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Linguistic Gaps in the English-Kiswahili Translation of Agropesticide Texts in Tanzania

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Abstract: This paper investigates the linguistic gaps in the English-Kiswahili translation of agropesticide texts in Tanzania. The Kiswahili translation of such information enables farmers to be familiar with the proper ways of controlling and managing pests and diseases. Different agropesticide texts were collected from farm input shops and analysed, and informants were interviewed based on the words, phrases, and sentences from the texts. The data were then analysed through thematic analysis. The translation of such information faces some challenges including coinage in the source language, meaning distinction in the source language, formal differences between English and Kiswahili, lack of Kiswahili equivalents for the names of some Kiswahili diseases and pests, and the traditional agricultural practices. Given the genealogical and typological differences between English and Kiswahili, translating through descriptions would overcome non-equivalence between the two languages at the word level. Translating agropesticide texts in Tanzania has implications for proper farming practices among farmers. Directions on the proper use of agropesticides are meant to make farmers practice productive farming. The challenges facing the translation between the two languages can be mitigated through descriptive equivalence and borrowing which is adapted to the morphological and phonological patterns of the target language.

Keywords: translation, equivalence, non-equivalence, source language, target language, agropesticide

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1 Introduction

In most developing countries, including Tanzania, the sharing of agricultural information between farmers and agricultural experts is dependent on conventional ways. To a large extent, these ways include people (such as agricultural extension officers and farm input vendors), texts (such as leaflets, magazines, and newspapers), and public campaigns (Abdullahi et al. 2016). In Tanzania, agricultural extension officers, veterinary officers, and farm input vendors play a big role in familiarizing farmers with better farming practices.

Given that in Tanzania many agricultural inputs such as pesticides, fertilizers, machinery, and chemicals are imported from foreign countries, the description for their proper use is in the English language. If translation is not done, farmers cannot understand the descriptions in the instructional manuals of the farm input, since most of them are not familiar with English. Thus, knowledge of farming practices will not be shared, and communication of agricultural information will break down. In the globalized world where the flow of commodities from one country to another is common, communication through the target language knowledge is important for such transactions to be successful (Imre 2012:1053).

1.1 The translation of agricultural information

One of the challenges that faces farmers in the modern world is access to agricultural information in local languages (IFLA and TASCHA 2017:60). Agricultural information is available mostly in widespread languages such as English, Spanish, and French, which are not familiar to most rural farmers in different parts of the world, including Africa and Asia.

Some initiatives have been taken by different governmental, non-governmental, and international agencies to make sure that such information is available to farmers in the local languages. For example, AccessAgriculture, an international non-governmental organization (NGO), disseminates agricultural knowledge to farmers worldwide through videos translated into respective local languages in East Africa, including Kiswahili, Ateso, Luganda, and Luo, among others (Bentley 2016:4 and Karubanga et al. 2017:192). Another international NGO known as PANOS has a database of radio programme materials for agricultural extension on cassettes and the internet that are translated into local languages (Chapman et al. 2003:6).

Further, some scholars including Yared (2014:84) and Karubanga et al. (2017:192) maintain that there is still a need to translate agricultural information from foreign languages into local languages so that farmers can comprehend it easily. That is to say, understanding agricultural information in the local

language and context is important for better farming practices and products. In Tanzania, information regarding the proper use of agro-chemicals and machinery is translated from English into Kiswahili for farmers to comprehend.

1.2 The challenges in translating agricultural information

Translation of a text involving any kind of information and any languages is always surrounded by challenges. The inadequacy of translation stems from irreducible linguistic and cultural differences between the languages, contexts, and cultures of the source and target groups (Glodjović 2010:143). No matter how different are the languages, cultures, and life conventions of the source and the target groups, the cost of translation failures is always borne by the target group.

In translating agricultural information, challenges have been reported. Bentley (2016:10) in the Luo translations in Uganda reports dialect differences within the same language as among these challenges. When translating into languages that have different dialects, the translator is likely to favour equivalents from one dialect over the others, thereby inhibiting proper comprehension of messages by the speakers of the disadvantaged dialects. For example, Bentley (2016:10) found some words from the Langi dialect being used for the Acholi Luo dialect speakers. When a word or expression is used by speakers of a different dialect, it is used out of context and culture; thus, it may fail to capture adequately some realities as intended in the target readership.

In Tanzania, standard Kiswahili which is familiar to a majority of the population was chosen from the Kiunguja dialect among other dialects such as Kimrima (Kimtang'ata), Kipemba, and Kimgao (Petzell 2012:138). The speakers of these dialects understand each other. The dialect differences among the speakers of Kiswahili are manifested in speech, not in writing. Then, the translation of agropesticide information into Kiswahili will have no significant dialectical impact to the readership as it does in other languages, as discussed in the preceding paragraph.

Karubanga et al. (2017:192) in Uganda report that the Runyankore-Rukinga, Rufumbira-Runyarwanda, Luganda, and Lukongo translated versions of videos for farmers had some challenges, including the use of technical language that affects the comprehension of the message by the farmers and information loss in the target language compared with the source language (2017:192, 196). When some facets of information are lost, farmers receive less information, something that is likely to inhibit proper comprehension of the intended message and can, in turn, affect the real practice of what is intended. The technicality of the language used is likely to exclude many farmers from understanding the intended message, thereby affecting the intended practice.

Lack of equivalents in the target language, especially for culturally specific words, is another challenge in translation. Though it is without a doubt acknowledged that anything is translatable, some cultural peculiarities remain untranslatable. For example, Xiong (2014:2155) says that there are no English equivalents for some Chinese peculiar words such as food names, religious terms, names of cultural relics, and new terms with Chinese characteristics. In Kiswahili, Malangwa (2010:124) reports that the computer term *window* has no ready equivalent in Kiswahili, and Jilala (2014:152) reports that the Kiswahili term *ugali* has no lexicalized English term. In these cases, borrowing from the source language is used to "translate" such words. Translation through borrowing has always resulted in producing other messages than what the target audience really wants, and sometimes the translation may deviate from the canonical patterns of the target language.

Another problem that has been reported is meaning distinction between the source and the target language, especially for culture specific terms. Languages express cultural realities differently. One language may use only a single word to refer to a certain concept, artefact, practice, or experience, but another may express the same distinctively by using different terms. With reference to food and crop names, Malangwa (2010:109–110) shows that some Kiswahili food names have the same English equivalents although they denote different senses in the local context. For example, the Kiswahili words *wali*, *bokoboko*, *biriani*, and *mchele* are translated as 'rice' in English. That is to say, English is unable to make distinctions between kinds of rice while Kiswahili can do so. Kiswahili also makes a distinction between *mpunga* (unhusked rice cereals and as a rice plant) and *mchele* (husked rice) while English refers to such distinctions by a single word 'rice.' These distinctions, if not properly translated, may give misleading information to the readership and in turn affect the intended practice.

2 The Functional Equivalence Theory

The functional equivalence theory was proposed by Nida (1964:159). This theory propagates that the message in the translated text should be approximately equal to the message in the source language. The theory proposes for the closest natural equivalent to the source language, entailing that 'equivalent' refers to the source language message, 'naturalness' to the target language, and 'closest' to the degree of resemblance between the messages in the source and target languages (Nida 1964:166).

No matter how different the two languages involved in translation are structurally, morphologically, or lexically, the message in the target language should be as close as possible to that in the source language. That is, the message should be prioritized over the form (Li 2006:72).

Since English and Kiswahili are two languages which are both typologically and genealogically different, their forms are quite different, making the task of translating even harder. This theory, then, advocates that such formal differences be disregarded at the expense of message in translating. In contrast, efforts to ensure formal correspondence with these two distinct languages will always end in a great loss. This theory is considered appropriate in this context because it allows translators to be flexible in handling problems of specific situations (Zhang 2010:882), such as the linguistic and cultural uniqueness that surround English and Kiswahili. This theory, then, helps to examine the extent to which the English-Kiswahili translated information suits the target language receptors and their cultural orientation. Thus, this paper examines the challenges facing English-Kiswahili translation of agropesticide information in Tanzania.

3 Methodology

This study adopted a qualitative approach. The qualitative approach uses data that are in the form of texts (Dawson 2002:133). The present study considered textual data from the agropesticide texts, collected by the researchers from farm input shops. Fifteen cotton farmers, five agricultural extension officers, six translators, and five farm input vendors were included in the study. Farmers and translators were selected through snowball sampling technique, the agricultural extension officers through purposive sampling, and the farm input vendors through convenience sampling. The data from the said informants were gathered through interview in Bariadi District, Tanzania. The interviews were conducted separately in different settings for each category of informants. The Kiswahili translated words, phrases, and sentences were selected by the researcher from the user guide manuals of agropesticides for reference in interviews with the informants.

The interviews with the farmers at their homes were meant to reveal their opinions regarding their satisfaction with the Kiswahili translated texts and their ability to comprehend the proper application of different agropesticides through those texts. Each agricultural extension officer was interviewed in their offices to get their comments regarding farmers' ability to comprehend the proper application of farm inputs through translation without assistance from them. The farm input sellers were interviewed in their shops to seek information regarding whether or not farmers seek clarification from them on the proper use of agropesticides after purchasing. The translators were interviewed in their convenient places to reveal the challenges that they face when translating such texts. The data from interviews were analysed thematically following flexibly the steps proposed by Braun and Clarke (2006). The steps include familiarizing with

the data, generating initial codes, searching for themes, revising themes, defining and naming themes, and producing the report.

Themes that emerged from each interview were compared with those from other interviews, revised, defined, and then named. The common themes that emerged from interviews which were considered as a shared understanding of the participants regarding the matter under investigation included coinage and meaning distinction in the source language, formal differences between English and Kiswahili, lack of some Kiswahili equivalents, and Tanzanian traditional farming practices. These themes were selected because they were frequently mentioned by the study participants.

4 Findings and discussion

The following are the themes that emerged as the challenges in the English-Kiswahili translation of agropesticide texts.

4.1 Coinages in the source language

Coinages are invented terms to express new concepts. There are coinages in the agricultural field that are introduced to express product names and new concepts. The coinages in the source language have no equivalents in the target language because they are first lexicalized in the source language before they are in the target language. Thus, they have no already lexicalized equivalents in the target language. Some would even need no lexicalization in the target language. For example, the source language brand names of pesticides such as *Twigathoate 40 EC*, *Mo-durs 48 EC*, *Volar Mz 690 WP*, *Snowcron 50% TIKTIK*, *TIXFIX*, *Skazon Powder*, *Paranex ® 100 EC*, and *BAMIC 2.0 EC* need to be used as loan words in the target language since hardly can there be equivalents for them in the receiving language. Through borrowing, such terms enter the host language with their affinity with the source language. They always tend to deviate from the morphological and phonological conventions of the target language. Since they are strange and odd in the target language, they do not satisfy linguistic and cultural needs of the target language receptors (Jilala 2014:153). Farmers cannot pronounce, memorize, and internalize the transferred product names in their daily farming transactions. They cannot identify them by name if they want to buy a new one even if they had bought and used the same before. They memorize them by the colour of the container or pictures on the user guide manual/label.

In Kenya, the same situation has been reported that farmers required to be shown the farm inputs first before purchasing them because of difficulty in pronouncing and memorizing their names. In Kiswahili, such names could be better understood by the rural Tanzanian farmers if they were adapted to its

graphemic and morpho-phonological patterns instead of being transferred (as proposed by functional equivalence theory). Thus, the word *Modurs* could be spelled as *Modaz*; *Paranex* as *Paraneksi*, and *Bamic* as *Bamiki*, so that they are written in the same way as they are pronounced, unlike in English where the way a word is spelled is not necessarily the same as it is pronounced. In doing so, they would retain their names but in the taste of the consumers and this would not significantly affect their trade names.

4.2 Meaning distinctions in the source language

One language may be capable of setting meaning distinctions of the same concept depending on the cultural orientations of its speakers. Such distinctions may not exist in the target language. In English, the word *pesticide* is a superordinate for all chemicals that may be used to kill fungus, bacteria, weeds, and insects, to mention a few. Its hyponyms include insecticide, herbicide, fungicide, and acaricide.

Kiswahili does not make a distinction between *pesticide* and *insecticide*. Through derivation with such words as bases and *-cide* as a suffix, we get *insecticide* and *pesticide*. Again, pesticide is not necessarily insecticide. However, in Kiswahili, *pesticide* and *insecticide* seem to respond equally into *dawa ya kuulia wadudu* (chemicals that kill insects/pests) in many English-Kiswahili translated agropesticide texts. That is, they seem to have no difference in Kiswahili. As Baker (1992:22) argues, translators will always face a challenge in selecting the suitable equivalent for each meaning distinction in a language that does not make such distinctions.

Since Kiswahili lacks the hyponyms for the English superordinates, replacing specific English words such as *insecticide* with Kiswahili general phrases such as *dawa ya kuulia wadudu*, as it is in many texts, is the best option. The functional equivalence theory advocates for semantically tailoring the source language message to the needs and understanding of the target group. Then, using a general term as an equivalent of the specific one is a good option since the prime goal in translation is not to translate words but meanings.

4.3 Formal differences between English and Kiswahili

Each language has its own distinctive formal features that are used to express certain types of meanings. The corresponding formal features may not exist in the target language. For example, the suffix *-cide* in English which means 'killer' can be used to derive consistently the names of chemicals that are used to kill certain vectors or plants as in *pesticide* (that which kills pests), *insecticide* (that which kills insects), *fungicide* (that which kills fungi), and *acaricide* (that which

kills acari). Likewise, the suffix *-osis* which means 'unusual or diseased condition' may be used to derive names of diseases from the names of vectors as in *salmonellosis* (a disease caused by infection by salmonella) and *coccidiosis* (a disease caused by coccidia).

Kiswahili does not have corresponding formal features to host adequately those in English. Rather, it uses words and sentences instead of morphemes as in English. For example, *pesticide* in many texts is translated as *dawa* (which can roughly be translated as 'chemicals') and *dawa ya kuulia wadudu* (which can roughly be translated as 'the chemicals that kill insects'). The phrase *dawa ya kuulia wadudu* serves as an equivalent to pesticide, insecticide, and acaricide.

In the reviewed texts, the equivalents for the words derived from the suffix *-osis* are inconsistent and do not even reflect the message of the source text. For example, in the reviewed texts, the Kiswahili equivalent for *salmonellosis* is *maradhi mbali mbali* (which can roughly be translated as 'different diseases') and *coccidiosis* is *maambukizo mengi* (which can roughly be translated as 'heavy infections'). The Kiswahili equivalents do not respond adequately to their English counterparts, for *maradhi mbali mbali* does not necessarily mean salmonellosis; it can refer to different diseases other than salmonellosis. Likewise, *maambukizo mengi* does not necessarily refer to coccidiosis; it can refer to different kinds of infections other than those caused by coccidia.

4.4 Lack of Kiswahili equivalents for some crop diseases and pests

Kiswahili lacks already lexicalized names of some crop pests and diseases. The translators just transferred them into Kiswahili. The following are examples of names of crop diseases that lack equivalence in Kiswahili as extracted from one text:

- **English**: "Volar Mz fungicide has both penetrant and contact action against ***early blight (caused by Altemari Solani)*** and ***late blight (caused by phytophthora infestans)*** of potatoes and tomatoes when used in protective spray programs."
- **Kiswahili**: "Volar Mz hupenya na huzuia magonjwa ya ***early blight (Altermari solani)*** na ***late blight (phytophthora infestans)*** katika viazi na nyanya ikitumiwa kwa njia ya kuzuia magonjwa."

There are also some names of pests, as found in one text, such as *tuber moth*, *psylla*, *plusia looper*, and *Africa bollworm*, that are not translated into Kiswahili. As for the names of diseases, the translators simply transferred them into Kiswahili. Some of the names of pests have their already lexicalized equivalents, although they seem to be unfamiliar to some Kiswahili speakers. For example, Africa bollworm is known as *funza wa vitumba vya pamba* in Kiswahili. The reasons for

borrowing are grounded in the fact that such Kiswahili equivalents have a limited discourse of use, usually in agriculture among agricultural experts. Then, there is likelihood that some translators are unaware of the existence of these Kiswahili terms unless they consult agricultural experts when translating these texts.

As already mentioned by Jilala (2014:153), the transferred words seem odd in the target language and always tend to diffract the flow of the message in the target text, thereby affecting readers' comprehension. In light of the functional equivalence theory, the names of the diseases and pests whose Kiswahili equivalents are not known would be, at least, adapted to the Kiswahili morphological and phonological patterns. Farmers can pronounce them, making it easier to memorize them even if they do not understand their meanings. Translation product should always achieve something rather than nothing for the readership. Translating terms that the readership can read (even if they do not understand them) is something better than translating terms, which the readership can neither read nor understand, as is the case when borrowing without adapting the loan words to the morphological and phonological norms of the target language.

4.5 The traditional agricultural practices

The modern farming practices expressed in the source texts do not match with the traditional ones in rural areas. Their translations deviate largely from what is actually being practiced in the daily agricultural transactions. For example, in the reviewed texts, the words *farrowing houses*, *poultry houses*, *dairy parlours*, and all *farm buildings* do not have relevant translations in Kiswahili. These terms are related to zero grazing, which is not common in rural Tanzania. The actual practice is that of herding cattle to different pastures; cattle and poultry are not penned and fed in a particular enclosure.

Shelters for cattle and poultry are sometimes shared with humans. In this case, the meanings of such words as *farm buildings* and *poultry houses* are extended to human houses, too, contrary to what it is perceived in the source text. A possible danger is that pesticide meant for animal houses may be applied in a human house that is shared with animals, thereby affecting both pests and humans. Gutt (2010:4) says that translators sometimes forget the socio-cultural orientation of the readership and concentrate much on linguistic factors contrary to the needs of the functional equivalence theory. This situation makes the lay public vulnerable to misinterpretations and misuse of the pesticides.

5 Conclusion and recommendations

Since agriculture is the leading economic sector in Tanzania, translating agropesticide texts has implications for the economy. The directions on the proper use of agropesticides are meant to make farmers practice productive farming. Undoubtedly, if other factors such as weather conditions are favourable, proper application of agropesticides may result in high yield. In contrast, the improper application of agropesticides may result in poor produce. The proper or improper application of agropesticides depends on whether farmers understand the directions properly through translation into their own language. Since English and Kiswahili are genealogically and typologically different, descriptive equivalence is recommended in translation to overcome the non-equivalence that exists between them. Descriptive equivalence renders the source language expressions in terms of descriptions in the target language. Further, the coined lexical items in English, names of diseases and pests that are always rendered through borrowing, should be adapted to the morphological and phonological patterns of Kiswahili.

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