The Translation of Medical Terms in Two Translation Versions of *Into The Magic Shop*

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Abstract. This study aims to identify the challenges in medical translation and the translation procedures applied in translating medical terms in the book *Into The Magic Shop*. Furthermore, this study also wants to reveal whether the translation of the medical terms is source-language oriented or target-language oriented. This is a descriptive qualitative research based on translation product. The data in this study are medical terms in the book *Into The Magic Shop* and its two translation versions. The data was collected through content analysis. Several features of medical terms related to translation problems were found in this study. There are Latin and Greek root words, eponyms, acronyms, word compounding, affixation, and the doublet phenomenon. The finding also shows that borrowing and literal translation are the most dominant translation procedures for translating the medical terms. Based on the result, it can be concluded that the medical translation tends to be source-language oriented.

Keywords: medical terms, medical translation, translation procedures

1 Introduction

Rapid progress is made in the field of medicine nowadays. New researches are constantly conducted, and the result needs to be spread to the public. The latest developments in the medical field are conveyed through various media, such as textbooks, scientific articles, conference proceedings, case studies, reports, brochures, and online information. Translation has a significant role in knowledge transfer in the medical field all over the world (Karwacka, 2015). A proper translation of medical texts requires excellent linguistic knowledge in the source language and the target language. In addition, the translator needs to be familiar with medical terms and medicine in general. Medical translators should always bear in mind that lexical choice and grammatical accuracy are of the utmost importance as inaccuracy in the translation may seriously affect someone's health or even life (Badzinski, 2018).

One of the most distinctive characteristics of medical translation is the terms. Medical terms refer to words and phrases used to describe the human anatomy, body processes, medical procedures, techniques, and instruments used in medicine (Buzarna-Tihenea, 2015). Medical terms are very dynamic, constantly representing innovations and discoveries through the coinage of new words. It is considered one of the most complex features in medical translation (Montalt, 2012).

ELTLT 2021, August 14-15, Semarang, Indonesia

DOI 10.4108/eai.14-8-2021.2317629

Recently, medical translation has become an important segment for professional translators. Many organizations require medical translation, such as pharmaceutical companies, medical book publishers, and medical device manufacturers. Medical researchers also need to have their articles translated into English to publish their research results in international journals (Montalt, 2011). Despite the high demand for medical translation in the translation industry, this type of translation has not gained much popularity among Translation Studies scholars. (Montalt et al., 2018).

Based on the background, the researcher is interested in conducting a study about medical translation. This research aims to find out the common challenges in medical translation and the translation procedures applied by the translators in two translation versions of Into The Magic Shop. Moreover, this study also wants to reveal whether the translation of the medical terms is source-language oriented or target-language oriented. Hopefully, this research will provide valuable insight for further research in medical translation.

2 Methodology

This study applied a descriptive qualitative approach. The data of this study were the medical terms in the book *Into The Magic Shop* and its two Indonesian versions. The book was written by James R. Doty, an American neurosurgeon, and published by Avery in 2016. The first Indonesian version was translated by Deasy Serviana and published by Mata Aksara in 2018. Two years later, another Indonesian version was translated by Ayu Yudha and published by Semicolon Publisher. The data were collected by using content analysis. After collecting the medical terms, the data were classified according to the features of medical terms related to translation problems and challenges proposed by Karwacka (2015) and Salager (1983). Then the data were analyzed by using the theory of translation procedures proposed by Vinay and Darbelnet (2000). Based on the analysis of the translation procedures, it can be concluded whether the translation of the medical terms is source-language oriented or target-language oriented.

3 Finding and Discussion

There are several features of medical terms that might become challenges for translators. According to Karwacka (2015), the main features of medical English that may lead to translation problems are Latin and Greek terminology, eponyms, acronyms and abbreviations, polysemy and synonymy. In addition, she also described the three features of Fundamental Medical English proposed by Salager (1983), namely word compounding, affixation, and the doublet phenomenon. In such a case, the translators need to apply the right strategies to produce an adequate translation.

Vinay and Darbelnet (2000) proposed seven procedures of translation. Three of them are categorized as direct translation, namely borrowing, calque, and literal translation. These procedures are oriented to the source language. The rest of the translation procedures, transposition, modulation, equivalence, and adaptation, are classified as oblique translation. These four procedures are target-language oriented.

The following sections present the common features of medical terms related to translation issues and the procedures applied by the translators. The source text (ST) is the book Into The Magic Shop, target text 1 (TT1) is the translation by Deasy Serviana, and target text 2 (TT2) is the translation version by Ayu Yudha.

3.1. Latin and Greek Root Words

The majority of medical terms derive from Latin or Greek language. Medical translators should be familiar with Latin or Greek root words since many affixes in medical terms are based on them. Translating medical text without this knowledge can be very challenging (Browne, 2016). Datum 1 and datum 2 show the translation of medical terms derived from Latin and Greek languages.

Table 1. Datum 1

ST	TT1	TT2
"Ultimately compressing not only the **cerebellum** but also the brainstem."	"Akhirnya ia tidak hanya menekan **cerebellum**, tetapi juga batang otak."	"Akhirnya mengompresi tidak hanya **otak kecil** tapi juga batang otak."
(Doty, 2016: 2)	(Serviana, 2018: 3)	(Yudha, 2020: 12)

The term *cerebellum* is derived from the Latin word *cerebrum* (Dorland, 2012). The simple definition of the term is *little brain*. In datum 1, The two translators applied different translation procedures to translate the term. The translator in TT1 applied the procedure of borrowing by retaining the word from the source language. The translator in TT2 translated the term by using the transposition procedure since there is a change in the word class. The noun *cerebellum* was translated into the noun phrase *otak kecil*. The book is targeted at general readers or non-experts in medicine. Therefore, the translation in TT2 is more suitable in this context since it is easier for the readers to understand the meaning.

Table 2. Datum 2

ST	TT1	TT2
"The adrenal gland also gets triggered by hormones released by the **hypothalamus**."	"Kelenjar adrenal juga terpicu oleh hormon yang dirilis oleh **hipotalamus**."	"Kelenjar adrenal – yang memproduksi beberapa hormon – juga terpicu oleh hormon yang dilepaskan oleh **hipotalamus**."

(Doty, 2016: 33)	(Serviana, 2018: 64)	(Yudha, 2020: 57)

The word *hypothalamus* has the prefix *hypo-* which means *under* in Greek. The hypothalamus is a part of the brain that controls many bodily functions, such as body temperature, sleep, and food intake (Dorland, 2012). In datum 2, both translators applied the borrowing procedure and adjusted the term according to the Indonesian spelling. Based on the translation procedures chosen by the translators, it can be concluded that the translation is source-language oriented.

3.2. Eponyms

Eponyms constitute a significant portion of medical jargon. They include names of body parts, e.g., Achilles tendon, names of diseases or syndromes, e.g., Asperger's syndrome, signs and symptoms, e.g., Auenbrugger's sign, fractures, e.g., Bennett's fracture, surgical procedures, e.g., Collis gastroplasty, and medical devices, e.g., Allis clamp. Medical eponyms are commonly derived from the names of physicians or scientists who first described the medical phenomenon or invented the tools, the names of patients affected by the disease, the names of places, or even the names of literary characters. Eponyms may become a source of translation problems if the equivalent in the target language is not eponymous (Karwacka, 2015).

Table 3. Datum 3

ST	TT1	TT2
"I could see the dome of the aneurysm poking out between the frontal and the temporal lobes in the **Sylvian fissure**."	"Dapat kulihat kubah aneurisme menongol di antara lobus frontal dan temporal dalam **lateral fisura**."	"Saya bisa melihat kubah aneurisma mencuat di antara lobus frontal dan temporal dalam **fisura lateralis**."
(Doty, 2016: 169)	(Serviana, 2018: 322)	(Yudha, 2020: 239)

Datum 3 shows the translations of an eponym *Sylvian fissure*. The term is named by Jacobus Sylvius, a Dutch physician, to describe a deep fissure in each brain hemisphere. It is also known as the *lateral sulcus* or *lateral fissure* (Dorland, 2012). The translations in TT1 and TT2 are not eponymous since it does not include the name of the physician who first coined the term. Both translators applied the literal translation procedure in this context. However, there is a difference in word order. The translation in TT1 is *lateral fisura*, which is influenced by the structure of the English noun phrase. In comparison, the translation in TT2 is *fisura lateralis,* which is adjusted to the structure of the Indonesian noun phrase.

3.3. Acronyms and abbreviations

The presence of acronyms and abbreviations is one of the main characteristics of medical language. As the current *lingua franca* of medicine, English medical acronyms are often used in other languages. It can be challenging to find the equivalent of medical acronyms and abbreviations, especially if they are not commonly used in the target language (Karwacka, 2015).

Table 4. Datum 4

ST	TT1	TT2
"**Cardiopulmonary resuscitation (CPR)** is trying to clutch-start a car in second gear – it's not very reliable, especially as we are continuing to lose blood." (Doty, 2016: 6)	"***Cardiopulmonary resuscitation (CPR)*** adalah semacam mencoba mengopling sebuah mobil di gigi dua – sangat tidak dapat diandalkan, terutama ketika kami terus kehilangan darah." (Serviana, 2018: 11)	"**Resusitasi Jantung Paru (RJP)** mirip dengan menstarter paksa mobil langsung dari gigi dua – tidak terlalu bisa diandalkan, terutama karena kami terus kehilangan darah." (Yudha, 2020: 18)

The acronym CPR was translated by using two different procedures, as shown in datum 4. In TT1, the translator decided to maintain the medical term and the acronym by applying the borrowing procedure. The translation in TT2 applied transposition procedure since there is a change in the word class of the adjective *Cardiopulmonary* into a compound noun *Jantung Paru*. It can be concluded that the translation in TT1 is more source-language oriented, while the translation in TT2 is more oriented to the target readers.

3.4. Word compounding, affixation, and the doublet phenomenon

Salager (1983) described three Fundamental Medical English (FME) features, namely compounding, affixation, and the doublet phenomenon. Compound nouns, e.g., *heart attack*, *kidney failure*, are common in FME. Therefore, translating the medical compound nouns may involve syntactic shifts. The affixation process is another characteristic of FME. It involves Latin and Greek affixes, such as *hyper-* (excessive) as in *hypertension*, *hypo-* (insufficient) as in *hypothermia*, and *-itis* (inflammation) as in *sinusitis*. The third feature of FME is the doublet phenomenon. Medical terms derived from Greek or Latin origin may have general counterparts, which are usually of English origin. For example, *acne – pimples*, *pulmonary – lung*, *myocardial infarction – heart attack*. In translating medical texts for lay readers, the translator should avoid using highly specialized jargon.

Table 5. Datum 5

ST	TT1	TT2
"**Brain surgery** is difficult, but surgery in the posterior fossa is	"**Operasi otak** itu sulit, akan tetapi operasi di fossa posterior	"**Pembedahan otak** adalah prosedur yang sulit, tetapi

even more so."	bahkan lebih sulit."	pembedahan di *fossa posterior* lebih sulit lagi."
(Doty, 2016: 4)	(Serviana, 2018: 7)	(Yudha, 2020: 15)

The case of compounding in medical terminology can be found in datum 5. The term *brain surgery* can be classified as a compound noun. In TT1, the term was translated into *operasi otak*, which is also a compound noun. In TT2, the translator also maintained the word class by translating the term into *pembedahan otak*. Even though the two translators applied literal translation procedures, their lexical choice was different.

Table 6. Datum 6

ST	**TT1**	**TT2**
"Their sudden onset, along with high blood pressure, can be an indicator of **preeclampsia**."	"Serangan mendadak yang diikuti dengan tekanan darah tinggi, dapat menjadi indikasi **preeklampsia**."	"Serbuan sakit kepala dan mual yang diikuti tekanan darah tinggi bisa menjadi indikator **pre-eklampsia**."
(Doty, 2016: 101)	(Serviana, 2018: 192)	(Yudha, 2020: 146)

Datum 6 shows an example of affixation in medical terms. The prefix *pre-* is of Latin origin, which means *before* or *in front of*. Preeclampsia is "a complication of pregnancy characterized by hypertension, swelling, and increased protein levels in the urine" (Dorland, 2012: 1509). The translations in TT1 and TT2 both applied borrowing procedure to translate the term. However, the spelling is adjusted according to the Indonesian language. In TT2, the translator decided to put a hyphen between the prefix and the root word.

Table 7. Datum 7

ST	**TT1**	**TT2**
"Noel had sustained a massive brainstem **hemorrhage** – an intraparenchymal **bleed**."	"Noel mengalami **perdarahan** batang otak masif – **perdarahan** intraparenkim."	"Noel mengalami **perdarahan** otak berkelanjutan – **perdarahan** intraparenkim."
(Doty, 2016: 101)	(Serviana, 2018: 192)	(Yudha, 2020: 146)

In datum 7, there is an example of the doublet phenomenon. The term *hemorrhage* is more technical, while the word *bleed* is more general. The word *hemorrhage* contains the prefix *hemo-*, derived from the Greek word *haima*, which means related to the blood. The word *hemorrhage* is defined as "the escape of blood from vessels, bleeding" (Dorland, 2012: 842). The translators in TT1 and TT2 applied the literal translation strategy and translated the two words into *perdarahan*. The translators did not differentiate the translation between the term *hemorrhage* and the word *bleed*, even though one is technical and the other is more general.

4 Conclusion

To produce an adequate translation of a medical text, the translator needs to have language competencies, knowledge about medicine and medical terms. Furthermore, the translator needs to be aware of the challenges in medical translation and apply the appropriate translation procedures.

Several common features of medical terms related to translation problems were found in this study. They are Latin and Greek root words, eponyms, acronyms, word compounding, affixation, and the doublet phenomenon. The translation in target text 1 applied borrowing and literal translation procedure to translate the medical terms. In comparison, the translation in target text 2 applied borrowing, literal translation, and transposition procedure. The use of the transposition procedure in target text 2 means that it is slightly more oriented to the target language than the translation in target text 1. However, since borrowing and literal translation are more dominant in the two translation versions, it can be concluded that the medical translation tends to be source-language oriented.

References

[1.] Badzinski, A. (2018). Collocations, Equivalence, and Untranslatability as Selected Critical Aspects in Medical Translation. In W. Karwacka (Ed.), Towards Understanding Medical Translation and Interpreting, 67-83. Gdańsk: Gdańsk University Press.

[2.] Browne, A. (2016). Selected Medical Translation Problems. Prace Naukowe Akademii im. Jana Długosza w Częstochowie. Studia Neofilologiczne, 12(12), 121-128.

[3.] Buzarna-Tihenea, A. (2015). Several Aspects Regarding the Specialized Translation of Medical Texts. From Theory to Practice. Economic Sciences Series, XV(2), 17–21.

[4.] Dorland, W. A. N. (2012). Dorland's Illustrated Medical Dictionary. 32nd ed. Philadelphia: Elsevier/Saunders.

[5.] Doty, J. R. (2016). Into the Magic Shop. New York: Avery.

[6.] Doty, J. R. (2018). Into the Magic Shop (D. Serviana, Trans.). Jakarta: Penerbit Mata Aksara.

[7.] Doty, J. R. (2020). Into the Magic Shop (A. Yudha, Trans.). Bogor: Semicolon Publisher.

[8.] Karwacka, W. (2015). Medical Translation Regulations. In Ł. Bogucki, S. Goźdź-Roszkowski, & P. Stalmaszczyk (Eds.), Ways to Translation, 271–298. Kraków: Jagiellonian University Press.

[9.] Montalt, V. (2011). Medical Translation and Interpreting. In Y. Gambier & L. Van Doorslaer (Eds.), Handbook of Translation Studies Volume 2, 79–83. Amsterdam: John Benjamins Publishing Company.

[10.] Montalt, V. (2012). Medical Translation. In C. Chapelle (Ed.), The Encyclopedia of Applied Linguistics, 1–5. New Jersey: Wiley-Blackwell.

[11.] Montalt, V., Zethsen, K., & Karwacka, W. (2018). Medical Translation in the 21st Century - Challenges and Trends. Monografias de Traduccion e Interpretacion, (10), 27–42.

[12.] Salager, F. (1983). The Lexis of Fundamental Medical English: Classificatory Framework and

Rhetorical Function (A Statistical Approach). Reading in a Foreign Language, 1(1), 54–64.
[13.] Vinay, J. P., & Darbelnet, J. (2000). A Methodology for Translation. In L. Venuti (Ed.), The Translation Studies Reader (pp. 84–93). London and New York: Routledge.