Translation Techniques and Quality of Automotive Technical Terms in the Yamaha Nmax Owner's Manual

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Abstract

In Indonesia, many types of motorcycle are produced and marketed. Most of them are made by foreign manufacturers. The manual books which are printed in foreign languages such as English may cause some problems for the motorcycle owners and users in the country. One of the problems is the translation of the technical terms in the manual books. It is thus challenging to analyze the translation techniques applied in the translation of the automotive technical terms in Yamaha Nmax Owner's Manual, and the impact of translation techniques on the accuracy, acceptability and readability. Yamaha Nmax is one of the motorcycles with high sales rate in the country. The methods of data collection consist of content analysis and in-depth interview with the raters and respondents. The results show that there are 8 techniques used to translate the technical terms and the use of the techniques result in a translation which is in general accurate, acceptable, and readable. The technique which produces translations with high level of accuracy, acceptability and readability is established equivalent. Meanwhile, generalization tends to produce translations with low level of accuracy, while borrowing produces translations with low level of acceptability and readability.

Keywords: automotive technical terms, translation technique, accuracy, acceptability, readability

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Nowadays, the use of motorcycle especially in Indonesia grows rapidly, accompanied by the production of motorcycles. A new motorcycle is mostly packed with its supporting items such as owner's manual book, service record book, and part catalogue. They are made to inform the owner not only about the motorcycle inside and out but also about how to maintain it based on the factory specification. Those books are usually written and printed in English. In most cases, especially exported motorcycles, the books are accompanied by books in the language of the target countriy.

Certain models of motorcycle which are used in more than one countries need manual books written in different languages based on the user countries the motorcycle is exported to. The users of the motorcycle may get confused if the books are written in different language from the language they understand, English for example. Users will face more problems when they have to deal with the specific automotive terms.

Since term is a lexical unit with a specialized meaning relating to a particular domain (Rogers, 2007), translating terms especially the automotive ones, has become a challenging task and an interesting topic, there was a study related to automotive technical terms translation that was already undertaken. The focus is different, however, since it was about the automotive terms in manual book of a car.

There are several researches regarding the studies on technical term translation under different majors, law (Moghadam & Far: 2015), medicine (Widarwati: 2015), religion (Yulianita: 2017), sport (Sunardi: 2013), and disaster management (Saptaningsih: 2018). Some of the researches focus on translation technique, while the others focus on the quality. Moreover, there is a research analyzing the translation techniques and their impact on the quality of the

translation of automotive terms done by Kurniawati (2016). However, Kurniawati's research focuses on the automotive terms on car (Chevrolet Orlando) while this research focuses on the automotive terms of motorcycle (Yamaha Nmax).

Therefore, in order to fulfill the research gap of the previous study related to technical term translation, the objectives of this research are to find out the translation techniques proposed based on the theory proposed by Molina and Albir (2002) found in Yamaha Nmax Owner's Manual and to describe the impact of the application of translation techniques on the quality of the in terms of accuracy, acceptability and readability.

Methods

This research is descriptive qualitative research as it focuses on analyzing a phenomenon, namely automotive technical term translation. The data are automotive technical terms found in the Yamaha Nmax Owner's Manual which are in the forms of words and phrase. The other data take form of information related to translation quality. Purposive sampling technique is used to determine the sources of data, namely: documents and informants. The documents which are used in this research are Yamaha Nmax Owner's Manual and its translation in bahasa Indonesia. The informants consist of a validator, three raters, and three respondents. Validators confirmed that the data are classified into automotive technical terms. The validator is a Tehcnical Engineering lecturer. The raters and the respondents assessed the quality of the translation of automotive terms. The raters are 1.) Technical Engineering lecturer, 2.) English Department lecturer University, and 3.) English lecturer, while the respondents are the owners and/or the users of Yamaha Nmax. In this research, three types of methods of data collection were used to collect the data; content analysis, questionnaire distribution and in-depth interview. The assessment of the quality of the translation of the terms referred to the instruments for assessing translation quality formulated by Nababan, Nuraeni, and Sumardiono (2012).

Result

Eight translation techniques as proposed by Molina and Albir (2002) are identified in the translation of automotive technical terms in Yamaha Nmax Owner's Manual. The eight techniques are; 1. Established Equivalent, 2. Borrowing, 3. Generalization, 4. Amplification, 5. Literal Translation, 6. Particularization, 7. Reduction, and 8. Transposition. Moreover, combinations of more than one techniques are also applied to translate the terms. The examples are:

Single technique

Established equivalent

Spark plug – Busi

"Spark plug" is a device in the engine that lights an electric spark within the combustion chamber to burn fuel in the cylinder. The term "spark plug" in the source text is translated into "busi" in the target text. "busi" is a well-known term in the target text referring to the same component as "spark plug" in source text. Thus, it is translated by using established equivalent.

Borrowing

Speedometer – Speedometer

The term "speedometer" in the source language is translated into "speedometer" in the target language. The translation is identified to be translated by using pure borrowing because the term in the target text is the exact same term as in the source text. Moreover, there is a term "spidometer" in the target language which is the equivalent of "speedometer". The term "Speedometer" refers to an instrument on a vehicle indicating its speed.

Coil spring – Per koil

The term "coil" is translated into "koil" in which the consonant "k" in the target language is used to replace "c" in the source language, so that the technique is identified as naturalized

borrowing. The term “coil” in the term “coil spring” refers to a part of the suspension system which is a spring made from a wire or rod twisted in a spiral shape.

Generalization

Scooter – Sepeda motor

The term “scooter” is translated by using generalization into “sepeda motor” in the target language. The term “scooter” which is a particular type of motorcycles, is translated into “sepeda motor” in the target language, which means “motorcycle”. In other words, the term “scooter” which is a particular type of motorcycle, is translated into more general term “motorcycle”.

Amplification

Spoked wheels – roda jenis jari-jari

The translation of the term “spoked wheels” in the target text is added with “jenis” which means “type”, so that the noun phrase “roda jenis jari-jari” in the target language means “spoked-type of wheel” which has the same meaning as the noun phrase “spoked wheel” in the source language. Thus, it is considered to be translation using the amplification technique.

Literal translation

Steering lock – kunci kemudi

This is an example of the application of literal translation in which the term “steering lock” is translated into “kunci kemudi”. “Steering” in the source language is translated literally into “kemudi” in the target language. The term “steering lock” means a lock (mostly integrated with the main switch) that enables one to lock the fork at an extreme right or left to prevent hinder theft. Considering the context, “steering lock” should be translated into “kunci setang” (or “kunci stang”) because the term “kemudi”in the target language can refer to any kind of steering i.e. in cars, motorcycles, or ships while “setang” or “stang” is a a term in the target language which refers to motorcycle steering. Moreover, “kunci stang” is a term widely used in the target

language.

Particularization

Coolant – cairan pendingin

The term “coolant” refers to a substance, typically liquid or gas, that is used to reduce or regulate the temperature of a system. The translation is categorized into the translation using the particularization technique since “coolant” which can be in a form of liquid or gas, is translated into “cairan” which is a particular for of the coolant.

Reduction

Caster angle – caster

This datum shows the application of reduction technique, in which the term “caster angle” in the source language is translated into “caster” in the target language. It is obvious that there is a reduction where no translation for word “angle” can be found in the target language. The term “angle” should be translated into “sudut” since it is an equivalent term and widely used in the target language. The term “caster angle” means the forward tilt of steering axis that tends to stabilize the steering.

Transposition

Bleed – bleeding

The term “bleed” in the source text is a verb. However, it is translated into “bleeding” which is categorized as a noun. That is why this translation is categorized into a translation using transposition technique. This is the only datum in which the transposition technique is applied.

Combination techniques

Established equivalent + pure borrowing.

Steering bearing - Bearing kemudi.

The term “steering” is translated into “kemudi” which is a term in target language that is

equivalent with the term “steering” in the source language, so it is translated by using established equivalent. Meanwhile, the term “bearing” is translated by using the pure borrowing technique into “bearing” in the target languge. The term “steering bearing” in the source language refers to a bearing between the triple clamp and the steering as well as the front end of a motorcycle.

Established equivalent + literal translation

Air filter element – elemen saringan udara

The term “air filter element” refers to a part which can be made of foam, paper, or stainless-steel filtering the air entering the carburetor from dirt. The term “air filter” is translated by using established equivalent into “saringan udara” while “element” is translated by using literal translation technique into “elemen”.

Established equivalent + established equivalent.

Fuel (gasoline) - Bahan bakar (bensin).

The term “Fuel” in the source language is translated into “bahan bakar” which is a term in the target language that is equivalent with “fuel” in the source language. Meanwhile, the term “gasoline” is translated into “bahan bakar” which is a term in the target language that is equivalent with the term “fuel” in the source language.

Established equivalent + generalization

Muffler protector – pelindung knalpot.

The term “muffler” refers to a part in automotive exhaust system which cools the exhaust gases by expansion through it and to reduce the noise of outgoing gases. The term “protector” is translated by using established equivalent technique into “pelindung”. Meanwhile, “muffler” is translated by using generalization technique into “knalpot”. Muffler which is a part of exhaust, is translated into more general term “knalpot” which means exhaust.

Established equivalent + pure borrowing + amplification.

Wheel bearings - bearing (laher) roda.

Even though there is a term “bantalan” in the target language which is an equivalent term for “bearing” in the source language, the term “bearing” is also known and commonly used in the target language and also considered as an equivalent term. However, the term “bearing” in the target language is taken from the term “bearing” in the source language, so it is also considered using the borrowing technique. Meanwhile, the amplification technique is applied in which the term “laher” is added. “Laher” is another term for “bearing” in the target language which is well known and widely used.

The translation techniques which are applied by the translator affect the translation quality. In order to find out the impact, translation quality assessment was done. The instrument of translation quality assessment proposed by Nababan, Nuraeni, & Sumardiono (2012) was used to assess the translation quality in terms of accuracy, acceptability and readability.

The first aspect is accuracy which is related to the equivalence of the message, in which translation is categorized into accurate, less accurate, or inaccurate. In this research, the technique giving positive impact on the translation of the automotive technical terms is established equivalent. From 130 data, 126 data are accurate, 1 datum is less accurate, and 3 data are inaccurate.

Translation technique giving the positive impact in terms of accuracy is established equivalent. From 96 data which are translated by using established equivalent, all data are categorized into accurate translation, for example, suspension – suspensi, spark plug – busi, and tire – ban. Suspension is the system of springs, shock absorbers, or similar devices connecting the axels to the frame of a motorcycle which is designed to reduce unwanted motion transmitted from the riding surface. Spark plug is a device in the engine that lights an electric spark within the combustion chamber to burn the fuel in the cylinder. Tire/tyre (rubber, sneaker) is the round thing made of rubber the motorcycle moves on.

The technique giving negative impact on accuracy is generalization. From 130 data, there are 3 data which are categorized into inaccurate and 2 of them are translated by using generalization technique, which are scooter – sepeda motor and handlebar - kemudi. Scooter is a motorcycle design where the tires are small and fat, the engine resides over the rear wheel permitting a sheltered driving platform for the rider's feet. Handlebar is a steering system which is used mostly in two wheels vehicle such as motorcycle and bicycle.

The second aspect determining the quality is acceptability. To be considered acceptable, the terms have to be translated naturally into the target language, do not contradict to the language rules and are familiar to the target readers. From 130 data, 108 data are acceptable, and 22 data are less acceptable.

The technique giving the positive impact in terms of acceptability is established equivalent. From 96 data which are translated using established equivalent, 94 data are acceptable, for example, sidestand – standar samping, brake pads – kampas rem, and wheelbase – jarak sumbu roda. Sidestand or Kickstand is an arm attached to a motorcycle that swings out from the left side to support the bike at rest. Brake pads is a thin block of friction-producing material that presses against a vehicle's brake disc or rotor to enable the wheel to stop. Wheelbase is a measurement from the center of the front wheel to the center of the rear wheel (the distance between the center of the wheel hubs on the motorcycle).

There are 2 data which are translated by using the combination of established equivalent and pure borrowing which are less acceptable; steering bearings – bearing kemudi and swing arm bearings – bearing lengan ayun. Steering bearing or steering head bearing in the source language refers to a bearing between the triple clamp and the steering as well as the front end of a motorcycle. Meanwhile, swing arm bearings are bearings between the swing arm and the frame. Bearing itself refers to a device which is a load supporting part designed to accept the wear and punishment of moving parts to protect other parts. Three types of bearing are roller

ball, tapered, and metal collar cap. It happens because the terms which are translated with the established equivalent technique, end up in translations which are natural and recognizable in the target language.

The technique giving the negative impact in translating automotive terms regarding acceptability is pure borrowing. From 130 data, there are 22 data which are categorized into less acceptable and 20 of them are translated by using pure borrowing, for example, front fork – front fork, fender – fender, and fuel injection – fuel injection. Front fork or forks refer to the sprung metal tubs holding the front wheel to the rest of the motorcycle using the triple clamp (triple tree). Fender refers to a part of the vehicle which prevents rock, sand, mud and any other material from the street from being thrown away to the air. Fuel injection is a system of metering fuel to an engine without using carburetor, uses small nozzle called injector, supplied fuel by an injector pump to inject fuel into the intake manifold. Unlike carburetors which rely on the vacuum created by the engine to draw the charges into the combustion chambers, fuel injection uses computer-controlled jets to inject atomized fuel and air into the air stream going to the engine. The technique takes a word or expression straight from the source language, which causes a problem to the target reader to understand. It is similar to Saptaningsih's research where borrowing also produces low level quality translation in terms of acceptability because the idea in the technical term is not presented by using familiar term.

The last aspect assessed to determine quality is readability. The translation of technical terms should be understandable to be considered readable. It means that translation should easily be understood by the target readers. From 130 data, 59 data are readable, 57 data are less readable, and 14 data are unreadable.

Translation technique giving positive impact in terms of readability is established equivalent. From 96 data which are translated by using established equivalent, 51 data are readable, for example, chassis – rangka, and vehicle identification number – nomor identifikasi

kendaraan. Chassis is the combination of frame and suspension of a motorcycle. Vehicle Identification Number (VIN) is factory stamped frame and engine numbers used to identify the motorcycle.

There are 43 data are which are considered less readable, for example stroke – langkah, displacement – volume silinder, telescopic fork – garpu teleskopik. Stroke is the distance traveled in either direction of by a piston or rod in an engine (the distance of the up and down motion of the piston). Displacement is the size of an engine, in cubic centimeters (cc) or cubic inches (ci). It is measured by the total volume displaced by all engine pistons. Telescopic fork refers to front suspension system with two fork legs, each with sliding and fixed tubular members that telescope together to allow suspension movement.

Meanwhile, 2 data are unreadable; valve – klep and valve train – mekanisme katup. Valve is a device that regulates the passage of fuel into the engine cylinder. It controls the entry of fuel and air mixture into the combustion chamber, as well as the exit of spent combustion gases from the combustion chamber to the exhaust. Valve train refers to the system of valves that let the fuel chargers in and let the exhaust gasses out. There are two types of valve train system which are commonly known, SOHC and DOHC. SOHC (Single Over Head Cam) is a system where there is a single cam shaft in the head or top of the engine that activates the valves while DOHC (Dual Over Head Cam) uses two camshafts to activate the valves in the engine. It means that the terms which are translated by using established equivalent technique are mostly understandable.

The technique giving the negative impact in terms of readability is pure borrowing. From 130 data, there are 14 data which are categorized into unreadable and 10 of them are translated by using pure borrowing technique, for example, catalytic converter – catalytic converter, gasket – gasket, caster – caster. Catalytic converter is a device in the exhaust system which reduce pollution emissions. The gas from the engine contains some dangerous substance such as Carbon

Monoxide (CO), catalytic converter then converts those gases to make them less dangerous and eco-fiendly. Gasket is a seal between two components. Caster refers to forward tilt of steering axis that tends to stabilize the steering. It happens because the terms are translated into the target language by borrowing the exact terms in the source language. It causes the translation to not be easily understood by the target readers.

From the finding above, it is obvious that the translation of the automotive technical terms in Yamaha Nmax Owner's Manual are considered having a high level of accuracy, acceptability and readability. Those high-quality translation are produced by the proper application of the translation technique, which can be seen by the using of proper, familiar, and understandable words, terms, and dictions.

Based on the research findings, there are 8 translation techniques proposed by Molina and Albir (2002) applied by the translator in translating automotive technical terms in the forms of noun and verb in the Yamaha Nmax Owner's Manual book, which are: 1.) established equivalent, 2.) borrowing, 3.) generalization, 4.) amplification, 5.) literal translation, 6.) particularization, 7.) reduction and 8.) transposition. Kurniawati on her research an analysis of techniques and quality of translation of automotive terms in Chevrolet Orlando manual book (2016) has stated that 7 out of 18 techniques based on Molina and Albir (2002) are applied by the translator. All of the 7 techniques are identified in both researches, the only difference is the reduction technique which is applied to translate the automotive technical terms in Yamaha Nmax owner's manual, while in the Chevrolet Orlando manual book, the technique is not used. It can be seen that there is similarity between the findings of these 2 researches regarding the techniques applied to translate automotive technical terms.

The most frequently applied technique in translating automotive technical terms in Yamaha Nmax Owner's Manual in the forms of noun and verb is established equivalent. From a total of 130 data in this research, there are 96 applications of established equivalent (82

applications as a single technique and 14 applications in combination with other techniques). It is similar to Kurniawati's research in which established equivalent is also the most frequently used technique to translate automotive terms in Chevrolet Orlando manual books with 50 applications (33 applications as a single technique and 17 applications combined with other technique). The use of established equivalent which is dominant indicates that the terms in the source language have equivalent trems in the target language. Moreover, that terms are acceptable, familiar, and are widely used in the target language. There is also similarity with Widarwati's and Yulianita's researches where established equivalent is the most frequently applied technique. Widarwati states that the phenomenon occurs in her research because the target readers who are related to the medicine field, are already familiar with the terms. Moreover, it is quite similar to the research done by Moghadam & Far, where the technical terms in law are mostly translated by using the equivalence strategy proposed by Mona Baker (1992). They also state that it may happen because the texts were meant to be read by specific readers who are specialized in law field. As a final point, established equivalent is the translation technique that is most frequently applied to translate technical terms in the field of automotive, medicine and religion.

On the contrary, there is a difference between this research and Sunardi's research regarding technical terms in "Beginning Tennis Video" where in her research, translation using loan word and loan word plus explanation proposed by Mona Baker (1992) are those mostly applied to translate the terms. It occurred because the translator wants to the misunderstanding.

There is also a special case identified in this research. There is a term in source language which is translated into the target language by using a term which is commonly used but is not listed in the glossary. The term is bearing which is translated into laher. In the target language's glossary, there is a term bantalan which is the equivalent of the term bearing in the source text, but it is translated into laher which is the term that is common in daily use. Even though it is categorized into less readable translation, it is considered as an accurate and acceptable

translation because of its being excluded from glossary. This finding seems to be contradictory to the statement proposed by Dagan and Cuhrch (1994):

Technical terms are difficult for translators because they are generally not as familiar with the subject domain as either the author of the source text or the reader of the target text. In many cases, there may be a number of acceptable translations, but it is important for the sake of consistency to standardize on a single one

Standardization on a single term in the case of the translation of bearing into laher is not likely to be done as this attempt may cause readers' confusion. Such confusion may lead to more severe consequence as the text in which the term is used is an owner's manual, which the motorcycle owners refer to in performing maintenance. Owner's manuals containing familiar technical terms is of course a better choice than those containing standardized but unfamiliar terms.

The notion corresponds to what Holz-Mänttäri has stated that "the needs of the receiver are the determining factors for the TT. Thus, as far as terminology is concerned, a technical term in a ST manual may require clarification for a non-technical TT user. (in Munday 2008, p. 78). The needs of the readers should be the consideration in producing translation of technical terms which works. Thus, translators when dealing with manual texts, which contain technical terms, need to do attempts to make sure that non-technical TT users' needs are satisfied.

Conclusion

There are 8 translation techniques proposed by Molina and Albir (2002) applied by the translator in translating automotive technical terms in the forms of noun and verb from a total of 130 data found in Yamaha Nmax Owner's Manual, which are: 1. Established Equivalent, 2. Borrowing, 3. Generalization, 4. Amplification, 5. Literal Translation, 6. Particularization, 7. Reduction, and 8. Transposition. In addition, not only single techniques were applied, but also the combination of more than one techniques, which are: 1. Established Equivalent + Pure

Borrowing, 2. Established Equivalent + Literal Translation, 3. Established Equivalent + Established Equivalent, 4. Established Equivalent + Generalization, 5. Established Equivalent + Naturalized Borrowing, 6. Established Equivalent + Pure Borrowing + Amplification, 7. Pure Borrowing + Transposition, and 8. Pure Borrowing + Reduction. Established Equivalent is the most frequently applied technique in translating the terms.

The translation quality of automotive technical terms in this research, in terms of accuracy, there are 126 data which are accurate, 1 datum is less accurate and 3 data are inaccurate; in terms of acceptability, 108 data are acceptable, and 22 data are less acceptable, while in terms of readability, 59 data are readable, 57 data are less readable, and 14 data are unreadable. Accurate, acceptable and readable translations are mostly produced from the application of established equivalent technique. Less accurate and inaccurate translation are produced from the application of reduction and generalization technique, less acceptable translations are produced from the application of borrowing technique, and less readable and unreadable translations are produced from the application of borrowing technique.

In translating automotive technical terms, translation technique that would result the best translation quality is established equivalent since it produces proper, familiar, and understandable words, terms, and dictions. Moreover, the application of amplification technique could be an alternative way to produce high-quality translations where the translator can add further information or explanation regarding the automotive technical terms, so that the readers could understand it easily.

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