

**AN ANALYSIS OF ZERO EQUIVALENCE IN THE TRANSLATION OF SCIENTIFIC
TERMS FROM ENGLISH INTO NORTHERN SOTHO**

by

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Declaration

I, MKATEKO MELIDAH NGOBENI, declare that the dissertation AN ANALYSIS OF ZERO EQUIVALENCE IN THE TRANSLATION OF SCIENTIFIC TERMS FROM ENGLISH INTO NORTHERN SOTHO has not been previously submitted by me for any degree at this or any other institution, that it is my own work and all the sources consulted are acknowledged.

MM NGOBENI (Ms)..... DATE.....

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Dedication

I dedicate this dissertation to my late mother, Ms Emily Ngobeni, my late grandmother, Ms Nyanisi Elizabeth Ngobeni, and my lovely son, Ntwanano Joseph Ngobeni.

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Abstract

This study entails the translation of scientific terms from English into Northern Sotho. The reason one conducted this study is because translators experience difficulties in finding the correct equivalent terms, especially in Northern Sotho. Consequently, borrowing and transliteration of terms becomes their last resort. However, that does not help users of dictionaries to achieve their communicative goal. The study highlights that, the borrowing of terms leads to language shift and death as users no longer consider other equivalents. In addition, the study indicates that the constant usage of the borrowed terms causes the terms to lose meaning and function. The way in which people translate idiomatic expressions is a huge problem as well. Mostly, people end up using literal translation and subsequently, the whole meaning of a text is lost or misunderstood.

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction

Generally, it is known that there are challenges with regard to zero equivalence in translating scientific terms from English into Northern Sotho. In order for a proper translation to occur, there should be equivalence between the terms of the source language and the target language. However, in many instances, this is not the case because of the lack of equivalent terms in the target language. In the case of zero equivalence, many lexicographers have used transliteration as an alternative, and transliteration of the source language terms has not assisted dictionary users to retrieve the required semantic information about a particular term. In the light of this, it is important to conduct a study on the impact of zero equivalence on translation.

1.2 Background to the Problem

South Africa is a multilingual country that has eleven official languages. These are, namely, Sepedi, Sesotho, Setswana, SiSwati, Tshivenda, Xitsonga, Afrikaans, English, isiNdebele, isiXhosa and isiZulu (*The Constitution of the Republic of South Africa*, 1996:4). These languages have diverse cultures and this poses a problem to translators due to language and cultural differences. For instance, English and Afrikaans were used mostly in the apartheid era, whereas African languages were not given the parity of usage. Therefore, this resulted in English and Afrikaans having more scientific terminology than African languages do.

As might have been a way to redress the foregoing, unfortunately dictionaries of African languages, Northern Sotho dictionaries included, do not provide semantic terms in a user-friendly way. In some cases, these dictionaries present a mere borrowed form of an English word as an equivalent. Let us consider the following example from *Pharos Popular Northern Sotho Dictionary* (Kriel, Prinsloo & Sathekge, 2007:185):

(1) **Ammonia** - *amonia*

The term **ammonia** does not have a translation equivalent in Northern Sotho. As such, translators borrowed the English word and transliterated it into **amonia**. This clearly shows a semantic problem as the translator has not helped users by transliterating the term **ammonia** given that some of them do not understand the term **ammonia** itself. Instead, the lexicographer should have supplied a brief definition of the term to help users understand what it means. In this regard, Mbatha (2005:3) believes that:

English terms are not always easily replaced by African words because English is such an old language with its own peculiar cultural practices, the only solution is to define them since direct borrowing of the source language does not always assist the user in his or her quest to achieve communicative success.

Mehlape (2007:2) points out that most lexicographers of Northern Sotho-English /English-Northern Sotho bilingual dictionaries often have a problem in providing an equivalent for technological, scientific and cultural terms in their dictionaries. As a result of zero equivalence, they resorted to borrowing or transliteration of the source language term as the translation equivalent.

The lexicographic procedure hardly succeeds in assisting dictionary users to retrieve the required semantic information regarding the meaning of the source language form. Due to zero equivalence, the problem of miscommunication arises between the speakers of different languages in business or social domains.

The following example from Kriel, Prinsloo & Sathekge, (2007:182) also presents a problem:

(2) **Acid-** esiti

The term **acid** does not have an equivalent in Northern Sotho; therefore, the lexicographer would opt for the option of transliteration and say that it is **esiti**, which still does not change much apart from the spelling. Thus, an explanation of the term would help to clarify the matter.

It is evident that translating scientific terms from English into Northern Sotho brings about a challenge as Northern Sotho, in many instances, lacks equivalent terms.

1.3 Literature Review

1.3.1 Mphahlele (2001)

Mphahlele (2001:26) states that zero equivalence is a case where there is no direct translation equivalent for a lemma. In other words, the source lemma is untranslatable. Some scholars refer to such a lemma as having a low degree of translatability.

The following article by Kriel, Prinsloo & Sathekge, (2007:265) illustrates the example of zero equivalence:

(3) **Microscope** - *makrosekopo*

This article shows a relation of zero equivalence. The lexicographer has used transliteration of the term, or rather borrowing, as the translation equivalent, but not all speakers of Northern Sotho know what the lemma **microscope** means in English.

Mphahlele (2001:27) argues that the lexicographer should enter the borrowed word in the semantic comment and this should be followed by a definition. The present researcher agrees with Mphahlele that it is important for the lexicographer to give a definition for the lemma that has no equivalent in the target language for the users to understand. This study uses Mphahlele's approach as an indication of the need for definitions and pictorial illustration where zero- equivalence exists.

1.3.2 Gouws (1999)

Gouws (1999:26) mentions that zero equivalence entails a lexical gap and that in such a case the lexical item that is supposed to be presented as a translation equivalent is not presented. He also states that, in order to solve this problem,

lexicographers of translation dictionaries should be familiar with certain aspects of lexical semantics.

Further, Gouws (1999) indicates that, in the case of a linguistic gap, a brief description of a source language form will be sufficient and that where a referential gap exists the lexicographer will have to include a more comprehensive description as the surrogate equivalent because the users need more information to understand the meaning of the source language item. The definition of the lemma representing the referent that is known to the target user will be more comprehensive because the target user needs more knowledge about the lemma.

1.3.3 Mehlape (2007)

Mehlape (2007:9) argues that a major problem that confronts the bilingual lexicographers is that he or she does not always find the required equivalents in the target language. Mehlape differentiates between two types of vocabulary that contribute to this problem, namely, culture bound words and scientific/technological terminology. According to Mehlape (2007), when a translator or lexicographer treats some items falling in the above-mentioned fields, there mostly is a prevalence of zero equivalence. The present researcher agrees with Mehlape (2007) because when a translator or a lexicographer comes across the scientific terms when translating, there is a problem of finding equivalents in the target language, Northern Sotho in this case.

1.3.4 Kganyago (2008)

Kganyago (2008:53-55) outlines the problems that are encountered by the translators in the translation process. She establishes that no two languages are the same due to cultural diversities and this brings up the question of zero-equivalence. Kganyago points out some problems which can be encountered in a case of non-equivalence as follows:

- Cultural specific concepts;
- A source language concept is not lexicalised in the target language;

- A word in the source language is semantically complex;
- The source language and the target language distinguish between divergent meanings;
- The target language does not have specific term;
- Difference in physical or interpersonal perspective; and
- Difference in expressive meaning.

The present researcher uses Kganyago's work as the problems outlined are relevant to the research that is currently conducted, and it was easier for the researcher to locate strategies in the translation of scientific terms.

1.3.5 Wiegand (2003)

Wiegand (2003:13) states that lexicographical equivalence provides lexicographers with "a starting point for lexicographical textualization of semantic-pragmatic equivalence in completely condensed dictionary articles that the linguistic equivalence relationship should be inferred by the user in action by means of absolutely complex lexicographical textualization outcomes in condensed texts". This argument urges lexicographers to supply extra-linguistic information in the articles where two languages are treated, and this contextual guidance could assist a dictionary user to understand the context in which a particular equivalent may occur. In the case of lack of equivalence, this approach may work. Wiegand's (2003:19) article plays an important role in this study because it deals with the problem of equivalence.

1.3.6 van Rooyen (2005)

van Rooyen (2005:188) states that qualitative research can, theoretically speaking, be described as an approach rather than a particular design or set of techniques. It can be used successfully in the description of groups, communities and organisation.

He further says that the semi-structured interviews are employed in qualitative research to identify important variables in a particular area, to formulate penetrating

questions about them and to generate hypothesis for investigation. In semi-structured interviews, the researcher has a list of themes and questions to be covered, although these may differ from one interview to another (van Rooyen, 2005:166).

1.4 Aim of the Study

The aim of this study is to analyse the influence that zero equivalence has on the translation of scientific terms from English into Northern Sotho.

1.5 Objectives of the Study

This study has the following objectives:

- To identify the problems translation encountered when translating English scientific words into Northern Sotho;
- To suggest ways in which translation can yield appropriate terms regarding Northern Sotho; and
- To come up with strategies in which translators could adopt or use when translating English scientific words into Northern Sotho.

1.6 Research Questions

In order to achieve the above objectives, the following research questions are answered.

- What are the problems realised when translating English scientific words into Northern Sotho?
- In which way can translation yield appropriate terms regarding Northern Sotho?
- What are the strategies that translators could adopt or use when translating English scientific words into Northern Sotho?

1.7 Research Methodology

In this research, qualitative method was used to gain more knowledge of the topic that is being researched. This method was suitable as it enabled the researcher to examine different kinds of translation strategies regarding the relationship between translation and science terms.

1.7.1 Sampling Method

Sampling refers to the technical accounting device to rationalize the collection of information, to choose in an appropriate way the restricted set of objects, persons, events and so forth from which the actual information will be drawn (Bless & Hugson-Smith, 1995:85).

There are two types of sampling methods namely, probability and non-probability sampling. With probability sampling, every member of the population has a high chance of being selected in the sampling while with non-probability sampling some population has no chance of being used in the sampling. In this research, non-probability sampling was used as the population was selected using accidental and purposive sampling. van Rooyen (2005:68) defines accidental sampling as the most convenient collection of members of the population that are near and readily available. This kind of sampling was used for language practitioners and lexicographers because they were selected haphazardly but based on the availability.

Purposive sampling was used for lecturers and the translators as they were selected purposively because of the experience and knowledge they have in translation.

The sample consisted of a total number of 20 informants distributed as follows:

- 3 lecturers in Translation Studies and Linguistics Department in the University of Limpopo;
- 2 lecturers in the English Department in the University of Limpopo;
- 5 translators in the Department of Arts and Culture in Limpopo;

- 5 language practitioners in the Department of Arts and Culture and the Pan South African Language Board in Limpopo; and
- 5 lexicographers in the Department of Arts and Culture in Limpopo.

1.8 Data Collection

1.8.1 The primary research method

In this study, a semi-structured interview was used to collect data. An Interview Guide was used to help the researcher not to lose control and start asking irrelevant questions not related to the topic. A tape recorder was the tool used to collect data during interviews.

1.8.2 Secondary research method

The secondary research method was used in this study as it is the method of inquiry and was used to utilise the information that is already collected by different researchers such as linguists, translators and terminologists. Sources such as books, articles, dictionaries, journals, dissertation/thesis and the Internet were used as secondary sources to gather information.

1.9 Data Analysis

The gathered information in this study was analysed manually through description. The interviews were synthesised, thereafter the generalisation of the findings is made. The information collected from the lecturers, language practitioners, translators and lexicographers was analysed. Data interpretation is more explanatory and was analysed after taking into considering various themes identified from the responses.

1.10 Reliability and Validity

The respondents were asked to comment on the interpretations of the research. This process only took place upon the completion of the interviews. A benchmark of information and documents pertaining to conceptions and gathered data aided in determining the influence that zero equivalence has on the translation of scientific terms in Northern Sotho.

1.11 Ethical Consideration

All the ethical factors were observed in this study; the factors include disclosing the rights of the respondents. Confidentiality and anonymity were adhered to. The respondents were not asked to divulge any personal information. The data collected will not be presented to anyone except the supervisor. The aim and nature of this study were disclosed to the respondents. Therefore, the researcher requested respondents' informed approval to conduct the interview. The researcher thoroughly advised the respondents about their voluntary right to participate and to equally pull out whenever they start feeling uncomfortable.

1.12 Significance of the Study

The findings of this study will assist the students or scholars as a source of reference on academic purposes and will also assist translators and lexicographers to improve the standard of bilingual Northern Sotho-English dictionaries in terms of the words that are transliterated and do not have any semantic relation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A literature review in an essay, thesis or research project is important, primarily in establishing relevant knowledge, ideas, arguments that have been written on this study or studies related to it, and secondarily to support the argument presented.

2.2 Zero Equivalence

Zero equivalence is regarded as a situation wherein a word or a particular term in the source language does not have a translation equivalent in the target language. In other words, such a term cannot be translated directly from the source language to the target language and that term can also be referred to as having a low level of translatability (Mphahlele, 2001:26). Let us consider the following example from *Pharos Popular Northern Sotho Dictionary* (Kriel, Prinsloo & Sathekge, 2007:265):

- (1) **microscope**- maekroskopo

The above article shows a problem of zero equivalence. The lexicographer has transliterated the term and used it as a translation equivalent, but not all the speakers of Northern Sotho know what the term microscope means in English. Furthermore, Mphahlele (2001:27) is of the view that the lexicographer should have supplied a definition for that particular term in order for dictionary users, who are not familiar with the term, to understand it better.

Gouws (1999:26) mentions that zero equivalence shows that there is a lexical gap and, in such a case, the lexical item that is supposed to be presented as an equivalent has not been presented. He also mentions that, in order to solve the problem of zero equivalence, lexicographers of translation dictionaries should familiarise themselves with some aspects of lexical semantics.

Furthermore, Gouws (1999) indicates that, in the case of a linguistic gap, a brief definition of a source language will be sufficient because the lemma is known to both speakers of the language but the other language does not have a term to express that particular term.

The following article by Kriel, Prinsloo & Sathekge, (2007:256) illustrate the example of a linguistic gap:

(2) **lantern-** lanteren

The above article shows the case of a linguistic gap because the term **lantern** is known to both speakers of English and Northern Sotho, but the speakers of Northern Sotho do not have a term that can be used as an equivalent of that term.

A referential gap simply means that a lemma is only known to the speakers of one language and the speakers of the other language are unfamiliar with it. Taking into account Gouws' (1999) advice, in a case where a referential gap occurs, the lexicographer must include a more detailed definition that will be used as the surrogate equivalence because the users need a lot of information so that they can understand the meaning of the source language term.

The following article by Kriel, Prinsloo & Sathekge, (2007:312) illustrates the example of a referential gap:

(3) **stratosphere-** setrasosfere

The above article shows the case of a referential gap because the term **stratosphere** is only known to speakers of English but the speakers of Northern Sotho are not familiar with it.

Both Mphahlele (2001) and Gouws (1999) share the same view because they say that, in a case where zero equivalence occurs, there is a need for a definition of a particular term. In this case, the present researcher agrees with both scholars because there is a need for definitions where there is a lack of equivalence

concerning a particular term. The definition will help the users of a dictionary to understand what that particular term means.

Mehlape (2007:9) argues that bilingual lexicographers are faced with a major problem of finding equivalents in the target language. He further provides the two types of vocabulary that contribute to the problem of lack of equivalence, namely, culture bound terms and scientific/technological terminology. The above-mentioned types of vocabulary are mostly the ones that fail the lexicographer when he or she is treating the terms because there is dominance of zero equivalence.

Kganyago (2008:53-55) points out the problems that translators are faced with in the process of translation. She establishes that there are no two languages that are the same due to their cultural diversities and that is where the question of zero equivalence arises because one language might be having more terms than the other.

Kganyago (2008:54) points out some problems that can be encountered in a case of non-equivalence:

Cultural specific concepts, the source language concepts are not lexicalised in the target language, a word in the source language is semantically complex. The source language and the target language distinguish between divergent meanings; the target language does not have specific term, difference in physical or interpersonal perspective, difference in expressive meanings.

Kganyago outlines the problems that most translators are faced with on a daily basis when translating because of lack of equivalence and these problems are relevant to the research that is currently conducted and it will be easier for the researcher to locate strategies in the translation of scientific terms.

Wiegand (2003:13) states that lexicographical equivalence provides lexicographers with “a starting point for lexicographical textualization of semantic-pragmatic equivalence in completely condensed dictionary articles that the linguistic equivalence relationship should be inferred by the user in action by means of absolutely complex lexicographical textualization outcomes in condensed texts”.

Lexicographers are urged to give extra-linguistic information in the articles when two languages are being treated and the contextual guidance could be of great help to the users in order for them to understand the context on which a particular equivalent might occur. In the case of lack of equivalence, the approach might work as Wiegand (2003:45-46) illustrates:

The lexicographical equivalence that represents one of the assumptions for an appropriate description of equivalent open class expressions in bilingual printed dictionaries should look like. Such a concept should be understood in such a way that it can, on the one hand, provide lexicographers with a starting point for lexicographical textualisation of semantic-pragmatic equivalence in completely condensed dictionary articles, and, on the other hand, take into account that the linguistic equivalence relationship should be inferred by the user-in-action by means of the absolutely complex lexicographical textualisation outcomes in condensed texts.

The reason for creating a concept of the described kind lies in the following facts: Dictionary research does not deal with the linguistic equivalents only, but it also deals with the fact that linguistic equivalence must be, among others things, offered in a completely condensed dictionary article and be mentioned on by means of further items.

Equivalence can be described as one to one relationship between the lexical items of two languages, which is the source and target language in the translation dictionary. Equivalence can also be divided into two types: complete and adoptive. Complete equivalence happens when two or more items of different languages (that is, source and target) share the same meaning. In case of adoptive equivalence, source language items are borrowed and transliterated into the target language, and hence the prevalence of zero-equivalence (Mphahlele, 1999:1).

2.3 Transliteration

Transliteration is defined as the adoption of foreign language terms to create a target language equivalent. In most countries, including South Africa, English has appeared

as the language that is often used to make communication possible between two people who are not sharing a mother tongue and also as a language of choice. This has therefore made African language speakers to opt for the use of English by means of borrowing, neologising and transliterating (Mphahlele, 2004:341). Mphahlele further states that as target language speakers, African language lexicographers, terminologists, subject specialists and linguists are encouraged to give a transliterated term in a case where there is lack of target language term equivalence. In most cases, the terminological procedure of transliterating has not helped, in assisting the terminology users to comprehend the information they need. Lack of target language equivalents shows the problem of zero equivalence.

If transliteration is implemented as the first preferred terminological method, the technical languages of the African languages that are developing will hardly improve. Excessive use of transliteration may result in full borrowing because all the speakers of a target language would use the new transliterated terminology.

The technical terminology for African languages should be created so that the speakers of those languages which are developing should use the terminology that belongs to them for an international technical source language when they communicate. The new terminology should be the same with corresponding concepts so that speakers of the developing language can be able to benefit when using international technical language in their mother tongue. In terminology, the source language terms are standardised by means of definitions for each term. Complete communication is possible if there is one to one relation between term and concept. These definitions are of great help to terminologists and their collaborators in supplying the appropriate equivalent term. With transliteration, definitions that are supplied for standardisation are sometimes unnoticed.

Molepo (2005:20) further adds that sometimes it is hard to find equivalents either complete or partial in the target language for some words in the source language. Quite often, this happens in particular for terms that are culture specific concepts as well as technical terms. In this case, the translator has no other option but to form a new word using the correct word formation principles and by forming a new word, it

sometimes causes confusion to the users as the new word might be a borrowed one or transliterated and they will not understand as they are not familiar with the term.

Mphahlele (2004) and Molepo (2005) share the same view that there is a problem of finding equivalents due to the problem of zero equivalence and that most of these terms that one cannot find equivalent terms for the target language, is because of culture specific concepts and technical terms. This is one of the major reasons that African lexicographers end up creating new terms and also opting for transliteration as the solution to lack of equivalent terms.

According to Mphahlele (2001:23), intranslatability is the state where a particular lemma lacks the appropriate equivalent in the target language, and it is one of the causes of zero equivalence. Intranslatability can be associated with zero-equivalence because it contains the words that are either cultural bound or scientific. This means that intranslatability is the cause of problems to users because such words or terms are strange to foreign speakers of the language. For example, a Sepedi speaking person will find it hard to understand English cultural-bound words that are presented as the lemmata. Intranslatability also includes adoptives or borrowed words because there are words which do not have equivalents but are transliterated and the foreign language users neither know the terms nor understand them.

Mabasa (2005:16) is of the view that transliteration is one of the most frequently used methods for creating translation equivalents for English and Afrikaans terms mostly in subjects such as medicine. Furthermore, transliteration is normally said to be a direct loan by where a particular term is created from one language and the user adjusts its pronunciation, spelling and morphological characteristics to suit the target language. She further warns that although transliteration is one of the most productive methods of developing terminology, it can lead to language death. Transliteration, therefore, should be used sparingly.

According to Roets (2001:9), lots of equivalents are formed through transliteration, mostly in subjects such as economics, medicine and physics. She adds that although English is the most popular language in South Africa for scientific and

technical subjects, it is limited in terms of usage for young African learners. The emphasis here is that transliteration should not be chosen as the first solution when giving the target language equivalents. Roets stresses that transliteration can only be used only if the source language is known and is well reputable in the target language.

She further argues that in order for a language to develop, the daily growth of human knowledge concerning science and technology of developed countries should be shared with the developing countries and so far be expressed in the mother-tongue terminology. She also mentioned that the importance of the language status depends on its possession of technical vocabulary and continues and say that the South African terminographers' mission is to be informed all the times about the emerging developments in all fields of transit into mother tongue equivalents for communicating to the vast number of new concepts that are to be mastered in order to develop this country. Roets (2001:2) observes that:

If international scientific terms were translated into African languages, speakers of African languages would be able to learn and communicate in scientific languages. She further states that in scientific and technological text there is an objective, while the means of necessarily remains within the general conceptual framework within which the objective is defined. It emerges here that lack of scientific and technical terminology in a language makes such a language to be subjected to an irreversible process of disintegration entails something is immediately done to the same situation.

Roets further explains that terminologists and lexicographers have a tendency of ensuring that the terms in the developing languages such as African languages are matched with English scientific and technological terms. This also includes the matching of abbreviations, acronyms, formulas and registers. However, since science and technology create contextual features which involve new concepts and processes that can be imitated, it is sometimes compulsory and even preferable for African languages lexicographers to create equivalent terminology corresponding with the source language.

2.4 Terminology Creation

Terminology is the study and the field of activity that is concerned with creation, collection, description, processing and presentation of terms that belong to a specialised area of usage or more languages. In this regard, terminology is associated with the systematic collection, description and presentation of concepts and their designations (Sager, 1990:2).

Mabasa (2005:10) further says that translators experience terminographical problems such as lack of equivalent terms in the target language when they are translating in and out of African languages. In addition, Mabasa explains that suitable equivalents do not always depend on the linguistic systems that are handled at a particular moment, but depend on the way the writer of the source text and the translator of that source text in the target text choose to manipulate the linguistic systems in question this means that there is still a lot that needs to be done in terms of language development regarding African languages in South Africa

When creating new terms, it is crucial that terminologists and their collaborators should also take the level of the target users into consideration so that the new terminology that they have created can be suitable and also be comprehensible to them. If research regarding the target users of terminology is not done, it is highly likely that the term equivalent may be too difficult to understand for the target users.

2.5 Borrowing

Mehlape (2007) shows that borrowing is the acquisition of a word from one language into another, that is, the term is incorporated into the linguistic system of another language. This means that borrowing is the system that is used by the speakers of a particular language to fill the gaps that exist in the vocabulary of such a language.

The Oxford Advanced Learner's Dictionary (1995:126) defines a dictionary as:

A thing borrowed especially money or a word taken
by one language from another.

Borrowed words are permanently absorbed into the vocabulary of the borrowing language. For this reason, the words that are adopted will, in some cases, be used in the study. In borrowing, words are used by a speech community that speaks a different language from the language which the terms originated. Borrowing deals with cultural contact between two language communities. The borrowing of words works in both directions between the source and the target languages, but there is always a case of inequality between the languages concerned. In this case, the contributing language enjoys more advantages such as of power, prestige and wealth than the recipient. This means English retains its prestigious status whereas African languages remain as languages of no influence.

Mabasa (2005:15) is of the view that the major source of new terminology in the African languages is borrowing from English to Afrikaans. In borrowing there are types that are used in the formation of new term of which are as follows: direct loan, hybridization and indirect loan/transliteration. In terms of direct loan, Mabasa explains that it involves the taking over of a source language term into the target language without changing the morphological structure. A loan word retains its spelling and is resorted to when the target language lacks an equivalent for the source language unit.

In addition to their borrowing from other languages that include English and Afrikaans, the African languages tend to use the prefixing as one of the strategies for word formation where the new lexemes are formed through an addition of an affix to the existing stem. The lexemes like that are normally called morphological hybrid forms.

Transliteration happens frequently in Northern Sotho and it is actually one of the most regularly used methods for creating the Northern Sotho equivalents for English and Afrikaans terms, particularly in subjects like science and maths. A direct loan is described by Sager (1990:90) "as the taking over of the term from another language but adjusting its pronunciation, spelling and morphological characteristics".

Mabasa (2005:16) cautions that although transliteration seems to be the most method that is productive when developing terminology, it has demerits such as

causing a language to be at risk of losing its character if transliteration is utilised excessively to fill the lexical gaps. Transliteration, therefore, should not be used as the first option but as a last resort where there is a lack of equivalence in the target language.

2.6 Translation Equivalence

Nefale (2009:15) defines translation equivalence as the communication between a word and a phrase in one language and its translation in another language. It represents an item in the target language that can be used to translate a specific existence of the source language item. Malange (2005:16) also adds that equivalence in translation has to do with a relationship that the words or phrases have with two or more languages that share the same meaning.

Malange (2005:16) furthermore indicates that translation equivalence is a one to one relationship between the lexical items of languages which have the same meaning. Venuti (2002:147) also shares the same view that translation is a process of communicating the foreign text by identifying with it. The above argument shows that equivalence plays an important role in translation. Similarly, Mabasa (2005:11) expands on equivalence as follows:

Translation equivalence is the degree of which linguists can be translated into another language without loss of meaning. Thus direct equivalence occurs where the relation of the equivalent term transports the meaning of the original term in the target language like that of the original term. In other words it is reproducing the closest natural equivalent of the source language term in the target language equivalence with a very close similarity in form.

Mabasa (2005:11) says in the process of supplying of equivalent terms, the term creators are sometimes faced with a lack of cohesion in the target and source languages. This is called a referential gap because the relationships between two words, actions or things are not semantically related.

Pham Thanh Binh (2010) says the problem of non-equivalence has been drawing the attention of many researchers. "There is ordinarily no full equivalence between code units". He also explains the differences between structures, terminology, grammar and lexical forms of languages are the main reasons of non-equivalence. He states that "equivalence in difference is the cardinal problem of language and the pivotal concern of linguistics." (As cited in Munday, 2001). In his theory, the general principle of cross-language difference and the concept 'semantic' field has been established.

Thanh Binh mentions that there are two factors which affect equivalence, that is linguistic and cultural factors that lead to two kinds of equivalents, that is linguistic and cultural equivalents. This finding is very essential because it consists of both important approaches toward equivalence, namely, linguistic and cultural approaches. In other words, functional equivalence can only occur if the translator takes both linguistic and cultural factors into account when translating texts.

2.7 Pictorial Illustrations

According to Al-Kasimi (1977:98), pictorial illustrations indicate and reinforce the verbal equivalents especially when the dictionary user is able to identify and comprehend the picture. In the light of the above, one can say that the target language user will understand the information he or she needs, and in this case, pictures can assist the user to comprehend the information. He states further that pictorial illustration should be used when an unwritten equivalent cannot show spatial or consecutive relationship effectively and when verbal equivalents require an uneconomical number of words. This means that pictures should be used as an explanation of the presented equivalents for the users to comprehend what the lemma means.

Gouws (1999) says that pictorial illustrations have the role to show something or to point it out. This means that pictures help in the identification of an item which is usually not known by the target language user of a dictionary. The use of pictures makes the dictionary users to be able to familiarize themselves with the referent.

Both Al-kasimi and Gouws share the same view that the pictorial illustration is needed in a case where the users do not understand a particular term that has given an equivalent term that was transliterated and they will be able to refer to the picture that has been provided and have a better understanding of that particular term.

According to Zgusta (1971), the most important intention of illustrations or pictures is that of portraying unusual or unfamiliar things, and they should not be over-specific, but only general. He continues to cite an example of the picture of a gnu thus has a peculiar long neck and as such people may wrongly suppose that all gnus have necks that long. By the above example, Zgusta (1971) is trying to show that it is not always easy to observe something that is not in practice. If one is viewing a rare animal or plant altogether foreign to one's own culture, one must necessarily base the image on a limited number of available photographs or illustrations. The researcher consents with Zgusta's (1971) thesis, because when a word appears to be difficult to grasp it becomes easy to understand. In the same breath one observes that learning and comprehension of items become easy with the inclusion of pictures.

According to Landau (1989:112), a picture is the best representative example of the type of thing defined, yet it does not include anything approaching the full image of possibility defined by the term it is supposed to demonstrate. Furthermore, Landau (1989: 112) goes to a level where he compares the convenience between drawings and photographs. He says that although photographs have an unquestionable attachment to reality or are authentic, drawings may combine features of many individuals and thus represent complex issues in a manner that is easy to follow. He argues further that if the drawing is properly done, it is usually more useful than any photograph because photographs hardly highlight what features that one would like to focus on.

When emphasizing the importance of pictorial illustrations, Landau (1989:113) gives an example of children's dictionaries that include more pictures than those in adult dictionaries.

Landau (1989)'s emphasis is that pictorial illustrations are important in illustrating any article, word, or text for the users/readers to learn, understand and recall what

has been learnt, but he regards drawings as the most important tool when compared to photographs. According to him the drawings are more informative, and the details are readily clear more than in any photograph. He concluded by saying that the more elementary or pedagogical the work is, the more useful are illustrations.

Mphahlele (1999:8) mentions that verbal presentation in a dictionary article remains crucial and should only be accompanied by pictorial illustrations. Furthermore, he says that semantic equivalence and communicative equivalence are different, and if a translation equivalent paradigm consists of a simple listing of translation equivalents, dictionary users will not acquire communicative success because the semantic comment will be demanding too much from them (users). Mphahlele (1999:8) argues that an ordinary listing of translation equivalents only enables the user to attain semantic equivalence between the source and the target language forms. He continues to say that a lexicographer has to expand the semantic comment by giving usage information (pictorial illustration) for each translation equivalent that is demanding.

He points out that, it is not only words of a language that assist the user to achieve communicative success, but also pictorial illustrations (if used correctly) contribute to the achievement of communicative success. Mphahlele (1999:9) declares that ostensive addressing is a user-friendly method that can be used by lexicographers of translation dictionaries to assist dictionary users to achieve communicative success, but warns that lexicographers must avoid using meaningless illustrations that duplicate the presented information.

2.8 Translations

Yinhua (2011:170) says that there are different opinions concerning translation such as "Translation is a science." "Translation is an art.", "Translation is a language activity," so on. However, translation, in essence, is basically a kind of communication. In history, translation has always functioned as a tool for people who do not know foreign languages to understand the source text. As a matter of fact, translators and translation theorists worldwide have long realized the principle of translation as a kind of communication.

Since translation is, in essence, a kind of communication, equivalence between the source text and the target text naturally becomes an important requirement. It is generally agreed that the essential requirement of any kind of communication is to guarantee that the message is adequately transmitted from the source to the receptor. Similarly, in translation, the translator should try his best to reproduce the closest equivalent message of the original text in the target text so that the target text reader can understand the source message satisfactorily; otherwise, translation as a kind of communication would end in disappointment.

When we say that something is translatable, in a sense, it means that a certain degree of equivalence of the source text can be achieved in the target language. In contrast, when we say that something is untranslatable, it means that no equivalence of the source text can be attained in the target language.

Nefale (2009:4) regards translation as a process in which meaning of terms in the source language is turned into the meaning of the target language. This means that the meaning in the source and the target languages should be related. Nokele (2005:5) says translation studies have been approached from different points of view by different scholars. He cites theorists such as Nida and Catford who view translation as a purely linguistic phenomenon. These scholars did not think about other extra-linguistic factors that influence the translation process. They focused mostly on linguistic equivalence. In fact, equivalence was considered as the necessary condition for translation. The translator had to be faithful to the author of the source text (ST), thus producing a text that is similar in style to the ST.

Nokele further indicates the difference between the two types of equivalence: formal and dynamic. Formal equivalence focuses mostly on the message itself in both form and content. This means that the message of the target text (TT) should match as closely as possible that of the ST. Dynamic equivalence on the other hand, puts emphasis on the fact that the relationship between messages conveyed in the target text should be same as the message contained in the source text. At the same time, it should be clear that the response of the target receiver can never be the

same as that of the original reader because of differences in cultural and historical settings.

2.9 Communicative Embarrassment

According to Mphahlele (2002:6), communicative embarrassment refers to failure to communicate properly after referring in a translation dictionary. Communication embarrassment is usually caused by both culture-bound lexical items and items with a low degree of translatability, that is, transliterated words. Culture-bound lexical items are those that are known by the speakers of the source language only, and if such items are not appropriately defined, foreign-language users of the language are usually confronted with the problem of misunderstanding and, as such, this misunderstanding is referred to as communicative embarrassment.

2.10 Contextual Guidance

According to Mphahlele (2001:5), contextual guidance is indicated by means of words or phrases that are normally written in brackets next to each translation equivalent in the translation-equivalent paradigm. Regarding contextual guidance, Kavanagh (2005:249) says that this refers to the parts that immediately lead and follow a word or passage and clarify the meaning. Contextual guidance serves as an important tool in a bilingual dictionary because it assists the user to choose the suitable translation equivalent from a translation-equivalent paradigm.

2.11 Conclusion

Zero equivalence is a major problem in the translation of texts from one language to the other. The translators mostly opt for the use of borrowing words from other languages as one of the strategies of dealing with zero equivalence. The literature reveals that languages are different and they cannot match all the times in terms of meaning. Most scholars indicate that, between different languages, it is impossible to find complete equivalence.

CHAPTER THREE

THE EVALUATION OF BILINGUAL AND MULTILINGUAL DICTIONARIES IN TERMS OF SCIENTIFIC TERMINOLOGY

3.1 Introduction

This chapter examines the treatment of scientific terminology in English-Northern Sotho and Northern Sotho-English dictionaries. This chapter starts with a brief background of science and transliteration.

3.2 Definition of Science

Cassell (1989:1200), in Mehlape (2007:68), mentions that science is the knowledge, systematised knowledge, a system of facts and principles concerning any subject, a natural science, the pursuit of such knowledge or principles governing its acquirement, exceptional skill due to knowledge and training, as distinguished from natural ability, especially unboxing a trade occupation. This means that science is the knowledge a person has of any subject and is the knowledge acquired through training.

Scientific terms are scientifically bound and they are only known by scientists specialising in the advanced study of a subject. Hence in bilingual dictionaries, it is important to give a comprehensive definition and a brief background of few scientific terms so that the readers will know how complicated these words are. Let us consider the following example from *Pharos Popular Northern Sotho Dictionary* (Kriel, Prinsloo & Sathekge, 2007:182):

English- Northern Sotho

(1) **acid** - esiti

Acid- is any of a class of substances whose aqueous solutions are characterized by a sour taste, the ability to turn blue litmus red, and the ability to react with bases and certain metals to form salts. (<http://www.thefreedictionary.com/acid>.) In a solution, it has a pH below 7.0, a sour

taste, releases hydroxyl ions in water, and turns litmus paper red. Acids are divided into two main classes: (1) Strong acids are very corrosive and cause severe skin burns, examples are hydrochloric acid, nitric acid, and sulphuric acid, also called mineral or inorganic acids. (2) Weak acids are mildly corrosive and normally do not affect skin, examples are acetic acid (vinegar), citric acid (citrus fruit juice acid), and tartaric acid (used in making mayonnaise). (<http://www.businessdictionary.com/definition/acid.html#ixzz2Al1JryZp>)

The above definition of the term **acid** is very complicated and hard to understand for someone who is not familiar with the term and also with English. Therefore, a brief definition of the term in the target language will be of great help to the user.

From this background, it is evident that the term **acid** is a very complicated substance that needs some explanation to people who are neither scientists nor work with chemical substances. If a lexicographer does not supply a comprehensive definition with regard to the chemical substances, then dictionary users will not be able to understand this scientific term.

The term **acid** does not exist in Northern Sotho as an established form. A brief definition of a lemma would have been better than a mere transliterated term, which is **esiti**, that is used as the translation equivalent. The following example illustrates the above-mentioned point:

(2) **Esiti** - Seelwa seo se ka fetogago ge se ka tswakwa le dikhemikhale le gona ka nako ye nngwe se ka nyaoša didirišwa tše dingwe.

The section below further continues with the discussion and gives another brief history of a scientific term that does not have an equivalent in the target language in order for the users of the dictionary to have some kind of knowledge or idea about that term. The following example illustrates this point:

English- Northern Sotho

(3) **ammonia** - amonia

Ammonia - is a colourless gas with a very sharp odour. Made both by humans and by nature, ammonia dissolves easily in water and evaporates

quickly. Liquid ammonia is found in many household cleaners. Ammonia is irritating to the skin, eyes, nose, throat, and lungs. Exposure to high concentrations in the air can severely burn the skin, eyes, throat, or lungs. In extreme cases, blindness, lung damage death can occur (<http://www.medterms.com/script/main/art.asp? Articlekey =25654>).

The occurrence of the word **ammonia** requires one to understand the elements and this understanding will be possessed if one does/has done scientific courses, especially at an advanced level. These elements need to be explained thoroughly if not known by the user. One can supposedly give a brief definition of the term **ammonia** in Northern Sotho as the above given definition that is in the source language is a bit complicated and most users would not understand it well.

The definition of the term **ammonia** that is in English is a bit complicated and not easy to understand ; so the better suggested solution by the researcher is that there should be a definition that is provided using the target language for the target language users to understand. The following definition which is in the target language will help the users to understand the term **ammonia** well.

- (4) **Ammonia** - Ke seela sa monkgo wa go se kgahliše seo se šomišwago go dira dithuthupi, menotšha le ditšweletšwa tša go hlwekiša.

The above definition of the term **ammonia** that is in the target language will make things easier for the users of the dictionary to have a better understanding of the term as the equivalent that has been provided does not help as such as it is just a mere borrowed or transliterated version of the original term.

3.3 Lexicographic Definitions

This section discusses the way in which lexicographic definitions can be able to assist the dictionary users to achieve the communicative success. There are two gaps in zero equivalence which is lexical and referential gap and these two gaps leads to the use of transliteration as a solution that the lexicographers have opted for as a result of lack of equivalence.

Transliteration is said to or defined as the adoption of foreign language forms to create a target language equivalent. In most countries, including South Africa English has appeared as the language that is often used to make communication possible between two people who are not sharing a mother tongue, also as a language of choice, and this has therefore made African languages to opt for the use of English by means of borrowing and transliteration (Mphahlele, 2004:341). Let us consider the following example from *Pharos Popular Northern Sotho Dictionary* (Kriel, Prinsloo & Sathekge, 2007:256):

English- Northern Sotho

(5) **Lantern** - lanteren

The above example indicates a case of a linguistic gap because the referent is known to both speakers of the language but the other language which is the target language does not have a term to express it or give it as an equivalent. According to Gouws (1999:27), the nature of the lexical gap that leads to the addition of a surrogate equivalence in a presentation of terms determines the extent of the description offered as surrogate equivalent. In other words, the definition of the lemma mostly depends on the nature that the lexical gap prevails in the target language.

If a loan word exists in the target language, it may be given as a translation equivalent; in this case, the lexicographer used a borrowed word as a translation equivalent. Not all speakers of Northern Sotho know what the term **lantern** means and, by supplying a Northern Sotho borrowed form of a **lantern**, the lexicographer has not helped as it would not serve any semantic purpose.

Therefore, the lexicographer has failed the dictionary users because she/he has transliterated the term **lantern** into **lanteren**, which is still the same as the source language term but only differ in spelling as the lexicographer has tried to indigenise the term so that it may not sound foreign.

With regard to transliteration, Roets (2001:9) says that a large number of equivalents are formed through the use of transliteration, mostly in subjects like Economics, Medicine and Physics and this does not necessarily mean that transliteration is the best solution. Transliteration should only be used if the target language users of a certain dictionary are familiar with the source language term. If transliteration is used while the speakers of the target language do not know the term, it cannot serve any semantic purpose as the speakers of the target language cannot understand the meaning of the source language form. The lexicographer in this case, where there is lack of equivalence in the target language, should not have opted for transliteration as the first solution because it would not help the users of the dictionary as some of them are not familiar with the term **lantern**. Instead, the lexicographer should give either a brief or a long definition to that particular term in the target language so that the users can be able to understand the term better and know what it means.

Roets (2001:10) notes that it would be better that terminologists and subject specialists supply a brief definition of the source language term as an equivalent so that the brief definition of the source language term could help the users to retrieve the information they need because the definition carries a concept in itself. This would be much better than just supplying a mere transliterated term as an equivalent.

If transliteration is accepted as the first terminological procedure, the technical language of developing languages, that is, African languages, could not be developed. The unnecessary use of transliteration may result in heavy borrowing because the members of the target language would use the new transliterated terminology. Ignoring the excessive use of transliteration, lexicographers, terminologists, subject specialists and linguists should always try to use new independent term equivalents that have a one-to-one relation with the source language terms. The new-term equivalents should obey the orthography of the target language and also have the concept that will correspond with the source language terms. These new terms should come as a result of terminological, scientific and linguistic decisions taken by collaborators in terminology. The above example should have appeared as follows:

- (6) **Lanteren** - Lebone leo motho a ka kgonago go le swara, leo le dirilwego ka tšhipi yeo e nago le galase yeo e kgonago go šireletša kgabo ya seetša.

As many Northern Sotho speakers are not familiar with the English word, **lantern**, the above example can be very helpful to the dictionary users as it displays a balanced terminological procedure, and they will thus be able to read the definition that has been provided for them and have a better understanding of what the term **lantern** really means, and also achieve a communicative equivalence. The term **lanteren** is an English borrowed form but it is recognised by the Northern Sotho speaking people. That means that the lexicographer should have entered it in the semantic comment, to be followed by a brief definition. It is important for the lexicographer to describe the meaning of the lemma **lantern** so that the users of the dictionary will be able to see the exact and original meaning of the source language. The definition will also help the users or the speakers of the target language not to use the lexical item in an unacceptable way.

It is also important for the lexicographer not to only give the definition of a term that has no equivalent as the only solution, but to also consider the use of a pictorial illustration in order to help the users who may take time to understand the definition. Some of the users are illiterate. Therefore, by using a picture, such users will have a better understanding as they will be able to look at the picture and recognise it and know what the term is, and even refer to the definition that has been provided to verify. For example:

(7)



(<http://www.ebay.com/sch/Lanterns-Lamps-/4128/i.html>)

The above picture shows how a **lantern** looks like and such will help the users who are not familiar with it to have a clear picture of what it looks like. As such, they will be able to understand it better as there is a definition that can be used by the dictionary users to refer to. This is what the lexicographers or the bilingual-dictionary compilers should have considered when compiling the dictionaries as the pictorial illustration and the definition of the transliterated term are helpful to the users who know nothing about the term **lantern**.

Let us further look at the example taken from the *Multilingual Natural Sciences and Technology Dictionary for Grades 4-6* (2005:203):

English- Northern Sotho

(8) **valve** - valefe

The term **valve** indicates a case of referential gap because the referent is only known to the speakers of one language whereas the speakers of the target language are unfamiliar with it and this does not help the dictionary users as they do not know what the term means. In a case where a referential gap exists, the lexicographer should have opted for surrogate equivalence where he or she gives a brief definition of that particular term in question than just supplying a transliterated term as an equivalent in the target language.

The following example illustrates how the lexicographer should have presented the terms.

(9) **Valefe** - Ke karolwana ya phaephe goba lethopo leo le bulelago le go tswalelega bjalo ka lebati gore, le kgone go laola kelelo ya diela le moya woo o fetago ka ona.

By giving the above definition, the lexicographer would have done a great job as the users will have a better understanding of what the term valve means in their language. Again, the lexicographer should give a pictorial illustration of the term so that the users can read the definition and also refer to the picture. This will assist them to understand it better and see what it looks like.

(10)



(<http://www.inmagine.com/searchterms/valve.html>)

The above picture of a **valve** can help a lot of dictionary users as part of reference when they come across difficulties in understanding the lexical item that was given a borrowed word as an equivalent.

Let us look at another example that shows the use of transliteration due to the lack of equivalence in the target language. The example is taken from Kriel, Prinsloo & Sathekge, (2007:239):

(11) **Graph** – kerafo

The above article shows a relation of zero-equivalence. In this case, the lexicographer has used a transliterated term as a translation equivalent. The transliterated Northern Sotho form **kerafo** does not serve any semantic purpose, since not all speakers of Northern Sotho know what the English term **kerafo** means. In this case, the lexicographer has failed in supplying the meaningful equivalent of the given lemma as the users of the dictionary do not understand what the term graph means or even know what it looks like.

The article, as presented above, can better be understood by the speakers of the target language (Northern Sotho) if a brief definition of the term is supplied in the

target language and a picture of the lemma **kerafo** is provided next to it for the Northern Sotho speaking users who are not familiar with the referent to be able to know what the translation equivalent refers. The following example can be used as a correct surrogate equivalent:

- (12) **Kerafo** - Ke seswantšho seo se bontšhago kwano kudu magareng ga dilo goba di tšhwantšho tšeo e lego methalo le mapheko ao lekanetšego go bontšha bogolo goba diphetogo magareng ga tšona.

To add more to this point, Mphahlele (2001:27) argues that if the speakers of the target language are not familiar with the English lemma or term **graph**, the use of a description will assist the user to easily understand the meaning of the term in question. A brief definition would help the user's chances of achieving a communicative equivalence. Mphahlele also states that the lexical item **kerafo** is a borrowed word from English and it is used as an established form in Northern Sotho. In this case, he mentions that a lexicographer should enter that term in the semantic comment and be followed by a brief definition and also provide a picture of that particular term for the users to use it as part of reference. The following picture illustrates the pointed that is stated:

(13)



(<http://cae2k.com/heavy-metal-photos-0/picture-of-a-graph.html>)

Let us consider another example taken Kriel, Prinsloo & Sathekge, (2007:222)

English- Northern Sotho

(14) **Dynamite** - tanamaete

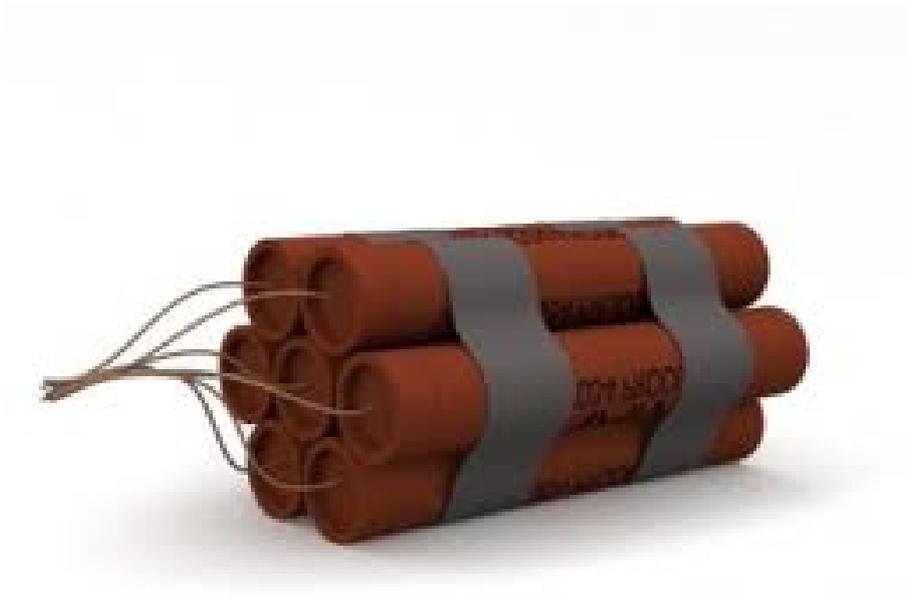
According to Mphahlele (2001:27), the addition of the word **tanamaete** as a translation equivalent of the lemma **dynamite** shows the use of borrowing and this mere indication of borrowing cannot serve any significant purpose. Mphahlele mentions that the lexicographers can claim that the lemma is known to the users or speakers of Northern Sotho but, at least, this loan word should have been accompanied by a meaning description because the speakers of the target language need more information about the lemma **dynamite**. This means that the meaning description of the lemma would have facilitated the process of the meaning transmission if it was given in the following way:

(15) **Tanamaete** - Ke sethunyi se maatla seo se šomišwago kudu go thuba leswika goba maswika.

According to Mphahlele (2001:27), the above definition helps the speakers of the target language to familiarize themselves with the referent. He also indicates that when the referent is fully defined, its meaning is comprehensible to the dictionary users and it will assist them in achieving their desired communication when they refer to the lemma. In other words, he continues that the user will know the meaning and also know the function of the source language form because of the information usage that has been provided in the definition. He further says that, if lexicographers feel that there is a need for a lemma to be given a detailed description, they must feel free to give one because, without the description, the lemma cannot be understood by the people who are consulting the translation dictionary. He stresses that translation dictionaries do not assist lexicographers to use single word as a translation equivalent and that modern lexicography permits the description of meaning in the translation dictionaries.

Lexicographers should also include the picture of the term that is being defined for the users to be able to refer to it when they do not understand or know what the term really means. The following example will show the picture of dynamite and how it looks like:

(16)



(<http://www.shutterstock.com/s/dynamite/search.html>)

This pictorial illustration is one of the solutions that the lexicographers should consider in a case of lack of equivalence in the target language, as it will help users to have a clear understanding of the term and also refer to the picture so that they can really know that particular term. The above picture of dynamite will help dictionary users as they will be able to understand what it looks like after they have read its definition. In addition, let us critically consider the following presentation from the *Multilingual Natural Sciences and Technology Dictionary for grades 4-6* (2005:194):

(17) **Thermometer** - themometha

The above presentation too leaves a lot to be desired. The Northern Sotho dictionary user or target language speaker can ask a question concerning the above presentation: “what does such term mean or look like?” In order for dictionary compilers or lexicographers to avoid this question, they should provide additional information in the form of a brief definition of the term and the picture for the users to understand and remember the referent. In this case, the referent (**thermometer**) will

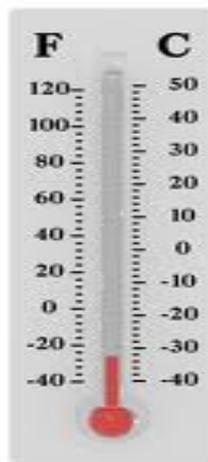
remain in the mind of the dictionary user as an image. Without this extra linguistic information, dictionary users will not be assisted to understand and know the presented lemma. The above example should have been presented this way by the dictionary compilers:

(18) **Themometha** - Ke sedirišwa seo se šomišwago go lekanya goba go bontšha thempereitšha mmeleng wa motho.

The above definition that is provided by the lexicographer can be of help to the Northern Sotho speakers who are not familiar with the English lemma **thermometer**. As such, they will be able to understand the meaning of the source language form because the definition that has been provided has brought some kind of understanding to the users about that lemma. In this case, the lexicographer should not only use the brief definition of the term as the only solution to the problem but also consider the use of pictorial illustrations as part of surrogate equivalence.

The following example shows a picture of the term **thermometer** and how it looks like.

(19)



(<https://www.factspage.blogspot.com>)

The picture given on the above example clearly shows how the lexical item thermometer looks like. This can be very useful to dictionary users as they will now

understand the meaning of the term and also have a clear picture of what the term looks like. That will ensure that there is no misunderstandings and users will be able to achieve communicative equivalence.

Let us consider the following presentation from the *Multilingual Natural Sciences and Technology Dictionary for grades 4-6* (2005:162):

(20) **Robot** - roboto

A linguistic gap prevails or exists in the above article. If a new Northern Sotho term is formed in this particular way, the target language users cannot understand the source language terms. In the example given above, the English term **robot** is given with the transliterated form as **roboto**. This transliterated term is supplied as a new Northern Sotho term and it cannot assist the dictionary users to understand the meaning and the contextual guidance of the source language term **robot**. Transliteration could only be opted for if the speakers of the target language understand the source language term and what it means; if that is not the case, transliteration will only be a mere duplication of the source text.

Transliteration is said to be the adoption of foreign-language terms to create a target language equivalent. In most countries, including South Africa, English has appeared as the language that is frequently used to make communication possible between two people who are not sharing a mother tongue and also as a language of choice. This has, therefore, made African language speakers to choose the use of English by means of borrowing, neologising and transliterating (Mphahlele, 2004:341).

Alberts (2001:3) states that the terms should not be created haphazardly. She further comments that terminologists, subject specialists and linguists, who are supposed to supply the term equivalents for source language terms, have a lot of ways to create the terms. The different ways that they use to create the terms, should not be used randomly because lexicographers and terminologists need to take the knowledge of a certain speech community for which the dictionary is intended to reach. This means that if the lexicographer, for example, opts for the use

of transliteration of a certain term as a translation equivalent, the term cannot serve any semantic purpose. Therefore, the lexicographer, in this case, does not meet the needs of the target users of the dictionary. The lexicographer should have presented the term this way:

(21) **Roboto** - Ke setlabela seo se šomago mo mmileng go laola sephethephethe sa difatanaga.

The above description helps the users to familiarise themselves with the referent and the referent is fully described so that the meaning provided is comprehensible to the users. This lexicographic definition will help the users to have a good communication when they refer to the lemma. In other words, the dictionary user will be able to know the function and the meaning of the source language form because of the usage information that has been provided.

If the lexicographers feel that a particular lemma needs a detailed description, they should feel free to do so because in the absence of the description, the users of the dictionary will not understand the lemma when they consult it.

If the speakers of the target language are not familiar with the foreign concept or term, the terminologists should make sure that the term is conveyed into the target language with the correct terminological procedure. In most cases, the new terms are merged into the orthography of a language after they would have been regarded as an established borrowing in that particular language. This means that there is no way in which one could possibly claim that the newly transliterated equivalents adhere to the orthography of a language.

The lexicographers should also make it a point that, after they have supplied a lexicographic definition in a case by where there was lack of an equivalent term, they provide the users of a dictionary with a pictorial illustration of that particular term as it will help the users to understand the term well and also use it for future reference. The following example illustrates or shows how the robot looks like:

(22)



(<http://www.freefoto.com/preview/21-33-85/Traffic-Lights>)

The above picture of the **robot** is definitely going to assist the dictionary users who are not familiar with the term as they will be able to read the lexicographic definition of that particular term which is written in the target language. It will be able to help them to understand the term a lot better and also see its picture. As a result, they will be able to use the term where it is necessary and thereby achieve communicative equivalence.

Let us examine the following example taken from Kriel, Prinsloo & Sathekge, (2007:265):

(23) **Microscope** - maekrosekopo

The term **microscope** shows a relation of zero equivalence as the equivalent that is given is a transliterated one and many lexicographers have used borrowing as an alternative. But borrowing of the source language has not helped the users in finding their required meaning of the term. The above term shows a relation of a referential

gap because the term is only known to the speakers of one language, whereas the other speakers of the other language are not familiar with it. This simply means that the term **microscope** is only known by the speakers of English and, if it has to be translated into Northern Sotho, a comprehensive definition will thus be needed so that the speakers of Northern Sotho will get all the necessary information regarding the term **microscope**. The lexicographer or the dictionary compiler should have presented the above example as follows:

(24) **Maekrosekopo** - Ke sedirišwa seo se šomišwago go bona dilo tše nnyane tše batho ba ka se kgonego go di bona ka mahlo a nama.

The above definition will help the dictionary users who are not familiar with it and they will now understand it better. In this case, a dictionary user would be able to achieve communicative equivalence. As it can be seen from the above definition, the supplied term equivalent does not depend on the English original term. Transliteration should only be chosen when all the measures to supply the term equivalents have failed. However, Roets (2001:10) says that:

To measure term equivalents against correctness, concept correspondence, adhere to orthography, appropriateness, accessibility, and conformity with or similarity to other entries should be adhered to.

This means that, when translating technological terms, lexicographers should make sure that they follow the orthography of the target language and also such terms should be the ones that will be accepted in the target language. Roets (2001) also mentions that, in difficult cases, lexicographers and terminologists should try to weigh the value of the term and follow the most communicative available equivalents and also follow the correct register. Roets (2001:10) continues to state that lots of terms are accepted because of their aptness and maybe easy identification with the subject field and lexicographers must also provide their additional benchmark in the creation of terms in the target language.

To add more on what Roets has said, it is wise for a lexicographer to also accompany the brief definition that was given as an equivalent in the target language

with a picture that will work as a pictorial illustration to help the users when they need to refer. The pictorial illustration of the term microscope will be shown below as follows:

(25)



(<http://www.arco-iris.com/George/microscopy.htm#modern>)

The above picture of **microscope** will help dictionary users as it is one of the best solutions for the problem of lack of equivalent terms in the target language. As such, dictionary users will be able to use the term in the correct context.

Let us consider another example taken from the *Multilingual Natural Sciences and Technology Dictionary for Grades 4-6* (2005:146):

(26) **plug-** polaka

A linguistic gap prevails in the above presentation of zero equivalence because the lemma is known to both speakers of the source and the target languages. The term **polaka** does not exist in Northern Sotho. The lexicographer should have supplied a brief definition to accompany the term **plug** rather than give a transliterated form **polaka** as a translation equivalent. The lexicographer should have presented the above term this way or the term should have appeared as follows:

(27) **Polaka** - Ke sedirišwa seo se šomišwago go kopanya mohlagase.

The definition of the lemma **plug** as defined above will help the Northern Sotho speakers who are not familiar with the term to understand it better. The term **polaka** is a borrowed form from English and it is somehow established in Northern Sotho and that means the lexicographer should enter it in the semantic comment followed by its definition. In a case of this nature, it requires the lexicographic definition and the pictorial illustration as a surrogate equivalence which means the researcher should provide a picture of the term plug to help users have a better understanding of what the term looks like. The following example shows the picture of **plug** as follows:

(28)



(http://www.inmagine.com/searchterms/electrical_plug.html)

The above picture will help users of a dictionary who are not familiar with the term plug to understand it well.

Let us consider the following example from Kriel, Prinsloo & Sathekge, (2007:318):

(29) **Test tube**- tšhuputeki

A referential gap prevails in the above presentation, the term **test tube**. This term is used or known by English speakers and there is no way in which the term could have an equivalent in Northern Sotho. The example given will not be able to assist the dictionary users to understand the meaning of the source language.

According to Gouws (1999:26), in order to cope with this problem, the lexicographers should familiarise themselves with some characteristics of lexical semantics. This means that lexicographers should know the rules that govern the meanings of terms. If they understand the rules better the lexicographers will be able to know or differentiate whether a lemma has a low degree of translatability or not. For the lexicographers to reproduce the content, it is more or less possible when both the source and target languages share the same conceptual framework. He continues to say that:

Words and concepts are not only mere entries in a dictionary but some are cultural things that sometimes are very hard to translate because the type of the material that needs to be translated. The lexicographer has a formidable job of balancing and living in two cultures. In other words, the lexicographer must be able to maintain the mental model of the cultures involved. In translating scientific terms, the lexicographers of bilingual dictionaries are faced with a serious challenge. (Gouws, 1999:26)

If the term is not known, the lexicographer should supply a comprehensive definition of the lemma that could serve as surrogate equivalence and include pictorial illustration as it will help the users of the dictionary to understand that particular term in a case where there is lack of equivalence. The above example should have appeared as follows:

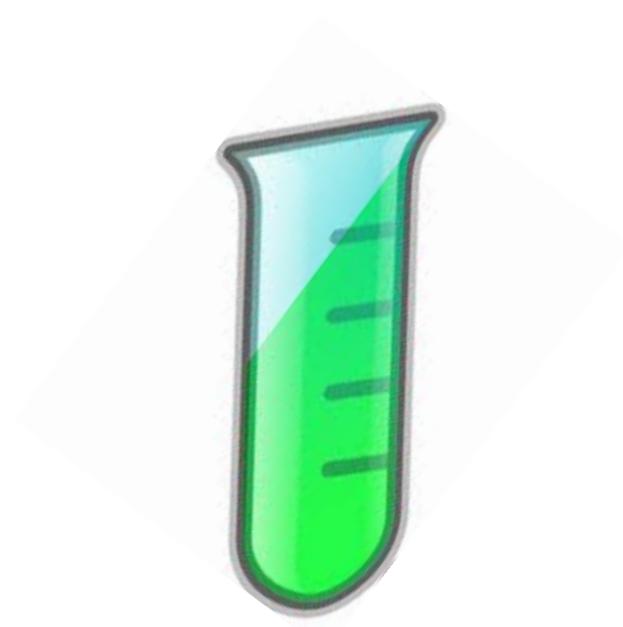
(30) **Tšhuputeki** - Ke tšhupu ya galase yeo e tswalegilego ka mafelelong ebile e šomišwa go swara bokalo bjo bonnyane bja didirišwa tša ka laporatori tšeo di šomišwago ge go dirwa diteko tše itšego.

This definition is the most comprehensive meaning that can make the users of the dictionary to understand the meaning of the source language. This happened

because of the gap that prevails in the article which is the referential gap. In a case of zero equivalence, the lexicographer should supply a brief definition where a referential gap exists because the target language users need to know a lot of information about the lemma.

The lexicographer has done a great job by supplying a definition of the term **test tube** and this will help the dictionary users to understand the term better and furthermore the lexicographer should have added a picture to help the users to have a better understanding of the term as they will be able to see the picture of that particular term. The following picture shows what a **test tube** looks like:

(31)



(https://www.google.co.za/#hl=en&output=search&client=psy-ab&q=pictgure+of+test+tube&oq=pictgure+of+test+tube&gs_l=hp)

The above picture will help dictionary users to understand the term **test tube** a lot better than just reading only the definition of the term. Lexicographers should provide the scientific definitions in a case of zero equivalence because they are important and they will be able to help the target users of a dictionary to understand lexical item.

Roets proposes that terminologists and lexicographers have an important task, which is to make sure that the terms correspond with the field of science that has been formed in African languages, so as to help users of the dictionary to be able to learn and also use the scientific terms in their mother tongue

3.4 Loanwords

Hockett (1958:405, in Mehlape, 2007:20) adds that loan words are acquired and adopted with their cultural meaning. He also states that loan words which are adopted along with the object and such words are, on their own, linguistic units, that is, they have special reference to make and show no shift of meaning in both the donor and host languages. The following example from Kriel, Prinsloo & Sathekge, (2007:209) shows this point:

<i>Donor Language</i>	<i>Source Word</i>	<i>Adoptive</i>
English	copper	koporo

According to Mphahlele (2001:27), the above example or article is accepted as it is an established loan word. According to him, the term **koporo** is a loan word that is recognised in Northern Sotho as it is being used frequently by the speakers of the target language. Mphahlele also states that the following definition can serve as a bonus to the users as a translation equivalent of the term copper.

(32) **Koporo** - Ke lethale le lehwebidu-phefadu leo le šomišwago go sepetša goba go laola mohlagase.

The above-mentioned term **koporo** has been borrowed from English into Northern Sotho but it still retains the same meaning as the source text. The term **copper** is one example of a linguistic gap as both speakers of English and Northern Sotho know what the term means but does not have an equivalent in the target language and that resulted in Northern Sotho speaking people adopting the term copper into their own language and call it **koporo**.

It is also important for a lexicographer to provide a picture of the term that is being researched because the main focus or the main idea in this study is to come up with ways that can help lexicographers not to just opt for transliteration as their first option when they come across a term that does not have an equivalent in the target language, but to use surrogate equivalence in a form of giving a brief definition and also provide a picture to illustrate more on the point. The following picture shows how a copper looks like.

(33)



(<http://www.ukzambians.co.uk/home>)

The above picture has been provided in order for the users to know what the adopted term looks like after they were given its definition. By so doing, users will understand the term a lot better than before and they will be able to use it in the correct way as they will have communicative equivalence.

3.5 Conclusion

In zero equivalence, there are two kinds of gaps, namely, linguistic gap and referential gap. A linguistic gap is recognised when a referent is known to both speakers of the source and the target languages but the other language, which is the target language, does not have a term to express it, whereas the other language,

which is the source language, has such a term. This means that the definition given will only represent the referent that is known to the target users and it will be brief, while the definition of the lemma representing the referent that is not known to the dictionary users will be more comprehensive because the target user needs more information about the lemma.

Zero equivalence is caused by language and culture differences and zero equivalence simply means that it is a case whereby a lemma does not have a direct translation equivalent in the target language. In a case where there is lack of equivalence, the lexicographer should opt for surrogate equivalence whereby the definition of that particular term is supplied along with a pictorial illustration so that dictionary users can be able to read the definition and also look up the picture to understand the term better.

CHAPTER FOUR

FUNCTIONAL AND IDIOMATIC EQUIVALENCE

4.1 Introduction

This chapter focuses on the way in which the functional translation of scientific terms and idiomatic expressions affect equivalence between English and Northern Sotho.

4.2 Functional Translations

African languages are faced with a problem of finding terminology in fields such as science. This is probably seen when the words are to be translated from English into African languages. Most of the terms that are used in English may be unknown in African languages. When it comes to functional translation or equivalence, the translator should make sure before translating that the text that is translated is going to be understood by the users and also be able to find a communicative and understandable translation equivalence.

Scientific terminologies have affected African languages such as Northern Sotho and that leads to meaning of particular terms shifting. In the end, such terms end up not being used at all.

(1) **Aeroplane** - sefofane

The term **sefofane** is the correct equivalent for the term **aeroplane** and it is a standardised term that is acceptable in writing and speaking. The dictionary compilers have provided the equivalent, looking at the function of the term **aeroplane** which refers to a vehicle that flies in the sky. In Northern Sotho, **sefofane** is something that flies and that means the lexicographers gave the correct equivalent but the speakers of Northern Sotho are not using the term as an equivalent for **aeroplane**, instead they use the term **folaematšhene** which is a borrowed term from **flying machine**. This makes the word **sefofane** redundant and that will result in the term losing the meaning and its function. The use of the borrowed term is not accepted in the standard language. It means that the dictionary

compilers have failed as the effort that they put in to come up with the correct and understandable translation equivalent is taken for granted by the dictionary users. This kills our African languages as speakers concentrate on the borrowed words than on the correct equivalents that are the ones that are accepted and used as standardised language. Another relevant example in this regard is as follows:

(2) **Cell phone** - sellathekeng

The above example shows the correct equivalent of the term **cell phone** but the challenge that speakers of Northern Sotho find is that the dictionary users do not use the term **sellathekeng** as an equivalent for **cell phone**, but instead they prefer using the term **phone**, which still does not serve as the correct meaning of the term. A phone is the one that is used in households or even in the offices. This means the term **sellathekeng** does not serve its purpose or does not have much use as it is only used in written language and the written language is mostly used in formal functions whereas the spoken language is the one that is frequently used.

Let us consider the following example taken from Kriel, Prinsloo & Sathekge, (2007: 290):

(3) **Radio** - seyalemoya

The term **radio** in the bilingual dictionary has been supplied with a translation equivalent, which is, **seyalemoya**. The term was created according to its function as it transmits information through wireless connection that reaches a lot of different places at the same time, but the users of the target language do not use this term and that makes it not to be familiar to the speakers more especially the younger ones as they are not being exposed to the term. This clearly means the term **seyalemoya** has lost its meaning and function as it is not used whereas it is the term that is standardised and considered to be the correct equivalent for the term **radio**.

Let us look at the following example from Kriel, Prinsloo & Sathekge, (2007:299) that emphasises the point that is stated above about using the borrowed words as equivalent:

(4) **Watch** - tšhupanako

The term **tšhupanako** is a standardised form in Northern Sotho that is accepted as the equivalent term for the word **watch** but the term **tšhupanako** is only used in written language while the term **watšhe** which is a borrowed term is used in spoken language as the equivalent of the term **watch**. The term **watšhe** is not the correct equivalent term for the lemma **watch** and that means the speakers of the target language are causing language death as the correct equivalent is not taken into consideration and that results in the equivalent losing its meaning and function.

Let us look at another example taken from Kriel, Prinsloo & Sathekge, (2007:198):

(5) **Calculator** - sebadi, seakanyi

The term **calculator** is given the equivalent term **sebadi** or **seakanyi** in Northern Sotho because of its function, which is, to calculate the numbers and the translation equivalents that are supplied in the English- Northern Sotho bilingual dictionaries for the term **calculator** are standardised and considered to be the correct equivalents to be used when translating but the users and the speakers of Northern Sotho do not use the equivalent terms **sebaledi** and **seakanyi** as supplied in the dictionary. Instead, they use the direct borrowed term, which is **calculator**, and that makes the correct equivalent not to be used by other speakers of the same language who are not familiar with the equivalents. To add on the above given example, let us look at the following example taken from Kriel, Prinsloo & Sathekge, (2007:293):

(6) **Refrigerator** - setšidifatši

The term **refrigerator** has an equivalent in Northern Sotho, which is **setšidifatši**. This is a standardised term that is acceptable and correct equivalent for the term **refrigerator**, but the speakers of Northern Sotho do not use the given equivalent. Instead, they use the borrowed term **fridge** which is also a short-cut of the term **refrigerator**. This makes the term **setšidifatši** archaic. As a result, speakers and users of Northern Sotho and those who are not familiar with the term will never understand its real meaning. The dictionary compilers knew what they were doing

when they approved the term **setšidifatši** to be the equivalent term for refrigerator. They were looking at the function of the equipment which is to make things cold inside it, **go tšidifatša** in the target language. **Setšidifatši** is hardly used in spite of it being a standardised term. Let us consider another example taken from Kriel, Prinsloo & Sathekge, (2007:317)

(7) **Telephone** - mogalantšu

The term **telephone** has an equivalent in Northern Sotho which is **mogalantšu** and the equivalent is given according to the function of the equivalent term which is to communicate with other people in a different place through it. Now, the speakers of the target language do not understand the reason why the dictionary compilers came up with such an equivalent and that results in most of the speakers not using the equivalent as supplied in the Northern Sotho-English bilingual dictionary. Instead they prefer the original term and call it **foune**, which is direct borrowing of the source text. The speakers of Northern Sotho in this instance are causing language death because the reason for the lexicographers to come up with equivalent terms is not only for academic reasons but to also promote the use of indigenous languages, and also teach the younger generation about the importance of knowing their language. But when the speakers of the target language use a borrowed word as the equivalent, the meaning of the given equivalent is lost and destroyed and it will not be known also by other speakers of different languages who are interested in knowing Northern Sotho as those speakers will ask the target language users of the equivalent of the term **telephone** and they will simply say it is a **foune** and those speakers of other languages would have learned nothing from that. It is a sad state of affairs that the correct equivalent, which is, **mogalantšu**, will be meaningless to foreigners as well. To add more on the use of borrowed equivalents while there is an equivalent term of the original term, let us look at the following example taken from *Multilingual Natural Sciences and Technology Dictionary for Grade 4-6* (2005:78):

(8) **Extension cord** – selelefatši

Regarding the term **extension cord** whose function is merely to extend the electrical cords in a case whereby a cord does not reach the targeted place, the

lexicographers came up with an equivalent term that suited the original term perfectly and said it is **selelefatši**, which means equipment used to extend when translated into English. The speakers or rather the users of Northern Sotho do not use the term **selelefatši** as they do not know the equivalent as it is mostly used in written language, not in the spoken one. The younger generation gets lost here because they only know the borrowed term of the original term, that is it **extension**. The conclusion is that the younger generation knows **extension** as the equivalent term of **extension cord** whereas the correct equivalent is **selelefatši**. **Selelefatši** ends up being useless and also not functional in the long run.

Let us consider another example taken from *Multilingual Natural Sciences and Technology Dictionary for Grade 4-6* (2005:41)

(9) **Catapult**- seragamabje

Regarding the term **catapult** which is **seragamabje** in Northern Sotho, the dictionary compilers provided this equivalent looking at the function of the equipment concerned, which is to throw heavy stones hence the equivalent term given is **seragamabje** which means throwing stones. The users of the target language do not use the term that is given as the correct equivalent as most of the speakers if one asks them what the equivalent of the term **catapult** is in their language the answer would probably be **khathaphila**. **Khathaphila** is a borrowed word that is transliterated so that it cannot sound foreign to the speakers of the other languages. The term **seragamabje** ends up losing its meaning and function as it is not used and known by the speakers of the target language.

All the examples thus far clearly show that borrowed terms are more popular than created terms in Northern Sotho. The study will now discuss the relationship between idioms and science.

4.3 The Relationship between Northern Sotho Idioms and Science

4.3.1 Definition of idiom

An idiom is a word or phrase which means something different from it says. It is usually a metaphor. Idioms are common phrases or terms whose meaning are not real but can be understood by their popular use (<http://simple.wikipedia.org/wiki/idiom>).

In all the languages, there are different kinds of idioms which are unique and their expressions cannot be easily understood from the individual words of a phrase. Each and every language has its own way of expressing the idiomatic expressions which are culture specific.

So, in the process of Interlingual translation, one idiom is replaced by the other. And the substitution is not only made on the linguistic elements of the phrase or the image contained in the phrase but on the function of the idiom. This means that when the translators translate the idiomatic expressions, they should use the dynamic type of equivalence which is defined as follows: Nida (1960: 221) in Mashao (2008:3) defines dynamic equivalence as “a translation principle according to which a translator seeks to translate the meaning of the original text in such a way that the target language will trigger the same impact on the target culture audience”. This means that the translator should translate the idiomatic expressions in such a way that the target users will understand and also not to lose the whole meaning of the idiom.

As far as idioms are concerned, the first difficulty that a translator comes across is being able to recognize that s/he is dealing with an idiomatic expression. This is not always so obvious. They end up making mistakes of using direct translation when translating because they are not aware of the idiom in question. They assume that it is just a normal sentence.

The African languages exhibit unique cultures and this poses problems to the translators in the process of translating information from English into any African

language. This means that a translator who is not familiar with idioms will have a problem of understanding that idiom because they will give the meaning of the idiom using literal or direct translation which will mislead the user.

For example:

(10) **Mosadi o ile kgweding**

A person who is not familiar with Northern Sotho is likely to translate the above sentence as follows:

(11) **A woman has gone to the moon**

The above sentence has been translated in a wrong way. The translator has used literal translation instead of taking into account dynamic equivalence that could have helped him or her to realise that the above given example is an idiom and the translator will definitely think that the term **kgwedi** that is used in the idiom above refers to the **moon**. The idiom actually refers to a process whereby females see their menstrual cycle which is referred to as **kgwedi** because most of these females experience their period at the end of the month and when the moon sets. The correct translation should have been as follows:

(12) **A woman is on her menstrual cycle**

Nowadays science has affected African languages and cultures because it has caused a shift of meaning and the way people practise their rituals and tradition. In the olden days, grandmothers or the elderly people used to take a baby girl when she was two years old and they would show her the moon and say that was her best friend and that meant every month whenever the moon went down the girl was supposed to see her menstrual cycle, that is, **kgwedi** in Northern Sotho. Nowadays the term **kgwedi** is now associated with **matšatši** (days) because when she is on her menstrual cycle, people will say that **o matšatšing** because in each and every month there are certain three to seven days that she will be on her periods. That is why they say **o matšatšing**. Sometimes this causes confusion as the term **letšatši**

means the sun and also refers to a day in Northern Sotho. The translator should thus be able to clarify the users when translating by making them understand the terms and what the idiomatic expression entails.

The following example taken from Kriel, Prinsloo & Sathekge, (2007: 242) illustrates how idioms impact African languages such as Northern Sotho:

(13) **head- hlogo**

The above term means a human body part which is the one that carries the brain as the most important body part. But now the term is also used in an idiomatic expression as follows:

(14) **I am the head of this family**

The above example is an idiom but the translator or any other person can use literal translation and even use the term **head** in a wrong context not knowing that the idiom is actually all about the father or the husband. The term **head** is polysemous, which means that the lexicographers in the bilingual dictionary have concentrated in one meaning of the term and did not indicate that it can also be used to refer to an individual too.

Due to language difference in terms of idioms, it is difficult and also challenging to translate idioms at times. Some of the idioms need to be recognized and understood by the translator before translating and also consider the translation methods Mustonen (2010: 41). Let's consider the following example taken from Rakoma (2010: 10):

(15) **Go belega mafahla**

A translator who is not aware that the above example is an idiomatic expression is likely to translate it literally thinking it is just a mere sentence and the other speakers from other languages such as English will not be able to understand the context of a given translation. The translation is likely to be as follows:

(16) To give birth to the twins

The above translation is wrong because the translator has used direct translation and he or she was not aware that example no (15) is not just a sentence but is an idiom. For the users who are not familiar with the idiom will also use the wrong translated version of the source text and they will end up losing the meaning of the whole text. The correct translation should have been this way:

(17) Go tlelwa ke mathata a mantšhi ka nako e tee (Facing a lot of problems at the same time)

The above definition given in example (17) is the correct explanation of the idiomatic expression that was discussed above because it was not translated literally but was carefully read and analysed. Let us consider another example taken from Rakoma (2010:16):

(18) Kgwedi e bonwe ke ditšhwene pele

The above-given example is an idiom and this suggests that the translators should first familiarize themselves with the sentence before translating it in order to know whether they are dealing with an idiom or just a mere sentence.

(19) The baboons saw the moon first

Any person who does not understand Northern Sotho will not know the real meaning of the expression in (19) as it is translated literally and he or she would just think it is the correct meaning whereas it is not. So it is of importance for the translators to know the idioms in both the source and the target languages so that they can be able to find the real meaning of them as there are idioms in both the source and the target languages which are bit different but referring to the same thing or having the same meaning when they are interpreted. The correct interpretation of the above given idiom should have been this way:

(20) **Ngwedi o bonwe ke basadi pele ka baka la lehlapo la bona** (Females are the first people to see the moon appearance as it is a sign that their menstrual cycle has started)

The above interpretation will help both the source and the target language speakers who do not understand the meaning of the idiomatic expression to have a better understanding of the idiomatic expression.

In the translation of idioms so far, the first difficulty that a translator comes across is to be able to recognize that he or she is dealing with an idiomatic expression before one can even think of translating. This is not always obvious as some of the idioms are easy to recognize than the other idioms. Some idioms are not easy to recognize and interpret. Thus, a translator should first have an idea of what the idiom is about in order to understand it better and then give the correct translation. For example:

(21) **A person has passed on**

The above given example is understandable and straight to the point in a way that it does not need any explanation, but in the target language (Northern Sotho) the translator has to be more polite when he/she provides an equivalent idiom to show respect that a person is no more. The equivalent idiom should be given as follows:

(22) **O tšerwe ke phiri (he has been grabbed by the wolf)**

The above idiom in the target language shows respect because the idiomatic expression is associated with euphemism; it is more humane and respectful. This method of euphemism makes the reader to take account of the beliefs and the cultural values of the target language and respect them. In contrast, someone who lacks respect and does not follow their traditions and their culture is likely to give the equivalent as:

(23) **Motho o hwile** (the person is dead)

This is not acceptable in the Northern Sotho speakers' culture because it does not show any respect to the people who are no longer with us, and this can also hurt the family of the deceased as they loved their departed relative. In Northern Sotho, disrespecting someone who cannot defend him/herself does not show any respect at all.

According to Balfaqeeh (2009:6), idioms are difficult to translate; sometimes it is difficult for the translator to find the correct equivalent for a single word without finding equivalence for a lot of words that mean the same thing. Idioms are mostly cultural specific because, in most cases, they occur in a sense whereby a target language does not have an equivalent. This means that the translation of idioms mostly depends on the context in which they occur. We might find idioms in the target language that have the equivalent in the target language but only to find that the situation in which they have been used differs from the source language to the target language. Thus, when translating idioms, one should at least try to understand what they really mean and then try to see if there is no equivalent idiom that means the same in the target language. For example:

(24) **It is raining cats and dogs**

The above example does have an equivalent idiomatic expression in Northern Sotho that expresses or shares the same meaning, and that means the translator should not use the literal translation as the first option but he or she should at least give the correct idiomatic expression in the target language that corresponds with the one in the source language. But, for a translator who is not familiar with the above given idiomatic expression, he or she is likely to translate it as:

(25) **Go na dimpša le dikatse**

The above given translation is the direct example, unfortunately, such a translation is incorrect. The correct equivalent of the idiom should have been this way:

(26) Go na pula ya matlorotloro

All this means that the users should be able to understand what the source language idiom entails and be able to use it in the correct context. The main aim of translation is for the target readers to understand the translated text and be able to interpret it. If the translators use literal translation, most of the users will be misled as they will be using the equivalent idiomatic expression that was literally translated. Let us consider another example:

(27) Lefase le eme ka maoto

For a translator who is not familiar with this idiomatic expression, he or she is likely to translate it directly or literally. For someone who has never heard of this particular idiom before, it will be difficult for him or her to say that the given equivalent translation of the idiom is wrong. The translator should first read and understand the expression before translating it. If this is not done, the idiom in (27) will look as follows:

(28) The world is standing on its feet

The translator here has given the direct translation of the expression in (27) and word-for-word translation has been applied as the translator wanted to include each and every word that is found in the target language. The correct translation that the translator should have given was supposed to be this way:

(29) There are a lot of bad things happening around the world

This is the correct interpretation of the idiom as it means the same thing in the source text. One other thing that the translators should keep in mind is that, when translating, they should avoid being ignorant and concentrate on the rules of translation. For example:

(30) **Monna o tagilwe**

The example provided does not show any respect for the elders. Youngsters use this style when they refer to their friends when they are drunk. The translator should always make sure that, after translating a text, he or she should proofread the text and see if it will be acceptable to the readers. The correct way of writing or translating the above-given example should have been as follows:

(31) **Monna o khotše**

This is the correct idiomatic expression that should have been used in example number (30) as it is more polite and respectful. The **khotše** part of the idiomatic expression is a figure of speech that is called euphemism. It is more respectful than using the term **go tagwa** (to be drunk) and it shows that the translator is aware that he or she should show respect when it comes to the elders, in spite of their behaviour. The equivalent or the translation of the above idiomatic translation should be:

(32) **The man is under the influence of alcohol**

Example (32) is the correct equivalent of the idiomatic expression in (31).

4.4 Conclusion

The use of borrowed terms has affected our African languages as equivalents supplied in bilingual dictionaries are not used. Concomitantly, the equivalents become redundant and lose the meaning. The use of literal translation is a problem as translators do not familiarise themselves with the idiomatic expressions.

CHAPTER FIVE

CONCLUSION

5.1 Introduction

This chapter contains the summary of each chapter of the research, findings and the recommendations of the study.

5.2 Summary of Chapters

Chapter One serves as the introduction of the study wherein the background of the study and the methodology have been presented.

Chapter Two outlines the literature review on zero equivalence and how it has an impact on the translation of scientific terminologies in the target languages.

Chapter Three highlights an overview of the evaluation of bilingual dictionaries whereby they were thoroughly evaluated in terms of the borrowed and transliterated terms, which lack translation equivalents.

Chapter Four discusses functional translation wherein certain terms are given translation equivalents in the target language in terms of their function. It also shows that dictionary users do not use the supplied equivalent but instead prefer the use of borrowed terms. In addition, the chapter discusses the translation of idioms whereby translators have a tendency of using literal translation and end up losing the meaning of the whole text.

Chapter Five serves as the conclusion of the study. It presents the summary of chapters, the findings and the recommendations of the study.

5.3 Findings

- The borrowed or transliterated lemma in Northern Sotho does not solve the problem of lack of equivalence because not all the users are familiar with English.

- Transliteration is mostly the method that is used when there are no equivalent terms in the target language as it is hard for the terminologists and collaborators to create terms in developing languages.
- The use of literal translation poses a major problem in translations, more especially when translators are working with idiomatic expressions.
- With functional translation, the researcher established that the given translation equivalents in the Northern Sotho-English and English–Northern Sotho bilingual dictionaries are not used, but, instead, the borrowed form of the terms are the ones that are considered and used regularly. This causes the written and approved equivalents in the bilingual dictionaries to lose their function and meaning.

5.4 Recommendations

The study recommends that:

- The use of lexicographic definitions and pictorial illustration should be regarded as a solution to solve the problem of zero equivalence in the English-Northern Sotho bilingual dictionaries;
- When lexicographers supply the equivalent terms, they should know whether the term exists in the target language and if that is not the case, they should give a lexicographic definition that will briefly explain the meaning of the term in question and also provide the picture to illustrate what it looks like;
- Bilingual dictionaries should always make sure that they use the most accurate and understandable lexicographic definitions for the users to understand;
- Lexicographers should be fully bilingual in the source and the target languages, so as to bring about correct translations; and
- The translators should familiarize themselves with the idiomatic expressions in the source and the target language so they can be able to know before translating as to whether they are dealing with an idiomatic expression or just a mere sentence, and also to be able to use dynamic equivalence in a case whereby an idiom does not have an equivalent idiom in the target or source language.

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