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## **Pocket Electronic Dictionaries and their Use \***

### **Abstract**

Pocket electronic dictionaries are a relatively new type of dictionary, having been in existence for just a few years, and their range and quality are increasing. This is a study of their use by students in a tertiary education institution in Hong Kong. It outlines the features of the dictionaries, describes their use, and gives students' views. While students are aware of the weaknesses of these dictionaries, they are attracted by their portability, speed and relative ease of use, and also the availability of sound. Interviews with teachers indicate that they are more concerned about the weaknesses, although the potential for the use of these dictionaries in language learning is recognized.

### **1. Introduction**

In the last few years electronic dictionaries have begun to appear, on disk or CD-ROM, exploiting to various degrees the possibilities which these formats provide. Just as pocket dictionaries appeared as one type of printed dictionary, so too in the development of electronic dictionaries we find what might be termed pocket ones being produced. Svensén (1993:264) noted this and described an early one which appeared in 1983 as part of an electronic calculator, while Hartmann (1992:157), in a survey article focussing on learner dictionaries, made a similar mention of dictionaries and thesauruses within calculators produced by such manufacturers as Franklin, Canon and Langenscheidt. Currently they are available either as dedicated units or as parts of electronic organizers, which also include such functions as diary, address list and calculator.

Hong Kong has a population of some 5.6 million, 97% of them Chinese, nearly all of whom are native speakers of Cantonese. However, the majority of secondary and tertiary level education is currently carried out through the medium of English. An increasing number of Cantonese speakers also speak Putonghua (Mandarin), the standardized official language of China based on northern Chinese. There is a perception in Hong Kong that the general level of English proficiency is not sufficiently high and there is considerable pressure on students to do well, both for access to tertiary education and for good employment prospects. As a result, ways to improve one's English are in considerable demand. Major publishers of English language dictionaries, especially Longman and Oxford University Press, have produced ranges of English learner dictionaries for the Chinese-speaking market, including

bilingualized versions of monolingual learner dictionaries, and these appear to sell well in Hong Kong.

However, Hong Kong is a place where new technology is attractive and readily accepted and it has been noticed that pocket electronic dictionaries (PEDs), both dedicated units and those in organizers, are becoming quite popular with students. There are several brands of PEDs on the market, each with a variety of models. Most, such as Sharp, Instant-Dict, Golden and Lexicomp, are produced in the East Asia region, while one, Franklin, is from the USA.

Yet traditional pocket dictionaries have major drawbacks and are frowned on by lexicographers and teachers, although as Rossner (1985:98-99) points out they may be of some use for beginners. It would be easy to take the view that their electronic counterparts are similarly of little or no value. However, any judgments should be soundly based and so, in an attempt to provide some relevant evidence from the point of view of users, this paper looks at the use of PEDs by tertiary students in Hong Kong, together with views from a smaller number of teachers.

## **2. Survey of students' use of pocket electronic dictionaries**

Information was collected primarily by questionnaire, with a small number of interviews also carried out in order to get more details and to see students actually using PEDs. Responses were received from 494 students in graduate, undergraduate, and sub-degree courses in the City Polytechnic of Hong Kong, one of Hong Kong's seven tertiary education institutions. The students were from a range of courses, including English, Chinese, translation, computing, and business.

The questionnaire contained 16 questions decided on after administering a pilot questionnaire and interviewing several students. The respondents were first asked if they use a PED or not. Those who do were then asked about its type, model and features, what they use it for and how often, its advantages and disadvantages, and whether they use it more or less than a printed dictionary. Those who do not use a PED were asked to give a reason. In most questions the respondents were asked to select from a list of possible answers. Whenever appropriate, a write-in option was included and in seeking views about PEDs open-ended questions were asked.

### **2.1 Features of the dictionaries**

Models with new or improved features appear regularly, so it is difficult to keep up with all the dictionaries available. However, the following features have been noted among the main models available in Hong Kong and used by the students surveyed.

Of the PEDs these students use three-quarters are organizers, while only one quarter are dedicated units. Nearly all are bilingual English and Chinese

with an English–Chinese dictionary and a Chinese–English dictionary. A minority include a monolingual English dictionary (28%) or Chinese dictionary (15%). Four respondents use dedicated PEDs which only have a monolingual English dictionary. Of the other languages, Japanese is the most common, but even it is only a feature of a small number of the respondents' PEDs (13%). Other languages are Spanish, French, German, Italian, Dutch, Russian, Korean and Thai. However, the dictionary function is limited to English and Chinese: for the other languages only set phrases, usually grouped by situations or topics with Chinese equivalents, are included, rather like a tourist phrase book.

As Chinese is written in characters, one or more input methods are provided so that users are able to access information through Chinese, if they wish. In most models, only the non-simplified forms current in Hong Kong and Taiwan are given but in some the simplified forms developed in China are also included, and users can crossreference the two forms of the same character.

As mentioned above, a monolingual Chinese dictionary is available in some models and users can check the meaning of a lexical item, the Putonghua pronunciation in romanization, and the simplified form of the characters.

The typical entry structure for the English–Chinese dictionary is: (i) English headword, (ii) pronunciation in phonetic script, (iii) part of speech, (iv) equivalent in Chinese. Over 80% of the students reported that their PEDs include the pronunciation in phonetic script. In most models only one phonetic script is used, but some use two, e.g., Daniel Jones and Kenyon and Knott. Over 63% reported that their PEDs gave parts of speech. There can be more than one part of speech in an entry and hence more than one equivalent given. Nevertheless in the models inspected only one phonetic representation and, where available, spoken pronunciation, is given even when there should be two, e.g. for *house* as a noun and a verb. Similar numbers reported having speech available – English (American in all cases checked), Cantonese, and Putonghua – and of them two-thirds had phrases or even sentences as well as single words. In some models other languages are available on IC (PCMCIA) cards. Some 60% of the users' PEDs include synonyms and about 50% include antonyms. The availability of synonyms or antonyms is indicated by a symbol on the screen and they can then be called up if desired. Only 28% reported that their PEDs include examples, which are mostly phrases, although increasingly whole sentences are being provided.

Some manufacturers state which printed dictionary, or dictionary family, their electronic version is based on, the main two for English being *Merriam–Webster* and the *American Heritage Dictionary* published by Houghton Mifflin, while some indicate they use the *Roget's II thesaurus* in compiling their list of synonyms. For English–Chinese and monolingual

Chinese dictionaries some state that they base theirs on publications by Commercial Press, a major Chinese publisher.

More advanced models offer users functions, such as a spelling check or a search function, which can help them find an English word or Chinese character if they are unsure of the spelling or the exact form of the character. Some allow users to store words or phrases or to build up a data bank of their own. Most recent models also allow the extension of functions by the insertion of IC cards which include monolingual English and Chinese dictionaries and practice exercises for TOEFL and some English language papers in Hong Kong public examinations. These cards currently cost US\$40–60, more than the cost of equivalent printed dictionaries.

## 2.2 Students' use of the dictionaries

Some 18% indicated they use a PED, with a range from 12% for students in business courses to over 20% in language-related courses, i.e. English language studies, Chinese language studies and translation, with a top of 29% in an undergraduate course in applied linguistics. Even the overall average of 18% is quite a high figure, as there is no requirement or even encouragement from teachers for the students to use PEDs, and they cost US\$100–400 to buy. Interviews with students and teachers indicated that there is also noticeable use of PEDs by students in secondary schools, especially in the senior years as a pass in the Use of English examination is essential for entry to tertiary studies. Of the 80% of respondents who do not use PEDs the main reasons by far are that they are not considered as good as printed dictionaries (43%) and that they cost too much (35%).

The main source of information about PEDs is advertisements (70% of respondents), especially on TV. Interviews indicated that there is influence from peers and relatives, with older siblings, parents or other older relatives often making the purchase. Some students expressed the view, in the questionnaire and in interviews, that having a PED is something of a status symbol. This was also mentioned by teachers interviewed.

All respondents said they use their PEDs to find or check the meaning of English words, nearly always by reference to a Chinese equivalent. In addition, 60% find or check the spelling of English words, while 44% find the Chinese equivalent of an English word and 34% find the English equivalent of a Chinese word; 30% use them to find parts of speech, 27% to find synonyms; 22% antonyms; and 13% the simplified form of Chinese characters.

The most common ways available in students' PEDs to access Chinese characters are Pinyin, the official romanization used in China (37%), the number of strokes (36%), Cang Jie, a system developed in Taiwan for Chinese word processing in which characters are broken into components (22%), Cantonese romanization (20%), and radicals, i.e. the approximately 200 commonly occurring components of Chinese characters used for

identification (18%). As already noted, usually more than one access method is included in a PED. However, the percentage of students who said they know how to use the methods available to them varied from 83% for Cantonese romanization to 50% for pinyin and the radicals. This is a problem area for the users, mentioned specifically by some of them, as they may not be sufficiently familiar with any of the systems available. One particular example is the pinyin romanization, which is a problem in Hong Kong since many Cantonese speakers do not know Putonghua, although the number who do is increasing.

Indeed, there are problems in being able to use the whole range of features available in these dictionaries. The manufacturers provide instruction booklets with sometimes also an introductory lesson or even a video. Chinese character input systems are not easy to learn and some students do not know any of them well, which means that they are restricted to keying in English headwords.

Asked how often they use a PED, 22% said they use it once a day, 44% at least once a week, and 33% less than once a week. Comparable figures for frequency of use of printed dictionaries are not available, but 28% of the respondents reported they use PEDs more than they use printed dictionaries, 46% use printed dictionaries more, while 26% use the two types about the same amount. A number of the students interviewed said that they use their PED more than they ever used a printed dictionary. Clearly, while printed dictionaries are still in more use, for a significant number of students their main dictionary is now a pocket electronic one. The main reason given for preferring PEDs was convenience of use, as it is easy and quick to look words up, while printed dictionaries were preferred because of their greater detail and accuracy and the inclusion of examples and usage information.

Users' views about their PEDs were sought in two other ways, viz., checking up to three answers from lists of several possible advantages and disadvantages and actually writing answers to open-ended questions about what they like and dislike most about the PEDs they use. In regard to advantages their responses were very similar to those given above: convenience, including portability, and ease of use, with 53% also selecting the provision of speech. The main disadvantages identified were the brevity of the equivalents, their inaccuracy, and the limited number of headwords. Also of some concern was the absence of examples or the unsatisfactory quality of those that were provided, as well as poor sound quality, breakdowns, and the cost of purchase.

It is clear that the students realize there are problems of quality. Some information, especially the equivalents and the phonetic representation of the pronunciation, is not as accurate or detailed as in the printed learner dictionaries with which they are familiar. In some models the quality of the speech is poor: students want very much to use it but they find it hard to hear. The absence of examples in some models or the presence of only very limited examples in others is also felt by students, as they are aware of their value

from their experience of using learner dictionaries. That quality is a concern is shown by the fact that in 1992 Hong Kong's Consumer Council reported that it had received 30 complaints about PEDs, including inaccurate spelling, poor pronunciation, and limited vocabulary. However, the Council noted that newer models were better, although speech quality remained a problem.

### **3. Teachers' views on the use of pocket electronic dictionaries**

Twelve teachers were interviewed: five polytechnic English teachers, three polytechnic translation teachers and four secondary school English teachers. Only four had actually used a PED themselves, but all reported seeing their students use PEDs both in and outside class, mostly to check the meaning and spelling of English words and to a lesser extent the pronunciation. The secondary teachers also noted that students use PEDs in writing classes to find the English equivalent of a Chinese word when they could not think of it and they were concerned that the words selected are often inappropriate.

Most of the teachers interviewed were rather doubtful about PEDs and all would prefer their students to use printed dictionaries. For the same money a student could have a good set of dictionaries and thesauruses. However, none said they would discourage students from using them, as despite the limitations they believe they are of some use, e.g., for quick reference or hearing the pronunciation of new words. Some teachers interviewed felt that these dictionaries might help to increase motivation, which is a problem in the teaching and learning of English in Hong Kong. Some place restrictions on the use of PEDs in class, considering, e.g., that their ease of access may lead students to rely too heavily on them rather than to develop the skills needed to guess meanings in reading comprehension. Only one teacher interviewed actively encourages the use of PEDs, including in class, and indeed makes regular use of a monolingual English one herself.

There is clearly a need for teachers to be better informed about PEDs, their advantages and disadvantages. This is an aspect of what Murison-Bowie (1993:6) points out: "Teachers need to be inquisitive about the world in which they and their students live – a world that includes technology – and make connections between this world and their teaching." Dealing quite specifically with PEDs, Stoks (1993:88) writes that "The language learning profession has hardly begun to consider the consequences of palmtop dictionaries" and expresses the view that the implications for language learning will be as dramatic as the effect of pocket calculators on learning arithmetic. Teachers in Hong Kong certainly need now to be able to provide students with guidance on the best use of PEDs.

#### 4. Conclusion

Pocket printed dictionaries and pocket electronic dictionaries both have the advantage of portability. But beyond that the former have very limited advantages over bigger dictionaries and many disadvantages. However, there is clearly considerable potential for PEDs because of their ease of use and range of features, including the availability of sound. Technological advances can be expected to lead to better sound and to an increased range of headwords and amount of information provided in each entry, including examples. Indeed better sound is already reported by students comparing new models while the introduction of IC cards is increasing the range of information available.

Prices may come down, but they will remain well above books for some time to come, to say the least. However, the use of electronic devices, for work or pleasure, is very popular and price is not such an important factor, especially if there is a perceived educational advantage, perhaps mixed with an element of status.

In Hong Kong PEDs are used by learners of English as a second or foreign language, but existing PEDs generally lack several of the ten features expected in dictionaries for learners as listed by Hartmann (1992:153), e.g. the provision of collocational detail and stylistic and cultural information. A major question is whether manufacturers will attempt to make use of the excellent existing printed learner dictionaries or the corpora associated with them in order to make some of the needed improvements in quality, or whether the publishers of these learner dictionaries will enter this area themselves. Hartmann (1992:157) reported no information being available about possible developments by such publishers, but things change quickly in this area, with, for example, Longman and HarperCollins now making English learner dictionaries available on CD-ROM.

At present it seems that the focus in the development of PEDs, at least in East Asia, is primarily on what the technology can do, with the emphasis on adding new features rather than on the provision of better quality lexical information. This is part of the danger against which Murison-Bowie (1993:6-7) has warned from a much wider perspective, that developments should be led by educators or materials developers – and it should be added, lexicographers – not by the technology itself. The situation could change in Hong Kong's very competitive environment, but working on the lexical area may be considered too hard or slow. Nevertheless, student users may well find that a point is reached where the balance tips in favour of PEDs over printed dictionaries for all but specialized requirements.

These pocket electronic dictionaries are already an interesting part of practical lexicography and future developments should be followed with interest. Hill (1985:121) asked: "Is the day of the printed dictionary passing? Must we look forward to that of the electronic word information-retrieval device?" For learners in places like Hong Kong the answers might soon be

yes, for at least many of their needs, if PEDs can be further developed and improved.

#### Note

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A wide variety of pocket dictionary electronic options are available to you. There are 98 pocket dictionary electronic suppliers, mainly located in Asia. The top supplying country or region is China, which supply 100% of pocket dictionary electronic respectively. Pocket dictionary electronic products are most popular in North America, Eastern Asia, and Mid East. You can ensure product safety by selecting from certified suppliers, including 71 with Other, 9 with ISO9001, and 1 with BSCI certification. Download : Available on the App Store Available on Android. Some electronic dictionaries contain only dictionaries for a single language, but most are geared towards translation into foreign languages, containing Chinese, German, French, Italian, Spanish, Korean, or several English dictionaries. Models may also have memory card slots that can be used for database expansion. Internal dictionaries are often from several publishers. For example, a single electronic dictionary may contain a Japanese Kanji dictionary, an Oxford English dictionary, and a Kenkyusha Reader's English-Japanese dictionary. The "jump" function, also known as "