Abstract: Writing is seen as a difficult skill for students of English because they encounter many problems. However, to deal with the problems, a dictionary seems to be one of the essential language tools to help them. This study, therefore, was conducted in order to investigate the correctness of words chosen from Thai-English electronic dictionaries for writing. The subjects were six third-year KMUTT undergraduates majoring in science. The instruments used for data collection were questionnaires, the subjects’ written work, the subjects’ record forms of word searching, semi-structured interviews, and observation sheets. The subjects were asked to do a writing task by using their Thai-English electronic dictionaries as a technical support. After the subjects finished the task, the researchers analyzed the record forms of word searching, the subjects’ written work, interview transcripts, and observation sheets so as to check the correctness of words chosen from the Thai-English electronic dictionaries in terms of form, meaning, and use. Furthermore, this study reveals the subjects’ reasons for their word choices. The results show that there were two reasons for the subjects’ weakest vocabulary use: subjects’ problems and electronic dictionary problems. Moreover, several reasons were found for the subjects’ word choices: they had seen the chosen words before, they used their intuition to choose words, and the chosen words matched the Thai meaning they wanted to convey. Suggestions and implications are provided with valuable directions for dictionary compliers and teachers of English.

Key Words: writing; electronic dictionaries; vocabulary use; word choices

1. INTRODUCTION

For Thai undergraduate students, writing seems to be a very difficult skill. What is more, they have to write a lot of assignments in English. One important language tool
to help them produce English assignments is dictionaries. Nowadays, most students prefer to use electronic dictionaries because they are modern, small, light, and apparently easy to use.

Prior to conducting this study, the researchers observed that, when students write their assignments in English, they often seem unable to make optimal word choices. Students say that they use electronic dictionaries as the main tool to help them find target words. Nonetheless, the researchers wondered if students’ misuse of electronic dictionaries might precipitate mistakes in their English writing. One reason for this is that they may not know how to use electronic dictionaries very well. This study thus aims to find out the answers to the following research questions:
1. Do students use translated equivalents chosen from Thai-English electronic dictionaries correctly? If not, why not?
2. What are their reasons for their word choices?

2. LITERATURE REVIEW

This literature review focuses on problems, vocabulary and dictionary use in writing.

2.1 Writing problems

Writing in a foreign language can be problematic for language learners. Learners might encounter several problems throughout the process of writing a document. Reflecting that second-language (L2) writing problems are widespread in Thailand, there are many studies investigating problems in Thai university students’ writing.

Chinnawong (1999) studied students’ ability in academic writing and found that, after grammatical errors, the students made most mistakes with vocabulary (e.g. spelling, word choices). Lakkhunaprasit’s (1999) study investigated the writing ability of first-year students. She found six aspects where her subjects made mistakes: structure/grammar, run-on sentences, word choice, prepositions, spelling and capitalization. Likewise, Khao Urai (2002) studied errors in the English essays of fourth-year students and found that the most frequent errors were grammatical while the next most frequent errors were syntactic and lexical. Her category ‘lexical errors’ included 1) spelling, 2) literal translation from Thai (first language, L1) to English (L2), 3) overgeneralization of the use of one translation equivalent, and 4) using general lexical items.

As we can see from this research, students have many problems in writing, including vocabulary use.

2.2 Vocabulary in writing

Read (2000) proposes that being proficient in L2 is not just a matter of knowing a lot of words or grammar rules but being able to use that knowledge effectively for various communicative purposes. Therefore, L2 learners need to show that they can use words appropriately in their own writing rather than just demonstrating that they understand what a word can mean. Thus, lexical knowledge, which L2 learners need to master, includes knowledge of form (pronunciation, spelling, word derivation), position in grammatical constructions, collocations, functions (frequency and appropriateness), and association (Nation, 1990; George, 1983, cited in Oxford and Scarcella, 1994). The
aspects of word knowledge which are relevant to this study (form, meaning, and use) will be elaborated below.

**Form.** For the written mode, learners have to know how the words should be spelled. Moreover, they have to have knowledge of how to combine elements of words to create other lexical items. For example, learners learn the rules of building up different forms of related words such as *forget, forgot, forgotten, forgetting* and *forgetful* (Nation, 2001).

**Meaning.** When we think about words, we should think of their semantic features, too. For example, the words *drink, sip, gulp...down, swig* refer to the action of drinking but have different features, and each feature contributes to what is called ‘shades of meaning’ (Nation, 1990).

**Use.** There are two kinds of knowledge of word use which are relevant to this study: grammatical functions and collocations.

Therefore, in this study, we aim to investigate how students use vocabulary in writing by choosing words from Thai-English electronic dictionaries, and to check whether they can use these words correctly and appropriately in contexts.

### 2.3 Using dictionaries in writing

Nesi and Meara (1994) studied patterns of misinterpretation in the productive use of EFL dictionary definitions. Their subjects were 52 non-native speaker adults, most of whom studied in English language and study skills programmes. It was found that there were three categories of errors: semantic (the majority); grammar and usage errors (the next most frequent category); and failure to use the target word. Furthermore, they found that the subjects systematically misinterpreted dictionary entries and this affected the correctness of their writing. Christianson (1997) also studied dictionary use by EFL writers. The subjects were 51 Japanese university freshman EFL students majoring in computer science. They were assigned to do writing assignments while using a dictionary as a tool to assist them. They were also asked to underline all of the words that they looked up in any dictionary (L1-L2, L2-L1 and L2-L2). Forty-two percent of the underlined words were found to have been used wrongly in some ways; there were errors concerning word choices, prepositions, articles, pluralizations, spellings, word forms and tenses.

East (2006) studied the impact of bilingual dictionaries on lexical sophistication and lexical accuracy in tests of L2 writing proficiency. This research aimed to investigate whether using a bilingual dictionary enhances good writing in German writing tests. The subjects were 47 school students in New Zealand, aged around 17-18 years. The subjects took two tests, one with and one without a bilingual dictionary. The two tests were compared in terms of lexical sophistication, lexical accuracy and test score. The results revealed an increase in lexical sophistication in ‘with dictionary’ tests but frequent misuses of look-ups. There was also no improvement in test scores. Types of words looked up in the dictionary were nouns, verbs, adjectives, adverbs, phrases, and other items. It was found that 50% of words looked up were used wrongly, of which 51.5% were ‘wrong word’ and 48.5% were ‘wrong form’.

For Thai students, Boonmoh (2003) studied problems using electronic dictionaries to
translate Thai written essays into English. The undergraduate students compose English assignments by writing in Thai first and then translating into English. His study found that, because of translation, their writing contained many mistakes, both in terms of forms and meanings (Boonmoh et al., 2004); moreover, the quality of their written work was quite poor partly because it contained many poor word choices as well as grammatical mistakes (Boonmoh et al., 2006).

In conclusion, to be able to write accurately, learners should have good knowledge of the target language, that is, in this case, English; this means, learners should have good understanding about its spelling, meaning, grammatical structure, collocation, and word choices. Dictionaries have many valuable pieces of information which learners can make maximum use in writing.

3. RESEARCH METHODOLOGY

3.1 Subjects
The questionnaire was used to survey how students use Thai-English electronic dictionaries and from the students’ answers the researchers chose the subjects based on the criteria below.

1. The subjects’ grades on the previous English course they attended had to be between B and C+.
2. The subjects owned and used the same brand name and same version of electronic dictionaries.
3. The subjects always used Thai-English electronic dictionaries to help them complete their written work.

Finally, six subjects (5 males and 1 female) were selected. All the subjects took LNG 104 (Content-based Language Learning) as a compulsory English course in the first semester of 2006. They were experienced in writing short paragraphs. They were from the Faculties of Industrial Education, Engineering, and Science.

3.2 Technical support
According to the results of the survey questionnaire, one brand of the electronic dictionaries that every subject normally used was selected. This brand is used extensively because it is popular among students. However, the number of words contained and the corpus used are not mentioned either in its manual or on its box. There are three main functions in this electronic dictionary (each with sub-functions): dictionary (e.g. English-Thai Dictionary, Thai-English Dictionary, English-English), organizer and calculation. There are some additional functions such as Download, Games, and Reference.

3.3 Instruments
Subjects’ written work
In order to answer Research Question 1, the subjects were asked to write for two hours on the topic of Computer Games. The content should contain a favorite computer game, its characteristics, how to play it and reasons why they like that computer game.
Observation sheets
While the researcher was observing the subjects, she used blank observation sheets as supporting instruments to record four things: every Thai word which the subjects looked up in the Thai-English electronic dictionary; English word(s) which they found and did not find in the dictionary; the process which the subjects were doing on their written work; and the new word(s) which the subjects used to replace the old word(s) in their written work.

Semi-structured retrospective interviews
The semi-structured retrospective interview was used to get information about the subjects’ reasons for using or not using particular words after consulting their electronic dictionaries (Research Question 2). With the aid of the data from the observation sheets, the first researcher interviewed each subject as soon as the writing activity was completed.

3.3 Procedures
The first researcher asked the subjects to come one by one to do the writing activity. First, the instructions were explicitly given. Then, the subjects were asked to do the activity in English, using their electronic dictionaries as much as they wanted; moreover, they could use whatever sub-functions of the dictionaries they wanted. However, the researcher would focus on words the subjects looked up in the Thai-English dictionary only.

While writing, the first researcher did not interrupt the subjects. They had to underline words which they looked up in their dictionaries and write Thai above those words to show what meaning they really wanted to convey. The subjects had to write numbers in chronological order to identify the word which they looked up first and those they looked up subsequently. The first researcher sat beside each subject to jot down any words they looked up.

Each subject was then interviewed by the first researcher in Thai for about thirty minutes. During the interview, the researcher asked each subject about their word choices in terms of form, meaning, and use. The subjects were also asked to clarify any unclear points while they were using the electronic dictionaries.

3.4 Data analysis

- Data from the subjects’ written work
Each aspect of the words chosen (form, meaning and use) was calculated into percentages to show what aspects of words the subjects used correctly most often and what aspect they needed to improve most.

- Data from the observation sheets
To analyze the data from this instrument, some important terms used in this study must be defined: words the subjects looked up in their dictionaries are called ‘words sought’ if the dictionary provided one or more translated equivalents, these words are then called ‘words found’ and if the subjects chose any of the words found and used them in their written work, they are called ‘words chosen’.

Analysis focused on the total number of words the subjects sought in their dictionaries.
and, to show whether or not the dictionaries can provide words the subjects needed, differentiation was made between the words found and those not found. Then, from the words found, those chosen and not chosen by the subjects for their written work were counted. The frequencies of each word category mentioned were calculated into percentages.

- Data from the interviews
The subjects’ reasons for their word choices were categorized, counted and calculated into percentages. The subjects’ word choices came from two sources: words from their own lexicons and words chosen from the dictionaries.

4. DATA PRESENTATION
The data obtained from the record forms of word searching, the observation sheets, the subjects’ written work and the retrospective interviews are now presented.

4.1 Word searching via the Thai-English electronic dictionary
From Table 1, it can be seen that, from the subjects’ written work, there were 39 words the subjects sought in their dictionaries. According to the frequencies of word searches shown, the subjects could be divided into two groups: the group that searched more words, and the group that searched fewer words. Subjects F, B, D and E had similar frequencies of word searches, which were from three to five words, while Subjects A and C had frequencies of word searches from nine to fourteen words. Thus, although they wrote on the same topic, there was a big gap in the frequencies of word searches between the two groups.

Table 1 Frequencies of subjects’ word searches

<table>
<thead>
<tr>
<th>Subject</th>
<th>Words sought</th>
<th>Words found</th>
<th>Words not found</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>9</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>14</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>E</td>
<td>5</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Total (%)</td>
<td>39 (100.00)</td>
<td>30 (76.92)</td>
<td>9 (23.08)</td>
</tr>
</tbody>
</table>

From Table 2, another way to look at the words found is that 70% (21/30) were chosen by the subjects whereas 30% (9/30) were not; however, there was considerable individual variation among the subjects in terms of the proportion of words found that were actually chosen. While Subjects A, B, C and D did choose all the words given in the dictionary, Subjects E and F chose every word they found.

Table 2 Frequencies of words chosen and not chosen in written work
### Subject Words found

<table>
<thead>
<tr>
<th>Subject</th>
<th>Words chosen</th>
<th>Words not chosen</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total (%)</strong></td>
<td><strong>21 (53.84)</strong></td>
<td><strong>9 (23.08)</strong></td>
</tr>
</tbody>
</table>

Note: The percentages of the table are calculated based on words found, which were 76.92% of words sought (see Table 4.1).

### 4.2 Correctness of words chosen in terms of form, meaning, and use

Table 3 shows the frequencies of words chosen from the electronic dictionary that were correct in the students’ work in the aspects of form (100.00%), meaning (90.48%) and use (57.14%). According to these results, they can be categorized into three groups: correct form, meaning, and use; correct form and meaning; and correct form only.

#### Table 3 Words chosen from Thai-English electronic dictionary

To elaborate and make the description clear, there are examples from the subjects’ written work to support. The bolding and underlining in the extracts relates to the words chosen in the subjects’ written work.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Word chosen</th>
<th>Form</th>
<th>Meaning</th>
<th>Use (Types of mistakes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>act (ทำ)</td>
<td>√</td>
<td>X</td>
<td>X (gerund)</td>
</tr>
<tr>
<td>B</td>
<td>rifle (ไรเฟิร์)</td>
<td>√</td>
<td>√</td>
<td>X (plural noun)</td>
</tr>
<tr>
<td>C</td>
<td>upright (ตั้ง)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>encounter (พบ, พบว่า, ประสบ)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>murderer (ฆาตกร)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>try (พยายาม)</td>
<td>√</td>
<td>√</td>
<td>X (parallel structure)</td>
</tr>
<tr>
<td></td>
<td>storm (บุกตะลุย)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>role (บทบาท)</td>
<td>√</td>
<td>√</td>
<td>X (collocation)</td>
</tr>
<tr>
<td></td>
<td>scene (ฉาก)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>graphic (กราฟิก)</td>
<td>√</td>
<td>√</td>
<td>X (plural noun)</td>
</tr>
<tr>
<td></td>
<td>exciting (น่าตื่นเต้น)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>D</td>
<td>create (สร้าง)</td>
<td>√</td>
<td>√</td>
<td>X (modal verb)</td>
</tr>
<tr>
<td></td>
<td>enemy (ศัตรู)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>quality (คุณภาพ)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>E</td>
<td>restricted (จำกัด)</td>
<td>√</td>
<td>X</td>
<td>X (collocation)</td>
</tr>
<tr>
<td></td>
<td>apply for (สมัคร)</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>
Subject C used the word ‘murderers’ (ฆาตกร) in a sentence. He wanted to convey that the main character, a police officer, saw his wife and son who had been killed by murderers. He also intended to convey the word ‘murderer’ in its plural form to tell readers that there were many murderers.

“He encountered his son and wife be killed by murderers.”

(Subject C)

Subject D used the word ‘create’ (สร้าง) in a sentence. He wanted to tell his readers how to play the game. The sentence is wrong as ‘s’ should not be added to the word ‘create’ because it follows a modal verb (must).

“The player must __________ the army for destroys the enemy.”

(Subject D)

Subject A used the word ‘act’ (ทา) in the sentence below. It is wrong because, to convey his intended meaning, he should have used the word ‘follow’. Actually, he wanted to say that, if a player wanted to change his level, he should follow the requirements of the game. Furthermore, ‘ing’ should be added to the word ‘act’ because it follows the word ‘by’.

“When level of your character is level 15, you can change class by talk with NPC (non player character) and __________ with quests from NPC.”

(Subject A)

In conclusion, the subjects’ written work appeared good in terms of word form and fairly good in terms of word meaning because they could see the spelling of the words and check the meaning of the words from the electronic dictionary; however, it was less good in terms of word use.

4.3 Reasons for choosing words in Thai-English electronic dictionary
This section presents the subjects’ reasons for their word choices as revealed by the interview data.
According to Table 4, the subjects gave 12 reasons for their word choices, though it can be seen that there were three main reasons. Firstly, the subjects had already seen how the words were used (23.53%); equally, the subjects used their intuition (23.53%) to consider whether they should use the words or not; next, the subjects pointed out that they chose words because these words matched the Thai meanings they wanted to convey (17.65%). For the least frequent categories (1.47%), it was found that the subjects used the chosen word because it matched the part of speech they wanted; the chosen word was the first word given in the electronic dictionary; and the dictionary also showed how to use the word.

Table 4 Reasons for choosing words in Thai-English electronic dictionary

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Subject</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. has seen the chosen word before.</td>
<td>A: 0 B: 1 C: 7 D: 3 E: 3 F: 2</td>
<td>16 (23.53)</td>
</tr>
<tr>
<td>S.’s intuition (e.g. without providing clear evidence, S. feels a chosen word is better than other words in the context).</td>
<td>A: 3 B: 0 C: 3 D: 0 E: 7 F: 3</td>
<td>16 (23.53)</td>
</tr>
<tr>
<td>The chosen word matches the Thai meaning S. wants to convey.</td>
<td>A: 0 B: 0 C: 7 D: 3 E: 1 F: 1</td>
<td>12 (17.65)</td>
</tr>
<tr>
<td>S. has checked the meaning of the chosen word in the English-Thai electronic dictionary.</td>
<td>A: 0 B: 0 C: 2 D: 0 E: 0 F: 3</td>
<td>5 (7.35)</td>
</tr>
<tr>
<td>Only one word is given in the Talking Dict.</td>
<td>A: 0 B: 1 C: 1 D: 1 E: 0 F: 2</td>
<td>5 (7.35)</td>
</tr>
<tr>
<td>S. has used the chosen word before.</td>
<td>A: 0 B: 0 C: 2 D: 1 E: 0 F: 1</td>
<td>4 (5.89)</td>
</tr>
<tr>
<td>S.’s background knowledge (e.g. S. knows/remembers that…).</td>
<td>A: 1 B: 1 C: 1 D: 0 E: 0 F: 0</td>
<td>3 (4.41)</td>
</tr>
<tr>
<td>S. has already planned to use the chosen word since the beginning.</td>
<td>A: 0 B: 0 C: 1 D: 1 E: 0 F: 0</td>
<td>2 (2.94)</td>
</tr>
<tr>
<td>S. is familiar with the chosen word.</td>
<td>A: 0 B: 0 C: 1 D: 1 E: 0 F: 0</td>
<td>2 (2.94)</td>
</tr>
<tr>
<td>The chosen word matches the part of speech S. wants.</td>
<td>A: 0 B: 0 C: 0 D: 1 E: 0 F: 0</td>
<td>1 (1.47)</td>
</tr>
<tr>
<td>It is the first word given in the Talking Dict.</td>
<td>A: 0 B: 0 C: 0 D: 0 E: 0 F: 1</td>
<td>1 (1.47)</td>
</tr>
<tr>
<td>The Talking Dict shows how to use the chosen word.</td>
<td>A: 0 B: 0 C: 0 D: 0 E: 0 F: 1</td>
<td>1 (1.47)</td>
</tr>
<tr>
<td>Total</td>
<td>A: 4 B: 3 C: 25 D: 10 E: 14 F: 12</td>
<td>68 (100.00)</td>
</tr>
</tbody>
</table>

To make the important categories clear, there are examples from the interviews to support the subjects’ reasons for their word choices from the electronic dictionary.

Reason 1: Subjects had seen it before.

**quality**

Researcher: Why do you think so? Have you ever seen the word ‘quality’ before?

Subject D: I have seen like… the quality of this electrical appliance is good. Something like that.
Reason 2: The subjects’ intuition

restricted

Researcher: Does the word ‘restricted’ that you have chosen convey the meaning ‘Kamnot’ you really wanted?
Subject E: Maybe.
Researcher: Maybe. What makes you feel confident?
Subject E: After I consider the other words, I think that they are not suitable for this context.

Reason 3: The chosen word matched the Thai meaning they wanted to convey.

graphic

Researcher: Is the English word of the word ‘Krafik’ you saw in Talking Dict what you wanted to convey to readers?
Subject C: Yes, it is. I want to tell readers that I like this game because there are beautiful graphics. They look realistic.

Reason 4: Checking the meanings of the chosen words in the English-Thai electronic dictionary

upright

Researcher: Did you check the meaning from English to Thai again? What function in Talking Dict did you use to check English meanings to Thai meanings?
Subject C: Cross Search function.
Researcher: What is it for?
Subject C: This function is available in Talking Dict. It is used to check meanings in order to make sure that English words found are what I really want to convey in Thai.
Researcher: After you checked the word ‘upright’, is it the meaning of the word ‘Suetrong’ in Thai that you want to convey?
Subject C: Yes, it is.
Researcher: When you used this function, does Talking Dict show that the meaning of the word ‘upright’ is the word ‘Suetrong’ in Thai?
Subject C: Yes, it does.

4.4 Words not chosen from the Thai-English electronic dictionary

Words sought and the subjects’ reasons for words not chosen are shown in Table 5. From the table, we can see that there are three reasons why the subjects did not choose words from the dictionary: words found were not the meaning the subjects wanted to convey; words found were not suitable in the context; and words found were not the part of speech the subjects wanted to use.

Table 5 Reasons for not choosing words from the electronic dictionary
<table>
<thead>
<tr>
<th>Reasons</th>
<th>Words sought</th>
<th>Subjects’ explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not convey the meanings</td>
<td>ปราบ /Prap/</td>
<td>Words found (to clear, to level) were not the meaning he wanted to convey.</td>
</tr>
<tr>
<td></td>
<td>พัฒนา /Phathana/</td>
<td>The subject felt more confident to use a word (upgrade) he had in mind. He also thought that the word could convey the intended meaning rather than a word found (develop).</td>
</tr>
<tr>
<td></td>
<td>จัดการ /Chatkan/</td>
<td>The meanings of words found (to handle, to deal with) were not the meaning he wanted.</td>
</tr>
<tr>
<td>สายนิ่มมีกระแสไฟ /SaifaiThi Mi Krasae</td>
<td>A word found (a live wire/a dead wire) was not the meaning the subject wanted.</td>
<td></td>
</tr>
<tr>
<td>สายนิ่มไม่มีกระแสไฟ /SaifaiThiMai Mi Krasae</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Words sought</th>
<th>Subjects’ explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not convey the meanings</td>
<td>พบ /Phop/</td>
<td>Words found (to meet, to find/to discover) were not close to the meaning the subject wanted to convey.</td>
</tr>
<tr>
<td></td>
<td>พบว่า /PhopWa/</td>
<td></td>
</tr>
<tr>
<td>Not suitable for the context</td>
<td>การเคลื่อนไหว /Kan Khlueanwai/</td>
<td>The subject thought that a word found (movement) was not suitable for the context.</td>
</tr>
<tr>
<td>Not the right part of speech</td>
<td>สีสัน /Sisan/</td>
<td>A word found (a colour) was not a part of speech the subject wanted to convey. The subject wanted an adjective instead of a noun the dictionary provided.</td>
</tr>
</tbody>
</table>

5. DISCUSSION AND IMPLICATIONS

The discussion and the implications will be discussed and presented under the following headings:

5.1 Correctness of vocabulary chosen in terms of form, meaning, and use

Among the three aspects investigated (form, meaning and use), in answer to Research Question 1, form is the aspect where the subjects had no problems. Therefore, in this narrow sense, it can be said that students such as the ones in this study can use electronic dictionaries reliably.

As for meaning, the subjects were able to choose words to convey intended meanings correctly. According to the result, there were only two mistakes found out of 28 words chosen. The mistakes occurred because the subjects translated literally. When they found an English word in the dictionary and the English word had a Thai meaning that was what they thought in their mind, they would choose that word immediately. They were probably not aware whether the word chosen could be used appropriately in that context or not.

Use is the aspect that the subjects need to improve most. It consists of two sub-aspects: grammatical functions and collocations. We found that the problem where the subjects
made mistakes frequently was grammatical functions (gerunds, plural nouns, modal verbs, parallel structures, etc.). From the interviews, the subjects reported that they made mistakes because they were careless, they forgot or they did not check their written work carefully after they finished it.

5.2 Reasons for subjects’ word choices
In answer to Research Question 2, the reason for word choices that most of subjects reported was because they had seen them before, which shows that the subjects trusted their own knowledge rather than the dictionary. It was found that there were three situations. The first situation was that the dictionary provided only one word, but actually there should be more words to choose. In this situation, the subjects did not choose the word provided and preferred to use a word they had in their minds. The second situation was that the dictionary provided only one word because there is one English translated equivalent. Again, the subjects did not choose the word provided if they felt more confident to use a word from their own lexicons. The last situation was that, although the dictionary provided many words, the subjects did not choose any of them. They used their own words instead because they had seen the words before.

Next, the subjects chose words because they used their intuition. They felt a chosen word is better than other words in the context. The point is that, for words chosen for this reason, the subjects were not sure because they rarely saw and could not remember them. That is probably why they used their own feeling to choose words with which they felt more familiar, or perhaps, albeit without providing clear evidence, they just thought that those words should be used.

Furthermore, the subjects chose words because the chosen words matched the Thai meanings they wanted to convey; for this, they focused on meaning. The strategy that they used to help themselves for this is to check the meanings of words found by referring back to the English-Thai dictionary, which worked very well.

5.3 Problems in using electronic dictionaries
From the findings, the subjects mistakes in terms of form, meaning and use in their written work might be because of the electronic dictionary itself. Five problems are discussed as follows.

a. For some word searches, the dictionary did not provide any English words. There are some Thai headwords where the dictionary did not provide translated equivalents such as ‘เหมือนจริง’ /MueanChing/, ‘สมจริง’ /Somching/, or ‘เสมือนจริง’ /SamueanChing/ (realistic). Eventually, the subjects used the words ‘reality’ or ‘realistic’ from their own lexicons to use in their written work.

b. The dictionary provided insufficient words found. For example, Subject A wanted to find the English words from the Thai headword ‘การเคลื่อนไหว’ /Kan Khlueanwai/ (motion). However, when his dictionary provided the words found in the entry, it came out that the word ‘motion’ that Subject A had expected did not appear. The dictionary provided the words ‘movement’, ‘activity’. As a result, Subject A gave up searching for this word and, instead, used the word ‘motion’
c. The dictionary provided only one equivalent meaning. It is found that there are nine words for which the dictionary provided only one meaning. For example, the Thai headword ‘ฐานะ’ /Thana/ (position) is given the meaning in English as ‘a position’ but it can have another meaning, ‘status’. This case supports Summers (1988) and Thompson (1987), who state that giving single-word translations makes learners think, often erroneously, that there is a one-to-one relationship between L1 and L2; as a result, learners tend to make mistakes.

d. The dictionary provided more than one word but failed to differentiate them. The subjects might not be able to know how each particular word can be used in a particular context since they might believe that all of the provided words have the same meaning. For this, Underhill (1985) suggests that, when the dictionary provides more than one meaning equivalent, learners need to know the difference; otherwise, they may make mistakes because the chosen word is not suitable to the particular context.

e. The dictionary did not provide part(s) of speech of the words found. For example, the meaning of the Thai headword ‘กราฟิก’ /Krafik/ is given meaning as ‘graphic’; or another Thai word ‘คุณภาพ’ /Khunnaphap/ is given meaning as ‘quality’. From the two examples above, there should be ‘(n.)’ following the words to indicate a part of speech.

From the problems presented in this section, it might be possible to conclude that, as long as electronic dictionaries provide insufficient information, they may not be the best choice for students to use as their main support, especially when they have to use them for writing where accuracy is sometimes vital.

5.4 Suggestions for compilers

From this study, the problems that dictionary users found will be useful for the compilers to improve and develop their products in the future. They should take these five problems into consideration in order to improve their dictionary.

a. The subjects could not find many target words. This implies that the electronic dictionary may not have been helpful and user-friendly because they could not provide many words to users. This shows that the compilers have to increase their vocabulary of words translated as much as they can. At least, they should include possible words or similar meanings of each target word based on a reliable corpus.

b. Since the dictionary did not provide words the subjects expected to see, the compilers should add more words to serve their needs. By doing this, users will have various words to choose.

c. To avoid reinforcing the belief in a one-to-one relation at word level, the compilers should provide full semantic, grammatical and stylistic information, and usage notes that are not available in traditional bilingual dictionaries (Thompson, 1987).
d. Compilers should provide examples to show how a particular word is used in a particular context since this might prevent students from using incorrect words.

e. Compilers should provide part of speech of each word since students might not have met some words before. This solution will help them to use words matching a part of speech they need to use.

5.5 Training students to use electronic dictionaries

The following points are suggestions for teachers to train their students to use electronic dictionaries.

a. Ask students to study the electronic dictionary manual carefully, since there are many functions that the electronic dictionary provides to assist learners.

b. Make sure that students know how to use important functions in the electronic dictionary such as ‘Cross Search function’.

c. Make use of computer skills such as typing and knowing alphabets. With these skills, students can use electronic dictionaries faster.

d. Train students to change part of speech of a word sought if the target word cannot be found; for instance, if a word sought is a verb, change it into a noun form or vice versa. When converting the word into another part of speech, the electronic dictionary might supply a meaning.

e. For connectors, inform students to use a formal word to start as a headword. For example, when Subject A wanted to link two sentences by using the word โดยที่ /Doithi/, he could not find any English words. In this case, teachers might tell students to look up this word by using the first syllable โดย /Doi/ and scroll down to see other words which begin with the word โดย /Doi/. This strategy can be helpful to look up similar Thai words the subjects wanted to convey.

f. Raise students’ awareness to make use of the Thai lexicon since the Thai language is very rich in terms of the variety of words which have more or less the same meaning. In short, teachers may have to guide them to use lots of synonyms when they cannot find the target word.

g. Teach students to break down one word into smaller units. This strategy can help students to convey meanings they want by themselves. For example, students can break the word เสมือนจริง /SamueanChing/ into two units: เสมือน /Samuean/ and จริง /Ching/. Then they look up English translations of each word in the dictionary: ‘like, as if’ for เสมือน /Samuean/ and ‘real, true’ for จริง /Ching/.

h. Suggest students to simplify a sentence they have problem with. To do this way, they can still convey the meanings they want.

i. Train students to keep track of words found (i.e. writing words found onto a piece of paper whenever they are searching for words). When the students can not find the word
that they wanted, they can backtrack to consider from the list of words found which word they can use in a particular context.

j. Suggest students to use a monolingual dictionary. By doing this, students will have an opportunity to see useful information contained in the monolingual dictionary. It will help them to select a particular word to write in a particular context correctly.

6. Conclusion
The results of this study on students' utilization of electronic dictionaries show that the aspect where students are weakest is use, and this appeared to be for two main reasons: students' own problems and problems inherent in the electronic dictionary used in this research. There were three reasons for students' word choices. Apart from the reason that the dictionary sometimes did not provide any English words, they are: students had seen the chosen words before, they used their intuition to choose words, and the chosen words matched the Thai meanings they wanted to convey. Suggestions and implications are also discussed as a result of those problems. Finally, the researchers hope that this study provides valuable findings and some directions for teachers of English to implement when training students to use electronic dictionaries successfully.

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