Ministry of Higher Education and Scientific Research

University of Mohammed Seddik Ben Yahia, Jijel

Faculty of Letters and Languages

Department of English Language and Literature

STUDENTS' DIFFICULTIES IN TRANSLATING MEDICAL TERMS IN SCIENTIFIC TEXTS

The Case of Third-Year Students, University of Mohammed Sedik Ben Yahya

Dissertation Submitted in Partial Fulfillments of The Requirements for The Degree of Master in Didactics of Foreign Languages

Submitted by

- ChahrazadBouchair
- SoumiaAzizi

Supervised by

- Mr. Bakir Benhabiles

Board of Examiners

- **Chairperson**: Dr. Fateh Bounar
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- **Examiner**: Dr. Izzedin Fanit

Academic Year: (2019, 2020)

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Abstract

The present study aims at tackling the difficulties of translating medical terms from English into Arabic by third year students of English at Mohammed Sedik Ben YahyaUniversity. This study adopts qualitative and quantitative approaches. In order to investigate and identify the difficulties, a test was given to sixty third year students; it contains thirteen sentences that include different medical terms. The analysis and results of the test reveal that the students' level is roughly acceptable, and that they face some difficulties in translating medical terms such as complexity and ambiguity, due to the lack of practice. Also, the study shows that the students are not interested in this kind of translation. This paper offers some solutions to help students translate medical terms successfully.

List of Abbreviations

SL : **S**ource **L**anguage

TL : **T**arget **L**anguage

LT: **L**iterary **T**ranslation

ST : **S**cientific **T**ranslation

UMD : **U**nified **M**edical **D**ictionary

GEM : **G**ale **E**ncyclopedia of **M**edicine

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General Introduction

Translation is an important discipline in the field of language studies. It is considered as a strong approach to teaching English to non-native speakers. Translation is the act through which the content of a text is transferred from the source language into the target language. One of the most important and complex types of translation is scientific translation. Scientific translation is mainly about translating terms in all of the fields of science: medicine, physics, chemistry, mathematic, computer science etc., from one language into another.It is considered as a tool that aids people to develop and progress in the field of science. One of the main difficulties that translation trainees may face when dealing with scientific texts is how to deal with translating medical terms from English into Arabic, and in choosing the best method to achieve a high quality translation of those terms.Medical terminology is a system of words that is based on standard roots, prefixes and suffixes. Usually used to describe precisely the human body, its components and processes, medical aspects and diseases. In other words, medical terminology is the vocabulary used by medical professionals to describe treatments, illnesses and the organs of the body…etc. This language is unlikely used on a daily basis. Hence, only healthcare professionals communicate using it. Most of the terms include almost all the letters of the alphabet, which is something that does not frequently occur in English.

Statement of the Problem

Considering thetranslation of medical terms in scientific texts, students may face difficulties such as,the free Use of Abbreviation andAcronyms and the complexity of the terms.

Aims of the Study

This research aims to highlight the difficultiesthat third year university students may face when attempting to translate medical terms from English into Arabic. This study will show how the translation of medical terms can be a challenge for those students. It also highlights methods they use in translating such terms.

Research questions

In attempting to investigate the difficulties in translating medical terms from English into Arabic that third year university students face, it is necessary to answer the following questions:

1. What are the difficulties that third year university students face in translating medical terms from English into Arabic?
2. What kind of methods students use in translating medical terms?
3. What are the solutions that may help third year university students to overcome these difficulties?

Hypothesies of the Study

In an attempt to answer the questions raised by this study, it is hypothesized that:

1. Students will be able to comprehend and translate medical termsin scientific texts if they already have a scientific background.
2. Students' failure to translate medical terms may be accounted for by their unawareness of the importance of adopting the appropriate method that ensures a high-quality translation.

Research Methodology

In the present research, the target population is third year students at Mohammed Sedik Ben Yehyia University. In order to test our hypotheses and achieve the aim of the research, the data will be collected through the use of quantitative and qualitative analysis. A translation test is given to sixty students as a means by which data for this research are collected. The test is composed of one exercise, in which students will be asked to translate thirteen sentences that contain a number of medical terms, from English into Arabic. The aim behind the translation test was to assess the students' performance concerning the translation difficulties that they may face.

Structure of the Study

The present study consists of two main chapters: a theoretical and a practical chapter. The theoretical chapter is divided into two parts, the first part attempts to highlight the main aspects concerning scientific translation in general. The second part is devoted to incorporate a review of medical terms; its definition, types, characteristics and difficulties.

The second chapter is a practical framework. It is devoted to the description, interpretation and the analysis of the data collected from the translation test. It ends up with some pedagogical recommendations that may be considered as a solution to overcome the difficulties of translating medical terms.

Chapter One: Medical Terms in Scientific Translation

Introduction

The following chapter is divided into two partsthat try to give an overview of medical terms. The first part starts with a literature review of the scientific translation; itsdefinition, featuresand aims. Whereas the second part will shed light on translating medical terms, stating its definition, types and characteristics. It will additionally discuss the difficulties that students face when it comes to translate this type of scientific works. Finally, some recommendations and solutions will be suggested for the students to help them overcome these difficulties.

1. Part One

1.1. Translation

Defining translation has always been a problematic issue, in the sense that one can find more than one definition; each has a different perspective and a theoretical basis. For instance, one can view translation as a tool of transferring ideas and messages via rewording or paraphrasing, as in everyday life when someone tries to explain or express ideas in different ways by using different words even if within the same language. otherssee translation as an act of transferring messages from a source language into a target language, be in oral or written form, for the sake of establishing equivalence to get the appropriate meaning (Yowell& Lataiwish,2000).

Translation has been viewed differently by many scholars, who define it as: ‘‘rendering the meaning of a text into another language in the way that the author intended the text’’ (Newmark. 1988, p.5).

According to Ghazala(1995), ‘‘translation is generally used to refer to all the process and methods used to convey the meaning of the source language into the target language’’ (p.1).

Ghazala's definition reveals the importance of meaning as an essential part in translation. That is, understanding the meaning of the source text is crucial to give the suitable equivalent in the target text.

Translation is a process and product. According to Catford(1995), ''translation is the replacement of textual material in one language ''SL'' by equivalent textual material in another language ''TL'' (p20). This definition shows that translation is a process, since it is an activity practiced by people through time, using rewording and paraphrasing to translate complex terms and expressions into simpler ones, from one language into another, or in the same language. On the other hand, Translation is also a product since it helps people from different regions to interact without facing the problem of misunderstanding and overlapping, as it plays the role of bridging the gaps between different cultures and nations

For Nida (2001), translation refers to ''the act of transferring the meaning of a text from one language into another based on three main principles mainly: faithfulness, expressiveness, and elegance.''

According to Hatim and Mason (1990, p.2), ''translation is a useful test case for examining the whole issue of the role of language is social life. In creating a new act of communication out of a previously existing one, translators are inevitably acting under the pressure of their social conditioning while at the same time trying to assist in the negotiation meaning between the producer of the source language text and the reader of the target language text, both of whom exist within their own, different social frameworks.'' (Hatim&Mason 1990, p.2).

1.2. Types of Translation

Jacobson (1959) in his seminal paper "On linguistic aspects of translation", distinguishes between three main types of written translation: intra-lingual translation, inter-lingual translation, and inter-semiotic translation.

Intra-lingual translation deals with textual materials in the same language. This type may include rewording or paraphrasing.

Inter-lingual translation is the translation of texts from one language into another, it is also referred to as the proper translation.

Inter-semiotic translation is the interpretation of the verbal signs into non-verbal signs, like translating feelings and emotions into music and painting.

In addition, these types of translation are looked at differently by theorists. According to Ghazala, all the available typologies can be assembled into two main types: word for word translation and direct translation. Word for word translation deals with individual words only without taking into consideration the grammatical and linguistic differences. Unlike word for word translation, direct translation considers the grammar and the linguistic differences. On the other hand, free translation has no limitations. The source text word order is not taken into consideration in this type of translation.

1.3. Translation Strategies

Strategies are a set of procedures which are used when a source- language text is transferred into the target-language. Each strategy has its own features, that may be more helpful than the other. Generally speaking, when a translator faces a problem while translating a text, translation strategies will be needed.

1.3.1. Characteristics of Translation Strategies

Chesterman(1997), believes that translation strategies have some general characteristics, which are:

1. Translation strategies should involve text manipulation. In other words, word processing.
2. They should be inter-subjective; means that translation strategies should be empirical and understandable for the readers, not the person who used them.
3. They are goal- oriented.
4. They are problem- centered.
5. They must be applied to the process.

1.3.2. Types of Translation Strategies

Different theorists suggested various types and categorizations of translation strategies, according to their own perspective. The translator is free to use any strategy. However, he has to declare the reason why he chooses a certain strategy.

1.3.2.1. Bergen's Classification

Bergen's (n. d.) Classification includes three categorizations:

1. Comprehension strategies; the translator read and comprehend the text carefully.
2. Transfer strategies; the translator analyses the differences between the source language and the target one. And, he/she must decide which kind of strategies will be needed in the process of translating.
3. Production strategies; as a final step, the translator should produce the equivalent text in the target language.

1.3.2.2. Bosco's Classification

Bosco (1997) classified translation strategies into two main types, the direct and the oblique strategy.

1.3.2.2.1. The Direct Strategy

Direct translation strategies are mainly used when there are conceptual elements that can be taken by the translator from the source language into the target language. Bosco (1997) classified those strategies as follows: borrowing, claque, and literal translation.

1. Borrowing

It is the simplest strategy of translation. In which, the translator takes words from one language and put them in another language alphabet. These words become familiar in the target language, as a part of the lexicon system. For example : computer كمبيوتر.

2. Calque

Or the loan translation refers to the translation of the borrowed expressions literally into the target language. Preserving the structure of expressions in the source language which may be unfamiliar to the target language. For example: week-end and champions' league are new borrowed expressions used in French and Arabic.

3. Literal Translation

Translating from the source language into the target language, without any changes that may affect the source textstructures.For example:J'aiparlé au parlementhier : I gave a speech in the parliament yesterday.

1.3.2.2.2. The Oblique Strategy

When translators cannot translate a work literally, due to some lexical and syntactical differences, oblique translation is used as an alternative. According to Bosco (1997), oblique includes : transposition, modulation, equivalence, adaptation, compensation.

1. Transposition

Without changing the meaning of the message, the translator can change the order of parts of speech in a sentence. For example adjective to noun : a red car سيارة حمراء / blueball … boule bleue.

2. Modulation

This type allows the translator to add some changes to the grammatical and semantic structure of the source language. Making it appropriate to the target language, without affecting the meaning. It is divided into two types. The recorded modulation, which is used in bilingual dictionaries. The translator is obliged to keep the elements translated as they are.

For example : It is easy to understand….السهل ان افهممن .

And free modulation, in which, the translator is free to make changes in the source language, in order to suit the targetlanguage. For instance :

It isdifficult ……. ce n'est pas facile

3. Equivalence

In the case of translating idioms, proverbs, and slogans, the translator should be intelligent and creative. He/she has to make the implicit expressions in the SL explicit in the TL. For example :

1. Give the devilhis dueاعط كل ذي حق حقه.
2. Il pleut à seaux it is raining cats and dog

4. Adaptation

It is used to express one language culture in in a totally different way, to make it appropriate to another language culture. AsBosco (1997, p.2):''it is a shift in cultural environment''. For example :

Likefatherlike son ذلك الشبل من ذلك الاسد.

5. Compensation

Compensation expresses the meaning by replacing items that cannot be translated from the source text, by others in the target text.

1.4. Scientific Translation

Scientific translation is a special and complex type of translation, it is mainly about translating terms in the fields of science and technology of all kinds ; medicine, physics, computer science…etc. from one language into another. Translating scientific texts can be difficult for lay people, especially with the daily change of scientific terms, thus, a high degree of linguistic knowledge, and a practical experience will be needed. As well as a proper understanding of the subject.

Byrne (2006)claims that, scientific translation is much more than just rendering source text language and style, its main concern is to ensure delivering information in a clear, concise and accurate manner. Knowing that ambiguities and unclear constructions in LT must not be found in ST.

1.4.1. Aims of Scientific Translation

Scientific translation aims at delivering scientific information accurately and correctly. The information expressed are presented in an easy, proper and effective way. Also, it aims at conveying the original text in a clear and concise manner.

1.4.2. English-ArabicScientific Translation

Huge linguistic obstacles are posed when it comes to translating scientific terms from English into Arabic. For it is considered as an intellectual challenge, and it requires skills and mastery of both the source and the target languages. As far as, the field of science and medicine are concerned, Arabic lacks and suffers a serious shortage of vocabulary that covers them.

1.4.3. Arabic Language and Challenges for Translating English Medical Terms

Arabic and English languages belong to different language families. Arabic language belongs to *Semitic* languages, while English language belongs to*Germanic*ones. The differences that exist between these two languages play a significant role in scientific translation in general concerning vocabulary and grammar, and most of the language features. El Hassnawiconformed that Arabic language is in a serious need of introducing terms that serve the Arabic vocabulary as far as the scientific terminology is concerned. While English language is a highly sophisticated language. (El Hasnawi,2010, p.6):

Table1

Some linguistic differences between English and Arabic

English	Arabic
Words are composite.	Words are paradegmatic.
Only few grammatical items are compound.	The majority of grammatical items are compound.
Rigidwordorder.	Flexibalwordorder.
Very few inflection.	Highlyinflectional.
Uses abbreviations, acronyms, formulae, and registers.	Rarely uses abbreviations, acronyms, formulae, and registers.
Narrow range of gender distinction.	Wide range of gender distinction.
There is clear-cut tense-aspect distinction.	There is no clear-cut tense-aspect distinction.

There is no dative or dual	Contains dative and dual.
Scientific terminology covers all relevant fields.	Shortage of scientificterminology.
Archaic expressions are almost outdated.	Archaic expressions are still in use.
Uses many compound lexical structures.	Uses few compound lexical structures.
Metaphor and other forms of figurative language are reserved for poetic use of language and certain related fields.	Metaphor and other forms of language are very much frequent even in modern standard Arabic.
Adverbs are mostly formed by the affixation of (ly) to adjectives.	Adverbs are formed by prepositional premodification of nouns and adjectives ; English prepositions such as before, after, and between are adverbs in Arabic.
Capitalization is sometimes used for semantic implication. Eg : nativity.	Does not use any form of capitalization.
Does not use localization.	Localization has a semantic function.
Punctuation has a bearing on the interpretation of texts.	Punctuation has little bearing, if any, on the interpretation of

	texts.
Apart from suffixes as (- ling and –ette), there is no paradegmaticdeminutive in english.	Paradegmaticdeminutiveexists.
It has no diglossia.	Diglossiaexists.
There are about twenty configurations of vowel sounds.	Few vowel sounds used mainly in vocalization.
There are no pharyngial or glottal sounds.except in the aspirated (H) and the colloquial glottal stop.	Pharyngial and glottal sounds are among the standard phonemes in Arabic.

1.4.4. Strategies of Scientific Translation

1. Word coinage

Word coinage is a process of word formation, it takes place when the host languages lack natural equivalent of the foreign concepts or terms. For Pinchuck (1997), languages may have gaps at the lexical level, ‘‘one language will have no words for a concept expressed in the second language.’’ (p53). This method aims at presentingnew terms in the Arabic language via two main processes: derivation and revival. According to baker, the derivation method makes the meaning easier to be understood by the readers, because they are familiar with thewords’ roots which are used tobuild-up new terms, by adding prefixes, suffixes, infixes and vowels. On the other hand, Ghazala(1995), claimed that derivation cannot be applied in all the scientific terms. Moreover, the revival method is the process of bringing back old

Arabicwords that were used but fade away, and giving them new meaning, for example : ‘train’ = قطار, originally used to mean a line of camels. Also, the word ‘car’سيارة = , originally used to mean the night of travelers. On the other hand, revival cannot be applied to cover all the new introduced terms in the field of science, and it consumes much time and effort.

2. Transcription

Also named Arabization, it consists of writing the English scientific terms using the Arabicalphabet, with or without some modifications. The problem with transcription is that it does not serve the Arabic language, and its vocabulary is not enriched. In fact, it is just an offence to the Arabic language and translators. For example:Hepatitis هيباتيتيس. Ghazala (1995), claimed that this method should be avoided except in the case where the translator could not find equivalent for the term in Arabic language. For example : sandwich ساندويتش .

3. Naturalization

Can be seen as an evolution of the transcription method. The English terms are adopted to the morphology of Arabic word structure. In other words, this method is the process of adding new affixes to the foreign terms, to adjust the terms into Arabic morphology. For example : oxideاوكسيد / oxidizedمؤكسد. According to Ghazala (1995), naturalization is better than transcription, nevertheless it does not fulfill the appropriate translation of scientific terms. Also, naturalization is considered by Baker (1987), as the threat to the identity of the Arabic language.

1.4.5. Requirements of Scientific Translators

Scientific translation is a serious field of study, its main goal is not just transferring ideas, but to ensure delivering the information correctly and accurately. Scientific translators must have certain qualifications, in order to carry out a good translation of scientific texts, as well as to deliver the exact information. These qualifications are as follows :

1. The translator's style must be clear and concise

According to the biomedical writer Bethany Thivierge (2002), ''the work of scientific translators is to achieve one primary goal : to write information in a clear,concise and accurate manner''(p.88).

2. A translator has to be an avid reader.

A good translator should be an eager and a keen reader in order to be informed as possible. He/she has to read the latest scientific books to help him/her to become familiar with the terminology and the style of this type of work. Also, to understand the concepts that he/she is supposed to translate in a better way.

3. Intelligence

A qualified translator has to be able to distinguish between terms, and choose the most appropriate equivalence.

4. A scientific background

In order to be able to play with the terminology, without changing the meaning of the text, the translator must have a deep knowledge of both SL and TL, as well as getting used to scientific translation.

In other words, the translator needs to conduct research about the source and the target texts, in order to ensure the most appropriate translation. And also to conform to the target audience expectations.

2. Part two : Medical Terms

The current part deals with medical terminology, its definition, features, and the difficulties are going to be discussed. At the end of the part, some solutions will be suggested.

2.1.Definition of Medical Terminology

Medical terminology is a system of words that is based on standard roots, prefixes and suffixes. Usually used to describe precisely the human body, its components and processes, medical aspects and diseases. In other words, medical terminology is the vocabulary used by medical professionals to describe treatments, illnesses and the organs of the body…etc. Learning medical terminology is like learning a new language, because it is referred to as language of medicine. This language is unlikely used on a daily basis. Hence, only healthcare professionals communicate using it. Most of the terms include almost all the letters of the alphabet, which is something that does not frequently occur in English.

Davies(1985) defines medical terminology as ‘‘the study of words used to communicate facts and ideas particular to medicine; it is chiefly concerned with the present use and meaning of such words’’ (p.13).

2.2.Analysis of Medical Terms

Most English medical terms with Latin or Greek origin are hardto understand and translate, even for native speakers, For example, the word *Periodontitis*. On the other hand, there are simple medical terms such as cancer, kidneyetc.

Newmark (1988) believes that there are three categories of English medical terms, which are:

1. Academic : transferred Latin and Greek terms which are associated with academic papers.

2. Professionals : the terms used by experts in formal situation.

3. Popular : the terms used by lay people.

Many medical terms consist of three word parts (roots, prefixes, and suffixes) , with linking vowels. In order to better understand and translate medical terms, it is necessary to know the frequently used word parts.

2.2.1. Word Roots

The root is the main part of the term, and it provides the core meaning of the term. Hutton (2006) says that ‘‘roots are basic medical words. More are derived from early Greek and Roman (Latin) words. Others have their origins in Arabic, Anglo-Saxon and German’’. (p.2)

2.2.2. Prefixes

A prefix modifies and enhances the meaning of the root. It is found at the beginning of the word. Understanding the different prefixes that are used with medical terms is useful for tackling the difficulties of medical translation. Examples of prefixes are: anti, ante, hydra, per.

2.2.3. Suffixes

Medical terms may end up with suffixes that can change the whole meaning of the term. Each suffix has a meaning that helps to understand terms. For example :itis, gra, graphy, cyte, sis.

2.2.4. The Combining Vowels

Also named as linking vowels (o, i, a), are used to link the suffix with the root , and sometimes they link a root with another root. If the suffix begins with a vowel, the linking vowel will no longer be needed. For example, in the word *gastritis*.

Table2

An example of word parts:*electrocardiography*

Prefix	Root	Combiningvowel	Suffix
Electro	Cardi	O	Graphy

In order to gather information about the difficulties of translating medical terms, translators ought to have enough knowledge of the meanings of roots, prefixes and suffixes. Additionally, understanding the meaning of affixes assist in clarifying the whole field of medical terms.

2.3. Features and Principles of Medical Terms

Learning and being able to use medical terms has many keys, one and the most important key is to understand the way terms were created. Medical terms are classified according to their origins as follow : derived Latin and Greek terms, eponyms, borrowed figurative terms, and invented English terms.

2.3.1. Derived Latin and GreekTerms

Derivation was adopted due to the growing of medical science, and the lack of English words. Derivation means to build-up new terms from Greek and Latin morphemes by a combination

of base, prefix and combining vowels. For example: ‘Hepatitis’ = base : (hepat)+ suffix :(itis). And the word ‘thermometer’ = base : (therm) + combining vowel : (o) + suffix : (meter) .

2.3.2. Eponyms

An eponym is for Newmark (2001)‘‘any word that is identical with or derived from a proper name, which gives it a related sense’’ (p.198). Many scientists and doctors tend to share their discoveries and accomplishments pridefuly by naming them after themselves, their patients’ names, or the name of a place where a given disease is mostly found. For the reason to fill in the gap of the lack of medical terms and to make their names immortal.

2.3.3. Borrowed Figurative Terms

It is known and believed that science and medicine should not contain any figurative thinking, because it could damage meaning. However, it is used in some cases for the reason of describing the image more comprehensively and concisely. The image is implored- up by metaphor with its referential purpose, or to fill in the gap or scientific language. The use of metaphors is mostly found in the description of symptoms and signs or the nomination of organisms and others.

2.3.4. Invented English Terms

Science and medicine are developing every day. many medications, diseases and symptoms are being discovered and described. The invention of new medical terms was necessary to name the new medical conditions, and to cover the lack of medical terms in English. Comparing to the borrowed, derived from Latin and Greek terms, and eponyms, invented English terms are easier to understand. For example: infection, inflammation

2.4. Equivalence problems in Medical Translation

Vinay and Darbelnet (cited in cronin2003, p. 121) describe equivalence as ‘‘ the process of replacing elements in the ST with corresponding elements in the TT so as to replicate the same situation as in the original whilst using completely different wording’’. Translators often use bilingual dictionaries which are not updated in the target language, which effect the level of the translation and cause a failure in achieving the appropriate equivalent translation. Problems of equivalencemayoccureatvariouslevels.

2.4.1. Grammatical Equivalence

Each language has its own grammatical rulesthat can cause problems in finding the direct correspondence in the TL. The English grammatical system does not make much distinction in terms of number, gender, and verb agreement unlike the Arabic grammatical system. In this respect, having knowledge of grammatical structures and rules in both the SL and the TL is extremely useful for translators to produce correct medical translations. Baker (2011) says that grammar has two main dimensions: morphology which covers the structure of words and syntax that covers the grammatical structure of groups, clauses, and sentences. Baker (2011) states : ‘‘ grammar is the set of rules which determine the way in which units such as words and phrases can be combined in a language and the kind of information which has to be made regularly explicit in utterances.’’(p.88)

2.4.2. Cultural Equivalence

Faiq (2000) states ‘‘culture refers to beliefs and value systems tacitly assumed to be collectively shared by particular social groups and to the position taken by procedures and receivers of texts, including translations, during the mediation process.’’(p.1) .Cultural gaps between Arabic and Englishcannot easily be bridged, in the

literary translation. However, in the medical field, culture does not have much importance, the translator of medical works must focus on medical terminology of SL and TL.

2.5. The Problem of Non- Equivalence

The differences between languages make it hard for translators to find appropriate equivalence for some terms in the target language. Baker (2011) states:‘‘non-equivalenceat word level means that the target language has no direct equivalent for a word, which occurs in the source text.’’(p.23). An Arabic translator often faces the problem of finding lexical equivalents for many English terms, objects and events in Arabic.

2.5.1. Culture specific concepts

Many concepts expressed in the source language can be totally unknown in the target language. For example,‘adaptionservices’, which refers in English to the services provided by team for disable people, has no equivalent Arabic.

2.5.2. The Source-language Concept is not Lexicalized in the Target Language

Many of the words expressed in the source language may be known in the target culture, but have no word to express it, (not lexicalized). For example: ‘toothache’, it could be referred to in Arabic by الم اللثة و بالاسنان

2.5.3. The Source-language word is Semantically Complex

A term that consists of a single morpheme may express complex set of meanings. And this is very common in translation.

2.5.4. The Source and Target LanguagesMake Different Distinctions in Meaning

Sometimes whatEnglish regards as an important distinction in meaning, Arabic may not regard. In other words, the target language makes more or fewer distinctions in meaning than

the source language. for example : in English, there is a difference between *clinique, outpatients'departement, surgery.*In Arabic all of thesecouldbetranslated as عيادة.

2.5.5. The Target Language Lacks a Superordinate

The target language may have specific words, but no general words. For example : 'gonad' has no ready equivalent in Arabic, it is used in English to refer to a gland that produces gametes and hormones. However, the 'ovary' in the female is used as an equivalent forمبيض and the 'testis' in the male reffered asخصية.

2.5.6. The Target Language Lacks a Specific term

Sometimes, languages may have general words but lack specific ones. For example, in English the terms'*orthoptist'* and '*ophthalmologist*' are the name of eye specialistswho specializes in eye and vision care. In Arabic, there is one general equivalent for both which is العيونطبيب.

2.5.7. Differences in Expressive Meaning

More commonly, some words in the target language may have the same propositional meaning as words in the source language. Yet, they may have different expressive meanings. This difference may pose a translation problem in a given context. For example : in English, the terms 'snow' and 'ice' have different meaning, but in arabic, the term ' ثلج' is used as an equivalent for both.

2.5.8. Differences in Form

Some English medical terms have no equivalent in Arabic, because they contain prefixes, roots and suffixes. Instead, they are replaced by appropriate paraphrases. For example; the term '*mitochondrial myoma'* means 'weakness of the muscle due to the deletion or duplication of the energy producer in the cell ' *mitchondria*'.

2.5.9. The use of Loan Words in the Source Text

Medical terms are known to be complex and hard to understand even for native reader. Thus, when it comes to translate loan words, target translators and readers face a big problem.

Adding to the above problems, some terms are named after an inventor or the discovery of a disease. For example, Down's syndrome, named after the scientist who discovered the disease, can be translated as

داونمتلازمة . The nameiskept as one can not translate the names of people.

2.6. Strategies for Solving the Problems of Non-equivalence

Issues with equivalence are encountered at several stages. These issues are interlinked with each other and they usually come about due to lexical and grammatical dissimilarities in the language of the source document (SL) and the language into which it is supposed to be translated (TL).

2.6.1. Translation by a more general word (superordinate)

Instead of using specific terms, which have no equivalents in the target language, the translator may use a general term. For instance, الدمتحليل can be the Arabic equivalent for: a complete blood count, blood chemistry test, blood enzyme tests, and blood clotting test.

2.6.2. Translation by a more neutral / Less expressive word

The translator has the right to choose the most appropriate translation, for words that have more than one equivalent, according to the situation.the word 'died' in the sentence :'the patient died two hours ago' can be translated into arabic as توفي, which is the equivalent for 'passed away'. Although the exact equivalent for 'died' in Arabic is مات. The word توفي is more formal when speaking about human beings.

2.6.3. Translation by Cultural Substitution

This strategyinvolvesreplacing a culture-specific item or expressionwith a target-language item whichdoes not have the samepropositionalmeaning, but it has a similar impact on the targetreader. For example the expression ‘single mom’ can not betranslatedintoArabic as‘ عزباء ام ’ becausethis expression does not exist in the Arabic culture. It canbereferred to as لطفل غير شرعي'ام'.

2.6.4. Translation Using a Loan Word or Loan Word with Explanation

This strategy is common when dealing with culture-specific items, modern concepts, and bazz words.For instance, the term ‘ decibel’ can be translated and referred to into Arabic as ديسيبل وهو وحدة قياس السمع.

2.6.5. Translation by Paraphrase Using Related Words

This strategy is used when the concept expressed in the source item is lexicalized in the target language in a different form. For example : the term ‘ decholestrolization’ is rendered into arabic as الكولسترولنزع .

2.6.6. Translation by Paraphrase Using Unrelated Words

This strategy is used if the concept in the source text is not lexicalized in the target language. For example, the term ‘myomatectomy’ is rendered into Arabic as:الورم العضلي استئصال.

2.6.7. Translation by Omission

The translator cansimply omit a particular item or expression thatis not vital to the context of the text, withouteffecting the meaning, and neveromitting the medicaltermswithin the text. For example : ‘africantike-bite fever’ couldberenderedintoArabic as الحمى الافريقيةwhichliterallymeans ‘Africanfever’.

2.6.8. Translating by Illustration

When there is no equivalent for a term and it is hard to explain, the translator can give an example or drawing a picture to show the meaning of the term.

2.7.Difficulties of Translating Medical Terms

According to many scholars although Arabic is a living language, and rich in the field of word creation and derivation, when it comes to translating medical terms from English into Arabic, translators face serious difficulties and challenges, due to :

1. Complexity and Ambiguity : translators, especiallybeginners, in the field of translating scientific and medical texts, may find some medical terms complex and ambiguous. For instance, the derived words from Latin and Greek and the borrowed figurative terms.
2. The free Use of Abbreviation andAcronyms : some abbreviated terms may have different equivalent meaning.
3. Translation could be limited by many restrictions: the characteristics of each language such as grammatical and lexical properties, createsbarriers to translators and effect the process of translating.
4. The Change of Languages over Time : new words could be added and replace other words, and some words may no longer be in use. This would create a real difficulty for translation, because of the lack of up to date English- Arabic medical dictionaries, and the lack of translated works into Arabic.
5. Lack of Experience: the students or translators' lack of medical knowledge and practice in medical translation, does not serve neither the translator nor the process.

6. The use of Foreign Languages: universities use English or French instead of Arabic in the education of science and medicine, which makes the students unaware of the meaning of terms in Arabic.

7. One term could be used for two different meanings or two different equivalents may be used in translating one scientific term. In other words, the terms are not unified in the Arabic language, resulting poor translation.

2.9. Solutions to Medical Translation Difficulties

Many solutions are proposed for dealing with the translation difficulties of medical terms by many scholars:

1. Translation ought to up- date themselvesconstantly, and keep up with the changes that both Arabic and English undergo.

2. Translators should possess much knowledge of medical science.

3. Translators must bear in mind the different aspects of grammar and lexicon in both SL and TL.

4. Medical dictionaries English/Arabic must to up- to date, and students should practice and translate as much as possible the English medical works.

5. Universities should include Arabic in the medical educational system.

Conclusion

This chapter tackles definition of scientific translation, aims and strategies. It starts with definition of medical terminology, which is a system of words used by medical professionals to describe diseases, treatments and organs of the body. And the main features and difficulties that students and translators face, when translating such kind of works, for instance lack of experience, the change of languages over time, andthe complexity and ambiguity of the medical terms. Finally, translators of medical terms ought to have a deep knowledge about the word parts “prefix, root, and suffix”

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Chapter two: Data collection, Analysis and Results.

1. Introduction

The current chapter represents the practical part of the dissertation which attempts tohighlight the difficulties that third year students of English at Mohamed Sedik Ben Yahya university face when dealing with the translation of medical terms. This is attempted through the analysis of the data collected.

2.1. Population and Sampling

The participants in this study were third year students of English, at the department of English , Faculty of letters and foreign languages at Mohamed Sedik Ben Yahya university. Sixty students have been chosen randomly from the total population to take part in the study. The choice of this population was motivated by the fact that third year students have been studying translation for two years as a module, they are also supposed to be familiar with the translation of medical terms from English to Arabic, due to their experience in the first semester of the third year. The analysis of the errors made by the informants will help the researchers to point out the difficulties they face when translating.

2.2.Data collection Procedures

In this study, a test is presented to third year students in the form of thirteen sentences to be translated from English into Arabic; in order to find out the difficulties they may face when translating. The study makes use of qualitative and quantitative method of analyzing data. Hence, the nature of the study is descriptive and exploratory.

The discussion about the student's test starts with a description of it, and then followed by the analysis, it ends with the discussion and the interpretation of the results.

2.3. Description of the Translation Test

The students were given thirteen sentences that include twenty-six medical terms. They were asked to translate them into Arabic (their mother tongue) in order to highlight the terminological problems they encounter in translating English medical terms from English into Arabic. The test is in the form of a translation exercise, the thirteen short sentences were taken from different texts of the book entitled ‘‘Gale*Encyclopedia of Medicine, the fivevolumes*’’. The sentences were randomly selected, each sentence include at least one medical term. This is done for the reason to check the level of third year students in dealing with scientific texts. Their translation will enable the researcher to find out how they translate and thedifficulties they confront. The reason behind choosing sentences not a text is to avoid any kind of difficulty that may arise as a result of text textuality, and to ensure a bigger amount of medical terms. Relaying on the students ‘translation, the researchers shall be able to find out the difficulties they faced, and their level while dealing with the medical terms mentioned in the text.

2.4. Administration of the Test

The concerned sentences were administered to the informants by their teacher inside the classroom. In order not to effect on the result, the researcher chose not to inform the informants about the aim of the test. The test was done in the form of a quiz because the teacher is aware of the student’s translation competence, and has concluded that if it was given by the researchers probably no one could manage to translate the medical terms embedded in each sentence. The translation test was approximately three hours long.

2.4. Analysis procedures

The outcomes of this research will help examine the student's translation of medical terms to see the terminological difficulties they encounter when translating an English source text into an Arabic target text. The following procedures were used in order to analyse the mistakes and difficulties that the informants face during translation:

1. Each sentence is compared to its equivalent in the Arabic model (Unifeid Medical Dictionary).
2. The total number of the terms to be translatedis about txenty six terms. The correct translated terms will be classified in tabular formats presented in the form of percentages. The suggested translation from the UMD will be with the standard on the basis of which the informants' mistakes are evaluated.
3. The informants' mistakes will be evaluated on the basis of the suggested translation.
4. The students' translation will be classified in tables.

2.6. Validity and Reliability of the Test

Validity and reliability were ensured through taking all the sentences of the test from officially valid and reliable sources, that were available and accessible to the researchers. Gale encyclopedia of medicine provided comprehensive medical and health information, without oversimplification. GEM was a laborious production cycle with input from experts, medical writers, and content developers. It covered all topics of medical disciplines and categories of diseases and health conditions, tests, and treatments. The results gave the researcher a lot of insight into the study of medical terms, and reinforced the impression that this phenomenon merits studying as a problematic translation area.

2.7. Analysis of the Students' Test results

All the students responded to the test, which means that all the sixty samples were analyzed. However, not all of them translated all the sentences.

The following tables contain five columns. The first one deals with the English terms, the second contains the students translation, the third is about the frequency of occuracy, the fourth one includes the percentage, and the last one deals with Arabic translation model Unified Medical Dictionary (2009).by Dr.M.H. Khayat.

2.7.1. The Analysis of the students' translation

Students' answers in sentence one:

Sentence one:''Gallbladder cancer is often misdiagnosed because it mimics other more common conditions, such as gallstones, and pancreatitis.''

Not all the participants translated the first sentence. From among sixty students , only thirty-nine students translated the sentence. Twenty one students did not attempt to translate it. The sentence includes three medical terms.

Table3

Translation of the First Term**Gallbladder**

MedicalTerm	**UMD Model Translation**	**Typical Students' Translation**	**Frequency of occurence**	**Percentage %**
Gallbladder	**المرارة**	**سرطان المثانة**	**12**	**30**
Total			**39**	**100**

From the above table, it seems that most of the participants faced a problem in translating the first term. As it is shown, only twelve students among thirty-nine translated the term correctly, with 30% of the total perentage.

Table4

Translation of the second term**Gallstones**

MedicalTerm	UMD Model Translation	Typical Students' Translation	Frequency of occurrence	Percentage %
Gallstones	**حصاة صفراوية**	**حصى المثانة**	**9**	**25**
Total			**36**	**100**

The table shows that only nine students among thirty- six translated the word gallstones correctly, which means they face a difficulty while translating this term, with 25% of the total percentage.

Table5

The translation of the term**Pancreatitis**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurence	Percentage %
Pancreatitis	**التهاب البنكرياس**	**البنكرياس**	**13**	**44**
Total			**29**	**100**

The above table reveals that the informants seem to be familiar with theword **pancreas** but not with the word Pancreatitis, that sixteen of them translated it بنكرياس .While thirteenstudents translated it correctly with 44% of the total percentage.

Students' Translation for Sentence two:

Sentence two:''Medical therapy often controls symptoms, and surgery may or may not cure prostitutes''.

Almost all the students translated the second sentence, fifty-one students among sixty gave an answer which means that only nine students did not attempt to translate it. The sentences includestwomedicalterms.

Table6

The translation of the term:**Symptoms**

Medical Term	**UMD Model Translation**	**Typical Students' Translation**	**Frequency of occurence**	**Percentage %**
Symptoms	**الاعراض**	**الاعراض علامات**	**48**	**94**
Total			**51**	**100**

The sixth table presents that the majority of the participants had nodifficulty intranslating the word Symptoms with the frequency of occurance 48, and 94%of the total percentage. The rest three students' translation ''علامات'' was so close in meaning to the model translation UMD.

Table7

The translation of the term**Prostitutes**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurence	Percentage %
Prostatitutis	**التهاب البروستات**	**الجهاز البولي**	**17**	**40**
Total			**42**	**100**

The table above shows that the informants had a difficulty in translating the term correctly, only seventeen from among forty-two students gave the exactmodel translation with40% of the total percentage. However nine students among the fifty-one who translated the sentence failed in providing an answer for this term.

Students' Translation for sentence three:

Sentence three:''tension headache is caused by severe muscle contraction triggered by stress or exertion. It effects as many as 90% of adultamerican''.

It seems that the majority of students translated the sentence, forty-five students among sixty ones gave a translation of the sentence. Fifteen of them did not even provide an answer. The sentence includes three terms.

Table8

Translation of the sixth term:**Tension-headache**

Medical Term	UMD Model Translation	Typical Student's Translation	Frequency of occurence	Percentage %
Tension-headache	**صداع التوتر**	**الم الراس الحاد**	**13**	**28**
Total			**45**	**100**

The analysis of the sentence indicates that thirteen of the participants translated the term successfully, with 28% of the total percentage. Which reveals that the rest of the participants did have a difficulty with this term .

Table9

Translation of the term **Stress.**

Medical Term	UMD Model Translation	Typical Student's Translation	Frequency of occurence	Percentage %
Stress	**اجهاد**	**التوتر**	**11**	**26**
Total			**43**	**100**

As can be observed in the table above, approximately more than half of the respondents 32 did not provide the exact translation, though they gave a translation close in meaning to the model translation. While eleven of the informants succeeded in conveying the correct meaning with a percentage of 26%. Two of the participants who answered the sentence did not translate the term.

Table10

Translation of the term**Exertion**

Medical Term	UMD Model Translation	Typical Student's Translation	Frequency of occurence	Percentage %
Exertion	**تعب**	**مجهود**	**12**	**32**
Total			**37**	**100**

The results obtained above show that not all the informants succeeded in translating the term Exertion. Among 45 of the participants who translated the term, only 26 conveyed the Arabic model meaning with the percentage of 75%. Eight students among forty-five provided no translation for this term.

Students' Translation in sentence four:

Sentence 04:''if tension headaches are a symptom of depression or anxiety, the underlying problem should be treated with counseling, medication or combination of both.''

Most of the population sample attempt to translate the fourth sentence, in this sentence there are four terms. The analysis of the terms' translations is illustrated in the bellow tables.

Table11

The translation of the term**Depression**

Medical Term	UMD Model Translation	Typical Student's Translation	Frequency of occurence	Percentage %
Depression	اكتئاب	اكتئاب	**47**	**100**
Total			**47**	**100**

From the above table, it seems that all students translated the term correctly except thirteen of them who did not translate the whole sentence.

Table12

Translation of the term**Anxiety**

Medical Term	UMD Model Translation	Typical Student's Translation	Frequency of occurence	Percentage %
Anxiety	القلق	الضغط النفسي	**26**	**57**
Total			**45**	**100**

The results obtained above shows that not all the informants succeeded in translating the term Anxiety. Among forty-five of the participants who translated the term, only twenty-six conveyed the Arabic model meaning with the percentage of 75%.

Table13

Translation of the term**counseling**

Medical Term	UMD Model Translation	Typical Student's Translation	Frequency of occurence	Percentage %
Councelling	استنصاح	جلسات	**11**	**26**
Total			**41**	**100**

As can be observed in the table above, approximately all the students failed in giving the model translation meaning. Only eleven among forty-one respondents provided the right translation with 26% of the total percentage.

Table14

The translation of the term **medication**

Medical Term	UMD Model Translation	Typical Student's Translation	Frequency of occurence	Percentage %
Medecation	مداواة	ادوية	**12**	**27**
Total			**44**	**100**

Like the previous term, most of the participants face problems in translating this term. Only twelve from forty-four students with the percentage 27% provided the correct translation.

Students' Translation inSentencefive:

Sentence 05:''Angina is a severe constricting pain in the chest, usually caused by a lack of oxygen to the heart.''

Most of the students faced a problem in giving the Arabic model translation of this sentence, which containsone medical term ' Angina'

Table15

The translation of the term **Angina**

Medical Term	**UMD Model Translation**	**Typical Student's Translation**	**Frequency of occurence**	**Percentage %**
Angina	**ذبحة**	**انجينا**	**10**	**21**
Total			**46**	**100**

The table above indicates that only 21% provided the exact model translation, with the frequency of concurrence expressed by ten students from among forty-six.

Students' Translation of sentence six:

Sentence 06: ''Hepatitis is an inflammation of the liver''.

The sixth sentence had a high rate of participation; the majority of students seem to have no difficulty with the sentence which includes three terms.

Table16

The translation of the term**Hepatitis**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurence	Percentage %
Hepatitis	**التهاب الكبد**	**مرض الالتهاب الكبدي**	**48**	**96**
Total			**52**	**100**

Except from four participants, all the students succeeded to convey the required meaning, with 96% of the total percentage.

Table17

The translation of the term **Inflammation.**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency Of Occurence	Percentage %
Inflammation	**التهاب**	**التهاب**	**46**	**88**
Total			**52**	**100**

As the analysis reveals, almost all the informants _forty-six among fifty-two students_ translated the term '' Inflammation'' successfully. While eight participants did not attempt to translate the term.

Table18

The translation of the term **Liver**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurence	Percentage %
Liver	**الكبد**	**الكبد**	**52**	**100**
Total			**52**	**100**

The above table shows that the term 'liver' was translated by all students correctly.

Students' Translation of sentence Seven:

Sentence 07: ''Eczema is an inflammation of the skin that usually itches and sometimes forms scales''.

This sentence includes only one term ''eczema''. Among sixty participants, fifty-two of them translated the sentence. While eight of them did not deal with it.

Table19

The translation of theterm **Eczema**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurrence	Percentage %
Eczema	**اكزيمة**	**اكزيما**	**39**	**75**
Total			**52**	**100**

The above table presents that a good rate of population translated the term as it is required, with 75% of the total percentage. However, thirteen students among fifty-two did not translate it correctly.

Students' Translation of sentence eight:

Sentence 08: ''Gastroenteritis is frequently referred to as the stomach or intestinal flu, although the influenzas virus is not associated with this illness''.

The analysis of this sentence shows that among sixty students, thirty-two of them attempted to translate the sentence, while twenty-two students did not translate it .The sentenceincludestwoterms.

Table20

The translation of the term **Gastroenteritis**

Medical Term	**UMD Model Translation**	**Typical Students' Translation**	**Frequency of occurrence**	**Percentage %**
Gastroenteritis	**التهاب المعدة**	**غاسترونتيرتيس**	**5**	**15**
Total			**32**	**100**

According to the table above, the term Gastroenteritis had a low rate of participation, in which, only five students among thirty-two provide the exact translation of the term with 15% of the total percentage. While, twenty-seven students failled in translating it.

Table21

The translation of the term**Influenza**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurrence	Percentage %
Influenza	انفلونزا	انفلونزا	**32**	**100**
Total			**32**	**100**

As it is presented in the table above, all the students translated the term influenza correctly with the percentage of 100%.

Students' Translation of sentence nine:

Sentence 09: ''Malignant tumor is cancerous and can grow again or spread into other parts of the body, even if removed surgically''.

Among sixty students, forty-six of them translated this sentence which includes one term, while fourteen did not attempt to translate it.

Table22

The translation of the term **Malignant Tumor.**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurrence	Percentage %
Malignant Tumor	ورم خبيث	مالغنانت تيومور	28	60
Total			46	100

Twenty-eight among forty-six students translated the term Malignant tumor as it is required, with 60% of the total percentage. In the other hand, it seems that the rest of them had a difficulty with this term.

Students' Translation of sentence ten

Sentence 10: ''Blood gas analysis is a blood test that measures the level of oxygen, carbon dioxide''.

Most of the students did not have a problem in translating this sentence, forty-nine among sixty students translated it, while eleven of them did not attempt to translate the sentence. The latter includestwoterms

Table23

The translation of the term **blood gas analysis.**

Medical Term	UMD Model Translation	TypicalStudents' Translation	Frequency of occurrence	Percentage 100%
Blood gasanalysis	تحليل غاز الدم	تحليل الغاز في الجسم	28	57
Total			49	100

The analysis of the table above shows that not all the participants translated the term, twenty-eight among forty- nine students succeeded in conveying the exact meaning with 57% of the total percentage. While twenty- one students had a difficulty to figure out the terms' meaning.

Table 24

The translation of the term**Carbon dioxide**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurrence	Percentage %
Carbondioxide	ثنائي اكسيد الكربون	الكربون و ثاني الاكسيد	25	57
Total			49	100

As it is shown in the above table not all the participants translated the term. Only twenty- five among forty-nine gave the correct meaning with 57% of the total percentage. While twenty four of them faced a difficulty in translating the term carbon dioxide.

Students' Translation of sentence eleven:

Sentence 11: ''Electrocardiography is a cardiac test that measures the electrical activity of the heart''.

Among sixty students forty-one of them attempt to translate the sentence, While nineteen had not deal with it. The sentence includes one term.

Table25

The translation of the term **Electrocardiography**

Medical Term	**UMD Model Translation**	**Typical Students' Translation**	**Frequency of occurrence**	**Percentage %**
Electrocardiography	**تخطيط كهربية القلب**	**اختبار اشعة القلب**	**14**	**34**
Total			**41**	**100**

As it is presented in the table above, the majority of students face a difficulty in figuring out the exact meaning of the term electrocardiography, that only fourteen among forty-one succeeded in giving the correct translation with 34% of the total percentage. While twenty-seven students failed in conveying the exact meaning.

Students' Translation of sentence twelve:

Sentence 12: ''Jaundice is a yellowish staining of the skin and eyes due to excess bilirubin in the bloodstream''.

Among sixty students, only thirty-six of them translated the sentence, which contains two terms.

Table26

The translation of the term **Jaundice**

Medical Term	UMD Model Translation	Typical Students ' Translation	Frequency of occurence	Percentage %
Jaundice	**يرقان**	**اصفرار**	**18**	**50**
Total			**30**	**100**

The table above shows that students face a difficulty in conveying the exact meaning of the term, among the thirty students who attempt to translate the sentence, eighteen of them gave the correct translation with 50 % of the total percentage. Six students among those who translated the sentence failed in providing a translation for the term Jaundice.

Table27

The translation of the term**Bilirubin**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of ocurrence	Percentage %
Bilirubin	**بيليروبين**	**عنصر غذائي**	**16**	**50**
Total			**32**	**100**

Among thirty-two, sixteen students succeeded in translating the term Bilirubin, with 50% of the total percentage. While the other half of them failed.

Students' Translation of Sentence thirteen

Sentence 13:''The first blood test for AIDS was developed in 1985''.

This sentence had the highest rate of participation, that all the students translated it, it includes one term.

Table28

The translation of theterm**AIDS**

Medical Term	UMD Model Translation	Typical Students' Translation	Frequency of occurrence	Percentage %
AIDS	**الايدز**	**الايدز**	**60**	**100**
Total			**60**	**100**

The term AIDS is an abbreviation for *Acquired Immune Deficiency Syndrome.* The table shows that all the participants put the correct equivalent with percentage of 100% .the reason why the term did not offer much difficulty may be related the arabisized form and because the disease is universal and well known to the public people.

2.7.2. The Analysis of the Methods Used in Translating Medical Terms

The analysis of the informants' translation shows that some of them used the 'Transcription' or Arabization method. Some of the terms that have been transcribed are considered correct, because they do not have an equivalent in the Arabic language. Yet, their are others that have an equivalent in the Arabic language, but students failed to provide the exact translation.

Table29

The students' transcriptions are rated and classified as follows:

The Term	Acceptable Transcription	Unacceptable Transcription
Gallbladder		**غالبلادر**
Gallstones		**غالستاونز**
Panceratitits		**بنكرياتيتيس**
Prostatitis		**بروستاتيتيس**
Anxeity		**انكزايتي**
Angina		**انجينا**
Hepatitis		**هيباتيتيس**
Eczema	**اكزيمة**	
Gastroenteritis		**غاسترونترتيس**
Influenza	**انفلونزا**	

MalignantTumor		**ماليغنانتتيومور**
Electrocardiography		**الكتروكارديوغرافي**
Jaundice		**جاونديس**
Bilirubin		**بيليروبين**
AIDS	**ايدز**	

2.8. Discussion of the results

Based on the data acquired from the quantitative and the qualitative parts of the research and with respect to the students` answers that were available for our research, we have concluded the following statements aboutthe main difficulties that third year university students face when translating medical terms:

- Translators of medical terms ought to have background knowledge about medical terminology, because it is one of the most difficult and complex field of study in the English language.
- The students seem to be aware about the medical terms and about the difficulty in translating them, but our analysis reveals that they do not make big effort to overcome those difficulties. They do not have neither motivation nor experience.
- Comparing the students' answers with the Arabic translation model, we notice that the informants translate the terms differently especially when they fail in figuring the exact equivalent meaning in the TL.
- Most students are not capable of providing the exact Arabic translation.
- Few of the students provided the correct Arabic translation, but only when dealing with the familiar terms. For instance, depression, liver and AIDS. We can claim that

third year students at the department of English face many difficulties concerning medical translation such as guessing the equivalent meaning of most terms.

Conclusion

The aim of this chapter was to answer the question of the study, as far as the difficulties that students face when translating medical terms is concerned, and how aware they are when it comes to selecting the strategies for translation. The analysis reveals that students' difficulties are due to the lack of background knowledge about medical terms, and the students' unawareness of the importance of adopting a method that facilitates the translation process, and assures a good translation production. Thus, some pedagogical recommendations were suggested to help students to provide appropriate translation, as well as for their teachers to give more attention to the methods of translating scientific terms.

1. General conclusion

The present study was carried out to investigate third year university students' difficulties in translating English medical terms into Arabic, and to find out the methods they use to render those terms, and whether these methods are responsible for the difficulties they face.

In order to deal with the difficulties, this work was divided into two parts; the theoretical part which was divided into two sections. Both of them were devoted to collect data about the topic. The first one provided key definitions of scientific translation, types, features, and the strategies in translation tasks. The second one concerns with the students' difficulties in translating medical terms.

The practical part which was devoted to analyse the information gathered. A test was given to third year students at the English department of Mohammed Sedik Ben Yahya. The investigation and the analysis of the results reveal the difficulties that students have faced which lead them to incorrect translation, probably due to their unawareness of the strategies of translation.According to many scholars although Arabic is a living language, and rich in the field of word creation and derivation, when it comes to translating medical terms from English into Arabic, translators face serious difficulties and challenges, due to complexity and ambiguity, the free use of abbreviation andacronyms, the change of languages over time, and the lack of experience. Many solutions are proposed for dealing with the translation difficulties of medical terms by many scholars for instance translators ought to up- date themselves constantly, and keep up with the changes that both Arabic and English undergo, translators should possess much knowledge of medical science, translators must bear in mind the different aspects of grammar and lexicon in both SL and TL, medical dictionaries English/Arabic must to up- to date, and students should practice and translate as much as

possible the English medical works, and universities should include Arabic in the medical educational system.

Ultimately, at the end of the study, some pedagogical recommendations were given. It was suggested that students should accustom themselves with such kind of translation tasks, and should have a background knowledge about medical terms.

2. Limitations of the Study

Despite the fact that the researchers were working carefully and extensively to prepare and select the variables, and the suitable conditions for collecting data about the research. The current study has a number of limitations, the most common and the major obstacle that was encountered in 2020 is the wide spread of Covid-19. Which made it almost impossible for the researchers to contact each other, and their supervisor.Also , all librarieswereclosed.

3. Pedagogical Recommendations

Based on the findings of our study, we may suggest the following recommendations :

_ Students ought to accustom themselves with such kinds of translation tasks.

_ Courses where the student will be introduced to scientific translation should be included in the syllabus design, concerning teaching translation for third year students.

_ Students have better be exposed in earlier stages to the vital role that methods of translating scientific terms play in facilitating translation process.

_ Students must be creative and avoid transcription of the foreign terms, because sometimes it decreases the quality of the translation.

_ Students should be motivated to read scientific works, in order to enrich their vocabulary in both languages.

_ Students must have a good mastery of both SL and TL.

Appendix

Translation test

Dear students, read the following sentences carefully and try to translate them into Arabic :

1. Gallbladder cancer is often misdiagnosed because it mimics other more common conditions, such as gallstones, and pancreatitis.

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2. Medical therapy often controls symptoms, and surgery may or may not cure prostitutes.

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3. Tension headache is caused by severe muscle contractions triggered by stress or exertion .It affects as many as 90% of adultamericans.

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4. If tension headaches are a symptom of depression or anxiety, the underlying problem should be treated with counseling, medication or combination of both.

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5. Angina is a severe constricting pain in the chest, usually caused by a lack of oxygen to the heart.

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6. Hepatitis is an inflammation of the liver.

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7. Eczema is an inflammation of the skin that usually itches and sometimes forms scales

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8. Gastroenteritis is frequently referred to as the stomach or intestinal flu, although the Influenza virus is not associated with this illness.

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9. Malignant tumor is cancerous and can grow again or spread into other parts of the body, even if removed surgically.

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10. Blood gas analysis is a blood test that measures the level of oxygen, carbon dioxide . A blood gas analysis can help a physical assess how well the lungs are functioning.

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11. Electrocardiography is a cardiac test that measures the electrical activity of the heart.

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12. Jaundice is a yellowish staining of the skin and eyes due to excess bilirubin in the bloodstream.

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13. The first blood test for AIDS was developed in 1985.

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THANK YOU ^^

References

Baker.M. (1987)*Review of methods used for coining new terms in Arabic.* Meta: Journal des Traducteurs/ Meta Translators' Journal. Vol.32, 186-188. Retrieved May 20, 2010 from http://www.erudit.org/documentation/eruditPolitiqueUtilisation

Baker, M (2011). *In other words*.A Course- book on Translation.London .Routledge

Bergen, D. (n. d.). Translation Strategies and the Students of Translation.*JormaTommola*, 1, 109-125. Retrieved July 21, 2010, from http://www.hum.utu.fi/oppiaineet/englantilailentilologia/exambergen.pdf

Bosco.G. (1997)*Translation Techniques* Retrieved May 20, 2010 from http:// www.interproinc.com/articles.asp?id=0303

Byrne, J. (2006) Technical translation : Usability strategies for translating technical documents. Dordrecht : Springer

Catford, J.(1995) A linguistic Theory of Translation. London. Oxford University Press.

Chesterman, A. (1997). Memes of translation: The spread of ideas in translating theory. Amsterdam: J. Benjamins

Davies, P.M. (1985). *Medical Terminology*: *A Guide to Current Usage*. Oxford: Butterworth-Heinemann Ltd.

El- Hassnawi. A. R. A. Aspects of scientific translation: English into Arabic translation as a case study.

Faiq, S. (2000).''Arabic translation a glorious past but a meek present''. In Rose M.G. (ed) : *Translation perspectives* XI :*Beyond the Western Tradition*. Binghamton : State University ofNew York at Binghamton.

Fundukian, L. J. (2011). *The Gale Encyclopedia of Medicine*.4th ed / Detroit: Gale.

World Health Organization, Regional Office for the Eastern Mediterranean &Librairie du Liban Publishers. (2006). The unified medical dictionary: English-Arabic. https://apps.who.int/iris/handle/10665/119845

Ghazala, H. (1995). Translation as problems and solutions: A cource- book for university

students and trainee translators. Valetta Malta: Elga Publication

Hatim, B., & Mason, I. (1990).Discourse and the translator. London: Longman.

Hatim, B, &Munday, J. (2004).Translation : An advanced resource book. London : Routledge.

Hutton, A. (2006). *An Introduction to Medical Terminology: A Self-Teaching Package* New York: Elsevier

Jacobson, R. (1955/2000).On linguistic aspects of translation. In R.A. Brower *Ontranslation*, Cambridge, MA: Harvard University Press, pp. 232- 39.

Newmark, P. (1988).*A text book of translation*. New York: Hall International

Nida, E. A. (2001). *Language and Culture:* Contexts in translating. Shanghai Foreign Language Education Press.

Pinchuck, I. (1997). Scientific and technical translation. London: Andre. Deutsch.Redman, S (1997). English vocabulary.

Thieverge, B. (2002)*Translating Scientific Text: Practicalities and pitfalls*. RetrievedMay20, 2010 from

http://www.councilscienceeditors.org/members/securedDocuments/v25n6p188.pdf

Vinay J. P. and J. Darblenet.(2003). "A Methodology of translation." In L. Venuti The Translation Studies Reader (PP.84-91). London and New York: Routledge.

Yowell, Y .A. &Lataiwish, M.S. (2000)*Principles of Translation.*Libia: Dar Annahda Alarabiya.

Résumé

L'étude actuelle vise à traiter les difficultés de la traduction des termes médicaux anglais vers l'arabe, par des étudiants de troisième année anglais à l'université de Mohammed Sedik Ben Yahya. Cette étude adopte des approches qualitatives et quantitatives. Pour enquêter et identifier les difficultés, un test a été donné à soixante étudiants de troisième année, il contient treize phrases incluant des termes médicauxdifférents. Les résultats obtenus montrent que le niveau de la traduction des étudiants est acceptables, et qu'ils sont confrontés à des problèmes de traduction des termes médicaux, en raison du manque d'expérience et de connaissance dans la traduction médicale. De plus, l'étude montre que les étudiants ne sont pas intéressés par ce type de traduction. Cet article propose des solutions pour assurer une traduction réussie.

ملخص

تهدف الدراسة الحالية الى تحديد الصعوبات التي يواجهها طلاب السنة الثالثة في جامعة محمد الصديق بن يحي اثناء القيام بترجمة المصطلحات الطبية.

تتبنى هذه الدراسة منهجية كمية و نوعية. من اجل التحقيق و التعريف بهذه الصعوبات تم تقديم اختبار كتابي لستين طالب. الاختبار يتكون من ثلاثة عشرة جملة, و كل جملة تحتوي على مصطلحات طبية. وقد اظهرت النتائج المتحصل عليها ان مستوى الطلاب مقبول نسبياإلا انهم يواجهون صعوبة اثناء ترجمة هذا النوع من المصطلحات و ذلك يرجع الى انعدام الخبرة و المعرفة في المجال الطبي. بالإضافة الى ذلك , تظهر الدراسة ان الطلاب غير مهتمين بهذا النوع من الترجمة.

أخيرا هذه الدراسة اقترحت حلولا لضمان ترجمة صحيحة.