AN ANALYSIS ON TRANSLATION QUALITY OF MEDICAL TERMS IN AN ARTICLE ENTITLED "CRITICAL ILLNESS DUE TO 2009 A/H1N1 INFLUENZA IN PREGNANT AND POSTPARTUM WOMEN: POPULATION BASED COHORT STUDY" PRODUCED BY GOOGLE TRANSLATE

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Abstract

The purposes of this research are to describe the translation technique used by Google Translate in translating English medical terms in an article entitled *Critical Illness Due To 2009 A/H1n1 Influenza in Pregnant and Postpartum Women: Population Based Cohort Study* and to know the translation quality in terms of accuracy and acceptability. This research used purposive sampling technique to select the data. Two methods were used to collect the data; content analysis was obtained to collect the first data from source text and target text and interview and close and open ended questionnaire was obtained to gather data of the accuracy and acceptability. The findings of the research are as follow: there are five techniques to translate English medical terms literal translation, borrowing includes naturalized borrowing and pure borrowing, calque, transposition, and amplification.

Keywords: article, translation technique, quality assessment: acceptabelty and accurancy

Introduction

As machine translation, the growth of online translation services is faster than translation software. One of them is Google Translate. Here Google tries to expand its wing to provide its users with its own online translator. Through this product, Google attempts to accommodate the difficulties found by its users in understanding the articles, journals, or electronic guide books on the internet. As a fact, http://www.cnet.com/news/google-translate-now-serves-200-million-people-daily/ reported that Google translate has served 200 million people daily. The difficulties are especially caused by the different languages written in those texts. Therefore, Google Translate provides the ease in use, the efficient of time, and the low cost for its translation services. Its ability in translating text involves translation in the form of word, phrase, clause, sentence, paragraph, and even text.

The role of Google Translate is very important for Indonesian academic users when they try to understand the foreign text, especially English. As what (Hutchin, 1995, p. 431) stated that "computer programs are producing translations –not perfect translations, for that is an ideal to which no human translator can aspire; nor translations of literary texts, for the subtleties and nuances of poetry are beyond computational analysis; but translations of technical manuals, scientific documents, commercial prospectuses, administrative memoranda, medical reports". Since its emergence in the twentieth century, some experts believe that translation machine still has some difficulties such as producing an ideal translation for technical text (technical manuals, scientific documents, commercial prospectuses, administrative memoranda, and medical reports). In translating such sensitive texts, for instance medical text with many medical terms, Google Translate can instantly provide the translation for those terms.

However, the translation produced by Google is not thoroughly accurate. The

way Google works is bound by a system called statistical machine translation. The way it works is restricted depends on the data which are entered into a translation memory. This is the reason why Google Translate sometimes unable to fix some translation problems whether they are in the form of linguistic units or specific terms. Those problems are caused by the emergence of mistranslations on the translation product. For the reason, the researcher tried to apply Google Translate to translate English medical terms which were found in an article entitled "*critical illness due to 2009 A/H1N1 influenza in pregnant and postpartum women: population based cohort study*". The article was taken from www.bmj.com/cgi/reprint/mar18. The examples of translation problem occurred in the product of Google Translate are:

SL: Of the 22 postpartum women, 14 (64%) had had an emergency caesarean section and eight (36%) had **spontaneous vaginal deliveries**.

TL: Dari 22 pasca melahirkan perempuan, 14 (64%) telah memiliki operasi caesar darurat, dan delapan (36%) telah **spontan vagina pengiriman**.

The term **spontaneous vaginal deliveries** above is translated into **spontan vagina pengiriman**. The translation for the term is not accurate and it is not acceptable. The reason is that the translation does not deliver the same meaning as the SL meaning. The other reasons, it does not follow the Indonesian grammatical rules, and it is never used in the medical science text. The term should be translated **kelahiran secara normal**.

From those examples of translation problem which occurred in the translation of medical terms in the article entitled "*critical illness due to 2009 A/H1N1 influenza in pregnant and postpartum women: population based cohort study*" translated by Google Translate, the researcher would propose this issue as thesis. The research attempts to investigate more about the level of accuracy and acceptability in translating medical terms.

Methodology

This research is descriptive qualitative research. According to (Sutopo, 2002, p. 35) the data are identified as qualitative since the data which are in the form of words, sentences, or pictures are considered to be more valuable rather than numbers.

This research is design as single embedded-case study which means that this research focuses on the translation of English medical terms into Indonesian produced by Google Translate.

The data are all English medical terms found in the medical journal entitled "critical illness due to 2009 A/H1N1 influenza in pregnant and postpartum women: population based cohort study" and all translated medical terms produced by Google Translate.

The researcher also applied purposive sampling technique in determining the raters. The criteria for the raters are:

1. Mastering English and Indonesian well.
2. Having competency in translation theory.
3. Having experience as a translator.
4. Willing to be involved in this research.

In validating the data which are in the form of medical terms, the researcher validated the data through another informant to declare that the data are valid. The data were also checked through another document source to declare that data are valid. The validation technique is done by matching the English medical terms in http://medical-dictionary.thefreedictionary.com/ whether they are English medical terms or not. The reason of choosing this resource of *thefreedictionary's/medical dictionary* is this sites refers to *The American Heritage Stedman'sMedical Dictionary, Second Edition* and *Dorland's Medical Dictionary for Health Care Consumers,* which provide authoritative descriptions of medical

conditions, medications, anatomical terms, noted medical personalities and more.

Findings and Discussion

1. The Analysis of Translation Quality

This subchapter presents the analysis of the accuracy and the acceptability of English medical term translation produced by Google Translate. The level of accuracy and the acceptability of the data are rated by three raters who have filled the questionnaire. The questionnaire applied close and open-ended forms. The researcher distributed close-ended questionnaire to the three raters in order to assess for the scales of accuracy and acceptability. Meanwhile, open-ended questionnaire is functioned as the raters' space to clarify their answer of the accuracy and acceptability.

2. Accuracy

Table 1. Table of Accuracy

No	Parameter	Total	Percentage
1	Accurate	110	86,6%
2	Less accurate	4	3,1%
3	Inaccurate	13	10,3%
		127	100%

a. Accurate Translation

Accurate translation is defined as "*Makna kata, istilah teknis, frasa, klausa, kalimat atau teks bahasa sumber dialihkan secara akurat ke dalam bahasa sasaran; sama sekali tidak terjadi distorsi makna*" (Nababan, Nuraeni, & Sumardiono, 2012). There are 110 of the 127 data which can be described as accurate translation. The example of accurate translation can be seen below:

Datum number 013
SL : gave birth
TL : melahirkan

For datum number 013, it can be seen that the term *gave birth* is translated accurately. Literally, the term above should be translated as *memberikan kelahiran*. However, the translated term *melahirkan* which is applied in the TL has the same meaning as the term *gave birth*. Therefore, the meaning of the term *gave birth* is conveyed successfully into TL by translating it into *melahirkan*. For this datum, the three raters also score 3 which mean that the translation of the term is accurate.

Datum number 023
SL : virus
TL : virus

In this example, the SL term is the same as the TL term which is *virus*. This means that both terms n SL and TL refer to the same definition. The term *virus* is defined by kbbi.web.id as *mikroorganisme yang tidak dapat dilihatdengan mikroskop biasa, hanya dapat dilihat dengan mikroskop elektron, penyebab penularan penyakit spt cacar, influenza, dan rabies*. Meanwhile, *virus* in the SL means *a minuteinfection agent which, with certain exceptions, is not resolved by the light microscope, lack independent metabolism and is able to replicate only within a living host cell (the freedictionary.com)*. Therefore, the three raters consider the translation as accurate translation since the term *virus* in the TL conveys the same meaning from the same term in the SL.

Data number 011 and 053
SL : gestation
TL : usia kehamilan
SL : gestation
TL : kehamilan

From the examples above, the data number 011 and 053 refer to the same term which is *gestation*. In fact, Google Translate translate it into two different results. The first translation (datum number 011) is *usia kehamilan* and the second one (datum number 053) is *kehamilan*. However, both translated terms are the equivalent terms in the TL and they refer to the same meaning. The meaning of the term *gestation* is *the period of fetus development in the uterus from conception until birth* or it is also called *pregnancy*. From the definition, it can be concluded that the translation of the term, both *usia kehamilan* and *kehamilan* refer to the same meaning and condition. The three raters also score 3 in this datum which mean that the translation of the term can be classified as accurate translation.

b. Less Accurate Translation

Less accurate translation is defined as "*Sebagian besar makna kata, istilah teknis, frasa, klausa, kalimat atau teks bahasa sumber sudah dialihkan secara akurat ke dalam bahasa sasaran. Namun, masih terdapat distorsi makna atau terjemahan makna ganda (taksa) atau ada makna yang dihilangkan, yang mengganggu keutuhan pesan*". There are 4 data which are considered as less accurate translation.

Datum number **057**

SL : infant infection

TL : bayi infeksi

In this example, the term *infant infection* is translated into *bayi infeksi*. From the SL term, *infant infection* can be defined as *the infection which occurs on an infant*.

On the translation above, which is *bayi infeksi*, the structure of the head and modifier still follows the SL. Therefore, it can produce more than one meanings for example, *bayi yang terinfeksi,bayi yang menginfeksi, infeksi pada bayi,* and *infeksi dari bayi*. Since the translation produces more than one meaning, it is classified as less accurate translation. From the raters, the score is divided into two directions. The rater 2 and 3 score this translation as accurate. Meanwhile, the rater 1 scores 2 as less accurate datum. Based on the explanation above, the translation tends to be classified as less accurate.

Datum number **063**

SL : multiple birth

TL : beberapa kelahiran

The term *multiple birth* above is translated into *beberapa kelahiran. Multiple birth* also means *the birth of more than one baby at the same time from one single mother*. It can be seen that the translated term *beberapa kelahiran* only conveys some parts of the meaning in the SL. The translate termd can be defined as a birth of more than one baby from one mother or a birth of more than one baby from more than one mother. Since the translation produces ambiguous meaning, the translated term is rated as less accurate translation. From the raters score,

the rater 1 and rater 2 score 3 as accurate translations for this term. Meanwhile, rater 3 scores 3 as less accurate translation. Based on the explanation above, the translation of the term n datum number 063 tends to be classified as less accurate translation.

c. Inaccurate Translation

Inaccurate translation can be defined as "*Makna kata, istilah teknis, frasa, klausa, kalimat atau teks bahasa sumber dialihkan secara tidak akurat ke dalam bahasa sasaran atau dihilangkan (deleted)*". There are 13 data which are classified as inaccurate translation.

Datum number **015**

SL : delivered

TL : disampaikan

The term above is actually in the sentence "*All subsequently delivered.*". This sentence refers to the previous sentence which is "*(14 women (22%) gave birth during their stay in intensive care and 26 (41%) were discharged fro an intensive care unit with ongoing pregnancy)*. The word *all* in the sentence refers to the *women with ongoing pregnancy*.

The word translated term *disampaikan* cannot convey the meaning of the term *delivered*. Referring to the previous sentence, the translation should be *melahirkan*. Besides, it cannot be translated into passive since there is not "to be) in the sentence. From the raters score, the rater 1 and 2 score this translation with 1 as inaccurate translation. Meanwhile, rater 3 score 3 as accurate translation. Based on the explanation above, the translation of the term in datum number 015 tends to be classified as inaccurate translation.

Datum number **018**

SL : stillbirths

TL : dilahirkan

In the SL, the term *stillbirths* means the birth of a dead baby or fetus. In the TL, it is translated into *dilahirkan* which means *was born*. It can be seen that the translation of the SL term as *dilahirkan* doesn't convey the meaning of the SL term. In the TL, the term *stillbirths* is known as *kelahiran mati*.

From the raters, the rater 1 and 2 score this translation as inaccurate translation. While rater 3 scores 2 as less accurate translation. Referring to the explanation above, it can be concluded that the translation of the term in datum 018 tens to be classified as inaccurate translation.

Data number **039** and **122**
SL : labour
TL : tenaga kerja
SL : delivery
TL : pengiriman

For data number 039 and 122, the SL terms have the certain meaning when they are involved in certain scientific text. For the terms above, Google Translate translates those terms without considering the circumstances of the sentences. For example, the translated term *tenaga kerja* as the translation of the term *labour* and the term *pengiriman* as the translation of the term *delivery* are recognized lexically.

When they are applied in certain text, in this case medical text, it appears that they have different meanings from the previous ones. In medical field of study, the term *labour* means *the undergoing of childbirth*.

Meanwhile, the term *delivery* has the meaning as *the event of giving birth*. In this context, both terms refer to the same meaning which is *childbirth* or *giving birth*. Both *labour* and *delivery* are better translated into *kelahiran.*

From datum number 039, the raters give different score. The rater 1 and 2 score 1 as inaccurate translation. While rater 3 gives score 3 as accurate translations. Meanwhile, for datum number 122, all raters score 1 as inaccurate translation. Based on the explanation above, the translation of both term tends to be classified as inaccurate translation.

3. Acceptability
Table 2. Table of Acceptability

No	Parameter	Total	Percentage
1	Acceptable	113	89%
2	Less acceptable	5	3,9%
3	Unacceptable	9	7,1%
		127	100%

a. Acceptable Translation

Acceptable translation is defined as *"Terjemahan terasa alamiah; istilah teknis yang digunakan lazim digunakan dan akrab bagi pembaca; frasa, klausa dan kalimat yang digunakan sudah sesuai dengan kaidah-kaidah bahasa Indonesia"* (Nababan, Nuraeni, & Sumardiono, 2012). There are 113 data which are classified as acceptable translation.

Datum number **068**
SL : ectopic pregnancy
TL : kehamilan ektopik

The term *ectopic pregnancy* above is translated into *kehamilan ektopik.* Th translated term *kehamilan ektopik* means *kehamilan yang berkembang di luar rahim, biasanya di salah satu saluran tuba falopi.* Besides that, the term *kehamilan ektopik* is commonly known in the TL. from the raters, the three raters score 3 for this datum which means that the translation of the term is acceptable. Therefore the translation of the term is acceptable.

Datum number **075**
SL : body mass index
TL : indeks massa tubuh

The term above is *body mass index* which means *a measurement of the relatives percentages of fat and muscle mass in the human body, in which mass in kilograms is divided by height in meters squared and the result used as an index of obesity.* The translation for the term is *indeks massa tubuh* which is commonly known and it is also commonly used in the TL. from the raters, all 3 raters give 3 for this datum which means that the translation of the term is acceptable. Because of the reason, the translation of the term above is rated as acceptable translation.

b. Less Acceptable Translation

Less acceptable translation is defined as *"Pada umumnya terjemahan sudah terasa alamiah; namun ada sedikit masalah*

pada penggunaan istilah teknis atau terjadi sedikit kesalahan gramatikal". There are 5 data which considered as less acceptable translation.

Datum number **027**

SL : modern obstetric

TL : modern kebidanan

The term *modern obstetric* above is translated into *modern kebidanan.* There is a problem in translating this term in deciding the head and the modifier. It seems that the translation maintains the structure of the SL. It causes the translation unfamiliar even though it is still known as a medical term in the TL. The more acceptable translation for this term should be *kebidanan modern.*

c. Unacceptable Translation

Unacceptable translation occurs when *"Terjemahan tidak alamiah atau terasa seperti karya terjemahan; istilah teknis yang digunakan tidak lazim digunakan dan tidak akrab bagi pembaca; frasa, klausa dan kalimat yang digunakan tidak sesuai dengan kaidah-kaidah bahasa Indonesia"*. There are 9 data which are considered as unacceptable translation.

Datum number **051**

SL : unassisted vaginal delivery

TL : pengiriman vagina tanpa bantuan

The term *unassisted vaginal delivery* is the datum number 051. The term is translated into *pengiriman vagina tanpa bantuan* which is considered as unacceptable translation. The translation of the term doesn't relate to the SL and it is not used in the medical study. Besides it also sounds like translation. Actually it means *kelahiran normal*. From the raters score, the rater 1 and 2 give 1 for this datum. Meanwhile rater 3 gives 2 for this datum. Based on the Because of this reason, it can be concluded that the translation tends to be classified as unacceptable.

Datum number **098**

SL : emergency caesarean section

TL : bagian darurat caesar

The term *emergency caesarean section* is translated into *bagian darurat*

caesar. *Caesarean section* doesn't literally mean *bagian Caesar* in the TL. However, it is commonly known as *bedah Caesar*. In other word, the translated term doesn't used in medical study because it sounds like translation. The term can be translated into *operasi caesar darurat*. Based on the raters score, the rater 1 and 2 give score 1 for the datum. Meanwhile rater 3 give score 3 for this datum. Therefore, the translation of the term tends to be classified as unacceptable translation.

Conclusion

The analysis on accuracy of translation of English medical terms in the article entitled *critical illness due to 2009 A/H1N1 influenza in pregnant and postpartum women: population based cohort study* shows that 110 data (86.6%) are considered as accurate translation, 4 data (3.1%) are considered as less accurate translation, and 13 (10.3%) data are considered as inaccurate translation. From the data, it can be concluded that the translation of English medical term in the article entitled "*critical illness due to 2009 A/H1N1 influenza in pregnant and postpartum women: population based cohort study*" tends to results accurate translation. It can be seen from the number of the accurate data which cover 110 data or 86,6% of all 127 data. The techniques which generate translation in high level of accuracy are pure borrowing and naturalized borrowing. All data which are translated using this technique are considered as accurate translation. Since the terms are borrowed from the SL, this means that the meaning can be conveyed to the TL accurately. Meanwhile, the technique which affects the low level of accuracy is transposition. This technique tries to fit the SL terms into TL grammatical structure. However, the translated terms shows the different meaning from the SL.

The analysis on the acceptability of translation English medical terms in the article entitled *critical illness due to 2009 A/H1N1 influenza in pregnant and postpartum women: population based*

cohort study shows that 113 data (89%) are considered as acceptable translation, 5 data (3.9%) are considered as less acceptable translation, and 9 data (7.1%) are considered as unacceptable translation. From the data, it can be concluded that the translation of English medical term in the article entitled "*critical illness due to 2009 A/H1N1 influenza in pregnant and postpartum women: population based cohort study*" tends to results acceptable translation. It can be seen from the number of the acceptable data which cover 113 data or 89% of all 127 data. The techniques which generate translation in high level of acceptability are pure borrowing and naturalized borrowing. Meanwhile the technique which contributes the low level of acceptability is calque technique.

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