

Variation of Annotation Technique on Doctoral Dissertation at Gunadarma University

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ABSTRACT

This study aimed to identify glossary by annotation techniques in quoting foreign scientific terms in their dissertation. Researchers can use a wide range of annotation techniques, such as the use of *brackets*, *parentheses*, or *footnotes*. Another annotation techniques used by researchers in the use of foreign terms is *borrowing* and *endnotes*. We further examine annotation techniques that used in citing foreign terms in their dissertation. The data source for this paper are dissertations of doctoral students in Economics program, Information Technology and Psychology at Gunadarma University. This study will result in preference of annotation technique for dissertation writing. The results of this study can be used as a reference of preference in using the technique annotations scientific terms by Indonesian students in general.

Keywords: annotation techniques, scientific terms, dissertation

Introduction

In writing scientific papers, researchers often use some terms quoted from various sources to support the validity of the arguments. The quotations taken from literature sources are most likely from other countries with different languages. Differences in language and culture system often pose problems in translating the text of the source language into the target language. Including in this case is the translation of technical terms in different disciplines which will be quoted by the researchers. The unavailability of equivalence in Indonesian will pose some differences in translating those terms in Indonesian.

In translating, there is a technique called an annotation technique to translate unfamiliar terms. According to Chen (1997) and Newmark (1988), in describing a scientific term, a writer can use various annotation techniques, such as the use of *brackets*, *parentheses*, or *footnotes*. Other annotation techniques used by the researchers when encountering scientific terms are *borrowing* and *endnotes*.

Some examples of annotation technique carried out by the researchers in Indonesia are given on these tables below.

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Table 1
Information Technology Program

Scientific Terms	Equivalence in Indonesian	Meaning	Annotation Technique
Blur	<i>Kabur</i> (physics)	A filter which makes an image or graphic display becomes not clear.	Borrowing
Bit lines Caesar cipher	- <i>Sandi Caesar</i>	Flow A technique to change the position of the initial letters of the alphabet.	Borrowing Footnotes

Table 2
Economics Program

Scientific Terms	Equivalence in Indonesian	Meaning	Annotation Technique
Operating Budgets	<i>Biaya Operasi</i>	All expenditures which are directly used for the production or purchase of traded goods, including general expenses, cost of sales, administrative expenses and interest on loans	Borrowing
Debt Covenant Investment	<i>Perjanjian Kontrak Utang Investasi</i>	- Investing some money or capital in a company or a project for the purpose of gaining profit	Borrowing Borrowing

Table 3
Psychology Program

Scientific Term	Equivalence in Indonesian	Meaning	Annotation Technique
Foreign Direct Investment	<i>Investasi Langsung di Negara Asing</i>	Direct investments in business operations in foreign countries	Borrowing
Brand-name Loyalty	<i>Loyalitas terhadap "Label"</i>	Related to the campaigns or contestant dissemination as a campaign.	Borrowing
Dual-earner	-	Husband and wife are both having a job.	Footnotes

Theory

In *Kamus Besar Bahasa Indonesia (KBBI)*, the meaning of the word "term" is a word or a combination of words that carefully expresses the meaning of concepts, processes, states, or characteristics that are typical in a certain field (Kementrian Pendidikan dan Kebudayaan Indonesia, 2010). "Term" is divided into two, which are specific and general terms. The Specific Term is a term that its use and/or meaning is limited to a certain field; while the General Term is a term that becomes the element of the language used in general.

General Term is a term derived from a certain field, which is due to be widely used, becomes a general vocabulary. For example: budget, power, pious, etc. While Specific Term is a term which its meaning is limited to a certain field. For example: pleistocene, bipatride, etc.

"Term" is a word or phrase that is used as a name or a symbol that carefully expresses the meaning of concepts, processes, states, or characteristics that are typical in the fields of science, technology and art (Pusat Bahasa, 2006). The "Term Order" (terminology) is a set of the basis and provisions of the establishment of a term as well as the collection of terms resulted.

A book entitled "*Pedoman Umum Pembentukan Istilah*" published by the Language Center (Pusat Bahasa, 2006) mentions that in order to establish a term, it needs the requirements in the utilization of Indonesian vocabulary as follows:

1. The term chosen is the most appropriate word or phrase to express the concept and not deviate the meaning.
2. The term chosen is the shortest word or phrase among the available options that have the same references.
3. The term chosen is a word or phrase that makes a good sense (connotation).
4. The term chosen is a word or phrase that sounds natural (euphonic).
5. The term chosen is a word or phrase which is formed according to the Indonesian principles.

Research Question

The question proposed in this research is how the Indonesian scholars annotated the foreign terms related with their fields of studies in their dissertations.

Methodology

This study uses qualitative method because the researcher would like to understand the phenomena of what is experienced by the research subjects holistically, by describing it in the form of words and language, in a natural specific context by using various scientific methods (Moleong, 2009). The data collection is carried out by taking it from documents. The word 'document' comes from the Latin, which is *docere*, which its meaning is 'to teach'.

The meaning of the word 'document', according to Gottschalk (1986), is often used by experts in two senses: first, it refers to the written sources for the historical informations the feedback of testimonies, artifacts, painted relics, and archaeological remains. Second, it is intended for official letters, such as letters of agreement, constitutions, grants, etc.

The data source in this study is documents. The documents used in this study are the dissertations of doctoral students of Gunadama University from three programs, namely Information Technology, Economics, and Psychology. The data taken from the dissertations is the scientific terms that have been translated by the students by using different annotation techniques.

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After obtaining the data, the researchers then categorize the annotation techniques in using the scientific terms according to the type of annotation techniques as explained by Newmark (1987) and Chan (1997).

Results

In this study, the data used by the researchers are taken from the doctoral dissertations of three programs, namely Information Technology, Economics and Psychology. There are 105 dissertations in total which are used as the data source. 60 dissertations are from Information Technology program, 39 dissertations are from Economics program, and 6 dissertations are from Psychology program.

Furthermore, the researchers collect the data of general terms and scientific/specific terms, continued by finding out the equivalence word in the Indonesian, and searching for the meaning of the terms. From all the data collected, it was found that there are five annotation techniques frequently used in the doctoral dissertations of those three programs. The five annotation techniques found are *brackets*, *parentheses*, *footnotes*, *borrowing* and *endnotes*.

According to the data collection, it was found that:

1. In Information Technology doctoral dissertations, it was found that there is only 1 data of *Parentheses* technique used by the researcher. The second lowest is *Endnotes* technique with 69 data. After that comes *Brackets* technique with 301 data in total. *Footnotes* technique is more frequently used than *Brackets* with 345 data. The technique which is the most frequently used in the dissertations is *Borrowing* with 2097 data.
2. For the Economics doctoral dissertations, it was found that there are 8 data with *Brackets* technique. *Footnotes* is more frequently used than *Brackets* with the total of 33 data. Same as what has been found in the Information Technology doctoral dissertations, *Borrowing* is the most frequently used with the total of 775 data.
3. In Psychology program, from all 6 doctoral dissertations, it was found that *Borrowing* is still the most frequently used by the researchers with the total of 59 data. The second highest is *Footnotes* with 54 data. And the last is *Parentheses* with only 7 data.

Here is the table of the use of annotation techniques obtained from the 105 doctoral dissertations of three programs, namely the Information Technology, Economics, and Psychology:

Table 4

The Use of Annotation Techniques

Variation of Annotation Techniques	Dissertation of Information Technology Program	Dissertation of Economics Program	Dissertation of Psychology Program
<i>Brackets</i>	301	8	0
<i>Parentheses</i>	1	0	7
<i>Footnotes</i>	345	33	54
<i>Borrowing</i>	2097	775	59
<i>Endnotes</i>	69	1	0

According to the table above, it can be seen that in the doctoral dissertations of the Information Technology program, *Borrowing* technique is the most frequently used by the

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researchers in annotating the scientific/specific terms. From other two programs, namely Economics and Psychology program, *Borrowing* technique is also the most frequently used by the researchers. Other techniques that are also frequently used in the dissertations are *Footnotes* and *Brackets*.

The number of scientific/specific terms from each program, which are not easy to find the exact equivalence in Indonesian, make the writers of the dissertations annotate those terms by using *Borrowing*, *Brackets*, or *Footnotes* (giving description/meaning/explanation).

Here is the examples of several scientific terms found in the dissertations:

Tabel 5

Example of Scientific Terms

Program	Scientific Terms	Equivalence in Indonesian	Meaning	Annotation Technique
Information Technology	VLSI	-	Very Large Scale Integration. The process of integrating or embedding hundreds of thousands of transistors on a single silicon semiconductor microchip.	Footnotes
Economics	Inflation Risk	<i>Risiko Inflasi</i>	The risk of the decrease of the assets' real value due to inflation.	Borrowing
Psychology	Strain based pressure	-	Factors associated with the tension roles in one of these domains, such as job pressure, workload, and role ambiguity.	Footnotes

Conclusion

Based on the results of the data in previous section, it can be concluded that the variation of annotation techniques which are most frequently used for quoting the scientific/specific terms in doctoral dissertations of Information Technology, Economics, and Psychology programs at Gunadarma University are *borrowing* and *footnotes*.

The reason of why the researchers use *borrowing* is because some scientific/specific terms do not have the same equivalence as the language used by the researchers, which is Indonesian. So, the researchers prefer to use the original terms by writing the terms in italic.

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