Dictionaries and Vocabulary Learning:  
The Roles of L1 and L2 Information

Alan Hunt
アラン・ハント

This article examines the roles of first language (L1) and second language (L2) information in dictionary and vocabulary research. In particular, the problems of and solutions to using bilingual, monolingual learners, bilingualized, and pocket electronic dictionaries (PEDs) are discussed in the context of EFL instruction in Japan. The article argues that L1 information in dictionaries is valuable, but that it needs to be expanded through a greater emphasis on L2 information that can be found in monolingual learner’s dictionaries and from L2 contexts. Bilingualized dictionaries and PEDs that include both L1 and L2 information are especially promising resources for learners. This article concludes by arguing that learners should receive more training in making inferences from L2 contexts and in using dictionaries more effectively.

Introduction

Almost every Japanese student of English owns a dictionary to decode the meanings of English words. Most of these students assume that bilingual dictionaries are adequate for...
comprehending and learning English vocabulary. However, native teachers of English often say they would like to have their students use only monolingual dictionaries in order to increase the amount of English input and to encourage students to ‘think in English.’ In this article, I respond to these views by examining the value of both first language (L1) and second language (L2) information that different types of dictionaries provide. Drawing on dictionary research related to vocabulary learning, I will discuss some of the advantages and drawbacks to using bilingual dictionaries, monolingual learner’s dictionaries, bilingualized dictionaries, and pocket electronic dictionaries (PEDs). I will also argue that both L1 and L2 information in dictionaries are necessary for vocabulary development and that second language learners need training if they are to use dictionaries effectively.

**Bilingual Dictionaries**

Bilingual dictionaries are popular among learners at all levels (Atkins & Varantola 1998; Baxter 1980), and research supports their use for both reading comprehension and vocabulary learning. Lower proficiency learners show improved reading comprehension from using bilingual dictionaries (Knight 1994), and learners of all proficiency levels can use them to learn vocabulary (Hulstijn, Hollander, & Grenadius 1996; Knight 1994). While less proficient learners tend to use bilingual dictionaries to look up totally unfamiliar words, advanced learners are more likely to use them to confirm their understanding of partially known L2 lexical items (Atkins & Varantola 1997; Hulstijn 1993; Knight 1994).

Despite these positive findings, some native speaking English teachers have reservations about the use of bilingual dictionaries. In a study of Chinese ESL learners in Canada, Tang (1997) reported the following teachers’ concerns about the quality of bilingual (electronic) dictionaries: overly simplistic translations, outdated English, the lack of English sentence examples, and the failure to utilize frequency information as a criteria for determining the order of the different meanings of polysemous words. Although the largest, best designed bilingual dictionaries may be less prone to such charges, Japanese learners usually own mid-sized or smaller bilingual dictionaries, which are more likely to contain the above problems. In any case, thorough empirical research on contemporary bilingual dictionaries in Japan is needed to determine the degree to which these criticisms apply.

A related criticism of bilingual dictionaries is that they may contribute to a narrow view of language learning as being merely a matter of one-to-one word translation (Baxter 1980). Some learners may use translation as a part of a low effort strategy designed to ‘just get by’ rather
than deeply processing the language. Learners with poor language proficiency who rely on translation are less able to accurately transfer L1 information to L2 contexts (Prince 1996). However, the issue here is not that students should avoid translation; learning L1 equivalents is a necessary and efficient means for initial learning of new L2 vocabulary (see Nation 2001 pp. 207–302 on studying decontextualized vocabulary by using word cards). One-to-one word translation is an effective first step in developing word knowledge; however, it must be followed by activities that expand word knowledge beyond the translation stage. This requires a multi-faceted program that involves teachers in further developing students’ L2 reading and dictionary use skills, using exercises that develop awareness of contexts surrounding the target words, and providing large amounts of input through extensive reading and listening. If language education courses incorporate more meaning-focused input combined with awareness-raising activities that promote L2 context and inferencing strategies, eventually learners should be better able to combine the L1 information gained from bilingual dictionaries with knowledge of L2 contexts.

To illustrate the advantages and disadvantages of bilingual dictionaries, teachers can produce exercises that highlight their strengths and weaknesses. The advantages of L1 equivalents provided by bilingual dictionaries should be acknowledged, but their limitations (e.g., simplistic translations and a lack of L2 sentence examples) can be pointed out using exercises that require learners to compare both L1 and L2 knowledge and contexts. For example, Japanese learners might be asked to identify the possible subjects and objects that can go with the frequently misused verb *play* and its Japanese equivalent *asobu*. Likewise, learners could compare sentence examples concerning *play* and *asobu* from Japanese, bilingual, and English-English dictionaries, in order to identify the different meanings and usages of these verbs.

**Monolingual Learner’s Dictionaries**

In contrast to bilingual dictionaries, monolingual learner’s dictionaries provide L2 definitions using a limited defining vocabulary of 2,000–3,500 words, which effectively restricts their use to intermediate level learners and above. Moreover, monolingual learner’s dictionaries place a greater emphasis on how the L2 is used by providing more L2 sentence examples and both explicit and implicit information about collocations, grammar, and pragmatics.¹)

Monolingual learner’s dictionaries are constantly being improved because they are based upon regularly updated corpus data that provide an empirically-based description of the language (Rundell 1998). The sentence examples, as well as the grammatical and pragmatic
information, are accurate because they are drawn from this corpus data rather than from lexicographers’ intuitions. The corpus data can also be analyzed according to frequency, allowing monolingual learner’s dictionaries to indicate the frequency of the headwords. Knowing this information can assist learners in deciding whether or not to spend extra time learning and reviewing them. In addition, the inclusion of spoken data in the corpus allows for clear distinctions between contemporary spoken and written usage, with the result that these dictionaries are potentially more useful resources for developing listening comprehension vocabulary knowledge.

However, authentic linguistic data may not be easily understood by L2 learners, so lexicographers often adapt this information in monolingual learner’s dictionaries to make it easier to use (Rundell 1998). One such user-friendly feature is simplified sentence examples. A second feature of monolingual learner’s dictionaries is their restricted defining vocabulary; words outside of this defining vocabulary which appear in definitions are usually explicitly marked using capital letters and are sometimes defined. User friendliness is promoted when information becomes easier to understand and faster to find.

Numerous other features have been developed to make the information in monolingual learner’s dictionaries more accessible and comprehensible. For example, a third feature is that meanings are ordered in terms of their frequency, with the most common senses appearing earlier in the entry; this should reduce the amount of searching needed to find the appropriate information (Sholfield 1999). A fourth feature involves placing the different senses of a headword on separate lines within the entry, which should help learners scan the entry faster (Sholfield 1999). This is particularly useful for polysemous headwords that have many subentries (e.g., the verb get has 38 subentries in one dictionary). A fifth feature that has been widely adopted for polysemous headwords is to indicate different senses by numbering them and using capitalized or highlighted key words and phrases either in a box at the start of the entry or on separate lines throughout the entry. For example, under the headword get, the highlighted or capitalized word (obtain) appears after the number 1, the second highlighted or capitalized sense (receive) appears after the number 2, and so on. Depending on the dictionary, these methods are referred to as signposts, guidewords, menus, or shortcuts; they are designed to help learners quickly find the relevant sense of a word.

Additional user-friendly features include explicitly indicating information on spoken language, grammatical patterns, collocations, derivatives, idioms and phrasal verbs, and pragmatics. Monolingual learner’s dictionaries most commonly mark spoken language through the term spoken. These dictionaries may also place spoken phrases in a separate section at the end of
the entry, which may assist learners when navigating longer entries. Another helpful feature is that grammatical patterns are often boldfaced within an entry (e.g., within the entry for the verb *march*, one may find [+across]). Collocational information is implicit in the sentence examples, and more recent dictionaries explicitly indicate it using boldfaced or italicized phrases in the entry or in the example sentences (e.g., *on the outskirts of; take a turn for the better*). Derivatives (e.g., *brightness; brightly*) tend to be boldfaced at the end of an entry for a headword (*bright*), though they are sometimes found in a box at the start of the entry. Idioms and phrasal verbs, which are usually placed at the end of an entry, are more clearly emphasized by using capital letters, highlighting them in boxes and, in some cases, by placing them on separate lines in the entry. Pragmatic information is indicated using labels such as *British, American, informal, approval*, and *medical*. Although learners most commonly use monolingual learner’s dictionaries to find the basic meaning of a word, the above features explicitly indicate the formal patterns and the contexts in which specific words are used. Teachers may want to explicitly demonstrate how pragmatic information can inform learners about the appropriateness of specific vocabulary items and phrases in specific social contexts.

Despite the apparent benefits of these many features, very little empirical research has been conducted to determine how well they work. However, extensive discussions of the features in learner’s dictionaries as well as some evaluation of the strengths and weaknesses of specific dictionaries have been published (Bogaards 1996, 2003; Herbst 1996; Ilson 1999; Rundell 1998; Sholfield 1999). In my view, the most recent editions of monolingual learner’s dictionaries continue to show improvements in quality. For example, more of them are placing different parts of speech and senses on separate lines and are explicitly indicating headword frequency. Also, grammatical patterns have recently been incorporated into the entries of learner’s dictionaries and these patterns are made more readily identifiable through boldfacing.

The primary drawback of monolingual learner’s dictionaries is that, even when they employ limited defining vocabulary, lower proficiency learners cannot use them effectively. In addition, the greater availability of information is no guarantee that it will be used. Two studies have demonstrated that explicit grammatical information is largely ignored (Bogaards 2001; Harvey & Yuill 1997).

**Bilingualized Dictionaries**

Bilingualized dictionaries may offer an ideal solution for learners of all levels by combining the best of bilingual dictionaries (i.e., L1 equivalents) and monolingual learner’s dictionaries.
(i.e., L2 definitions, and L2 sentence examples). In some bilingualized dictionaries, the L2 definitions and examples may also be translated into the L1 as well. Bilingualized dictionaries give learner's a choice of which types of information (i.e., L1, L2, or both) to consult and, unlike monolingual learner's dictionaries, they can be used by lower proficiency learners. Good L1 translations can help to reduce misunderstandings caused by L2 definitions (Laufer & Kimmel 1997), and they can reassure higher proficiency learners that they have understood the word correctly (Laufer & Hadar 1997). Preliminary research shows that bilingualized dictionaries provide all levels of learners with better comprehension of target vocabulary than either bilingual or monolingual dictionaries, although advanced learners may do nearly as well using monolingual learner’s dictionaries (Laufer & Hadar 1997).

A further advantage is that the options provided by bilingualized dictionaries allow learners to apply their preferred look-up style. Laufer and Kimmel (1997) found that Israeli high school learners’ use of L1 or L2 information varied depending on the word being consulted. Moreover, they showed a variety of different look-up preferences; some preferred bilingual information, others preferred monolingual, and still others used both types. In another study (Laufer & Hill 2000) that used log files to track the learners’ choices of dictionary information on a computer, Israeli learners were shown to prefer L1 information whereas those from Hong Kong preferred L2 information. Although both groups did well using their own preferred look-up styles, consulting both L1 and L2 information resulted in better retention for both groups than when L1 information alone was consulted. The researchers concluded that bilingualized dictionaries accommodate a variety of learners’ look-up preferences and that learners should be encouraged to use both L1 and L2 information.

Pocket Electronic Dictionaries

Electronic dictionaries come in a wide variety of forms: pocket electronic dictionaries (PEDs hereafter), CD-ROMS, software for reading (both commercial and research oriented), on-line dictionaries (accessible from computers, PDAs, and cell phones), and optical character recognition/translation tools (ranging from handheld pens to flatbed scanners). CD-ROMs and software programs are more likely to have the storage capacity needed for multimedia functions, such as video and pictures, which have been shown to contribute to vocabulary learning and retention, though there is disagreement about which type of media is most effective (Al-Seghayer 2001; Chun & Plass 1996). However, due to their popularity, I have chosen to concentrate on PEDs.
Nesi (1999) found that learners want electronic monolingual dictionaries to be ‘cheap, complete, portable, comprehensible, and easy to use’ (pp. 56). In one ESL study of bilingual PEDs, both learners and teachers agreed that pocket electronic dictionaries have the advantages of being portable, fast, easy to use, as well as providing audible pronunciation (Tang 1997). In an unpublished survey by the author, intermediate level first and second year learners at a relatively high level private Japanese university stated that they often chose electronic bilingual dictionaries because they were portable, fast, and easy to use. Learners at a lower level private Japanese university also stated that, when they purchased their electronic bilingual dictionaries, price was an important factor. Completeness was not stated as a reason why learners from either university bought them, which raises the question of whether many Japanese learners really evaluate the type or quality of the dictionaries that are included in the PEDs.

One advantageous feature of the more expensive PEDs in Japan is the inclusion of multiple texts that can be easily searched though a superjump option. Compared to earlier jump options, the superjump allows the user to select any word in an entry and go directly to another dictionary for further consultation about that word, reducing the number of screens the user must view. Other promising features include visual images, history and archiving features that store previously viewed words for later review, and the ability to search without knowing the exact spelling of words.

One possible drawback of these dictionaries is that their small screens (with the cheaper ones being the smallest) may require a considerable amount of scrolling to view an entire entry, preventing learners from viewing the whole entry at one time. Another problem is that, because the information in PEDs seems to be unchanged from that of the printed editions, existing problems in the printed versions are passed on to the PEDs. Moreover, based on informal class surveys administered by the author, Japanese university learners seem not to know which publisher’s dictionaries are included in their PEDS, let alone which editions of these dictionaries are included. Such low consumer awareness may allow PED makers to get away with not including the most recent editions of dictionaries in their PEDs. It also appears that many learners do not carefully evaluate the quality of information of the dictionaries. As with paper dictionaries, it is worth spending class time comparing and evaluating several entries from different electronic dictionaries in order to determine which might be the best choice for the learners. At the very least, teachers and curriculum planners can research both paper and electronic dictionaries and recommend the ones that they think best match the needs of their students and the goals of their programs.
Research is lacking on the issue of whether electronic dictionaries are superior to printed ones for the purpose of enhancing reading comprehension or vocabulary learning. One possible advantage of paper dictionaries, as opposed to PEDs, is that learners can view entire entries without having to scroll through several screens, and that spending a bit more time accessing

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Bilingual</th>
<th>Monolingual</th>
<th>Bilingualized</th>
<th>Pocket electronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student proficiency level</td>
<td>All</td>
<td>Intermediate and above</td>
<td>All</td>
<td>Depends on the dictionaries</td>
</tr>
<tr>
<td>Initial comprehension of target vocabulary</td>
<td>Often good</td>
<td>Depends on learner’s level and ability</td>
<td>Potentially very good</td>
<td>Good to very good if both L1 and L2 info included</td>
</tr>
<tr>
<td>Use of L2 sentence examples, collocations, pragmatic info</td>
<td>May be lacking</td>
<td>Good</td>
<td>Good</td>
<td>Lacking unless monolingual dictionary included</td>
</tr>
<tr>
<td>Quality of translation/over-simplification</td>
<td>Sometimes a problem</td>
<td>Not applicable</td>
<td>Translations plus L2 definitions and examples</td>
<td>Depends on the dictionaries</td>
</tr>
<tr>
<td>Use of real, contemporary English</td>
<td>Sometimes poor</td>
<td>Excellent as based on corpus data</td>
<td>Excellent as based on corpus data</td>
<td>Depends on the dictionaries</td>
</tr>
<tr>
<td>Headword frequency indicated</td>
<td>Sometimes</td>
<td>Often</td>
<td>Often</td>
<td>Depends on the dictionaries</td>
</tr>
<tr>
<td>Frequency of polysemes indicated within an entry</td>
<td>Often not indicated</td>
<td>Order indicates frequency</td>
<td>Order indicates frequency</td>
<td>Depends on the dictionaries</td>
</tr>
<tr>
<td>Promotes the view of lexis as L1-L2 equivalents</td>
<td>Yes (unless L2 context emphasized)</td>
<td>No</td>
<td>No (as long as learners do not ignore L2 information)</td>
<td>Possible (unless L2 context emphasized)</td>
</tr>
<tr>
<td>Distinguishes between spoken and written use</td>
<td>Sometimes, may include less spoken language</td>
<td>Yes</td>
<td>Yes</td>
<td>Depends on the dictionaries</td>
</tr>
<tr>
<td>Different sense placed on a new line within an entry</td>
<td>Sometimes</td>
<td>Often</td>
<td>Often</td>
<td>Depends on the dictionaries and electronic formatting</td>
</tr>
<tr>
<td>Grammatical patterns shown clearly</td>
<td>Sometimes</td>
<td>Often</td>
<td>Often</td>
<td>Depends on the dictionaries</td>
</tr>
<tr>
<td>Portability</td>
<td>Depends on size/learner willingness</td>
<td>Depends on size/learner willingness</td>
<td>Depends on size/learner willingness</td>
<td>Highly portable</td>
</tr>
<tr>
<td>Ease of use and searchability</td>
<td>Easier because of L1 information</td>
<td>More difficult despite features designed to make searching easier</td>
<td>Easier because of L1 information</td>
<td>Easier because of L1 information and can search using incomplete spelling</td>
</tr>
</tbody>
</table>
Dictionaries and Vocabulary Learning: The Roles of L1 and L2 Information (Hunt)

words may actually assist learning and retention. On the other hand, Laufer and Hill (2000) have suggested that the ease of accessing entries in electronic dictionaries results in more look ups and so increases the number of opportunities for acquiring more words. As long as the learners are experienced and well-trained, the advantage of speed may make electronic dictionaries the better choice.

In summary, the dictionaries discussed above each have strengths and weaknesses in terms of the L1 and L2 information that they provide. These are summarized in Table 1.

Training

Teachers too often assume that their students will learn to use dictionaries effectively on their own. To find out just how much dictionary training is actually carried out during their learners’ language education, teachers need only ask their students. After polling 250 learners at a high-level private Japanese university, I found that many reported receiving no training, and the few who did stated they had received training for three classes or less. Because training is essential to develop effective dictionary skills (Hulstijn 1993; Nesi & Meara 1994), it should be no surprise that inadequately trained students are not adept at using their dictionaries. For instance, lower proficiency/unskilled learners may not look beyond the first or second subsense in an entry (Tono 1984). Some learners ignore L2 contextual clues and look up words indiscriminately (Tang 1997). Also, when using monolingual dictionaries, learners may apply the “kid rule” strategy (i.e., a strategy used by native children), in which they mistakenly choose some word(s) from the L2 definitions and substitute them for the headword (Nesi & Meara 1994).

In order to address these problems, teachers need to assist learners in developing an awareness of the types of information available in different kinds of dictionaries as well as the limits of their usefulness for different tasks. The following are guidelines for promoting effective dictionary use.

1. Initially, it may be best to introduce learners to only the most important features of a dictionary for the primary purpose of decoding meaning. This would include searching alphabetically, identifying parts-of-speech, and examining the original context and several subentries before deciding on the correct one. The first step in a procedure for dictionary use proposed by Nation (2001) is to identify the part of speech of the unknown word and to study the surrounding context (See pp. 285–287 in Nation 2001 for a full description of a procedure for making inferences).
2. Dictionary skills need to be developed over an extended period of time. Given the complexity of sophisticated dictionary use, numerous on-going training sessions throughout the learners’ primary, secondary, and university education are needed. Ideally, learners should be trained to view bilingual and monolingual dictionaries as complementary tools in the process of language learning.

3. Practice activities using dictionaries should be language-oriented (i.e. used in real language tasks) rather than merely focusing on learning the structure of the dictionary (Bejoint 1989). Teachers should monitor and discuss actual dictionary use by students during conversations, reading, and writing exercises.

4. Teachers should give guidance on what words to consult. Because dictionary use takes time, teachers will want to help students identify words that are important for the topic, such as words in titles or words that are repeated. In addition, high frequency vocabulary, as labeled in dictionaries, will deserve greater attention than low frequency vocabulary.

5. Effective dictionary use requires learners to become aware of context and to be trained in making inferences about unknown words prior to consulting the dictionary (Nation 2001; Scholfield 1999). Indeed, among advanced learners, Nesi (2002) found that most errors in using dictionaries were caused by ignoring context and jumping to conclusions about word meaning. Dictionary use should be viewed as complementing the process of inferring from context. Whereas making inferences promotes deeper processing of information, dictionaries can be used to check the accuracy of inferences and help ensure that correct information is retained (Sholfield 1997).

**Conclusion**

Both L1 and L2 information — whether gained from a combination of bilingual and monolingual learner’s dictionaries or from bilingualized dictionaries in paper or electronic form — are valuable for assisting EFL learners with reading and vocabulary learning. While it makes sense to emphasize L2 information for specific tasks, research does not support a general policy of banning the use of L1 information that bilingual dictionaries provide. Rather, teachers should create activities that emphasize the strengths and overcome the weaknesses of bilingual and monolingual dictionaries. Given the importance of both L1 and L2 information, bilingualized and
some electronic dictionaries have the advantage of providing quick access to both.

However, no matter which dictionaries learners use, if they receive only brief introductory lessons on dictionary use rather than on-going training in real language learning situations, they are unlikely to develop effective dictionary skills. Dictionary training is a long-term process that needs to be integrated into other reading strategies, such as guessing words from context. In order to expand language learning beyond one-to-one word translation, teachers and course planners need to place greater emphasis on procedures for making inferences from L2 contexts so that learners eventually become more comfortable with using the L2 information available in monolingual learner’s and bilingualized dictionaries.

Notes


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