Research article

The dictionary consultation behavior of Technology Institute students

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Abstract

Every ESL/EFL learner uses English dictionaries when learning English. An English dictionary provides ESL/EFL learners with opportunities for encountering and acquiring new words. It is apparent that dictionary is a common and indispensable instrument for learning a new language. Therefore, the purpose of this study was to examine the consultation behavior of English dictionaries of Taiwanese technology institute students. It investigated the frequency of use of dictionary information and the perceived usefulness of such information. Specifically, the study also explored whether the frequency of use dictionary varied between high and low English proficiency groups. The participants in the study included 158 freshmen of one institute of technology in northern Taiwan. An English mid-term exam and a dictionary strategy use questionnaire were used for data collection. The results of the study revealed that students in general made very limited use of the dictionary, especially information related to the English definitions, grammatical usages, and frequency of words. In addition, the high proficient students made fuller use of the English dictionary. By means of understanding students' dictionary consultation behavior, English teachers can help students develop necessary and effective dictionary skills, which in turn can improve their English abilities.

Keywords

For citation

1. INTRODUCTION

Every ESL/EFL learner uses English dictionaries when learning English. It is apparent that dictionary is a common and indispensable instrument for learning a new language. An English dictionary provides ESL/EFL learners with opportunities for encountering and acquiring new words (Knight 1994; Lawson and Hogben 1996; Luppescu and Day 1993). Although a number of studies have found that many students express reliance on dictionaries (Schmitt 1997; Fan 2003), many English teachers viewed dictionary consultation as an ineffective tool for language learning. Thereby, many educators and researchers discourage the practice and advise students to use contextual cues to guess the meanings of unfamiliar words.

In the last 25 years, research in ESL/EFL vocabulary acquisition placed very little emphasis on dictionary use (Block 1992; Jimenez, Garcia and Pearson 1995, 1996; Shu, Anderson and Zhang 1995). As a matter of fact, language learners' use of a dictionary while reading to define unfamiliar words is generally discouraged by most language teachers, but some researchers suggest that it be used as a last resort (Haynes 1993; Nation 1990). The primary concern for educators is that looking up words frequently diverts the reader's attention from the task at hand, interferes with short-term memory processing, and thus disrupts the comprehension process (Gonzalez 1999). In recent years, however, the study of dictionary use has become the most recent and promising area of language study (Hartmann 1994).

Of interest for the present study is the students' dictionary consultation behavior. We are particularly interested in the frequency of use of dictionary information and how useful such information is perceived. To our knowledge, despite certain studies of dictionary use (eg., Bensoussan, Sim and Weiss 1984; Laufer 1990; Lauppescu and Day 1993; Hartmann 1994), no studies have examined the frequency of use of the various types of information in the English dictionary and how useful they are perceived by the students. In addition, in the researchers' classroom, students' failure to identify the right meaning of words in the dictionary has motivated the researchers to conduct this study. The researchers will examine students' frequency of use and perceived usefulness of looking up dictionaries in an attempt to come to a better understanding of students' dictionary consultation behavior. If our research can lead to greater teacher awareness of learners' behavior, it seems to us the effort has been worthwhile.

1.1. Research Questions

The present study seeks answers to the following research questions:
1. How frequently do subjects use English dictionaries and to what extent do they find them useful?

2. What types of information in the English dictionaries do the subjects use more often and how useful do they perceive them?
3. Are there any differences in dictionary use between students more proficient and less proficient in English proficiency?

2. REVIEW OF LITERATURE

A study by Bensoussan, Sim and Weiss (1984) investigated the effectiveness of dictionary use for reading comprehension. Their study included three investigations in which advanced English as a foreign language read texts in three different dictionary conditions: monolingual, bilingual and no dictionary. Subjects with dictionaries were asked to underline the words they looked up while reading. Then, with the text still in front of them, the subjects responded to multiple-choice questions to check their reading comprehension. The results indicated there were no significant correlations between dictionary use and reading comprehension scores in any of the three situations. Thus, while using a dictionary to increase comprehension has rational appeal, the findings of Bensoussan, Sim and Weis' study do not support this claim.

Parry's (1991, 1993) research examined the acquisition of vocabulary by ESL college students in academic course. In attempt to investigate the range of strategies used by ESL students in building vocabulary specifically from their readings, she requested her subjects to keep a list of any unfamiliar words they encountered from their anthropology textbooks. Moreover, they were asked to write down what they guessed these words to mean and, if they chose to look up the words in the dictionary, to record the found definitions. The results showed that dictionary consultation assumes a lexical, linguistic sophistication on the part of the user. The dictionary user has to possess broad semantic categories to relate the unfamiliar words. Yet the study indicated that adept dictionary skills are necessary for ESL learners to facilitate the learning of unfamiliar words.

Luppescu and Day (1993) examined the contribution to vocabulary learning of the use bilingual dictionaries during reading by 293 Japanese university students studying English as a foreign language. They were given a short story and asked to read it. Students in the treatment group were freely allowed to use the dictionary to look up any words they were unsure of, and which they wanted to look up. It was found that bilingual dictionaries had a beneficial effect on vocabulary learning. However, dictionary use may confuse learners, especially if there were a large number of entries under the headword from which to choose, students usually were unable to locate the appropriate gloss in the dictionary. Moreover, students' dictionary use resulted in lower reading speed. Students who used a dictionary read nearly half as quickly as those who did not use dictionaries.

Laufer and Harder (1997) assessed the benefit of the monolingual, bilingual and bilingualized dictionaries and came to the conclusion that different dictionaries might accommodate different abilities in dictionary use. Laufer and Kimmel (1997) conducted another experiment to find out which part of the entry learners might read when they looked up an unfamiliar word in the dictionary. The findings of the study indicated that only a minority of subjects—13% employed the whole entry for most of the words while the majority of learners

preferred to use one language in the entry rather than two. They noted that different learners had different preferred look-up patterns.

Schmitt (1997) carried out a large-scale study in Japan to assess which vocabulary learning strategies the learners actually used and how helpful they believed them to be. It was found that the learners used more repetition and dictionary strategies and considered them more useful than other strategies. In a similar vein, Fan (2003) surveyed a sample of 1067 Chinese students in Hong Kong to investigate the relationship among frequency of use, perceived usefulness, and actual usefulness of L2 vocabulary learning strategies. Findings of the study indicated that although the learners in the study reported using guessing strategies significantly more often than dictionary strategies, they perceived the latter was significantly more useful. The more proficient students reported using both categories of strategies much more often than the less proficient groups. These findings suggest that learners need both guessing and dictionary use strategies to learn new words.

Schmitt (1997) points out that discrepancies may exist between the frequency of use and the perceived usefulness of strategies. Although a number of studies have been devoted to investigating the effect of dictionary us reading comprehension and acquisition of vocabulary, no studies have investigated the discrepancies between the frequency of use and perception about dictionary information. A study, hence, focuses on the frequency of use of the various types of information in English dictionaries and how useful they are perceived needs to be developed, particularly in Taiwan where dictionary use is believed as essential and important for English learning.

3. METHODOLOGY

3.1. Subjects

Three intact freshman classes at one institute of technology were recruited as the subjects of the study. The three classes were composed of 158 students in total. These subjects were female nursing and early childhood education majors. English is a required subject in this four-year institute of technology from the first to second year, so all participants were taking English courses. They were typical of most Taiwanese technology institute students in that they have completed 6 years of English instruction in junior high school and vocational/senior high school.

3.2. Instrumentation

The instruments for data collection in the present study were composed of a dictionary strategy use questionnaire and an English mid-term exam. The questionnaire employed in the study was developed by the researchers. It aimed to have a better understanding of students' dictionary strategy use. The questionnaire was composed of two sections. Section 1 included six questions, the purpose of which was to collect such information about the respondents such as the type of dictionary they use, the purpose of using dictionary, how often they use it and how useful they find it. Section 2 contained 24 questions about the use of various kinds of information provided by dictionaries.

For each of the items in the section 2 of the questionnaire, students were requested to respond to both of the following: (a) how frequently do you use the dictionary information stated? And (b) to what extent do you think the same information is or may be useful to you? They responded on a 5-point Likert scale, ranging from 1 (never), 2 (seldom), 3 (sometimes), 4 (often) to 5 (very often) for the former and 1 (not useful), 2 (not sure it is useful), 3 (quite useful), 4 (very useful), to 5 (extremely useful) for the latter. This design was adapted from Schmitt's (1997) study which provided some evidence that students may frequently use information which they do not consider too useful, and vice versa.

The test for evaluating the subjects' English proficiency level in the current study was an English mid-term exam made by English teachers in the school. It was a curriculum-specific achievement test, rather than a general proficiency test. There were 50 multiple-choice questions in total in the test.

3.3. Procedure

The dictionary strategy use questionnaire was distributed to all subjects under the subjects' English teachers' supervision in English class. Before the questionnaire was administered, a brief explanation of the purpose of the study was provided. The students were informed that the researchers were interested in finding out how English learners use dictionaries and they would be given a questionnaire. Then, they were advised that responses would not affect their academic grades. The answered questionnaires were collected right after they were finished.

3.4. Data Analysis

Each subject's responses to the English mid-term were given scores. A correct answer was assigned 2 points and incorrect answer was given no point. The total possible points were 100. Based on the test scores, subjects were grouped into different proficiency levels. The high-level group referred to those who scored higher than 78, and the low-level group referred to those who scored lower than 56. Those who scored between 78 and 56 belonged to the intermediate-level group. Consequently, 38 subjects were defined as high level learners, 85 intermediate level ones and 35 low level ones.

The mean scores of the subject's responses to both the frequency of use and perceived usefulness were calculated and rank ordered. Significant variation in means of use and usefulness as related to proficiency was determined using the t-test. The probability level of significance for t-test is set at 0.05. After the statistical procedures, the relevant discussion based on the three research questions is presented.

4. RESULTS

Table 1 presents the different type of dictionary that subjects prefer to use. None of the students reported that they used English-monolingual dictionary. Only 59 (37.3%) of the

students preferred to use bilingualized dictionary. 99 (62.7%) reported that they favored to use English-Chinese bilingual dictionary.

Table 1. Type of Dictionary Subjects Use

English-monolingual	Bilingualized	English-Chinese	Total
0	59	99	158
0%	37.3%	62.7%	100%

The frequency of use and perceived usefulness of dictionaries are presented in Table 2. Clearly, the subjects under study employed dictionaries quite often. None of the subjects reported they "never" used English dictionaries and only 31 (about 19%) of the subjects claimed that they "seldom" used English dictionaries. As to the perceived usefulness of dictionaries, the subjects considered them very useful. Only 8 (5.1%) of the students reported that they were "not sure".

Table 2. Frequency of Use and Perceived Usefulness of Dictionaries (n = 158)

How often do you use an English dictionary?				
Never	Seldom	Sometimes	Often	Very Often
0	30	55	62	11
0%	19%	35%	39%	7%
How useful do you find using an English dictionary?				
Not useful	Not Sure	Quite Useful	Very Useful	Extremely Useful
0	8	34	88	28
0%	5.1%	21.5%	55.7%	17.7%

In answering research question two, we explored how frequently students use the various kinds of information in English dictionaries. Table 3 lists the results of the findings. Chinese Equivalents (mean was 4.62) has the highest average frequency, and next is Example Sentences (3.68), followed by Pronunciation (3.53). The least used strategy is Frequency (1.89), and next is Grammatical Usages(1.97), followed by English Definitions (2.52).

Analysis of the perceived usefulness of dictionary information did not suggest a totally different, but somewhat same, picture as revealed in Table 3. Chinese Equivalents, Example Sentences, Pronunciation, were found to be both often used and perceived as very useful. English Definitions, Grammatical Usages and Frequency of words were used least often and perceived as least useful. There were only some slight changes on the rank order for the Spelling (ranked 4, 5), All Meanings (5, 4), Parts of Speech (6, 8), Collocations (7, 6), Appropriateness (8, 9) and Derived Forms (9, 7). In addition, the mean of frequency of use for Chinese Equivalents is lower than that of perceived usefulness. These findings will be discussed further in the discussion section.

Table 3. A Rank Order of the Frequency of Use and Perceived Usefulness of Dictionary Information

Dictionary information	Frequency of Use			Perceived Usefulness		
	Rank	Mean	SD	Rank	Mean	SD
Chinese Equivalents	1	4.62	.52	1	4.46	.60
Example Sentences	2	3.68	1.08	2	3.97	.80
Pronunciation	3	3.53	1.14	3	3.94	.96
Spelling	4	3.36	1.02	5	3.75	.82
All Meanings	5	3.30	1.07	4	3.77	.77
Parts of Speech	6	2.84	.97	8	3.33	.91
Collocations	7	2.78	1.04	6	3.46	.91
Appropriateness	8	2.60	1.09	9	3.32	.96
Derived Forms	9	2.55	.89	7	3.35	.86
English Definitions	10	2.52	1.19	10	3.15	1.04
Grammatical Usages	11	1.97	.85	11	2.94	.99
Frequency	12	1.89	.98	12	2.65	.96

By means of t-test, the results revealed significant differences between high-level group and low-level group in the use of the dictionary information in the respect of Parts of Speech, Derived Forms, Grammatical Usages, Collocations and Appropriateness. The findings suggest that the more proficient students used more information in the dictionaries than the less proficient ones. Since language learners advanced to higher language levels, they seemed to seek more types of information from dictionaries than just word definition or Chinese equivalents. In addition to referring to more dictionary information, high proficiency students also reported feeling more helpful in the respect of Spelling, Parts of Speech, Derived Forms, Grammatical Usages, Collocations and Frequency. That is to say, high level group used Parts of Speech, Derived Forms, Grammatical Usages and Collocations more often and regarded them as much more useful.

Table 4. Differences Between the High Level and Low Level Groups in Frequency of Use Dictionary information

Dictionary information	High(n=38)		Low(n=35)		t-value	Significance
	Mean	SD	Mean	SD		
Spelling	3.55	1.06	3.09	1.09	1.85	.068
Chinese Equivalents	4.71	.46	4.66	.54	.56	.650
Parts of Speech	3.18	1.20	2.34	.97	3.27	.002*
Derived Forms	2.89	1.01	2.14	.81	3.49	.001*
Grammatical Usages	2.34	.88	1.54	.70	4.27	.000*

English Definitions	2.63	.94	2.43	1.36	.74	.457
All Meanings	3.32	.90	3.17	1.34	.54	.588
Collocations	3.26	.98	2.31	1.05	3.99	.000*
Pronunciations	3.21	1.23	3.23	1.11	-.06	.948
Frequency	1.97	1.13	1.71	.96	1.05	.295
Example Sentences	3.68	1.04	3.31	1.28	1.36	.178
Appropriateness	2.74	1.13	2.17	.95	2.29	.025*

Table 5. Differences Between the High Level and Low Level Groups in Perceived Usefulness Dictionary information

Dictionary information	High(n=38)		Low(n=35)		t-value	Significance
	Mean	SD	Mean	SD		
Spelling	3.95	.87	3.46	.92	2.34	.022*
Chinese Equivalents	4.39	.59	4.51	.61	-.84	.400
Partsof Speech	3.71	.98	2.83	.95	3.88	.000*
Derived Forms	3.76	1.05	3.11	.83	2.90	.005*
Grammatical Usages	3.13	1.14	2.57	.95	2.26	.026*
English Definitions	3.39	.89	3.00	1.21	1.59	.115
All Meanings	3.89	.69	3.60	1.01	1.47	.146
Collocations	3.68	.96	3.03	.92	2.96	.004*
Pronunciations	3.61	1.20	3.80	1.08	-.72	.469
Frequency	2.79	1.09	2.26	.98	2.18	.032*
Example Sentences	3.92	.71	3.80	.87	.65	.515
Appropriateness	3.34	1.07	3.00	.94	1.44	.153

5. DISCUSSION

This paper aims to find out the dictionary look-up behavior of Taiwanese technology institute students. The results indicated that the majority of the students use English dictionaries and they find them useful. At the same time, findings of the study have revealed that most students make only limited use of English dictionaries, which is consistent with the findings of Laufer and Kimmel (1997). Students preferred to look up the Chinese equivalents of words more often than their English definitions. Since the most important function of dictionaries is to provide word meanings, it is not surprising that the students under study look up dictionaries most frequently for the Chinese meanings of new words. However, the focus on Chinese and English equivalents will give English learners the wrong message that there are perfect equivalents between L1 and L2. As a result, students may have weak awareness to the important fact that different languages may have different syntactic, semantic and stylistic characteristics. However, the mean of frequency of use for Chinese Equivalents is significantly lower than that of its perceived usefulness has revealed some important messages. It may indicate that students were already aware of the deficiency of focusing only on the Chinese equivalents of new words. As Hartmann (1994) pointed out that straightforward L1 equivalents are too far removed from the

target language and tend to encourage interference errors because they promote a mistaken trust in direct word-for-word equivalents.

Pronunciation is the fundamental part of speech production. Pronunciation is the language feature that most readily identifies speakers as non-native. It is also a filter through which others see them and often discriminate against them. Most importantly, incorrect pronunciation may cause communication breakdown. It was found that pronunciation is the third often used strategy, yet, in light of Yang and Su's (2003) study, poor pronunciation is Taiwanese technology institute students' major learning problem when speaking English. It is probably that Taiwanese students do not have much chance to pick up the L2 or to acquire L2 vocabulary and pronunciation in a natural environment. Hence, English dictionary is definitely one of the most valuable sources of input for learning English vocabulary and its pronunciation. To help students correctly pronounce the unfamiliar words, it is necessary for teachers to teach phonetic symbols to students and do more pronunciation practice.

Though most researchers agree that the advantages of English definition outweigh the disadvantages (Hartmann 1992), looking up English definitions was the third least used and third least useful strategy. By means of expressing the meanings of new words in target language, students can better understand English words and think directly in English, which in turn will enhance their English ability. In spite of this advantage, the main disadvantage of this kind of information is that students who are less proficient in English may not be able to benefit much from it. It may even cause much more problems when looking up into dictionaries because there are more new words in the definitions. To understand the English definitions, students have to spend more efforts looking up the meanings of the new words in the English definitions. The low usage of English definitions could be attributed to this.

For students to speak or write correct English, grammatical usage of word is essential in producing sentences or speech. Nevertheless, grammatical usages of words were given relatively low priority and perceived as the second least useful. It is understandable why L2 learners in general are not aware that they could look up grammatical usages of words in dictionaries. For example, verbs can be described in terms of pattern, such as be (copula) + subject complement, transitive verb (*vt*) intransitive verb (*vi*) and dative verb + ID + DO. For students to acquire correct grammatical usage of the word, they have to read as many example sentences as possible and find out the exact verb pattern of the verb in the appendix of the dictionary. If students haven't received any instruction from their teachers, it seems an impossible task for them to find out the grammatical usages of verbs in English dictionaries. This could explain why grammatical usage was ranked the second least used strategy. This problem will remain unresolved until they get instructions from the teachers.

Frequency is connected with how common a word is and how often it should be used. Word counts like these have provided some very useful insights into the way the vocabulary of English works. White (1988) suggested that frequency of use is the first issue that teachers should consider when selecting vocabulary to be taught. It seems clear that high frequency words are likely to predominate at early stages with lower frequency words becoming more significant in the syllabus at more advanced levels. Recently, as a result of technology advancement and the development in corpus linguistics, lots of dictionaries are complied on the basis of large text corpora. For instance, the 1995 editions of Collins COBUILD English Dictionary included

frequency information about words. This can serve as a guide to what is worth trying to retain. Since students may encounter numerous unknown words in extensive reading, many of which will be quite rare, it is very useful to have a guide to what to skip (Scholfield 1997).

6. CONCLUSION

This study sought to explore the English dictionary consultation of Taiwanese technology institute students. It examined the frequency of use of dictionary information and how useful such information is perceived. Comparison was also made between high-level students and low-level students to identify the dictionary consultation behavior which may enhance L2 learning. The results of the study revealed that students in general look up Chinese equivalents of English words. In contrast, English definitions, grammatical usages and frequency of words were the information least used and perceived as least useful by students. In addition, high level students make fuller use of the English dictionary than low-level students.

6.1. Pedagogical implications

Here are some tips that teachers have to know when trying to teach dictionary use strategies. First, dictionary is particularly fundamental for foreign language learners, because they will not always have the teacher around to guide them as they study the target language outside the classroom. Teachers, therefore, have to equip students with necessary dictionary skills which in turn will have a positive influence on students' independent vocabulary learning and the improvement of four language skills.

Second, most researchers agree that the advantages of English definitions outweigh the disadvantages (Hartmann 1992). English teachers have to let students understand the benefits of using English definitions, which provide them with more English input. When English teachers encourage students to use monolingual dictionaries, they may recommend some English-English monolingual dictionaries that are tailored to EFL learners of different proficiency levels. This may build on students' confidence in using English to express their thinking.

Third, teachers should teach students what other strategies are available to them when meeting unknown words in reading English. Reading comprehension may be hampered by over-reliance on dictionary and incorrect use of dictionary information. Hence, it is necessary to teach students there are other alternatives to dictionary use, such as guessing meaning from the context and pass or skip unknown words if they do not interfere with the understanding of sentences. Finally, teachers who teach beginning level have to teach phonetic scripts to students so that they can use the dictionary to find out how to correctly pronounce unfamiliar words.

6.2. Suggestions for Future Research

Based on the findings of the study, still there are other possibilities for further research on the same topic. First of all, the questionnaire data for the study generally do not create a whole picture of dictionary consultation behavior since they might miss other interacting factors involved. The use of qualitative methods such as interviews may serve exactly to rectify this

limitation. Second, awareness of assumption that students bring to the classroom can help teachers understand students' frustration and difficulties. Therefore, it is suggested that learners' beliefs about English dictionaries can be explored in the future study.

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