

The Application and Features of Animal Science Terms: Translation from English into Indonesian

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ARTICLE INFO ABSTRACT

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This study aims at finding the application of animal science terms and features of translation from the source language (SL) into the target language (TL). The application and features of terms in naturalness of languages was found structured. This study used qualitative method for the analysis that is presented descriptively. Terms were taken from two books, SL written in English and TL in Indonesian. Direct interview to scientists was conducted in order to obtain information of terms and find equivalences of terms in TL. The terms found with absorption from the SL into TL, terms creation, standardization, and motivation to be scientifically understood by target readership. Features of translation were found simplified in the form of language but some of them explicated in words of TL translation, however, absorption in adaptation cannot be avoided. In addition, the uniqueness of the languages showed from the plurality of language form in SL is not always translated within reduplication in TL. It can be concluded that the translation of two different languages have their own standard of writing and understanding, especially in scientific languages.

1.INTRODUCTION

Translating terms especially in a specific field of study tends to be challenging for a translator to discover their application from SL into TL. This is due to terms specificity and differences of SL and TL so a translator needs to know the background knowledge of study. Moreover, brevity and clarity of languages can be essential in the translation of scientific texts. Hanafi (1989: 16-17) conveys that scientific texts is commonly used with clear words, brief, and rarely use connotative words but often denotative. Moreover, the main purpose in universal of language is to be practical in communication so it intends to give clarity and convey language in a practical way. This should not be a problem in translating scientific works such as English to other languages.

The application of terms in a particular field of study depends on the text in which they are used. Newmark (1988: 151) states that specific term in a translation consists of: terms in politics, economy, trading, monetary, government, etc. So, animal science terms can be classified as specific terms concerning on animals as the object of study. These terms differ with other fields of study. Even though similar words can occur in any field of study, but they have differences in meaning and context. Moreover, Mastná (2010: 14 and 18) mentions that general features of translation are noticed to be logical sequence of utterances in scientific and technical texts including their style of language. He said that features can vary and depend on its recipients. In this case, misleading is actually avoided to be in translation of terms in order to understand the nature of the language.

In this study, there are varieties of application and features in translation since both languages have their own specificity. There are problems that arouse the type of application of terms found in the text and their effect to translation; the features of terms in translation.

2. LITERATURE REVIEW

The translation theory of Baker (2001: 251-256) is used for the analysis of terminology application. She conveys that the terms can be applied as structuring of terms, in special subject fields, terms creation, standardization, and motivation. She states that structuring of terms in special subject fields refers to those specific terms that belong to a particular subject that can be different in meaning and depends on their context of use. Terms creation is the term formation that occurs when a newly concept is created and has to be named. Standardization is the process of unifying and fixing each referent including its designation, motivation is the standardization that may come from all commercial reasons, safety considerations, or result of security. In addition, Pym's (2010: pp. 78-81 and 127) theory for the universals of translation is used to support the analysis of animal sciences terms translation. He classified the features of translation into: a) lexical simplification is translation that tends to have shorter words; b) explication is used more syntactic markers than non-translation; c) adaptation is the translation which is able to adapt rules or norms of target language within its culture; d) equalizing is the process of mediation thus brings features toward midpoint that interpreting can be implied for written translations; e) unique items in translation occurs if such structure as of linguistics elements found in the TL but not found in the SL in order to show equivalences.

Furthermore, related articles and researches of translation support the analysis of terms. They give benefits to the application of terms in translation and features in translation for further comparison of result of findings in animal science terms even though they use different languages. Besides, solving problems were also presented in their findings which can be similar to the result of study from English into Indonesian. These can be further discussed as below.

Matamala (2010: 255), in her research translation of sciences documentaries English-Catalan combination found specific terminological problems and challenges in identifying the terms, understanding the term, finding the suitable equivalent, dealing with failing to find an adequate equivalent, dealing with denominative variation, "in vivo" versus "in vitro" terminology, and mistranscriptions. These problems can also be found in animal science terms, especially for the absorption from SL into TL including creating new terms when the translator unable to find the equivalent of terms.

Nicolae and Marinescu (2010: 167) in his article entitled "*Translating Culture – Terminology and Communication*" mention that terminology is often used by specialists in particular subject fields and intermediaries. They are mainly concerned with standardization of the definition of concepts and definition including terms. Therefore, glossaries and terminology dictionaries are essential to assist in translation. They said that communication within the specialists is needed to ensure smooth transferring of languages in the product of translation. In this study, standardization use dictionaries and experts to obtain information for the terms. This study of animal science also uses dictionaries and specialists who have the background knowledge of study in order to know the standard use of terms.

Ngobeni (2013) in his research entitled "An Analysis of Zero Translation in the Translation of Scientific Terms from English into Nothern Sotho" concerning on translation of terms from English into Sotho shows that the absorption of terms from English is mostly found for the equivalences of terms i.e. microscope (SL) is translated into maekroskopo (TL). This absorption and adaptation of languages cannot be avoided in translation. This study is related to the finding of animal science terms since the results of finding can be similar but absorbed from English and adapted with the Indonesian as SL. The difference of languages lies in their uniqueness in each language as further discussed in the animal science terms.

3.METHODOLOGY

Animal Science terms were collected from the books entitled Small Ruminant Production in the Humid Tropics (1993) written in English as SL and its translation entitled Produksi Kambing dan Domba di Indonesia (1993) written in Indonesia as TL. The writer of SL is Tomazewska, M.W., Gardiner, S., Djajanegara, A., Mastika, I M., and Wiradaya, T.R. in which they also are the editor of the book, however, the translator of TL consists of Mastika, I.M., Suaryana, K. G., Oka, I G. L., and Sutrisna, I. B. in which the editor of TL is Mastika, I M. They were classified in terms of the specification and consultation to the experts who have a background knowledge conducted for additional information for the terms. Oualitative method was conducted and explained descriptively based on the application of terms and features found in translation. The meaning of terms can be searched using online application in the internet of Indonesian dictionaries, KBBI V and animal science dictionary.

4. RESULTS AND DISCUSSION

The Application of Animal Science Terms

The animal science terms found with varieties of application in the texts. In general, they have differences in structures application in both SL and TL, terms creation were conducted to obtain equivalences in TL including their meaning, and standardization that are considered to be used in special dictionaries and familiarity to the user of subject field, and motivation which is extremely different from general terms. In the structuring, most of terms in SL as nouns were translated as nouns in TL as well, except those in terms creation for terms related to Production and Social Economy. The translators found difficult to translate the SL so they consider translating them into explication in the TL. In this case, the form of noun in SL can explicate in TL for their equivalences of terms and meaning. Basically, they showed their special cases since SL standard of terms could reflect to the TL use as follows. **a. Structuring of Animal Science Terms** The structuring of terms can be found as nomenclature in special field of languages which is called animal science terms. They were found with absorption from English within specification of the terms translated in Indonesian. This absorption found in animal science terms is related to genetics and animal breeding, reproduction, nutrition, and social economy. SL terms showed with plural form and after translated this form majorly absorbed without showing their reduplication as happen in general text. The form of terms varied in the result of translation which consists of absorption in the structure of languages, standardization in the TL and adaptation based on KBBI V application and Indonesian grammar (Tata Bahasa Baku Bahasa Indonesia). These can be further discussed in the following table.

No.	Animal Science Terms	English (SL)	Indonesia (TL)
1	Genetics and Animal Breeding	genotypes	genotipe
		selection	seleksi
		genes	gen
		heritability	heritabilitas
		genetics	genetika
		antibodies	antibodi
2	Reproduction	intervals	interval
		reproduction	reproduksi
		meconium	meconium
		colostrums	colostrums
		laxative	laxative
3	Nutrition	legume tree	legume pohon
		legume tree	legum pohon
4	Social Economy	systems	sistem
	-	margin	margin

Table 1. Absorption in Animal Science Terms

The animal science terms absorption from English found related to genetics in the target language and adapted with the pronunciation in the target language, as of: genotypes translated into genotipe, selection translated into seleksi, genes translated into gen, heritability translated into *heritabilitas*, and legume tree translated into legum pohon, except genetics translated into genetika are nominals. There were no reduplication in the target language to show their plurality but translated as if they are singular however the meanings meant plural in general. This is due to the meaning of genotypes equivalence with genotipe based on KBBI V application as physical characteristics which could not be seen from the performances. So, actually the genes inside the animals body will influence to physical characteristics after interaction happened from the mating between parents. The term selection equivalence with seleksi since the meaning has a

relationship on how the animals are being selected by farmers based on their performance in order to obtain a good quality of animals to be raised. It showed that the selection conducted can be meant in plural without reduplication in the translation of target language. Moreover, genes not translated in reduplication because gen refers to more than one gene inside the animals' body. The term heritability equivalence with heritabilitas based on KBBI V application meaning is the ability of the animals to inherit the characteristics from their parents. In contrast, genetics equivalence with genetika based on KBBI V application is a branch of biology study and showed the name of branch of study in animal science concerns on characteristics of organism. Similarly, these result of translation can also be found in other animal science terms related to reproduction such as intervals translated into *interval*, reproduction translated into reproduksi, antibodies translated into antibodi. They have meanings that showed the measurement of birth for interval of

animals, reproduction of animals in majority, and antibodi for the immune of animals. However, colostrums translated into *colostrum* without adaptation of pronunciation in TL, similar to the terms laxative, meconium, legume, and post- partum. Actually, the term can still be accepted to its meaning because it has been written in italics and familiar to the user in animal science. The absorption of translation also found in animal science terms related to Social Econonomy which adapted with their pronunciation in target language. There were no reduplication for systems translated sistem, extensive translated ekstensif, production translated produksi, ruminant translated *ruminansia*, curves translated *kurve* which should be kurva to be accepted in application of KBBI V. The plurality in source language were not being translated into reduplication but contain plural meaning in the target language, i.e. kurve has the meaning that the curves can be more than one curve to show the demand of animals in a chart. In contrast, margin in the source language was totally absorbed in the target language with the writing of term but adapted with the pronunciation became margin.

b. Terms creation of Animal Science Terms

Terms creation were found in the translation of animal science terms related to Social Economy such as diumbar, bero, lahan kritis, petani kecil, petani penggarap, petani gurem, and penggaduh. These terms were accepted by the respondents but they gave comments that consistency of writing *diumbar* (TL) should be translated into pengumbaran as the translation of extensive system (SL) since related to the overall previous terms in sentences written in nominal. Meanwhile, bero should be replaced by bera as mentioned to be the suitable term in the application of KBBI V. Modification of terms and adaptation of culture were found in the translation since the translator intends to use local language as in the root word umbar from diumbar, penggarap from petani penggarap, gurem from petani gurem, and penggaduh. Actually, the whole terms above can be accepted with their translation in the TL even though in some cases needed consistency of translation that affected the form of terms. These were found in terms such as extensive system translated into cara ekstensif (diumbar) can be accepted to be understood in terms and meaning, however, the problem of consistency should be considered by the translator since there were two different terms found for the translation of system i.e. sistem or cara. In addition, the translation term of *diumbar* is suggested to be translated into *pengumbaran* based on the information by Prof. Harya Putra as the respondent of research dated on

25th February 2018. Furthermore, the term uncultivated translated into lahan yang tidak diolah (bero) can also be accepted as a familiar term in animal science even though bero is suggested to be revised into bera as mentioned in the KBBI V application. These terms are classified as terms creation that have been accepted by the scientists even though revision should be considered for the standard of writings. The term creation of smallholder farmers translated into *petani kecil* indirectly intends to define the economy condition of farmers. This is further discussed in the KBBI V application which has similar meaning to petani gurem as petani kecil or smallholder farmer who have less than 0.25 hectare of land. This term is familiar to the animal scientist and term meaning is related to the economic condition of farmer with lower income whose life also depends on raising livestock. The farmer got the animal with the system of borrowing from those who have higher income. Moreover, the term marginal land translated into lahan kritis classified into terms creation which is acceptable because the application of KBBI V mentioned in two alternatives, i.e. lahan marginal or lahan kritis is a land that does not have an ability to be reproductive whether as a media for water management or environment conservation. Those two terms have similar meanings and can be accepted. Terms such as petani penggarap, petani gurem, and penggaduh were also found as terms creation and adapted with the local languages. The culure adaptation was found in the target language such as *penggarap* from the term *petani penggarap* seem to be difficult in finding equivalence in the target language because it is affected with Indonesian cultural context so local language was used. The animal science terms, landless (SL) translated into petani penggarap (TL), subsistence farmers (SL) translated into petani gurem (TL) have been familiar based on the information from Prof. Harva Putra dated 6 March 2018. Similar result found with the term caretaker (SL) translated into *penggaduh* (TL) is a term creation that has been familiar in the society of Indonesia. The purpose is to be easily understood by the target reader based on its meaning. The system was conducted to share livestock and income after the owner who has the financial capital gives his or her livestock to the caretaker for raising the animal. Those terms showed that there were relationships between small ruminants, especially goat and sheep including smallholder farmers, landless, subsistence farmers can act as those who raise the animals. Their income is not so big because feeding cost for ruminants is expensive. They will get benefit when the ruminants are ready to be sold at the market but this depends on the ruminant performances, market price, and also agreement with the owner.

c. Standardization of Animal Science Terminology The standardization of the terms is applied based on their familiarity which has been agreed by the user of the certain field, such as animal science. The standardization of the terms is found in the animal science dictionary or Kamus Istilah Peternakan and Indonesian dictionary i.e. Kamus Besar Bahasa Indonesia (KBBI) or KBBI V application as shown on Table 1 and Table 2 below. This is due to the fact that terms can be found with one of those dictionaries, including the Latin with their form and meaning. The animal science terms are found in the translation within the direct translation, combination of English and Indonesian, and also combination of Latin and Indonesian. Most of them were adapted based on the scientific texts and meaning. These combinations were found mostly in the animal science terms related to nutrition as feed for the small ruminants. The results of translation were made in order to receive the understanding of target readers.

d. Motivation in the Translation of Animal Science Terms

Motivation of the terms including their standardization in animal science was not found for commercial reasons or because of security consideration. Majorly, the whole of them are scientific terms even though terms creation can still be found for the reasons of culture adaptation and to give an understanding of target reader by translating terms with explication were conducted in the target language. The main reason is because of the specific of terms but not because of underpressure condition. In fact, it intends to convey a message of the knowledge to the reader and give an understanding of the content.

Features	in Anin	nal Scier	nce	Terms
Table 2.	Plural F	form of I	Term	ıs

There were features found in the result of translation from English into Indonesian in which most of them were in simplification with variety of sections (i.e. Genetics, Animals Production). Meanwhile, some of them were in explication especially those related with Social Economy. In addition, the uniqueness of both languages can also be found through the term of source language and target language. These can be further discussed as follows.

a. Lexical simplification of Animal Science Terms The lexical simplification was found shorten in words as shown in Table 1 and one of them was found in the following table i.e. flocks which is being shortened into kelompok that if the translators would like to make a clear understanding to the target reader can be translated into kelompok ternak as group of ruminants. In fact, most of them were shortened in form of language translation of animal science terms whether in Table 1 nor Table 2. Terms in SL seem to be in short terms but in TL they have differnt form of writing because most of them are used in a scientific language which are considered to have a practical understanding to be understood by the target reader who has the same background of knowledge. In the form of languages basically the terms in source language which is in plural showed different results in their translation of TL. The plurality of form in the SL was not always found in the TL but they seem to have adaptation. Based on the Indonesian grammar (Alwi et. al., 2003: 285) that words are not being reduplicated in sentences if reffering to things in generic. information from the respondent direct interview editor dated on March 6, 2018, Prof. Harya Putra who is a lecturer, translator, and book editor conveys that terms of animal science in the SL which are presented in plural form do not have to be equally plural in the result of translation. They were found in animal science terms related to Genetics and Animal Breeding, and also Production that can be seen in the following table:

No.	Animal Science	English	Indonesia
	Terms	(SL)	(TL)
1	Genetics and	tropical animals	ternak tropis
	Animal Breeding	_	_
		animal geneticists	ahli genetik ternak
		breeding plans	rencana pemuliaan
		genes	gen
		carriers of a gene	pembawa suatu gen
		females of a local breed (L)	ternak betina setempat (L)
		crossing systems	sistem persilangan
		sires	tetua
		indoor pens	kandang tertutup
		kids	anak kambing
		flocks	kelompok

		interpartum intervals	interval kelahiran ternak	
antibodies		antibodies	antibodi	
	semen from males of an exotic breed (E)		mani ternak pejantan yang didatangkan dari luar (E)	
		Etawah cross kids	anak kambing Peranakan Etawah	
2	Production	slaughter of breeding animals	pemotongan kambing bibit	
	parturient females		betina yang melahirkan	
		weaners	ternak yang baru disapih	

The whole of them were found being simplified in terms of lexical form, the plural of SL showed with the suffix –s but not being reduplicated in the TL for the adaptation. Terms in the SL were simplified in the TL but they still have the plural meaning in the TL i.e.

SL: A feature of **tropical animals** is the thin pelage.(Tomazewska *et.al.*, 1993: 65)

TL: *Ciri* ternak tropis adalah berbulu tipis.....(Mastika dkk., 1993: 72).

The above example showed that tropical animals translated into *ternak tropis* generally means that the tropical animals in the TL not only concern of a single species but for ruminants (small ruminants and big ruminants). These were similar to animal geneticists translated into ahli genetik ternak means that does not only concern with one scientist who understand about genetics but more than one, breeding plans translated into rencana pemuliaan indicates more than one planning of breeding for animals to improve the production (management mating, nutrition, etc.), genes translated into gen means that plurality shown from gen in TL consist of the gene in generic refers to be more than one either produced from the male or female, carriers of a gene translated into pembawa suatu gen which means gene from male and even female of the animals can carries the characteristics and effected to the performances of progeny depends on the mating and breeding, females of a local breed (L) translated into ternak betina setempat (L) means breed of ruminants especially the local breed, crossing systems translated into sistem persilangan means that system used in the crossing can be within local breeds (male and female), sires translated into tetua means more than a sire (male) as the parent of ruminants, indoor pens translated ito kandang tertutup means the indoor pens for ruminants which is built in fences, kids translated into anak kambing means young goats which can be more than one, flocks translated into kelompok means more one animal in groups, interpartum intervals means interval kelahiran ternak means period of time for animals birthing, antibodies translated into antibodi is the preventive substances for immune and health of ruminants,

semen from males of an exotic breed (E) translated into mani ternak pejantan yang didatangkan dari luar (E) is the sperms of males from exotic animals (foreign breeds), Etawah cross kids translated into anak kambing Peranakan Etawah is young goats as progeny from pure breed and exotic breed of Etawah, slaughter of breeding animals translated into pemotongan kambing bibit is the slaughtering of superior breeding animals, parturient females translated into betina yang *melahirkan* is the birthing females from ruminants, weaners is the process of separating the young ruminants from their mothers' udders to drink milk. These showed that equivalence of terms found from source language translated into target language analyzed from the use of terms, translation, including their meaning. They have shown the brevity on the use of the language as scientific terms in translation.

b. Explication of Animal Science Terms

The explication was found in the translation animal science terms especially those related to Production and Social Economy through expanding use of lexical. Actually, the purpose is to give a clear meaning and understanding of the terms. These were found in terms of parturient females translated into betina yang melahirkan with additional of yang as conjunction, weaners translated into ternak yang baru disapih also added with the conjunction of yang in order to highlight the meaning of head of the term betina and element of explanation with the lexical of *baru*. The term Etawah cross kids in the source language expanded into anak kambing Peranakan Etawah in target language with the use of lexical in the translation. There was additional of lexical peranakan before **Etawah** in order to underline the progeny of Etawah goat from India mating with local breed (Kacang Goat from Indonesia) based on the information of Linda Doloksaribu on March 5, 2018. Animal science terms related to Social Economy such as extensive systems translated into sistem ekstensif

(diumbar) with the additional of lexical diumbar inside the brackets. Moreover, systems combining arable cropping also expanded with conjunction yang and dengan in its translation of sistem yang dikombinasikan dengan lahan pertanian for similar purposes. Then, the terms such as *roadside*, *communal* and arable grazing system explicated in the target language with additional lexicals sistem, pada, and lahan milik masyarakat translated into sistem penggembalaan dipinggir jalan, pada lahan milik masyarakat, dan pada lahan pertanian. Furthermore, terms of tethering in source language was explicated with additional phrases into ternak pada suatu tempat so the translation became mengikatkan ternak pada suatu tempat. Explcation of lexical also found in the target language with additional phrase such as sistem pemberian and conjunction i.e. dengan, yang, dan, oleh, and nominal of petani in the translation of cutand-carry feeding translated into sistem pemberian pakan dengan pakan yang dicari dan dibawakan oleh petani.

c. Adaptation of Animal Science Terms

The terms were found directly and indirectly adapted from SL into TL. Terms with direct adaptation include **earlier weaning** (SL) translated into *penyapihan dini* (TL) but **conception post-partum** (SL) translated into *pembuahan post-partum* (TL) was adapted directly **conception** into *pembuahan* and **post-partum** was indirectly absorbed in the TL without adaptation.

d. Equalizing of Animal Science Terms

The equalizing of oral text was not found in this translation but is oriented as product and found in written texts within scientific languages. In addition, the equalizing was found in the whole terms, but some of them were in cultural adaptation related to Social Economy as of caretaker translated into *penggaduh*, peasants translated into petani penggarap, roadside system di dalam roadside, communal and arable grazing system translated into sistem penggembalaan di pinggir jalan, extensive systems translated into sistem ekstensif (diumbar) within the combination within adaptation of pronunciation and spelling in target language. Meanwhile, equalizing found also in the animal science term is related to reproduction such as weaning translated into *penyapihan* which seems to have cultural adaptation with the target language. This is due to the lexical *penyapihan* that has the influence of local language and is accepted as the national language of Indonesian.

e. Unique items of Animal Science Terms

The uniqueness in scientific texts translation that is not the whole terms can be found to the closest terms and meaning in TL. In some cases, they could not be found with the equivalence for their translation so the translator intends to explicate and or absorbed the term i.e. *interval* in *interpartum interval* translated into *interval kelahiran ternak* which is added with *ternak* to highlight the meaning for ruminants. In addition, the elements of linguistics in the SL should not always be simply the same in the TL but it depends on the context of text. It means that the terms will be used based on the types of text. The findings can be analyzed from the data on Table 2 in which the plurality terms in the SL should not always be reduplicated into the TL for their plurality meanings with reduplication such as Kacang and Etawah-cross goats translated into kambing Kacang dan kambing Peranakan Etawah (PE) without repeating the term of *kambing* become kambing-kambing, tropical animals translated into ternak tropis without repeating the lexical ternak become ternak-ternak tropis, heterozygotes translated into heterozigot without repeating heterozigot*heterozigot* or with additional word *beberapa* to show plurality (in English *beberapa* means similar to **some**) so it becomes beberapa heterozigot; indoor pens translated into *kandang tertutup* without repeating kandang so becomes kandang-kandang tertutup, parturient females translated into betina yang melahirkan without repeating the lexical betina becomes betina-betina yang melahirkan, systems translated into sistem without repeating the lexical becomes sistem-sistem. All of them seem to be in singular but they have plural meaning. This is informed from the scientist, book editor, and translator, Prof. Harya Putra dated onl March 6, 2018. He said that plurality in source language shown from the prefix -s should not always be used in reduplication in the target language depends on the context of situation.

5.CONCLUSION

The translation from SL and TL seems to have their application and features. In the application, structuring of terms showed that terms in SL intend to use absorption in the TL since the translator could not find the most lexical equivalents to translate them. These are similar to term creation and adaptation because adapting the local language as term creation in TL accepted and familiar to the target reader understanding. Basically, standardization for SL and TL are recognized through dictionaries and motivation of using the terms only for the reason of sending messages and knowledge to the target readers so they could have the understanding of content. Morever, features of translation found with varieties for simplification and explication, adaptation and equalizing, and unique of languages showed the way how the translator makes decision and reflects to the result of translation.

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