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The Effect of Language Background and Culture on Productive Dictionary Use

Abstract

This paper describes an experiment to compare the speed and success with which subjects from different language and cultural backgrounds read and make productive use of learners' dictionary entries. Two groups of subjects, one from Malaysia and the other from Portugal, produced sentences using given target words, with optional access to dictionary information. Computers monitored their behaviour during the task, and the sentences they produced were subsequently rated for appropriacy. Although the Portuguese group knew fewer English words, they were found to access dictionary information less frequently, to read dictionary entries more quickly, and to produce more appropriate sentences after dictionary consultation. First language influence was not always found to have a positive effect on interpretation of the dictionary entry.

1. Introduction

I think most teachers of English as a Foreign Language would agree that learners from some parts of the world have better dictionary skills, and that certain types of dictionary misreading can be linked to certain language backgrounds. Few prior studies have investigated this phenomenon, however, and no research has systematically compared the productive monolingual dictionary use of representative samples of subjects from different cultures.

Those few studies which have looked at the effect of culture on dictionary use tend to acknowledge that the user's first language is important. Ard (1982) chose subjects from two different language backgrounds (Japanese and Spanish) for close observation, and came to the conclusion that:

> while the nature of bilingual dictionaries makes it unlikely that students will often find acceptable words to use in compositions, the success rate depends on the native language background of the students. Students from languages 'close' to English ... are more likely to be successful. (1982:2)

Ard's sample was too tiny to be representative, but his finding that people with different language backgrounds have different approaches to dictionary use, and possibly different dictionary needs, finds support in the work of Meara and English (1988). In this study lexical errors, taken from a

corpus of Cambridge First Certificate examination papers, were assigned to six categories and checked against information in the Longman Active Study Dictionary (LASD). It was found that the distribution of error types varied markedly from one language to another, which led the researchers to the conclusion that LASD is far more effective for speakers of some languages than for speakers of others; Swahili speakers, for example "are more than three times as likely to meet a dead end than are Finnish speakers of about the same level" (p. 8).

Further support for the view that language and culture are important factors is provided by Bogaards (1990, 1992), who focussed on just one aspect of dictionary consultation – the dictionary users' choice of search word when looking up multi–word idioms – and noted that French and Dutch dictionary users exhibited very different look–up behaviour:

> il existe des comportements typiquement français ou néerlandais, différents de ceux que manifestent les étrangers. Il est donc permis de croire que les choix que font les sujets dépendent dans une large mesure de leur langue maternelle. (1990:94)

One major study in this area, however, reports no influence of language and culture on dictionary use. Battenburg (1991) dismisses the possibility that the behaviour of dictionary users varies according to their native language backgrounds. He found "no significant patterns" in questionnaire responses from different language groups regarding the frequency of consultation of different dictionary types and dictionary information types, and came to the conclusion that language learners' use of dictionaries was largely unaffected by their mother tongue and culture.

Perhaps Battenburg failed to find a connection between dictionary use and first language because he depended on the subjects' own reported be–haviour, rather than direct observation. Significant patterns may also have failed to emerge because his subjects were not picked to represent language backgrounds in equal proportion. In the study reported in this paper I avoided this problem by directly observing the dictionary using behaviour of two relatively large groups of subjects with different first languages.

2. Objectives and procedure

My study aimed to address the following research questions:

1.   Do students from different language backgrounds differ in the number of words they look up in the given task?
2.   Do students from different language backgrounds differ in the time they take to consult dictionary entries?
3.   Do students from different language backgrounds differ in the number of acceptable sentences they produce after dictionary consultation?

The study departed from previous studies into learner dictionary use in its employment of a computer program (written by Paul Meara at University College Swansea), both to record and time instances of definition look–up, and to record the subjects' own language production. The experiments were administered in the home countries of the subjects, who were 51 Portuguese undergraduates and 44 Malaysian undergraduates studying English at tertiary level in Faculties of Education. All the subjects intended to become English teachers. The two groups were chosen because they were identical in age, educational level and language learning purpose, but came from very different backgrounds in terms of language and culture. English is a foreign language in Portugal, but English and Portuguese are both Indo–European languages and share many cognate words. In Malaysia, on the other hand, English is the second language but the national language, Bahasa Malaysia, belongs to a completely different language family (Malayo–Polynesian).

The subjects were tested initially using the Eurocentres Vocabulary Size Test (EVST) (Meara and Jones 1990) which served as an approximate indicator of general English vocabulary size. Subjects were then presented with a target word and a high–frequency word on their computer screens, and were asked to use both of these words to create a sentence. If the subject did not know the target word s/he could access a dictionary entry for that word by pressing ENTER on the keyboard. Eighteen pairs of words were presented to each subject in this way.

The target words used in the study came from the medium frequency and range band of I S P Nation's *University Word List* (1990), while the high–frequency words came from level one of Hindmarsh's *English Lexicon* (1980). It was ascertained in a pilot study that the target words were likely to be unknown to the majority of subjects, while the high frequency words would be known to all. Target words were paired with high–frequency words in order to prevent the subjects from merely reproducing example sentences from the dictionary entries. This method obliged subjects to create a new context to accommodate both words in the pair. The high frequency words chosen for the study were intentionally context neutral, so that they did not provide clues to target word meaning, or encourage a false understanding of the target words. Each test file in the program recorded personal details of each candidate, any access to definitions, the length of time spent reading those definitions and the sentences produced by the subjects.

3. Results

Sentences produced after look–up were rated for appropriacy by three independent judges, using a rating scale from one (completely inap–propriate) to six (completely appropriate). Judges were asked to ignore spelling mistakes, and comment only on the appropriacy of the target words, rather than complete sentences. By averaging the ratings of the three judges

an appropriacy score was calculated for each instance of target word use in the data.

Table 1 summarises findings for the two groups, in terms of mean vocabulary size (EVST), mean number of words looked up (number), mean number of seconds taken to read the dictionary entry (time) and mean sentence score (score).

Table 1: A comparison of the performance of the Portuguese and Malaysian groups

	Portuguese(51)	Malaysian(44)
EVST	5279.41	6780.68
S.D	1262.62	1379.38
number	12.90	16.00
S.D	3.34	2.44
time	24.66	31.75
S.D	14.21	12.74
score	3.52	3.09
S.D	0.68	0.60

The two groups were significantly different in all respects: despite the fact that the Malaysians had a larger vocabulary size [t = 5.54, df = 93, p<.01] they looked up more words [t = 5.08, df 93, p<.01], they took longer to read the dictionary entries [t = 2.55, df = 93, p<.01], and they gained lower scores for the sentences they produced [t = 3.20, df =93, p<.01].

All errors of target word use were subsequently classed as errors of meaning, grammar, or word formation, and it was found that the Malaysian group produced a significantly greater number of grammatical errors [t = 1.99, df 93, p<.05].

In order to investigate first language influence in the data, it was necessary to consider the extent to which the target words were related to words in

Malay and Portuguese. Table 2 shows where relationships exist between the English target words and their Portuguese and Malaysian equivalents. The asterisks indicate the group with the higher percentage of appropriate sentences for each target word; where no asterisk is given the difference between the two groups was less than 5%.

Table 2: Relationships between the target words and words in Portuguese and Bahasa Malaysia.

	Portuguese	Bahasa Malaysia
ENLIGHTEN	-*	-
ERR	errar*	-
GRAVITY	gravidade	graviti
INCORPORATE	incorporar*	-
INTERSECT	-*	-
PERPETRATE	-*	-
RETARD	retardar	-*

RUDIMENTARY	rudimentar	-
SYMPTOM	sintoma*	simtom
VERSION	versao*	versi
AGITATE	agitar	-*
CIVIC	civico*	sivik
CLARIFY	clarificar	-
COLLIDE	colidir*	-
COMPUTE	computar	-*
CONTROVERSY	controversia	kontroversi*
INTERACT	-	(ber)interaksi
INTERLUDE	interludio	

It can be seen that fourteen of the eighteen target words had Portuguese cognates, while only six of the target words had been borrowed into Malay. It should be noted, however, that the noun *komputer* exists in Bahasa Malaysia, and Malay versions of two other target words – *intersek* and *interlud* – occasionally creep into the speech of bilinguals, although these forms remain very rare. (Educated Malaysians frequently switch between their first language and English while speaking, using lexical items from English as stop–gaps when they cannot recall the words they require in Malay, and vice–versa; this makes it difficult to establish the full extent of English borrowings into Bahasa Malaysia.)

4. Discussion

The three research questions posed at the beginning of this paper were all answered in the affirmative. The two groups, similar in age and educational level, differed significantly in the number of words they looked up, the time they took to consult the dictionary entries, and the acceptability of the sentences they produced after dictionary consultation. These findings seem to conflict with Battenburg's finding that native language and cultural background do not affect dictionary use.

Three factors are probably responsible for these evident differences in dictionary use: the English language learning background of the subjects, cultural attitudes to task completion, and the proximity of English to the mother tongue.

Whereas the Portuguese subjects had learnt English as a foreign language in the classroom, and had been given very few opportunities to use English communicatively outside class, for the Malaysian subjects English was virtually a second language; many university textbooks were available only in English, and their university education was partially English–medium. This meant that the two groups had a history of acquiring English vocabulary by very different means. The Malaysians had larger lexicons, but they also had far less formal experience of vocabulary learning; by and large they had picked up words by continual exposure to the language. The Portuguese subjects, on the other hand, had learnt most English words through translation exercises and dictionary use.

It may be that the Portuguese subjects had greater prior experience of dictionary use; this would help to explain why they read the entries more quickly, and it would also help to explain why they interpreted the entries more successfully. Greater familiarity with the grammar codes used in learners' dictionaries, and possibly greater familiarity with the grammatical concepts encoded in the dictionary entry, may have contributed to the Portuguese subjects' relative success with the grammar of the target words.

However, the possibility that the Portuguese were more practised in dictionary use does not explain why they chose to look up fewer words despite their inferior vocabulary knowledge. One probable reason for their more confident behaviour is that they recognized more cognates among the target words. I also suspect, but cannot prove, that the faster and self–assured Portuguese approach and the more thoroughgoing Malaysian approach were at least partially culturally determined. Speed of task completion is probably more highly valued in Portugal than in Malaysia, and looking up words inevitably takes time.

The proximity of Portuguese to English doubtless favoured the Portuguese subjects to a certain extent. However, the Portuguese group's advantage in this respect is not so straightforward as might first appear, for the following reasons:

1)   Cognates are not always recognised as such. Studies such as those of
      Horsella and Sindermann (1983) and Moss (1992) show that learners
      often fail to notice the formal similarities between target language
      words and first language words; in Moss's study, Spanish–speaking
      students' overall average cognate recognition was only about 60%.
2)   Learners may assign an identical meaning, collocational range and
      syntactic patterning to the cognate target word, when in fact it differs
      from the word in the learner's first language in one or more of these
      respects.
3)   Speakers of languages unrelated to English often have access to the
      meaning of unfamiliar English words, either because they are already
      familiar with another European language, or because there are English
      borrowings in their first language. In this study, the Malaysian group
      did not know any European language other than English, but were
      familiar with many words of English origin which had been borrowed
      into Bahasa Malaysia. Moreover, whereas Portuguese speakers may
      be unaware of the relationship between a word in their own language
      and a word in English, Malaysian speakers are often conscious of the
      'Englishness' of borrowed words, because most have not been
      assimilated into the language sufficiently to admit the word formation
      processes common to native words. (The Malay noun *interaksi*, from
      INTERACTION, is exceptional in its admission of the verb–forming
      prefix *ber–*.)

As can be seen in Table 2, where a related word existed in one language but
not in the other, this did not always place the language with the related word
at an advantage. However, where related words existed in both languages the
Portuguese group tended to be more successful. Most interesting were
results for the three cases where no related word existed in either language
– ENLIGHTEN, INTERSECT and PERPETRATE – because these target
words tested each group's ability to interpret dictionary information without
the influence of prior lexical knowledge. In all three cases the Portuguese
were substantially more successful at interpreting the dictionary entry.

5. Conclusion

The results seem to suggest that the Portuguese are better than the
Malaysians at gathering information about word meaning and use from the
dictionary entry, without the influence of prior lexical knowledge. In the
majority of cases, however, one or both of the groups had, in effect, matched
dictionary information against lexical knowledge already acquired in the
first language. The existence of a related word in the first language was not
always helpful to the subjects. The results suggest that, where subjects
recognised the target words as cognate with words in their first language,
their knowledge regarding the behaviour of the first language word

sometimes overrode conflicting information available in the dictionary entry, resulting in unsuccessful target word use.

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