

# Chapter 3

## Portable computers / word processors

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### 3 PORTABLE COMPUTERS / WORD PROCESSORS

*"I think laptops are better than handwriting because you get tired when you are writing but you don't get tired on laptops."*

from 'I.T. Helps' (NCET, 1995)

Word processors are not confined to desktop computers: they are also available in small inexpensive portable devices. These machines include the *AlphaSmart* and *DreamWriters*; combined word processors / printers like the *Canon StarWriters*; more sophisticated portables like the *eMate*, *Psion* and *Windows CE* machines; and Macintosh and PC notebook computers.

The cheaper portables have several advantages.

- The price, compared with desktop computers, means that more computers can be bought for the same money, so more pupils have an opportunity to word-process.
- The portability of the devices, and relative ease of use (in most cases, you switch on and start typing immediately, compared to waiting for minutes while *Windows* grinds into life) makes them more flexible within the classroom.

*"Rather than moving the class to an I.T. room, with portables the I.T. comes to the user. In this way, I.T. becomes more supportive of the learning process."*

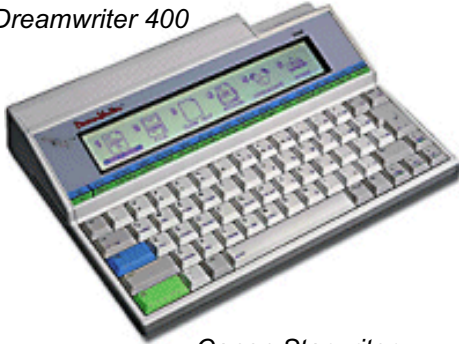
Boswell, B., France, S., & Redfern, S. (1994)

#### 3.1 Low cost word processors

The low cost *AlphaSmart* and *DreamWriter 100/200/400s* are primarily designed for note-taking and writing relatively small amounts of work because the small screens can only show a few lines of text – four with the *AlphaSmart*, eight with the *DreamWriter 400* and sixteen on the *DreamWriter 200*. Their word processors are fairly basic, the size and style of text is limited, and they do not display graphics very well, if at all. Nevertheless, they are very popular in schools because they are cheap, reliable, quick and easy to use, robust, and have a long battery life. Although they may not have the same features as more expensive devices, the features that they do offer are sufficient for many writers and tasks.

#### 3.2 Combined word processor / printers

Combined word processor / printer devices are popular in some primary schools where the lack of portability (most are mains rather than battery powered), and weight (they are quite heavy compared to *AlphaSmarts* and *DreamWriters*) are not issues. They are generally designed for business users and most have relatively small screens, but the ability to print out hard copy quickly is an advantage. The *Sharp FontWriter* has a largish screen and so is useful for people with a visual impairment. They are available from high-street suppliers like Dixons and Tandy.

**Figure 3.1: AlphaSmart, Dreamwriter 400 and Starwriter***NTS Dreamwriter 400**AlphaSmart 2000**Canon Starwriter*

### 3.3 Mid-priced and 'palmtop' computers

If the writer needs to display more text or wants a more sophisticated word processor than is provided by a low cost word processor, it is worth considering slightly more expensive 'notebook' or 'palmtop' computers.

Palmtop computers are mainly designed for business users but have also proved popular and successful in schools – the *Psion 3* machines were sold by Xemplar as *Acorn Pocketbooks*, for example. They are more portable than the low cost word processors, but consequently their keyboards are really too small for fast touch-typing. Although the screens are also small, they can display more lines of text, in a range of fonts and sizes, than the *DreamWriter 400* and *AlphaSmart* machines. The word processors have more features; other software is built in (database, spreadsheet, diary etc.); and you can get extra software (again, mostly business oriented) to run on them as well.

**Figure 3.2: Psion 3c and Psion 5 palmtops***Psion3c**Psion5*

Slightly larger, and more expensive, notebook computers include the *Apple eMate*; and *Windows CE* machines like the *DreamWriter IT* and *HP Jornada 820*. The *eMate* and *DreamWriter* are specifically designed for school use and have fairly large screens, almost full size keyboards, and good word processing and other built-in software. See the reviews in Chapter 17 for more information.

**Figure 3.3 eMate, Dreamwriter IT and HP Jornada 820**

*eMate*



*Dreamwriter IT*



*HP Jornada 820*



*Windows CE*, despite its name, is not the same as *Windows 95* or *98* – it just looks similar. You cannot run ordinary *Windows 95/98* programs on *Windows CE* computers. Similarly, the *eMate*, although it is manufactured by Apple, cannot run standard Macintosh software.

With time, some *Windows 95/98* programs will be converted to work on *Windows CE* machines (*WordBar*, an on-screen word bank program from Crick Software, publishers of *Clicker*, is already available). A new low-cost Apple portable computer to replace the *eMate*, which will run ordinary Mac software, is also rumoured to go on sale in 1999. So in the future it is likely that the low-cost computers will have more supportive writing software available for them.

### 3.4 Low cost portable or expensive ‘notebook’ computer?

In the meantime, it is often difficult to decide between a low cost portable, or a more expensive PC or Mac laptop computer which can run speech, word bank or prediction software. The low cost devices have more limited facilities but are much more affordable, the batteries usually last for a whole school day, they are often simpler to use, and often more reliable because they do not have hard discs. So although they may not have all the facilities you would like, they are often more practical in the classroom.

Even if a writer does need special software to support writing it may be better to use a low cost portable for taking short notes and drafts in class that are then transferred and expanded, edited, formatted and spellchecked on a desktop computer.

**Figure 3.4: Case Study – practicality or features?**

The CALL Centre provides a technology support service to students with special educational needs in the University of Edinburgh. Often, students with specific learning difficulties come to the centre for assessment with a fairly firm notion that they want a PC or Mac laptop for taking notes in lectures and the library. We usually try to dissuade them and suggest they borrow a lightweight, simple machine to evaluate instead. In most cases, the students end up choosing a Psion palmtop because they are so neat and convenient to use, despite the small keyboard and screen.

Table 3.1 lists some of the more popular portable computers/word processors, and Chapter 17 compares and reviews a selection of the devices in more detail. There are many more palmtop computers, PC and Mac notebook computers, and combined word processors/printers available: refer to computer magazines and shops and office equipment suppliers for information about other machines.

<b>Machine</b>	<b>Description</b>	<b>Cost</b>	<b>Supplier</b>
<i>DreamWriter T100</i>	Lightweight (1.1 kg) A4 sized portable computer with word processor, spellchecker, calculator. File transfer to Acorn, Mac & PC. Easy to use and good value.	£150	NTS
<i>DreamWriter T400</i>	T100 with more memory, plus address book and diary programs.	£170	NTS
<i>DreamWriter 200</i>	Larger, heavier (3.2 kg) DreamWriter with flip up 16-line screen and PC disc drive. Word processor, spellchecker, address book, calculator, diary.	£255	NTS
<i>DreamWriter IT</i>	Windows CE portable designed for schools. 1.8 kg., 6-8 hours battery life, colour screen, disc drive, modem, printer & PS/2 ports. Pocket Word, Powerpoint, Excel, etc..	£600	NTS
<i>AlphaSmart 2000</i>	Lightweight (0.9 kg) A4 size note-taker. Extremely simple to use, 200 hour battery life, robust, but limited word processing features. Links to Mac, PC, Acorn.	£199	Inclusive Technology, TAG
<i>Apple eMate</i>	Robust A4 size portable, 1.8 kg, designed for school use. Large screen, good word processing, drawing and other functions. Links to Mac and PC.	£450	Xemplar
<i>Canon StarWriter 350C</i>	Word processor with small screen, 3.4 kg, and built in ink jet printer. Mains powered. Good word processing functions but quite complicated.	£300	Dixons, PC World, etc.
<i>Psion 3c / 5</i>	'Palmtop' computers, 360 g., pocket size, miniature keyboard, good screen, word processor, spreadsheet, database, calculator, diary, lots of other (business) software available. Links to Mac and PC.	£215 to £339	Various computer shops, mail order, etc.
<i>HP Jornada 820</i>	Windows CE notebook, 1.1 kg, 10 hours battery life, 8.2" colour screen, no disc drive, modem. Pocket Word, Powerpoint, Excel, etc..	£590	Various computer shops, mail order, etc.

### 3.5 Keyboard familiarity

Regardless of the machine you choose, portable computers are at first often more time-consuming and fiddly than pencil and paper – charging the device, getting it out, printing the text, etc., all add complexity. The investment of time and expense in technology really begins to pay off when the user is able to enter text at a rate faster than they can write by hand. A fluent typer has the ability to use the technology effectively and to make the best use of the time available.

Pupils should be familiar with the locations of the keys on the keyboard and should be able to type fast enough to keep up with the rest of the class, before the word processor is introduced for routine classroom writing tasks. To achieve this, it may be necessary to arrange extra keyboard and typing lessons. Programs like *Speedy Keys* (Acorn, £36 from SEMERC), *First Keys* (Acorn/Win, £30, Widgit, Inclusive, others) and *Kid Keys* (Mac/Win, £34, SCET) are fun programs for teaching keyboard familiarity.

### 3.6 Touch typing

Ideally, the pupil should also learn to touch type. With touch typing, pupils do not need to look at the keyboard while they are typing because they have learnt, through repeated practice, to find the keys by touch. Not everyone can touch type: pupils with physical impairments may have difficulty.

Pupils who are going to use technology for routine writing at secondary school need to learn to be fluent in its use at primary school. There is very little time for teaching new skills in the secondary setting. There are many touch typing computer programs available. *Type to Learn* (Mac or Win, £55 from TAG) and *Touch Type* (all platforms, £42 from Inclusive Technology) are popular programs for schools, while suppliers like REM and AVP sell a range of programs.

#### Figure 3.5: Case Study – touch typing

Gordon had learned to touch type using *Mavis Beacon Teaches Typing* on an old PC and had then moved on to using *Doorway Text Type* in Primary school, although most of the practice had been done at home. When Gordon moved to high school he said;

*“I am glad I learnt to touch type. Everyone with problems like mine should learn to touch type at primary school.”*

### 3.7 Portable computer summary

*Portable computers are useful for pupils with writing difficulties because they:*

- ✓ can be moved easily to the writer and the learning environment;
- ✓ may be cheaper than desktop computers;
- ✓ may be very simple and quick to use.

*Portable computers are worth investigating if:*

- ✓ the writer needs constant, quick access to a word processor;
- ✓ the writer has slow, poor or illegible handwriting.

*Things to look for in a portable computer:*

- ✓ low cost;
- ✓ low weight and bulk;
- ✓ long battery life;
- ✓ adequate screen size and quality;
- ✓ ease of use;

- ✓ access features if necessary (e.g. keyboard response adjustment, keyboard 'shortcuts' for mouse operations);
- ✓ word processing features appropriate to the learner and the task;
- ✓ supportive writing tools if necessary (e.g. spellchecker, speech output, word prediction, etc.).