current form; they are acronyms and initialisms and six types need to be slightly amended; they are abbreviations, blends, alphanumeric forms, mixed forms, and short forms (see 4.2.10). This typology could be applied to Arabic in general, although in the UN context this might not work due to the rarity of original Arabic abbreviated forms at present. However, the analysis of the case study on the implementation of Arabic abbreviated forms in the UN context (see 4.8) shows that the same typology of abbreviated forms in English can be applied to Arabic (table 85 and table 86). The most frequently used abbreviated forms (in the good quality terms category) of this case study are acronyms (12), blends (11), and mixed forms, clippings and alphanumeric forms (1 each). On the other hand, the most frequent types of abbreviated forms in Arabic (in the acceptable terms category) are short forms (40), mixed forms (32), initialisms (30), abbreviations (27), blends (18), acronyms (16), alphanumeric forms (4), and clippings (2) respectively (table 85 and table 86).
- It has been obvious that pronunciation plays an important role in differentiating the various types of abbreviated forms such as initialisms, acronyms and abbreviations. Thus, abbreviated forms can be classified in general into those which are pronounced as words and those which are not. Blends, clippings and acronyms belong to the first type and the rest of abbreviated forms to the second. Lexicalization can apply to the most frequently used abbreviated forms, especially the ones which are pronounced like regular words, for example, *laser*, *UNICEF*, etc. This view was confirmed from the discussion and results of the literature review (chapter two).
- The analysis shows that the total number of English abbreviated forms in UNTERM is 2155. Acronyms are the most frequently used abbreviated forms, their number is 969/2155; (45%) of total abbreviated forms in UNTERM. The second most frequently used abbreviated forms are initialisms; their ratio is 594/2155 and percentage (27.5%) of total abbreviated forms in UNTERM. The third most frequently used abbreviated forms are abbreviations; their ratio is 241/2155 and percentage (11.1%) of total abbreviated forms in UNTERM, followed by mixed forms (218/2155) → (10.1%), blends (81/2155) → (3.7%), alphanumeric forms (24/2155) → (1.1%), short forms (18/2155) → (0.8%), and clippings (10/2155) → (0.4%) respectively (chart 1). These statistical figures can provide an answer to RQ3.

- The total number of abbreviated forms made up of only (pure) initials is 1600 out of 2155, which makes 74.2 % of all abbreviated forms in UNTERM. Many procedures are employed to improve the quality of abbreviated forms and make them pronounceable. These procedures include dropping some words from the source form in the creation of the abbreviated form; this is the most common procedure and it occurs in 17.4% of abbreviated forms in UNTERM. In many cases, two letters of one word instead of initial letters are included in the creation of abbreviated forms; this is used in 8.1% of all abbreviated forms in UNTERM. The third most common quality improvement procedure is the use of backronyms which are used in 5% of all abbreviated forms in UNTERM. The fourth most common quality improvement procedure is the inclusion of the initials of conjunctions; this occurs in 3.2 % of all abbreviated forms in UNTERM, while in 1.9% of abbreviated forms in UNTERM, external letters are added to the abbreviated forms. Three letters of one word are included in 1.7 % of all abbreviated forms in UNTERM. Metaphorically related words that are not parts of the full forms are used in 0.5% of abbreviated forms in UNTERM, while double acronyms are found in 0.3% of them. Initials of articles are included in producing 0.2% of all abbreviated forms in UNTERM, and four letters of one word are included in 0.04% of all abbreviated forms in UNTERM (see table 5). As for the Arabic part of the study, quality improvement procedures are also employed in the case study on the implementation of Arabic abbreviated forms in the UN context (4.8) to produce abbreviated forms that are compatible with the Arabic pronunciation system. These procedures include dropping some words (used 20 times), including the first two letters of one word (used 7 times), rearrangement of letters (used 3 time), and adding external letters (used 3 times) (see Table 87). These statistical figures constitute a good basis to answer *RQ4* and give more validity to the results of the analysis. As has been introduced earlier, the main reason behind these procedures is to improve the pronounceability of abbreviated forms. This statistical data provides a vivid evidence in support of *hypothesis 3* of the study.
- Rearrangement of letters refers to changing the order of letters of the abbreviated form to create a word of a stronger effect or connotation in addition to being pronounceable. It was hypothesized (*hypothesis 4*) that this procedure can be one of the important methods that may be used to improve the quality of abbreviated forms to make them of a better pronounceability. However, the statistical data of the analysis shows that this procedure is used in the formation of only three out of 2155 abbreviated forms in UNTERM; this number constituted 0.14% of all abbreviated forms in UNTERM (see table 5). Hence, this procedure is opposite to my expectations, because such a small number cannot be relied on to validate *hypothesis 4*, despite the fact that this procedure can be applied on a larger scale in the UN context to produce good quality abbreviated forms. However, the analyses of the case study on the implementation of Arabic abbreviated forms in the UN context (4.8) show that rearrangement of letters is employed more than in the main analysis of abbreviated forms in UNTERM. It is used in the formation of three out of forty abbreviated forms. This reflects that the ratio increased from 3/2155 to 3/40 and the percentage increased from 0.14% to 7.5% (see Table 87). This is an indication that rearrangement of letters, if properly employed, can be a good quality improvement procedure that would significantly produce abbreviated forms of a good quality and this would mean

that *hypothesis 4* would be fully proved if this procedure is properly exploited in the UN context.

- The current status shows that the use of Arabic abbreviated forms in the UN context is very rare. In most cases, Arabic abbreviations are mere reflections of the English ones. The total number of Arabic abbreviated forms in UNTERM is 165 the majority of which (154 out of 165; i.e., 93.3%) are entered in this database by way of transliteration. Only eleven abbreviated forms out of 2155 English abbreviated forms are formed in Arabic as equivalent abbreviated forms for the English ones. This constitutes 0.51% of all abbreviated forms in UNTERM (see 4.6); two of them are acronyms and the rest are initialisms. The statistical data of this part of the analysis disproves the fifth hypothesis.
- However, it was presupposed that the statistical data derived from the analysis of the use of Arabic abbreviated forms in UNTERM might not reflect the real capacity of the Arabic language to employ abbreviated forms. As this argument is based on the results deduced from the discussion of the Arabic part of the literature review (chapter Two), a further case study has been carried out to verify this presupposition. This view is a reflection of *hypothesis 5* which states “Arabic can use its potential to create abbreviated forms as equivalent for the English ones in the UN context and this can be proved via the UN documents and databases”, and it can also better answer RQ5 and RQ6. The case study contains a random sample of forty abbreviated forms from UNTERM: five abbreviated forms from each English abbreviated form type. These English abbreviated forms have no Arabic equivalent abbreviated forms in the UN terminology main database. Then, the study attempted to create Arabic abbreviated form equivalents for them. The analysis shows that the total number of possible (acceptable, including good terms) Arabic equivalents for these 40 English abbreviated forms is 195 (487.5%), the total number of possible (acceptable, excluding good terms) Arabic equivalents for these 40 English abbreviated forms is 169 (422.4%), and the total number of successful Arabic abbreviated forms (good terms) is 26 (65%), (see 4.8.9 above). The statistical data obtained from this analysis completely reversed the initial results of the analysis of *Hypothesis 5* and validated this hypothesis to a large extent. For example, the percentage of Arabic abbreviated forms which are used in UNTERM as equivalents for the English abbreviated forms was 0.5%, while in the case study which involved a real implementation of abbreviation in the UN context, this percentage jumped to 65% and the last percentage reflects the actual capacity of the Arabic language to employ abbreviated forms.
- As will be seen in the next chapter, the results of the analysis have answered the research questions, and provided the basis to verify the validity or invalidity of the hypotheses proposed as well as the qualitative and quantitative results of the analysis to add more credibility to the study in general.

Chapter 5 Discussion of the Results

5.1 Introduction

This chapter provides a critical discussion of the results of the analysis in comparison with the results of literature reviewed in chapter two as well as with the definitions, typology and methods of formation of abbreviated forms stated in ISO 704. The overall aim of this study was to examine abbreviated forms as regards their formation, definitions, classification and usage in English and Arabic, with special reference to the UN context in order to verify whether Arabic can follow the western language types and methods of formation of abbreviated forms. It also aims to address the shortcomings of the terminological tools used to address abbreviated forms in the UN context.

As has been shown in the literature review chapter, there is a wide variety of works that address the formation, definition and typology of abbreviated forms in English and to a less extent in Arabic. The definitions and methods of formation addressed by authors were relatively similar, whereas some of the abbreviated form types were not addressed. Although typologies varied significantly in the literature, the overall number of English abbreviated form types throughout the literature review amounted to nine types. This typology can be applied to the Arabic language in general. Linguists such as Sager (1997) classified abbreviated forms of terms into six types: short forms, abbreviations proper, initialisms, acronyms, mixed forms, and blends. In another place (*ibid*, p.38), he categorized clippings under compression and considered it a very productive method of term formation. Although Sager's typology predated the evolution of media-related forms, new forms of numeronyms, and netspeak, it was the closest typology to the typology reached throughout the current study in which the total number of types of abbreviated forms amounted to nine (see Table 4, and 4.3).

5.2 Acceptance or Rejection of Hypotheses

This chapter also addresses whether or not the data collected and analyzed earlier in Chapter Four can help in proving or disproving the hypotheses of the dissertation as initially set out in chapter three (see 3.2). The following are the discussions of these hypotheses:

1. **Hypothesis 1:** *The Standard ISO 704; namely, section B.2.4 Creation of abbreviations, which basically focuses on abbreviation as a method of term formation, can be adopted as a model for the formation, definitions and classification of abbreviated forms both in English and Arabic.*
 - a. **Definitions:** The definitions of abbreviated forms in the UN context depend on the method of their formation and this was obvious from the response to the first research question which reads: *"How can each type of abbreviated form be created and defined in the UN context compared with the methods of formation and definitions in the literature and in the Standard ISO 704?"*

According to the analysis of abbreviated forms in the UN context, in comparison with the definitions in the literature and in ISO 704, the definitions of abbreviated forms fall into two groups. The first group is the definitions of ISO 704 that can be adopted in their current forms; these include acronyms and initialisms. The second group contains the definitions in ISO 704 that could be modified; it includes abbreviations, blends, clippings, alphanumeric forms, mixed forms, and short forms.

Based on the response to *RQ1*, it can be said that *Hypothesis 1* is partially proved, as not all the definitions can be adopted in their current form; some of them need modification to reflect the state of the art of abbreviated forms in the UN context. The analysis showed that ISO 704 covered the eight types of abbreviated forms found in the UN context; two of the definitions in ISO 704 can be totally adopted, they are the definitions of acronyms and initialisms. This constitutes a percentage of 25%. On the other hand, six out of eight definitions in ISO 704 need to be modified; these are abbreviations, blends, clippings, alphanumeric forms, mixed forms, and short forms. Mixed forms are addressed under alphanumeric codes, "Alphanumeric codes made up of combinations of letters, numbers or both shall be considered *symbols*, if they do not represent words in a *natural language* or *abbreviations*" (ISO 704, 2022, p. 52). Thus, the overall review of the literature covers all the possible types of abbreviated forms and their definitions. The review and discussion of the literature in Chapter Two shows that the definitions of abbreviated form types can be applied to Arabic (see 2.6.2 and Table 4). This hypothesis was also accepted in light of the results of the analysis of the case study on the implementation of Arabic abbreviated forms in the UN context (see 4.8.9). Therefore, the modified definitions of ISO 704 can apply to Arabic as well as to English.

- b. Methods of formation:** Similar to the definitions, and according to the analysis of abbreviated forms in the UN context in comparison with the definitions in the literature and in ISO 704, the methods of creation of abbreviated forms fall into two groups. The first group includes the formation methods discussed in ISO 704, which can be adopted in their current forms; these include acronyms and initialisms. The second group contains the methods of formation that need to be slightly modified; it includes abbreviations, blends, clippings, alphanumeric forms, mixed forms, and short forms.
- c. Typology:** An analysis was performed on the types of abbreviated forms in the UN context compared with the types in the literature review (chapter 2) and those in ISO 704 in order to reach a universal typology of abbreviated forms in English and Arabic. Based on the response to *RQ2*, eight types of abbreviated forms were found in English in the UN context, whereas the findings of the literature review in Chapter Two shows that nine types were mainly found in the literature. In ISO 704, all the types found in the literature and in the analysis of UNTERM were covered. Thus, it can be said that with some modifications, ISO 704 in its current form can be a complete criterion to be adopted as reference for the classification of abbreviated forms. Again, this confirms that *Hypothesis 1* can only be partially accepted. In other words, ISO 704 needs to be slightly modified in order to be adopted as a model for the formation, definitions and classification of abbreviated forms. With these modifications incorporated, *Hypothesis 1* can be fully accepted. This also applies to Arabic abbreviated forms as the literature

review showed that all the definitions, methods of formation and typology of English abbreviated forms can be applied to the Arabic ones. On the other hand, the analysis of Arabic abbreviated forms in the UN context showed that the above-mentioned criteria cannot be applied, because Arabic abbreviated forms in the UN context are very rare. In a nutshell, *Hypothesis 1* is partially accepted. However, the second analysis on the implementation of the methods of abbreviation to produce Arabic abbreviated forms in the UN context (see 4.8) has shown that the Arabic language can produce abbreviated forms just like the English language. If these methods are applied to the Arabic part of abbreviated forms in the UN context, *Hypothesis 1* would be fully proved.

2. **Hypothesis 2:** *A universal classification of English and Arabic abbreviated forms in the UN context can be reached based on a phonological criterion, i.e., on the way these abbreviated forms are pronounced. Abbreviated forms which are pronounced syllabically are treated like words and are more inclined to be lexicalized, while other abbreviated forms, which are not pronounced as words are less inclined to be lexicalized, and are only shortened representations of the full forms.*

From the analysis of abbreviated forms in the UN context, it has been apparent that there are two groups of abbreviated forms in general. The first group is the abbreviated forms that are pronounced as ordinary words; it includes acronyms, blends, clippings, and short forms. This group can be called the lexical abbreviations. The second group is the abbreviated forms that are pronounced as sequence of letters, or letters and numbers; this group includes abbreviations, initialisms, mixed forms, and alphanumeric forms. This second group can be called the graphical abbreviations; they are less inclined to lexicalization than the abbreviated forms which are pronounced syllabically. Furthermore, this result is evidenced by the findings of the literature review which show that based on the method of pronunciation, there are two types of abbreviated forms in general: lexical abbreviations and graphical abbreviations (See 2.6.1). In the analysis of abbreviated forms in the UN context (see 4.3), *RQ2* is answered and this reveals the same result which confirmed the findings of the literature review. Thus, *Hypothesis 2* is accepted.

3. **Hypothesis 3:** *Modification of abbreviated forms to improve their pronounceability as words by adding letters or sounds from their referents other than the initials is a productive and accepted method both in English and Arabic.*

Many procedures were used in the UN context to produce abbreviated forms that are compatible with the pronunciation system of language. These procedures include dropping some words from the source form in the formation of the abbreviated form. This is the most common procedure; it occurs in 17.4% of abbreviated forms in UNTERM. Other procedures are: including two letters of one word instead of initial letters (in 8.1% of all abbreviated forms in UNTERM), the use of backronyms (in 5% of all abbreviated forms in UNTERM), including the initials of prepositions or conjunctions (in 3.2 % of all abbreviated forms in UNTERM), adding external letters (in 1.9% of abbreviated forms in UNTERM). The rest of procedures are including three letters of one word, using metaphorically related words, double acronyms, including the initials of articles and including four letters of one word. These statistical figures constitute a good basis to

answer RQ4 (see 4.5) and give more validity to the results of the analysis. This being the case, the statistical data provides more validity in support of *hypothesis 3* of the study.

As for the Arabic abbreviated forms in the UN context, it is not clear due to the rarity of Arabic abbreviated forms, but based on the findings of the literature review (see 2.8) and the analysis of the case study on the implementation of Arabic abbreviated forms in the UN context, and its results (see 4.8.9), it becomes quite evident that these procedures are also applicable to the Arabic language in the UN context (see Table 87). Therefore, and based on the results of the literature review and the analysis of the case study on abbreviated forms in the UN context as well as the response to RQ4, *Hypothesis 3* is accepted.

4. Hypothesis 4: *Rearrangement of letters can improve the quality of abbreviated forms with regard to their pronounceability, usability and adaptability as potential word forms; it is an important procedure in producing abbreviated forms that are pronounced as regular words.*

From the analysis of abbreviated forms in the UN context, it has been found that rearrangement of letters is used in the formation of three out of 2155 abbreviated forms in UNTERM (0.13%). These are MARPOL for *international convention covering prevention of pollution of the marine environment*, G-WADI for *Water and Development Information for Arid Lands – a Global Network initiative*, and H-SAF for *Satellite Application Facility on Hydrology* (UNTERM). Similarly, only a few examples of abbreviated forms which underwent rearrangement of letters are found in the literature (see 4.5, and Table 5). Although this number is marginal, the examples reviewed imply that rearrangement of letters can be a sound method of improving the quality of abbreviated forms if it is exploited properly. This is supported by the response to RQ4.

As for the Arabic abbreviated forms in the UN context, rearrangement of letters is not clear due to the rarity of Arabic abbreviated forms. However, rearrangement of letters is found in the literature review where it is employed in some examples to improve the quality of abbreviated forms and make them easier to pronounce, e.g., WAFA ‘وفا’ (see 2.4.2.2). The analysis of the case study on the implementation of Arabic abbreviated forms in the UN context (4.8) gives evidence that this procedure is also applicable to the Arabic language in the UN context. Rearrangement of letters is used in the formation of three out of forty abbreviated forms which means that it could produce 7.5% of the equivalents of the forty SL abbreviated forms (see Table 87). Thus, according to the results of the analysis of the case study on the implementation of Arabic abbreviated forms in the UN context (4.8), *Hypothesis 4* is accepted.

5. Hypothesis 5: *Arabic can use its potential to create abbreviated forms as equivalents for the English ones in the UN context and this can be proved via the UN documents and databases.*

To verify this hypothesis, the creation of abbreviated forms is thoroughly discussed in the literature review (See 2.4) and also is statistically analyzed in the analysis chapter. The

literature shows that all the types of abbreviated forms employed in English can be formed in Arabic (see 2.6.2).

A research question was designed to address this matter. *RQ5* stated: *How are abbreviated forms rendered in the process of translation in the UN context?* To answer this research question, an analysis has been designed to examine the strategies used to render the English abbreviated forms into Arabic, the approaches used in dealing with abbreviated forms in the process of translation, and the most frequent method used in this regard.

Another statistical analysis has been performed to determine the most commonly used procedures of rendering abbreviated forms; this includes strategies like full translation, transliteration, borrowing, transferring abbreviated forms in their original language form into the TL (Arabic), and the formation of an equivalent abbreviated form in the TL. The last approach is closely related to the verification of *Hypothesis 5*. The first analysis related to this research question shows that abbreviated forms are not produced in Arabic except in very rare cases. Only 11 out of 2155 English abbreviated forms in UNTERM are rendered into Arabic abbreviated forms; this constitutes 0.51 % of all abbreviated forms in UNTERM. If the current status of Arabic abbreviated forms in the UN context is relied on, it can be said that *Hypothesis 5* is rejected.

Nevertheless, the current status of Arabic abbreviated forms in the UN context may not reflect the real potential of the Arabic language to perform these processes. It seems that there are very few attempts to make use of abbreviated forms in Arabic and this is apparent from the very small number of Arabic abbreviated forms in the UN terminology databases as mentioned above. What supports this view is the fact that the literature review chapter shows that Arabic can form abbreviated forms just like other languages if the topic of abbreviation is more thoroughly studied and exploited.

Therefore, and in order to further verify *hypothesis 5*, a case study (4.8) has been carried out on a random sample of 40 English abbreviated forms which have no Arabic equivalent abbreviated forms in the UN main terminology database. Then, Arabic abbreviated forms were coined as equivalents for these English abbreviated forms. This part of the analysis can provide answers to *RQ5* which states: *“How are abbreviated forms rendered in the process of translation in the UN context?”*, and *RQ6* which states: *“Can Arabic use its potential to create abbreviated forms as equivalents for the English ones in the UN context?”*. Answers to these questions would show the potential of the Arabic language to create abbreviated forms in the UN context and the answer could help in proving or disproving *hypothesis 5*. The quality of the generated abbreviated forms is judged depending on the explicitness and pronounceability criteria. According to ISO 704, “a *term* or *proper name* is transparent when the *concept* that it designates can be inferred, at least partially, without a *definition* or other type of information supplementing or replacing a definition” (ISO 704, 2022, p. 53)”; therefore, the criteria for the success of the abbreviated form is based on transparency which is one of the main requirements for the formation of terms in general. Other criteria that are of importance include the avoidance of ambiguity and being economical and pronounceable. Thus, the accepted forms should reflect a possibility for inference, economy, pronounceability, and clarity.

These 40 abbreviated forms are but a sample of English abbreviated forms that have no Arabic equivalents; otherwise, the total number of such forms is considerably larger than 40. (Only 11 out of 2155 abbreviated forms in the UN terminology databases form their Arabic equivalents as abbreviated forms; in other words, only 0.51%, while 2144/2155 (99.49%) of the English abbreviated forms have no Arabic abbreviated form equivalents in the UN context (see 4.6). The analysis shows that 195 acceptable Arabic abbreviated forms can be created as equivalents for these 40 English abbreviated forms, i.e., these 195 abbreviated forms include transparent and partially transparent terms, while 60 suggested Arabic abbreviated forms are unacceptable, because they are either too long, obscure, or non-transparent. All or most of the 40 English abbreviated forms can be rendered in Arabic by way of transliteration. A more important result of the analysis is that 26 successful Arabic abbreviated forms (good terms) were created as equivalents for these 40 English abbreviated forms (65%). This reflects that Arabic can use its potential to create equivalent abbreviated forms for the English ones in the UN context just like other languages (see 4.8.9). Thus, based on the results of the analysis of the case study, and on the implementation of these procedures, *hypothesis 5* is fully accepted.

5.3 Limitations

- There was no utility built into the UN main terminology database that would enable the extraction of abbreviated forms; therefore, the data collection was carried out manually. This was a time and effort consuming process due to the large amount of abbreviated form entries in UNTERM; they are 2155 entries in the English part and 165 entries in the Arabic part of UNTERM.
- It was difficult to conduct questionnaires and select participants from the UN translation services, either for their time constraints or due to the fact that the use of Arabic abbreviated forms in the UN context is not recommended, not to mention the copyright issues. From my personal contact with some translation services at the UN, I was told that they do not tend to use Arabic abbreviated forms in the UN context; they always resort to full translation instead. Due to time constraints, this topic is not adequately addressed and exploited, and is often frowned upon.
- Access to UN terminology applications such as eLUNa⁽²³⁾ is only granted to translation sections, in spite the fact that translators may work for many sections other than the UN main translation services. This hampered the flow of the study and imposed more time to cover many aspects of the study.

⁽²³⁾ eLUNa is a translation platform designed to facilitate the work of translators at the UN. It consists of UN translated documents, terminology databases, machine translation applications, etc.

Chapter 6 Conclusions

One of the main problems associated with abbreviated forms is the lack of consolidated rules for their formation, definition and classification. Thus, this dissertation has hypothesized that the part related to abbreviations in ISO 704 can be adopted as a model for the formation, definition and classification of abbreviated forms in English and Arabic. The study revealed that rules for the formation and definition of abbreviated forms can be determined as has been shown in the review of the literature, UN terminology databases and ISO 704. However, the part of ISO 704 that is related to abbreviations needs to be slightly modified in order to be adopted as a model. Definitions and methods of formation are inter-related because the abbreviated forms are defined according to their method of formation. Thus, the first hypothesis is only partially proved; with the modifications incorporated in ISO 704, this hypothesis can be fully proved.

Similarly, the typology of abbreviated forms in ISO 704 can be slightly modified to include the nine types of abbreviated forms found in the analysis of the English part and in the literature review; these types are abbreviations, acronyms, initialisms, blends, clippings, alphanumeric forms, mixed forms, short forms, and symbols. This typology could be applied to Arabic as well as to English. Pronunciation plays an important role in the differentiation of the various types of abbreviated forms. Abbreviated forms can be classified according to their pronunciation into lexical abbreviations and graphical abbreviations. Lexical abbreviated forms are word-like abbreviations that are pronounced as words and can be readily lexicalized as ordinary words, such as acronyms, blends and clippings. Graphical abbreviated forms, such as abbreviations, are used only in writing, pronounced as full words, and are less inclined to lexicalization.

Many procedures can be employed to improve the quality of abbreviated forms and make them pronounceable. These procedures include: addition of letters or sounds, including the initials of conjunctions, prepositions, articles, and other weak forms, dropping the initials of some words of the source form, including more than the initials of words from the source form such as taking the first two or three letters of words, etc. Furthermore, the use of diacritics between consonants in Arabic abbreviated forms can address the problem of consonant cluster and make the abbreviated form pronounceable. Another procedure used in producing abbreviated form is rearrangement of letters in which letters may not be ordered according to the sequence of the words of their full forms. The purpose of this procedure is to improve the quality of the abbreviated forms that are produced and render them pronounceable or matching already existing words (see 4.8).

The state-of-the-art shows that the use of Arabic abbreviated forms in the UN context is currently very limited. The total number of Arabic abbreviated forms in the UN terminology databases is 165, the majority of which (154 out of 165; i.e., 93.3%) are generated using transliteration. Only eleven abbreviated forms out of 2155 English abbreviated forms are rendered in Arabic abbreviated forms. However, an analysis of the implementation of abbreviated forms in the UN context (see 4.8) showed that Arabic can employ abbreviation just like English and other languages provided that the abbreviated form is pronounceable and transparent; that is, it can be inferred from its components. The rarity of Arabic abbreviated forms in the UN context may be attributed to the fact that there are no

adequate efforts to make use of this linguistic procedure in the formation dissemination of such forms in the UN documents and publications as well as keeping a special record of them for future usage. The study shows that blending is one of the means of term formation in Arabic just like derivation, metaphor, translation, Arabicization, etc. If used properly, blending can be an effective method of term formation thanks to its great reductive capacity coupled with recognizability.

In dealing with abbreviated forms in the process of translation, the first step is to find an equivalent abbreviated form for the SL abbreviated form in the TL. If the equivalent abbreviated form does not work, the SL abbreviated form can be transliterated and put between two brackets preceded by the full form translation; otherwise, full translation should be resorted to. If the abbreviated form is so familiar and used in many languages, it can be borrowed in the TL. The ambiguity posed by some abbreviated forms can be overcome by an explanatory note, as is the case with new terms which need to be explained when used for the first time. Hence, in case of borrowing a foreign abbreviated form, it is important to maintain the peculiarities of the TL language in terms of its phonetic and derivative systems and this includes adapting the abbreviated form to conform to these systems. It is recommended in the terminology work to use one term for one concept. In long texts such as reports, laws, publications, and so on, the abbreviated form should be defined in brackets the first time it is used in the document by enclosing the abbreviated form in parentheses immediately following the full form, and then using it henceforth in the document; this is the *modus operandi* in UN documents. However, if the abbreviated form is familiar to the readers and has gained popularity, it is better to be used without spelling it out. It is important and more meaningful sometimes to adopt the foreign abbreviated form if it represents a very technical term in order to maintain as much as possible the same concept in an attempt to keep a common code in multilingual communication which is an important factor in terminology work. This procedure is more welcomed in technical discourse and can facilitate international multilingual communication.

The main challenge that faces the translator as a terminology producer is whether to translate the SL abbreviated form, find an equivalent TL abbreviated form for it, borrow it in the TL or find a hybrid equivalent for it. In Arabic, it becomes more difficult, because there is a shortage of abbreviated forms and Arabic usually lacks not only equivalent abbreviated forms, but even the concepts behind these abbreviated forms. The solution depends mainly on the translators/terminologists' knowledge, experience and the availability of the tools that can facilitate their work such as multilingual terminology databases and dictionaries, term banks, etc.

Frequency is a decisive factor for the acceptability and spread of new abbreviated forms especially if they observe the principle of linguistic economy and preserve the language peculiarities. Once the abbreviated form is used by many speakers in a linguistic community, it would be of a similar status to that of the full form, with the advantage of linguistic economy. Hence, some Arabic abbreviated forms seem unfamiliar at first, but with frequent use they would be familiar to the same degree of familiarity of the English abbreviated forms.

The collection and recording of the new abbreviated forms have become an essential part in the work of the UN translator/terminologist in order to refer to them when needed. Arabic dictionaries, encyclopedias, termbases and specialized and general scientific books should contain lists or glossaries of translated and formulated abbreviated forms that are used in these works. Keeping records of abbreviated forms proved to be a very important tool that helps readers/hearers in general, and translators/terminologists in particular, overcome the difficulties faced in the process of translation/formation and decoding the abbreviated forms in specialized discourse. This recording process can be in the form of a dictionary, online portal, database, glossary, and so on. Once an abbreviated form is formed, approved and used, it should be recorded so that it can be referred to when needed to facilitate the work of translators and other language users in the UN context.

Standardization of abbreviated forms is a vital step; it would address the ambiguity associated with the use of homonymous abbreviated forms. Thus, giving single designations to concepts in the form of abbreviated forms would facilitate the work of translators, terminologists, and texts producers and users in general whether they are experts in the subject area or not.

6.1 Recommendations for further studies

A practical study can be carried out on the use and implementation of Arabic abbreviated forms in general, and in the academic curricula in particular, because the academia is a fertile ground that can determine the feasibility or unfeasibility of the use of such terminological units. Furthermore, the high level of academic language can constitute a factor of exploiting this type of terms which can be disseminated easily among scholars and academics.

Also, a study can be carried out on the development of a special multilingual database for abbreviated forms in the UN context, depending on the rules of term formation in general, and abbreviated forms creation in particular. It can contain the definitions, equivalent abbreviated forms, translations and borrowing of these abbreviated forms across the UN languages. This kind of tool could have many advantages, and could facilitate the work of translators, terminologists and text producers.

Due to the importance of lexicalized abbreviated forms, independent research can be carried out on the lexical type of abbreviated forms which are more important and are used as ordinary words; they can add to the vocabulary of language, reservoir of terminology and technical multilingual communication.

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Abstract

Multilingual communication is one of the foundations of global transcultural communication; it can be smoother and more accurate with the use of clearly formed and well-established terminology, and one aspect of terminology is abbreviation. The importance of abbreviated forms is closely linked to the great importance of terminology clarity and economy in time, space and effort.

The main problem that faces abbreviated forms in English and Arabic is the absence of clear-cut rules for their formation, definition and classification. Besides, Arabic does not adequately make use of abbreviation as a means of word formation for several reasons that are reviewed throughout the dissertation. The study explores abbreviated forms in English and Arabic with focus on the translation and terminology practices within the UN context which is a fertile ground for investigating practical problems of international multilingual communication through translation and terminology work.

To address these problems, the Standard ISO 704 is proposed as a model for the formation, definitions and classification of abbreviated forms both in English and Arabic. An analysis is conducted based on data collected from UNTERM (the UN main and central terminology database). ISO 704 is critically reviewed, and the capacity of Arabic to form and employ abbreviated forms is also examined. The definitions and methods of formation taken from the literature review were compared with those found in the analysis of the abbreviated forms in UNTERM, and with those stated in ISO 704 to reach a final statement on the definitions, formations and typology of abbreviated forms. Another analysis is designed to examine if Arabic abbreviated forms can be coined in the UN context.

The results of the analysis revealed that with some modifications, ISO 704 can be adopted as a model for the formation, definition and typology of abbreviated forms in English and Arabic. Many procedures can be applied to improve the quality of abbreviated forms including addition or omission of letters or sounds, taking the initials of weak forms, etc. The current status shows that Arabic abbreviated forms are very rare in the UN context. However, another analysis on the implementation of abbreviation in Arabic shows that Arabic can use its potentials to produce abbreviated forms just like English provided that the peculiarities of that language are observed.

Having a clear idea about how to form, define and classify abbreviated forms would facilitate the work of translators as terminology producers, achieve linguistic economy by saving time, effort, space, and even costs. Ultimately, this would contribute to more concise and precise multilingual communication by the use of clearly formed and well-established terms.

Zusammenfassung

Mehrsprachige Kommunikation ist eine der Grundlagen der globalen transkulturellen Kommunikation. Die Verwendung klar definierter und etablierter Terminologie macht sie glatter und genauer. Ein Aspekt der Terminologie ist die Abkürzung. Die Bedeutung von abgekürzten Formen hängt eng mit der großen Bedeutung der Terminologiekларheit und der Wirtschaftlichkeit in Zeit, Raum und Aufwand zusammen.

Das Hauptproblem, dem Abkürzungen auf Englisch und Arabisch gegenüberstehen, ist das Fehlen klarer Regeln für deren Bildung, Definition und Klassifizierung. Außerdem verwendet Arabisch die Abkürzung aus verschiedenen Gründen, die in der gesamten Dissertation behandelt werden, nicht als Mittel zur Wortbildung. Die Studie untersucht abgekürzte Formen in Englisch und Arabisch mit Fokus auf die Übersetzungs- und Terminologiepraktiken im UN-Kontext, die ein fruchtbarer Boden für die Untersuchung praktischer Probleme der internationalen mehrsprachigen Kommunikation durch Übersetzungs- und Terminologearbeit sind.

Um diesen Problemen zu begegnen, wird die Norm ISO 704 als Modell für die Bildung, Definition und Klassifizierung von abgekürzten Formen sowohl in Englisch als auch in Arabisch vorgeschlagen. Eine Analyse wird auf der Grundlage von Daten durchgeführt, die aus der UNTERM-Hauptdatenbank und der zentralen Terminologiedatenbank UNTERM gesammelt werden. ISO 704 wird kritisch überprüft, und die Fähigkeit des Arabischen, abgekürzte Formen zu bilden und anzuwenden, wird ebenfalls untersucht. Die Definitionen und Bildungswege, die der Literaturübersicht entnommen wurden, wurden mit denen der UNTERM-Analyse der abgekürzten Formen und mit denen ISO 704 verglichen, um eine abschließende Aussage über die Definitionen, Formationen und Typologien der abgekürzten Formen zu erhalten. Eine weitere Analyse soll untersuchen, ob im UN-Kontext arabisch abgekürzte Formen geprägt werden können.

Die Ergebnisse der Analyse haben gezeigt, dass ISO 704 mit einigen Modifikationen als Kriterium für die Bildung, Definition und Typologie von abgekürzten Formen in Englisch und Arabisch übernommen werden kann. Es gibt viele Verfahren, um die Qualität von abgekürzten Formen zu verbessern, einschließlich Hinzufügen oder Weglassen von Buchstaben oder Lauten, die Verwendung von Initialen schwacher Formen usw. Der aktuelle Stand zeigt, dass arabische abgekürzte Formen sehr selten sind, wenn sie im UN-Kontext nicht vorhanden sind. Eine andere Analyse zur Implementierung von Abkürzungen auf Arabisch zeigt jedoch, dass Arabisch seine Möglichkeiten zur Herstellung von abgekürzten Formen wie Englisch nutzen kann, vorausgesetzt, dass die Besonderheiten dieser Sprache beachtet werden.

Wenn Sie eine klare Vorstellung davon haben, wie Abkürzungsformen gebildet, definiert und klassifiziert werden, würde dies die Arbeit der Übersetzer als Terminologieproduzenten erleichtern, eine sprachliche Wirtschaftlichkeit erzielen, indem Sie Zeit, Aufwand, Platz und sogar Kosten sparen. Letztendlich würde dies zu einer präziseren mehrsprachigen Kommunikation beitragen, indem klar formulierte und etablierte Begriffe verwendet werden.