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Problematic of languages In the translation of animal science terms

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Abstract—Animal science terms have their specialty in scientific works because the different results of translation from the source language (SL) and target language (TL) can give effect to the meaning. A translator should understand the terms in both languages to be able to consider the problems and finding equivalence of terms for the result of the product. Problematic of languages may occur not only in SL but can be on both sides, SL and TL when the translator is not the native speaker of the language. This study aims at finding problems of language translation for animal science terms and finding the equivalence of terms using English as SL and Indonesian as TL. Qualitative method used in analyzing the data with a description of the meaning of terms in their translation within the direct interview information. Majorly, problems found in TL but also SL and TL which affected the meaning of animal science terms. Different lexical choices of terms findings in the translation gave the effect of ambiguity and misunderstanding to the scientists as target readers, however, the solution was given in order to have an equivalence of understanding. It can be concluded that problematic of languages in both languages should be considered for improvement in translation.

Keywords*: terms, lexical choices, translation, equivalence*

1. Introduction

Language and science is unity and intertwined since they work together in translation to deliver messages to the target readership. The important thing that they have specific languages understood by those who use them as a field of the subject. Generally, in scientific writing specific terms has its own style of language. It is written in a simple and direct language within the use of simple, concrete, and familiar words (Youdeowei, *et. al*., 2012: 46). A scientist intends to have an understanding of messages being transferred to the target reader in a text because she or he should absorb the knowledge. This certainly reflected to understand the meaning of all words which is essential for a scientific text and their specialty of languages.

Nicolae and Marinescu (2010: 167) convey that glossaries and specialized dictionaries are needed to assist in understanding the terms for a field of study. The translation of languages mainly uses by the specialist and translator in which the media is used for translating a language

into another language. In this study, animal science terms have special use in a text. Problems of languages may occur if the translator does not understand the terms and lexical transfer in the SL and TL. The equivalence of translation is closely related to the meaning of a language being transferred from the SL into TL. Certainly, it becomes a problem when the translator also decides the importance of cultural aspects and to what extent it is necessary or desirable to translate them into the TL. The aims of the translator are to give implication for achieving a better result of translation and understanding of the readership for both texts in SL and TL. There were problems encountered in the translation of terms and meaning as of whether terms in animal science can be difficult only in TL in translation, or they could be in SL, and even in both languages, SL and TL. If they have a different understanding of terms in SL and TL so these can be further discussed as follows.

2. Methods

In this study, animal sciences terms were analyzed using the qualitative method. They were collected from the SL entitled *Small Ruminant Production in the Humid Tropics* (1993) written in English as SL, meanwhile, *Produksi Kambing dan Domba di Indonesia* (1993) written in Indonesia as TL and specified with those related to Genetics and Animal Breeding. They were explained and analyzed with the description in words and sentences based on the findings (Sutopo, 2006: 40) and their implementation in SL and TL. In addition, animal science terms and Indonesian dictionaries were used to understand their meaning. Moreover, direct interview with the experts of animal science conducted to have additional information of terms.

3. Results and discussion

Baker (1992: 21-25) conveys that difficulties in transferring languages from SL in TL consist of:

a. Specific concept of culture which cannot be found in the TL because they are related to religion, custom, or food i.e. *midodareni* is related to the custom of Javanese which is unknown in English.
b. The concept of SL which is not available in TL, the word in SL is known by the TL but TL does not have the similar word to express it i.e. **standard** in **the standard range of products** in SL expresses the concept which is familiar in general languages, except Arabic.

c. Semantically the concept of SL is complicated that sometimes the morpheme of a word can express the word with more complex of meaning compare to its meaning in a sentence. A translator should understand that complexity of word in a language which has no equivalence in SL can be translated in nominalization in the TL such as **sedimentation** which has a complex of meaning for the native speaker of Indonesian. It becomes ***sedimentasi*** means sedimentation or the process of droplets sink to the bottom because of gravitation (Indonesian dictionary or KBBI IV, 2008: 1239).

d. Different perception of a concept such as ***kehujanan*** and ***hujan-hujanan*** in Indonesian. The word concept of ***kehujanan*** is when a person who is going out when it is raining so he or she does not mean to have a shower in the rain but actually he or she is wet because of the rain. In contrast, the concept of ***hujan-hujanan*** is when a person intentionally goes out to get wet in the rain. English did not make the differences in both expressions such as Indonesian. This difficulty will be found in the translator translates the English sentence as *He is going out in the rain* into Indonesian so there will be the ambiguity of context of language.

e. The TL has no superordinate or general words to translate, for example, ***facilities*** in English has a synonymy such as utilization, service, or building and each of them has a different meaning. However, Rusian has no superordinate but only have the types of the facility such as *a name* for credit, *neobkhodimoe oborudovanie* for important utilities, ***neobkhodimye pomeschenίya*** for important accommodation.

f. The TL has no synonymy i.e. *house* in English has hyponym synonymy such as **bungalow**, **hall**, **villa**, **hut**, **lodge**, **cottage**, etc. but probably not for other languages.

g. Different physical and interpersonal perspectives. The physical perspective refers to personal relationship and places which are expressed in pairs such as the words in English **come/go**, **arrive/depart**, ***take/*bring**, etc. Interpersonal perspective is the language perspective of a language that refers to the relationship of two personals in a text such as Japanese which have six equivalences for the word "**give**" in English depend on whom and who are they giving to i.e. ***yaru***, ***ageru***, ***kureru***, ***morau***, ***itadaku***, and ***kudasaru***.

h. The differences of expressive meaning in a language in which the meaning related to the feeling or speaker's attitude of the object meant with the words i.e. ***Tutup mulutmu!*** and ***Diam!*** In Indonesian have differences of meaning. The expression ***Tutup mulutmu!*** will have more painful meaning if it is expressed to someone compared to ***Diam!***.

i. The differences of word form in SL usually has no equivalences in the TL because of differences of language form in a language, for example, English has pair words which pronounce similarly: **trainer/ trainee**, **employer/employee**. In addition, Indonesian has similar pair words i.e. ***pengajar/pembelajar***,

petatar/penatar. However, the differences of both languages if the English suffix *–ish* is added to give adjective meaning such as **greenish**, **childish** so in Indonesian use affixation *ke-an* become ***kehijau-hijauan***, ***kekanak-kanakan***.

j. The difference of purpose and level of special use on language form such as suffix of *–ing* in verb usually use in English to connect two ideas in a clause but it is different with Germanic. This form is the characteristic style of English but if it is omitted will also omit the naturalness of the text.

k. The absorption of language in SL usually creates the problem in the translation without considering its meaning and the proportion is to give a prestigious impression of the language.

In some cases, the equivalence of terms cannot be found from SL translated into TL, especially when dealing with different languages such as English and Indonesian. The specific of languages also related to the terms of Animal Sciences, especially related to Genetics and Animal Breeding. Majorly, they were found without reduplication in the translation of TL terms for equivalences, however, excessive terms with additional words to show their plurality were found in TL. So, they showed the difference of purpose and level of special use in scientific texts compared to general text. These problems certainly influence the meaning of terms and understanding of target readership. These can be further discussed as follows.

3.1 Problems of terms in TL

Data 1 BSu: Asia is a very important reservoir of widely different and well adapted **indigenous goat** and **sheep breeds** (Tomazewska *et. al*., 1993: 4).

BSa: *Asia merupakan sumber yang sangat penting untuk berbagai* ***jenis kambing*** *dan* ***domba asli*** (Mastika *et. al*, 1993: 5).

The above data showed that terms such as **indigenous** and **breeds** translated into ***jenis kambing*** and ***domba asli*** means the indigenous animals refer to small ruminants such as goat and and sheep but the problem was found in TL from the word ***jenis*** which should be translated into ***bangsa*** as the equivalence of lexical choice. This is considered since the term ***bangsa*** is more specific compared to ***jenis*** in the TL and specified to animal science even though both of them have similar meanings. It is supported with the information from Prof. Harya Putra as the respondent in this study and meaning in the animal science dictionary (Sudono, 1985: 13) mention that ***bangsa*** is a group of animals which is originated and have special traits that cannot be the same if compared to other groups of animals. The terms **indigenous goat** and **sheep** (SL) translated into ***jenis kambing*** *dan* ***domba asli*** (TL) mean Asia became the source of local or

indigenous animals for goat and sheep found in that period. Meanwhile, the SL showed noun clusters of **indigenous goat** and **sheep breeds** found into two as of **indigenous goat breeds** and **indigenous sheep breeds** which was combined within the conjunction of **and** in those terms.

The problem of translation **sheep breeders (SL)** in plural form was found in plural with additional unity of word ***para*** mentioned in TL. This showed excessive statement in TL because ***para*** is additional of numerical in ***para peternak domba***. It means more than one breeder of sheep who raises those small ruminants but seems to be excessive for the content of sentences. These can be further discussed in the following data.

Data 2 SL: Prolificacy is a desirable condition that is included as a target of breeding plans in many situations oriented to maximizing overall productivity of sheep kept for meat production. This results in a preference for prolific sheep among **sheep breeders** (Tomazewska *et. al*., 1993: 102).

TL: *Jumlah anak yang banyak adalah keadaan yang diharapkan dan termasuk sebagai satu sasaran dari rencana pemuliaan yang dalam banyak hal mengarah ke produksi secara keseluruhan yang sebanyak-banyaknya dari domba yang dipelihara untuk penghasil daging. Hasil-hasil ini merupakan keinginan bagi* ***para peternak domba*** *untuk mendapatkan domba yang beranak banyak* (Mastika *et. al*, 1993: 113).

On the above data, the term **sheep breeders** which is in plural form should be translated in ***peternak domba*** in order to be equivalence in TL without reduplication or additional words for plurality and the simple term can be created in the text. This is due to the scientific texts of animal science that intend to highlight the meaning in its context without reduplication of words such as ***peternak-peternak domba*** nor additional of ***para*** as mentioned on the above data ***para peternak domba*** because it seems to have abundant of meaning in TL. This is based on the information from Prof. Harya Putra dated on March 5, 2018, because the ambiguity of meaning will be implied in the scientific meaning of sentences.

There were problems of terms translation in TL in the following data. The problems found in reduplication and lexical choices of terms. These can give effect to the meaning of terms in SL and TL since both of them should be equalized in order to be understood by the target readers. These can be further discussed below.

Data 2 SL: Differences between individuals with respect to a given **trait** which are transmitted from generation to generation, depend ultimately on **genes** making up the **genotype** of the **traits**. Two general models are used by **animal geneticists** to explain the inheritance of these **basic Mendelian model** and an expanded model involving **polygenic inheritance** (Tomazewska *et. al*.,1993: 82).

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TL: *Perbedaan-perbedaan antara individu untuk suatu **sifat** tertentu yang diturunkan dari generasi ke generasi, tergantung pada **gen-gen** yang menentukan **genotipe sifat-sifat** tersebut. Dua model umum yang biasanya dipakai oleh **ahli genetik ternak** untuk menjelaskan perbedaan-perbedaan ini adalah: **model dasar oleh Mendel** dan model lain yang lebih luas meliputi **penurunan sifat-sifat yang ditentukan oleh banyak gen**.* (Mastika *et. al*., 1993: 92).

Based on the above data, equivalence was found in terms of **the trait** (SL) translated into ***sifat*** (TL) because both of them showed the relationship of the transmitted traits and gen from the ruminants. The terms **genes** (SL) translated into ***gen-gen*** (TL) and **genotype of the traits** (SL) translated into ***genotipe sifat-sifat*** (TL) found with the problem of reduplication in its translation of ***sifat-sifat***. The information from the respondent Prof. Harya Putra dated on 23rd June 2018 mentioned that the plurality in SL should not always be in reduplication in TL. The meaning on the application of KBBI V, the genes will bring traits that cannot be easily seen is called as ***genotipe*** or **genotypes**. The differences of individuals depend on the mating of ruminants from in which genes from each of them will bring their traits transmitted from generation to generation. These genes produce the genotypes of traits of the ruminant. The meaning in both terms concern on the differences of animal traits which depend on the genes of the parents. Geneticists use basic Mendelian models and other models using polygenic inheritance. Moreover, the problem also found in the term of **basic Mendelian model** (SL) translated into ***model dasar oleh Mendel*** (TL) that gave effect to the meaning of sentences. This is due to the additional word ***oleh*** or it means **for** in English which can give effect to **Mendel** so it becomes inequivalence because it seems to have the meaning that ***model dasar*** or **basic models** made by a person name **Mendel**. The meaning of a term in TL did not have the equivalence as in the SL even though Johan Greger Mendel is the name of a geneticist of the Mendel law (Srigandono, 1996: 137) with principles of offspring characteristics, gene dominant, segregation, dan *independent assortment*. In fact, the term ***model dasar Mendel*** is one of the genetics basic principal concerns on animal traits and genes (Srigandono, 1996: 137) and related to the term used in animal science. In fact, the additional conjunction of ***oleh*** is not needed and it should be translated into ***model dasar Mendel*** in order to be equivalence in TL and SL meaning. The term **polygenic inheritance** translated into ***penurunan sifat-sifat yang ditentukan oleh banyak gen*** found the problem with the reduplication since it should not be reduplicated into TL because it reflected the context of sentences for a specific text. So, the equivalence is preferred to be ***penurunan sifat yang ditentukan oleh banyak gen*** with ***penurunan sifat***

as the head of element and ***sifat yang ditentukan oleh banyak gen*** as the element of explanation. The term ***polygenic inheritance*** is the inheritance of the traits of an animal considered within most of the genes in the body of parents. In general, it will be in the inheritance of their offspring.

The problem of translation was also found in **breeds** translated into ***jenis ternak*** in which the term of TL seems to have a generic lexical for ***jenis***. It did not refer directly to the meaning of animals or small ruminants. In contrast, the SL of the term refers to the meaning related to specific ruminants. This can be further analyzed in the following data.

Data 3 SL: Crossbreeding is a process which controls or restricts the ways in which the parents of a given population are mated. The direct consequence of this process is an increase in heterozygosity. Crossbreeding has two relevant implications in animal improvement: development of new **breeds** and heterosis (Tomazewska *et. al*., 1993: 97).

TL: *Kawin silang adalah suatu proses yang mengatur atau membatasi cara-cara perkawinan tetua suatu populasi tertentu. Akibat langsung dari proses ini adalah peningkatan heterozigositas. Kawin silang mencakup dua hal yang penting: pembentukan* ***jenis ternak*** *yang baru dan heterosis* (Mastika *et. al*., 1993: 107-108).

The problem of lexical translation ***jenis*** in the term ***jenis ternak*** should be translated into ***bangsa*** is not equivalence to their translation in TL. It should be translated into ***bangsa ternak*** to show that the term is specifically related to ruminants. This is highlighted that ***bangsa*** means a group of animal that comes from the same species and characteristics (Sudono *et. al*., 1985: 13). Based on the above data the term **breed** was translated into ***jenis*** meant to be more generic. Meanwhile, the specific meaning of ***bangsa ternak*** for the above translation refers to the crossing of small ruminant from the same species but live in different habitat and special characteristics. The purpose is to produce a new born animal which has a longer life and more productive compared to their ancestors.

3.2 Problems in SL and TL

The problems of terms translation were found in TL and both SL within TL. In the following case, the plural form in SL was translated with reduplication in TL and unfamiliar of lexical term chosen in SL and TL. Besides, the absorption of terms found with an adaptation of pronunciation but it was given with equivalence of terms if problems were found. These surely reflected the meaning in the whole sentences which can be analyzed as follows.

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Data 4 SL: In most cases it will not be leasable to establish continuous crossing systems for village sheep production in Indonesia. Thus crossing will be used to introduce **exotic genes** and then a new strain will be developed by **interbreeding** the **crossbred animals** (Tomazewska *et. al*., 1993: 135)

TL: *Pada kebanyakan kelompok kejadian-kejadian tidaklah mungkin untuk menciptakan **sistem persilangan** secara terus menerus untuk kambing di pedesaan di Indonesia. Dengan demikian **persilangan** akan dilaksanakan untuk memasukkan **gen-gen asing** kemudian jenis baru akan tumbuh dengan **persilangan antara ternak sesama ternak-ternak hasil persilangan*** (Mastika *et. al*., 1993: 150).

The term ***exotic genes*** (Sl) translated into ***gen-gen asing*** (TL) should not be reduplicated in TL but the equivalence term should be ***gen asing***. This is due to the context of sentences written in scientific text and supported by the respondent of expert, Prof. Harya Putra, dated on 5th of March 2018 and 26th of June 2018. Moreover, the term **interbreeding the crossbred animals** (SL) translated into ***persilangan antara ternak sesama ternak-ternak hasil persilangan*** (TL) found with the problems in SL which affected to the TL translation, including their meanings. The inequivalence of terms was found in SL and TL since **interbreeding** has an ambiguity of meaning in the text based on the information from the respondent and direct interview with ibu Sarini dated on March 10, 2017, and June 28, 2018. She mentioned that **interbreeding** is not familiar with genetics and animal breeding. It should be translated into **inbreeding** means a system of mating among animals that have a family relationship or known as pedigree comes from the same ancestor or the fourth previous generation (Srigandono, 1996: 115). In other words, the term should be translated into **inbreeding of the crossbred animals** (SL). However, its translation ***persilangan antara ternak sesama ternak-ternak hasil persilangan*** should not be in reduplication but it should be ***persilangan antara ternak hasil persilangan dengan kekerabatan sama*** (TL) without the reduplication of ***ternak*** as mentioned by the respondent Prof. Harya Putra dated on March 5 and June 6, 2018. The revision of those terms and equivalence is essential to be conducted in order to be understood by the target readership. It is also crucial for a scientific language such as animal science terms since the mistake of lexical choice for terms could create a problem with the meaning such as **interbreeding** based on the above data.

The problems arose in terms of **genetic trends** translated ***arah perubahan genetik*** and **selection of individuals** translated into ***seleksi individu-individu***. They were found in TL translation. These can be analyzed in the following data.

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Data 5 SL: Estimation and prediction of causes of variation aim to elucidate common problems in **animal breeding**, such as:
- Characterization of animal populations and estimation of their production potentials;
- Identification of main constraints to production;
- Evaluation of breeding programs and **genetic trends**;
- **Selection of individuals** as **parents** for the next generation on the basis of their **genetic merit** (Tomazewska *et. al*., 1993: 106).

TL: Perkiraan dan pendugaan penyebab-penyebab variasi bertujuan untuk menjelaskan masalah-masalah umum pada **pemuliaan ternak** seperti:
- Pengkhususan populasi ternak dan perkiraan kemampuan produksinya;
- Penentuan hambatan-hambatan utama terhadap produksi;
- Penilaian rencana pemuliaan dan **arah perubahan genetik**;
- **Seleksi individu-individu** yang dipakai **tetua** untuk generasi mendatang berdasarkan **sifat genetiknya** (Mastika *et. al*., 1993: 118)

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On the above data, the term ***arah perubahan genetik*** (TL) translated from ***genetic trends*** (SL) problem was found in TL since the meaning can be unclear whether the trend that tends to be improved or deteriorated based on the information of the expert Prof. Harya Putra dated on 5 March 5, 2018, and June 12, 2018. In addition, he said it should be translated into ***kecendrungan perubahan genetik*** because the meaning is one of the problems in animal breeding in which it tends to achieve a genetic trend for the variation of animal production through the evaluation. Moreover, the term ***seleksi individu-individu*** did not need to be translated in reduplicated in TL to show equivalences with the plurality in SL. In contrast, it should be translated into ***seleksi individu*** without reduplication because it has given the meaning that individual selection for the ruminants. It is conducted is based on the genetic merits of the parents, especially those which have a quality of performances and meat production. This is supported that with the meaning of both nouns, ***seleksi*** or **selection** is the systematic process of selecting animals to be the parents in the next generation (Sudono, 1985: 126), meanwhile, ***individu*** or **individual** based on the online KBBI V application is the free-living organisms. They are specialized terms that had been familiarized by those of animal science study as informed by Prof. Harya Putra on 5th of March 2018 and Prof. Sayang Yupardhi on 6th of March 2018. In this case, the term ***seleksi individu*** or **individual selection** refers to the process of small ruminant selections from the result of observation based on their performances such as traits which have values in economic, milk production, body weight, carcass percentage, etc. In this case, absorption from SL term was found in the TL with the adaptation of pronunciation.

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The lexical choice problem was found in the translation of TL, ***jenis ternak sintetis*** *atau* ***baru*** and ***jenis ternak tetuanya***. This can be analyzed in the use of word ***jenis*** for **breed** or **breeds** which should be translated in a specific item and its meaning refers to animals. This can be analyzed as follows.

Data 6 SL: Crossbreeding increases the heterozigosity of a population permitting the exploitation of heterosis. It may also be used for the formation of a new type of animal, a **synthetic** or **new breed**, which will combine desirable features of the **parental breeds** (Tomazewska *et*. *al*., 1993: 130).

TL: *Kawin silang meningkatkan heterozigositas suatu populasi, memberikan kesempatan pengumpulan heterosis. Mungkin juga dipakai untuk pembentukan tipe ternak yang baru,* ***jenis ternak sintetis*** *atau* ***baru*** *yang menggabungkan sifat-sifat baik dari* ***jenis ternak tetuanya*** (Mastika *et*. *al*., 1993: 145).

The terms **synthetic** or **new breed** (SL) should be translated ***bangsa ternak baru*** *atau* ***hasil rekayasa genetik*** (TL) because the meaning of ***jenis*** in ***jenis ternak*** in the TL is general for ***breed*** compared to ***bangsa*** which can give clarity to animals. This information was also given by Prof. Harya Putra dated on 28th of June 2018 meanwhile the term ***hasil rekayasa genetik*** is the equivalence term compared to the previous translation and its meaning in general opinion for the improvement of small ruminants production. It is required in case crossbreeding of small ruminants is conducted which improve heterozygosity as the possession of two different alleles. This is similar to ***breed*** *or* ***breeds*** which were translated into ***jenis*** in **parental breeds** (SL) should be translated into ***bangsa ternak tetuanya*** (TL) as the parents, male and female of the small ruminants. In addition, **sintetic** or **new breeds** (SL) translated ***ternak sintetis*** atau **baru** (TL) is the new born offspring produced from crossbreeding parents so the translation in TL should be translated into ***bangsa ternak baru*** to underline the specific of the term related to animals. Generally, it refers to the small ruminants as of goat and sheep mentioning that the prospect of crossbreeding can produce a better quality of animals compared to the previous one consists of performance, meat texture, etc.

The problems of translation of animal science terms were found in SL and TL which also affected the content of meaning. The terms of **intercrossing** translated into ***hasil persilangan*** problem were found in the lexical choice of SL, meanwhile, ***pure breeds*** translated into ***jenis-jenis ternak murni*** problem found in the TL. These can be further discussed as follows.

Data 7 SL: Hybrid vigour or heterosis is mainly explained by non-additive genetic causes, principally dominance and epistasis. The superiority manifested most in the first crossbred generation and it is less pronounced, or not completely retained, in further generations of **intercrossing**.

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Thus utilization of heterosis requires continued crossing and the maintenance of **pure breeds** (Tomazewska *et. al*, 1993: 98).

TL: *Hybrid vigor atau heterosis diakibatkan oleh kondisi genetik yang tidak bersifat penambahan, dan pada prinsipnya ditentukan oleh keadaan dominan dan epistasis. Keunggulan suatu sifat diwujudkan terutama pada generasi hasil silangan pertama dan akan berkurang atau tidak bertahan terus pada generasi selanjutnya dari **hasil persilangan**. Dengan demikian, heterosis memerlukan persilangan yang terus menerus dan pemeliharaan **jenis-jenis ternak murni*** (Mastika *et. al*, 1993: 109).

In fact, the term **intercrossing** can not found in the animal science dictionary for its translation ***hasil persilangan*** so it should be translated into **crossing** in SL. It is mentioned that the term **crossing** or ***kawin silang*** or ***persilangan*** meaning is the process of mating among animals of their parents which come from different habitat (Sudono *et.al*., 1985: 60). Moreover, the term **pure breeds** (SL) translated into ***jenis-jenis ternak murni*** (TL) should be translated into ***bangsa murni*** with the omission of the lexical ***jenis-jenis*** and ***ternak*** to show the specific term of animal science in TL so the problem related to the lexical choice. This is supported from the animal science dictionary (Sudono *et.al*.., 1985: 13) convey that ***bangsa murni*** is a group of pure blood animal without crossing system so the blood is not mixed with other animals which do not belong to the same habitat. The plural form in the SL with the suffix –s in ***breeds*** should not always be translated in reduplication because ***bangsa*** means a group of animals which has shown the plural meaning as mentioned previously by Prof. Harya Putra.

The problem of translation found in the term **selection differential** translated into ***selisih seleksi*** with inequivalence of lexical choice in TL. Certainly, it can give effect to the meaning of the whole sentences as mentioned below.

Data 8 SL: I. ARTIFICIAL SELECTION
This is definitely the most powerful tool for **genetic** improvement. Artificial Insemination in goats and sheep is not yet as successful as in cattle, but progress has been made in recent years. A buck and ram can be trained to mount a so-called dummy or a teaser animal and serve into an artificial vagina. Another alternative electro-ejaculation which means electrical stimulation with a rectal probe.
AI has the following advantages:
1) The **selection differential** can be increased, using only a few genetically superior sires;
2) the cost of keeping males is reduced;
3) venereal diseases from inseminated flocks can be eliminated (Tomazewska *et. al*., 1993: 244).

TL: I. *INSEMINASI BUATAN*

> *Inseminasi buatan (IB) merupakan alat yang paling ampuh untuk perbaikan* ***genetik****. Inseminasi buatan pada kambing dan domba belum begitu berhasil dibandingkan dengan sapi, tetapi kemajuan telah terjadi beberapa tahun belakangan ini. Seekor pejantan kambing maupun domba dapat dilatih untuk menaiki apa yang diistilahkan dengan dummy (boneka) atau teaser dan mengawini alat kelamin betina buatan. Pilihan yang lain adalah pengeluaran mani dengan listrik yang berarti rangsangan listrik dengan alat yang dimasukkan ke dalam lubang pantatnya. IB mempunyai keuntungan-keuntungan sebagai berikut:*
>
> 1) ***Perbedaan seleksi*** *dapat ditingkatkan dengan menggunakan hanya beberapa tetua yang genetiknya unggul.*
> 2) *Biaya pemeliharaan pejantan tambahan dapat dikurangi.*
> 3) *Penyakit kelamin dari kelompok betina yang dibuahi dapat dihindarkan*
>
> (Mastika *et. al.*, 1993: 268).

The equivalence was not found in the translation of **selection differential** translated into ***perbedaan seleksi*** especially in TL. This is supported by the result of the respondent direct interview with one of the expert in animal science, Linda Doloksaribu dated on 8th of March 2018. She conveyed that ***perbedaan seleksi*** has different meaning with the SL. Based on Srigandono (1996: 189), the term **selection differential** is the means of the superiority of individual which had been selected to be the parents. The result of selection showed from the best evaluation score of means of the population depend on the habitat of an individu. In this case, it should be translated into ***keunggulan individu terseleksi*** as the equivalence of lexical choice since its meaning closely related to know the ability of superior parents who have a good quality of genetic so the mating with artificial insemination can be succeeded and prevent the cause of death of small ruminants.

4. Novelty

The novelty found in this study consists of terms of creation to resolve the problems in translation. This is conducted in order to obtain equivalence of terms and giving a solution to the closest meaning of terms in TL and or SL of lexical choices. The findings were found based on the valuable information from the respondents in field research. In this case of study, there were terms found with direct translation into TL and absorption with an adaptation of pronunciation and spelling. Generally, these considerations were given in order to have a better understanding of the target readers of the books. In fact, specific terms such as animal science terms need the

experts and translator to work together and giving an improvement in the translation including media of dictionaries for their validity of meaning.

5. Conclusion and Recommendation

The translation of animal science terms has their own specialty considering on their use and meanings in a text, neither SL nor TL. Problems seem to be found in the product of translation even though native speaker involve to be the translator and assisted throughout the process. However, these should be taken concern since they will give effect to the meaning as a result of the translation. Solution through experts consultation including direct interview support the findings for equivalences of terms can be one of the main choices besides using the meaning with dictionaries and their context of use. Moreover, understanding both terms, SL and TL are essential to obtain the main decision and consideration of lexical choices.

Generally, improvement and revision should be conducted for the animal science terms translation because target readers could have a different understanding based on their use and no clarity of terms being mentioned through messages in texts. In this case, re-editing is essential in order to obtain a better result of translation and avoid misunderstanding of terms for those who have the same background of the study.

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