

Monolingual vs. Bilingual Dictionaries for Learning Technical Terms

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ABSTRACT

The prominent role of vocabulary knowledge has always been emphasized by theorists and researchers in the fields of language learning and teaching. It has been repeatedly acknowledged that acquisition of vocabulary has a crucial role in the course of language learning. Similarly, having a good mastery of vocabulary is also essential for ESP (English for Specific Purposes). Technical dictionaries seem to be helpful for learning specialized uses of vocabulary and working with such reference books can be useful for language learners. This study aims at investigating the effect of using monolingual and bilingual technical dictionaries in the marine students' learning of special terms. The subjects of the study were junior deck- and engine engineering students of the Khoramshahr Maritime University as one of the main Iranian centers for marine training. They were randomly selected from 100 students who participated in a proficiency test which was based on UCLES IELTS tests. After that, they were being taught in two different ways. Some received instructions about the technical terms with the help of a monolingual technical dictionary, while others received instructions about the same terms with the help of a bilingual technical dictionary which was based on the Standard Marine Communication Phrases (SMCP), in a short period of time. The results of the study showed that the group which received treatment with the help of a bilingual technical dictionary delivered a better performance on the final test. The limitations and implications of this study, as well as its suggestions for future research, are also discussed.

KEYWORDS: Technical English, Marine English, Monolingual Dictionary, Bilingual Dictionary.

INTRODUCTION

Vocabulary is a vital component in the process of language learning and is of great significance to language learners. In definition, words are the building blocks of a language where they are used to label objects, actions, ideas. In the field of second language learning and teaching, the crucial role that lexis plays has been repeatedly acknowledged in second language acquisition (SLA) both theoretically and practically. High knowledge of vocabulary can play an active and valuable part in helping students to become successful learners of the target language. On the other hand, regarding the significant role of vocabulary learning in second or foreign language learning, one can also implicitly understand the importance of vocabulary teaching (Richards and Renandya, 2002).

In the field of language teaching and learning, many experts believed that vocabulary is the single most important aspect of foreign language learning (Singleton, 2007). It is also considered a priority by teachers as well (Crow, 1986).

Vocabulary is a core component of language proficiency and provides much of the basis for how well learners speak, listen, read, and write. According to Celce-Murcia (2001: 285), "Vocabulary learning is central to language acquisition, whether the language is first, second, or foreign."

According to Folse (2004) "ESL Students see acquisition of vocabulary as their greatest source of problems. However, there are different tools and strategies for the acquisition of vocabulary. One of these useful tools is dictionaries. Generally, a dictionary contains an alphabetical list of words and their meanings. Almost all dictionaries provide the following information about each word: spelling, the standard pronunciation, definitions to represent the word's one or more meanings, parts of speech, etymology or history, quotations or examples to illustrate the given definitions of the word and a lot of more information about it. According to Fromkin et al. (2003), the first dictionary to be printed in England was the Latin-English Promptuorium parvulorum in 1499. As Schmitt (2002) mentions dictionaries may be monolingual (all in the foreign language), bilingual (foreign language

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words-first language definitions and vice versa) or bilingualized (monolingual with first language definitions also provided). Dictionaries may also be written specifically for certain fields of study such as maritime fields.

Throughout history, the role of dictionary in language learning has received much interest and it has been recognized as an essential language-learning tool (Marckwardt, 1973; Bensoussan *et al.* 1984; Luppescu and Day, 1993; Ahmed, 1989; Laufer, 1990; Narenji, 1998). For example, Sim and Weiss (1984) investigated the effect of dictionary use on multiple-choice comprehension test scores. Hulstijn (1993) also did a study on the effect of dictionary use on reading comprehension. Luppescu and Day (1993) conducted a study which focused on the contribution to vocabulary learning of the use of bilingual dictionaries. Knight (1994) also investigated the effect of using computerized dictionary on reading comprehension.

Vocabulary and various matters related to it such as different kinds of words, different strategies of learning vocabulary and etc have been the subjects of a considerable amount of studies (e.g. Carter & McCarthy, 1988; McCarthy, 1999; Nation, 2005; Arnaud & Bejoint, 1992; Gass, 1987; Meara, 1989; Nation & Carter, 1989; Gairns & Redman, 1986; McCarthy & O'Dell, 1994; Harley, 1995; Hatch & Brown, 1995; Coady & Huckin, 1997; Schmit & McCarthy, 1997; Atkins, 1998; Wesche & Paribakht, 1999; Read, 2000; Schmitt, 2000; Nation, 2001).

Thus, the present study is an attempt to investigate the effect of monolingual and bilingual dictionaries on learning technical marine vocabularies in a short period of time. The study was conducted among non-native English speaking learners in Khoramshar Maritime University.

VOCABULARY DEVELOPMENT AND DICTIONARY USAGE

Chastain (1988: 327) puts forward that, vocabulary usually plays a greater role in communication than the other components of language. Chastain (*ibid*) mentions that the lack of needed vocabulary is the most common cause of students' inability in communication activities. Therefore, it seems to be a relation between the amount of vocabulary a student knows and his/her linguistic ability. Schmitt (2002: 50) also claims that in English, there is a relatively close relationship between how many words you know, as measured on the standard vocabulary tests, and how well you perform on reading tests, listening tests and other tests of your English ability.

Throughout history, vocabulary development and different issues related to it such as vocabulary learning and teaching and the role of dictionary use in such learning have received much attention. For example, Richards and Renandya (2002) combine three approaches to vocabulary instruction and learning which are themselves modified from Coady (1997 a) and Hulstijn, Hollander, & Greidanus (1996). Nagy, Herman, and Anderson (1985) and Krashen (1985, 1989) were emphases on the role of reading on vocabulary development. Lightbown (1998) mentions the role of good learning strategies on better vocabulary development. Vocabulary learning has such an important role in language learning and acquisition that almost in all books related to language teaching and learning it has been included. Due to the length of this study just of some the relevant works are mentioned.

According to Schmitt (2002: 44), there are four major strategies that help with finding the meaning of unknown words and making the words stay in memory. He puts forwards them as guessing from context clues, deliberately studying words on word cards, using word parts and dictionary use.

The role of different types of dictionaries in vocabulary learning has been reported by some scholars. For example, Summers (1988) investigates the effectiveness of the Longman Dictionary of Contemporary English both in reading comprehension and in vocabulary learning. Knight (1994) and Luppescu & Day (1993) found that bilingual dictionary result in vocabulary learning. Bilingualized dictionaries were found to result in better comprehension of new words than either bilingual or monolingual dictionaries (Laufer & Hader, 1997). Hulstijn, Hollander, and Greindanus (1996) suggest that electronic dictionaries are easier to use than traditional dictionaries and the students will be more likely to use them.

WHAT IS INVOLVED IN KNOWING A WORD?

The first step in teaching and learning a word is perhaps deciding on whether that word is worth spending time or not. For example, when a word is with low frequency, it is not a useful technical word and is not a particularly useful word for learners. Therefore, it seems that part of effective vocabulary teaching and learning involves working out what should be taught and learnt about a word. Nation [41] mentions to three general concepts of words which should be determined for deciding on if that word is worthy teaching or learning. Those

concepts are: meaning, form, and use. The researchers add another important factor too which the frequency rate of a technical word.

What Dictionaries: Monolingual OR Bilingual?

In two different studies done by Yorio (1971) and Bensoussan et al. (1984), the students were put in a free choice of using bilingual or monolingual dictionaries, and it was found out that more than half of the subjects showed a distinct preference for bilingual dictionaries. According to Schmitt (2002), learners show strong preferences for bilingual dictionaries and research indicates that bilingualized dictionaries are effective in that they cater for the range of preferences and styles (also cited in Laufer and Hadar, 1997; Laufer and Kimmel, 1997).

Some Studies have been conducted regarding the differences between the usefulness of monolingual and bilingual dictionaries in language learning, for example, some scholars have supported the contribution of monolingual dictionaries to vocabulary. Underhill (1985) states that many high frequency words may be given appropriate treatment in monolingual dictionaries. Baxter (1980) also believes that more encouragement should be given to the use of monolingual dictionaries since it promotes fluency by offering definitions in context. (Cited in Lupescu and Day 1993: 275)

On the other hand, Thomson (1987) believes that all the information of a monolingual dictionary can be equally given in a bilingual dictionary and Bejoint (1981) claims that learners who use monolingual dictionaries also recognize these themselves. Thomson (ibid; 284) concludes that monolingual dictionaries are simply not cost-effective for many learners in terms of rewards (correct choice of word) versus effort. Therefore, the question here remains that whether or not does it really matter what sort of dictionary learners use, especially technical ones?

TECHNICAL TERMONOLOGY

Technical terms are specialized vocabulary of a field. These terms have specific definitions within the field, which may not necessarily be the same as their meanings in common use. As Falk (1978: 67) said, every profession has its own set of special vocabulary, terms that designate concepts and phenomena with which the profession is concerned.

TECHNICAL MARINE TERMS

Based on the way it is applied, technical marine English can be divided in two separate sections:

- English used by mariners engaged with navigation, cargo handling, communications and commercial business of the ship, the deck department.
- English used by mariners engaged with engine parts and electronic systems of the ship, the engine department.

The main technical terms might be safety phrases. Safety phrases are a group of words exactly related to an event or accident and are used unchangeably all over the world. They were first only a few and introduced by the International Maritime Organization (IMO) in 1977 for situations in which ships were in danger.

Most of the messages in these phrases had a May Day alert. As time went by, it became obvious that in most situations safety phrases could not be descriptive of the event, thus making an increase in the range of the Standard Marine Navigational Vocabulary (SMNV).

Some of these phrases are precious in bad situations and seem to be the best way of alerting others. In 1993, the IMO found that the SMNVs cannot be applied in all situations and decided to make a substantial change in them. This time the range of the vocabulary broadened and specialist sections were added which were not merely related to safety phrases. The result was the Standard Marine Communication Phrases (SMCP) broadly including the followings:

- Distress communications
- Search and rescue communications
- Requesting medical assistance

- Urgency communications
- Safety communications
- Warnings involving meteorological and hydrological conditions
- Environmental protection communications
- Ice-breaker operations
- Vessel Traffic Service (VTS) Standard Phrases
- On-Board Communication Phrases
- Handover of watch keeping responsibilities
- Berthing and unberthing
- Fire protection and Fire fighting
- Cargo and Cargo Handling
- Preparing for Sea
- Passenger Care

SURVEY QUESTION AND HYPOTHESIS

The aims of the research can be summarized as seeking to answer the following question in the context of Khoramshar Maritime University:

Question: Are there any different in using monolingual and bilingual technical dictionaries in a short period of time between junior Deck- and Engine engineering students?

The above research question posits the following research hypothesizes:

- H.1: Based on the case study of Khoramshar Maritime University, in a short period of time, teaching maritime junior students with the help of bilingual technical dictionary can help them have a better learning.
- H.2: Maximum one month is required for learners to improve their knowledge by new English technical marine terms.
- H.3: The learners are not on board any ships until yet, i.e. they have no actual experience within their courses.
- H.4: The technical marine dictionaries are provided based on the mentioned phrases of the SMCP.

MATERIALS AND METHODS

The subjects of the study were 80 junior students of Khoramshar Maritime University. They were randomly selected from 100 students who participated in a proficiency test which was based on UCLES IELTS tests. The purpose of this test was to assure the homogeneity of the subjects' general proficiency. Based on the results of the mentioned test, 80 students who got "5" on the test were identified and divided to two equal groups which were called A and B groups.

DATA ANALYSIS

The two groups were being taught in two different ways. Group A received instructions about the technical terms with the help of a monolingual technical dictionary while group B received instructions about the same terms with the help of a bilingual technical dictionary. The total amount of hours that the two groups received treatment on the terms was 150 minutes. Afterwards, the subjects were tested on those technical terms and the average score of each group was calculated and compared. Following table represents the results of the test.

Table 1: Results of the test

Item	A		B		Total
	Deck Students	Engine Students	Deck Students	Engine Students	
No. of Respondents	21	19	18	22	80
Average Score	17.63		18.24		
Standard Deviation	3.75		3.25		

Significant differences were found between the average scores of each group, i.e. the average score of B is much better than of A, which means that the first hypothesis of this study was approved.

CONCLUSION

The major objective of this article was to find out an answer to this question that whether the kind of technical dictionary (in terms of monolingual or bilingual) used for teaching technical terms can help the junior maritime students to learn them better in a short period of time. The study reported here indicated that the group which received treatment with the help of a bilingual technical dictionary (here group B) delivered a better performance on the final test. Therefore, it can be said that the application of bilingual dictionary in teaching technical terms can help the students have a better learning in a short period of time. There are some limitations in this study. First, since the terms used here was related only to the maritime technical terms, generalizing the finding of this study to the vocabulary learning of other fields can be difficult. Second, the focus of this study was just on the learning of junior marine students. Hence, conducting research on the vocabulary learning of other fields could provide broader insights. This study has implications for teaching and learning of technical terms. It is suggested that the same research be done in other fields of study.

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