

Dulay's Surface Strategy Taxonomy on the Selected Texts of the Bilingual Biology Textbook: A Study of Error Analysis in Translation

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Abstrak

Penelitian ini berdasar pada analisis kesalahan dengan menggunakan teori Surface Strategy Taxonomy dari Dulay. Data yang dikumpulkan berasal dari buku Biologi dua bahasa. Tujuannya adalah untuk mencari dan menganalisis kesalahan yang terjadi pada buku Biologi tersebut dengan menggunakan teori itu dan untuk memberikan pembetulan alternatif pada kesalahan yang terdapat dalam buku. Kesalahan yang telah dikumpulkan dianalisis, diklasifikasi dan diberi penjelasan berdasarkan teori yang digunakan. Hasil dari penelitian ini dapat digunakan sebagai referensi tambahan bagi peminat yang mempelajari analisis kesalahan, memberikan kontribusi untuk studi ilmu bahasa, dan membantu memperbaiki kesalahan terjemahan bahasa Inggris pada buku tersebut.

Kata Kunci: Analisa kesalahan, frekuensi kesalahan, *Surface Strategy Taxonomy*, merekonstruksi kalimat bahasa Inggris.

Abstract

This study is based on an error analysis of Dulay's Surface Strategy Taxonomy. The data were collected from the bilingual Biology textbook. The purposes of this study are to investigate the errors which occur on the bilingual Biology textbook using Dulay's Surface Strategy Taxonomy and to give alternative corrections for the errors on the book. The collected errors are analyzed, classified and described by using the theory. The result of this study can be used as an additional reference for those who are interested in studying error analysis, gives a contribution to linguistic study and helps to correct the errors of the English translation on the book.

Keywords: Error analysis, frequency of errors, *Surface Strategy Taxonomy*, reconstructing English sentences.

Introduction

In learning a foreign language, learners are involved in the process of systems: the language learner system and the target language system. These systems are the reasons why errors occur.

Errors happen in a lot of translated books. To analyze errors, error analysis is needed. Error analysis is a method to investigate the language learning process (Corder, 1981:45). Meanwhile, Dulay *et al.* (1982:138) say that error analysis is a method to analyze the flawed side of learner errors in speech or writing. It is further stated that errors has four types, they are linguistic category, surface strategy (omission, addition, misformation and misordering), comparative analysis and communicative effect (Dulay *et al.*, 1982:146).

This study analyzes a bilingual Biology book from an international class. International classes are classes in *Sekolah Bertaraf Internasional* (Internationally Standardized School) in Indonesia. These classes use English as the main medium of the instruction. This classes also use bilingual books to help in learning English for the

local students and help to get a better understanding of the subjects for students who come from abroad.

The bilingual books used in international classes are chemistry, physics, biology and mathematics. From those books, I choose the bilingual Biology book written by Nunung Nurhayati.

In analyzing errors, I use Dulay's Surface Strategy Taxonomy. The function of that theory is to analyze errors that concern with identifying a language that underlies the reconstruction of the new language.

Related to my study, I concern to find out the errors occurring in the bilingual Biology book, so I limited this study to avoid the refraction of the topic. Therefore, the research questions composed in this study to get the specific problem discussion are as follows:

1. What are the most frequent errors according to Surface Strategy Taxonomy in the texts?
2. What are the probable intended texts?

This study is designed to achieve two purposes. The first purpose is to analyze errors which occur on the bilingual Biology textbook using Dulay's Surface Strategy

Taxonomy, and the second is to give alternative corrections for the errors on the book.

Research Method

This study uses mixed method, quantitative and qualitative research (Denscombe, 2007:107). I use that research to conduct the analysis of the errors. The quantitative research is applied to count the most frequent errors while the qualitative research is applied to interpret and explain the errors on the book.

The data are selected sentences taken from the bilingual Biology book for senior high school grade XII by Nunung Nurhayati. The data are collected by using random sampling which means that the selection of data is literally at random (Denscombe, 2007:13). In the book, there are eight chapters, but I take the data from the even chapters because the materials of those chapters are closest with human's live and can be understood easily by people who is not master or study Biology. There are 100 sentences found with errors. The data that I use are 52% from the whole data. It means that the data used are 52 sentences. Those 52 sentences are divided into four chapters. There are 17 sentences for chapter 2, 2 sentences for chapter 4, 13 sentences for chapter 6 and 20 sentences for chapter 8.

The data collection are grouped and analyzed based on the errors in each sentence. There are some techniques to analyze the data. First, the elements of each sentence are analyzed by using the basic constituents of a sentence. Second, the selected sentences are divided into the types of sentences either simple sentences, compound sentences, complex sentences or compound-complex sentences. Third, the sentences are analyzed to find the errors and then classified by using Surface Strategy Taxonomy. Fourth, the errors will be corrected and then reconstructed by using the result of the error's analysis and the correct English structure, while the Indonesian text (SL text) will be used as the guidance to produce the probable intended text.

Result

On the even chapters, there are fifty two sentences which I analyze. The sentences are not well-formed, and each sentence has at least one error. Totally there are ninety three errors found in the chapters. The following table shows the number of errors in each chapter.

Table 1. Number of Errors

Chapter	Omission Error	Addition Error	Misformation Error	Misordering Error
2	14	7	13	2
4	2	-	1	-
6	10	5	9	2
8	5	11	9	3
Total	31	23	32	7

The table shows there are 31 omission errors, 23 addition errors, 32 misformation errors and 7 misordering errors. Therefore, the most frequent error of Surface Strategy Taxonomy in the texts is misformation error with 32 errors.

Discussion

Based on the basic constituent of English sentence, a sentence has a subject, a predicate and complements (Verspoor and Sauter, 2000:33). Subjects involve nouns/pronouns, gerund, phrases, to infinitive and sub clause (noun clause). Predicates can be active or passive. Complements involve subject attribute, direct object, object attribute, indirect object and adverbial. In addition, English sentences have four types (Verspoor and Sauter, 2000:35). There are simple sentences, compound sentences, complex sentences and compound-complex sentences.

Based on Surface Strategy Taxonomy, there are four types of errors found in the even chapters: omission, addition, misformation and misordering error. The result shows that omission has 31 errors, addition has 23 errors, misformation has 32 errors and misordering has 7 errors. The errors can be seen in the following examples:

1. SL: *Misalnya, enzim catalase mempunyai bobot molekul sebesar 248.000.*

TL: For example, catalase enzyme that has molecular weight of 248,000.

The analysis: For example, catalase enzyme that has
S Subord. P
molecular weight of 248,000.
adj.

2. SL: *Keuntungan lain pembuatan vaksin dengan rekayasa genetika selain lebih aman, juga dapat diproduksi dalam jumlah besar.*

TL: The other advantage of making vaccines by genetic engineering, besides it safer, is it can also be produced in a large amount.

The analysis: The other advantage of making vaccines by
S
genetic engineering, besides it safer, is it
S Adv. S Adj. P S

can also be produces in a large amount.
P Adv. phrase

In the example number 1, three kinds of errors found. There are omission, addition and misformation error. It belongs to **addition error** because the subordinator 'that' is an unnecessary addition which must not appear in a well-formed sentence. Furthermore, the word 'molecular' is an adjective whereas the predicate 'has' has to be followed by complements or past participle, and based on the SL, it has to be followed by a noun 'molecule'. The use of the wrong form of molecular is called **misformation error**. In addition, the nouns 'molecule' and 'catalase enzyme' need articles because they are countables. The absence of the articles is called **omission error**. Based on the explanation, **the probable intended text** that I suggest is: For example,

the catalase enzyme has a molecule weight of 248,000.

In the example number 2, two kinds of errors found. There are addition and misordering errors. Based on the SL, the TL is not a good translation because the SL is translated by using word for word translation, and the phrase *selain lebih aman* can be translated into 'apart from the safer process'. Those are **misordering errors** because they do not have a good structure and the adverb phrase is in the incorrect placement. Furthermore, there are unnecessary subject and predicate (is and it), and this is called **addition error**. Thus, **the probable intended text** that I suggest is: Apart from the safer process, another advantage of genetic engineering is that the vaccines can be produced in a large amount.

Based on the examples, each sentence has at least two errors. The distribution of all the error types indicates that on the bilingual Biology book contains errors, and the most frequent occurring type of error is misformation errors with 32 errors found.

Conclusion and Suggestion

After analyzing and classifying the data from Biology book, the research questions can be answered. For the first question, the answer can be seen in the table 1 that the most frequent error is misformation error with 32 cases. For the second question, the probable intended texts are made by correction of the errors and the reconstruction of English structure while the SL text used as the guidance.

Hopefully, this study can be used as alternative corrections for the book and as the reference for those who are studying error analysis in bilingual book. It is also expected to give contribution for a better understanding in Surface Strategy Taxonomy and to support an analysis in the similar study.

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