# Chapter 5

# Spellcheckers

# 5 SPELLCHECKERS

Most pupils who can benefit from supportive writing technology have some sort of difficulty with spelling. Spellcheckers can help by highlighting suspect words and hopefully offering the writer the correct spelling. Another valuable aspect of computer spellcheckers is that they confirm correct spellings so the writer does not waste time checking them:

*"A spell-checker is useful, almost mandatory, for a dyslexic, not because it corrects the wrong spelling, but because it protects what is already correct thereby preventing the dyslexic from the unnecessary work of checking a suspect word only to find that it is correct."*.

(Crombie, 1991)

## 5.1 How spellcheckers work

An electronic spellchecker works by comparing each word typed with the words in its dictionary. It then indicates whether the word is in the dictionary, or not. If the word is not recognised, it offers a list of likely alternatives. If the correctly spelled word is in the list, the writer selects it by clicking with the mouse, or using the keyboard.

If the spellchecker does not recognise the word, it does not necessarily mean it is wrongly spelled – it may just not be in the dictionary (as in names of people or places). Secondly, the checker may accept some words which are mis-spelled because they are other words – for example *sum* for *some*, *her* for *hear*, or *who* for *how*). Research suggests that 26% to 40% of spelling errors made by writers with spelling difficulties will not be identified as an error by the spellchecker, because they are in fact correctly spelled other words (MacArthur, 1996).

Table 5.1 shows a sample of spelling errors made by one pupil referred to CALL – five (25%) of the errors were accepted as correctly spelled words by most of the spellcheckers.

Even if the spellchecker has identified a word as being mis-spelled, it may not be able to offer the correct spelling. As Table 5.1 illustrates, spellcheckers vary greatly in effectiveness – in how well they can offer the correct spelling when presented with a mis-spelled word. In the tests reported in Chapter 14, the percentage of mis-spellings for which the different checkers offered the correct word varied between 30% and 73%. In other words, the very best checker only offered the correct spelling for about three quarters of the errors, while the worst managed less than a third of the errors.

The poorest spellcheckers are only able to pick up simple mistakes in typing and the common spelling mistakes made by an average writer (e.g. '*recieves*' instead of '*receives*'). Most can tackle errors such as letter reversals (e.g. '*anb*' instead of '*and*'), transpositions (e.g. '*teh*' instead of '*the*') and straightforward phonetically spelled words (e.g. '*lite*' instead of '*light*'). Spellcheckers specifically designed for school use, or for people with spelling difficulties, may be able to cope with more complicated mis-spellings that contain a combination of different types of error (e.g. '*exaserpate*' instead of '*exasperate*', or '*prakts*' instead of '*practice*'). A few specialist spellcheckers can also suggest the correct word from split words (e.g. *'con tans'* for *'contains'*) and more bizarre mis-spellings (e.g. *'scnis'* for *'science'*, or *'simn'* for *'swimming'*).

**Table 5.1 Comparison of spellchecker performance – 1**

| Error | Word | Franklin | Claris Works 5 | TextEase | Alpha Smart | Dream Writer 100 | MS Word 7 | Dream Writer IT |
|---|---|---|---|---|---|---|---|---|
| colld | called | ✗ | ✓ | ✗ | ✗ | Phonetic | ✗ | ✗ |
| sow | saw | | | | | | | |
| sum | some | | | | | | | |
| pepil | people | ✓ | ✓ | Dictionary | ✗ | Phonetic | ✗ | ✗ |
| maik | make | ✓ | ✓ | ✗ | ✗ | Phonetic | ✓ | ✓ |
| frens | friends | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| hom | home | ✓ | ✓ | Dictionary | | ✓ | ✓ | ✓ |
| elswar | elsewhere | ✓ | ✓ | Dictionary | ✗ | Phonetic | ✗ | ✗ |
| thear | there | ✗ | ✓ | ✓ | ✗ | Phonetic | ✓ | ✓ |
| cold | called | | | | | | | |
| liekt | liked | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ |
| gosts | ghosts | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| eney war | anywhere | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| honded | haunted | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| athers | others | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| intruptad | interrupted | ✓ | ✓ | ✗ | ✗ | Phonetic | ✓ | ✓ |
| exvatla | exactly | ✗ | ✗ | ✗ | ✗ | Phonetic | ✗ | ✗ |
| comftabl | comfortable | ✗ | ✗ | Dictionary | ✗ | ✗ | ✗ | ✗ |
| sad | said | | | | | | | |
| wen | went | | ✓ | Dictionary | ✗ | | | |
| TOTAL | 19 | 9 | 10 | 3 (8) | 2 | 3 (10) | 7 | 7 |

✓ – correct spelling was offered by the checker
✗ – correct spelling was not offered by the checker
– word was accepted as being correctly spelled by the checker
Dictionary – correct spelling was offered with the *dictionary* option only, which gives a very long list
Phonetic – correct spelling was offered with the *Key 9* phonetic checker, which gives a longer list

It is extremely important that the spellchecker suits the pupil's particular difficulties and the learning task: a spellchecker which cannot offer the correct word in response to a pupil's errors is as much use as a calculator which gets sums wrong.

The effectiveness of a spellchecker depends upon:

- the size and content of the dictionary, and whether it contains the words the student is using;
- the effectiveness of the program in working out valid replacements (see the graphs in Chapter 14);
- the nature of the mistakes made by the user – are they simple typing errors, 'ordinary' spelling errors, does the word still sound like the intended one, or does it look quite bizarre, bearing little phonic or visual resemblance to the correct spelling?
- the 'user interface' – there is no point in having a very effective spellchecker if it is too slow or confusing to use;
- extra facilities such as showing the word in context, giving examples of use, or speaking out words in the spellchecker list.

So, while one measure of a spellchecker is its ability to spot mis-spelled words and suggest correct replacements, that is only part of the story. Spellcheckers only help the writer correct a proportion of mis-spellings: MacArthur (1996) reported one study where just 36% of the writers' errors were successfully corrected by using the

spellchecker. This statistic should be borne in mind when considering whether a spellchecker will give sufficient support, or whether another supportive writing tool – such as word prediction, or speech recognition – should be used as well. (Remember also that despite the limitations of the spellcheckers, they will give some improvement – 36% fewer errors is still much better than nothing.)

## 5.2 Check marked text / document checking

All computer-based spellcheckers allow you to check the whole document from within the word processor (*document checking*). Most also let you highlight sections of the text and then check it (*check marked text*): this saves time if you just want to check a new word or sentence in a previously checked document. Most writers, who mainly want to pick up typing errors or the odd spelling mistake usually prefer this method as they can write then spell-check afterwards.

## 5.3 Check as you type

A second technique is *automatic* checking of each word as it is typed (*check as you type*). Here, the computer underlines, highlights or beeps as soon as an unknown word is typed. Some spellcheckers also display the list of suggested corrections automatically. The writer has the option of retyping the word; or using the spellchecker to correct it; or ignoring it and correcting it later. *Check as you type* does not suit all writers – some people find that it interferes with the flow of writing and so it is important that it can be switched off.

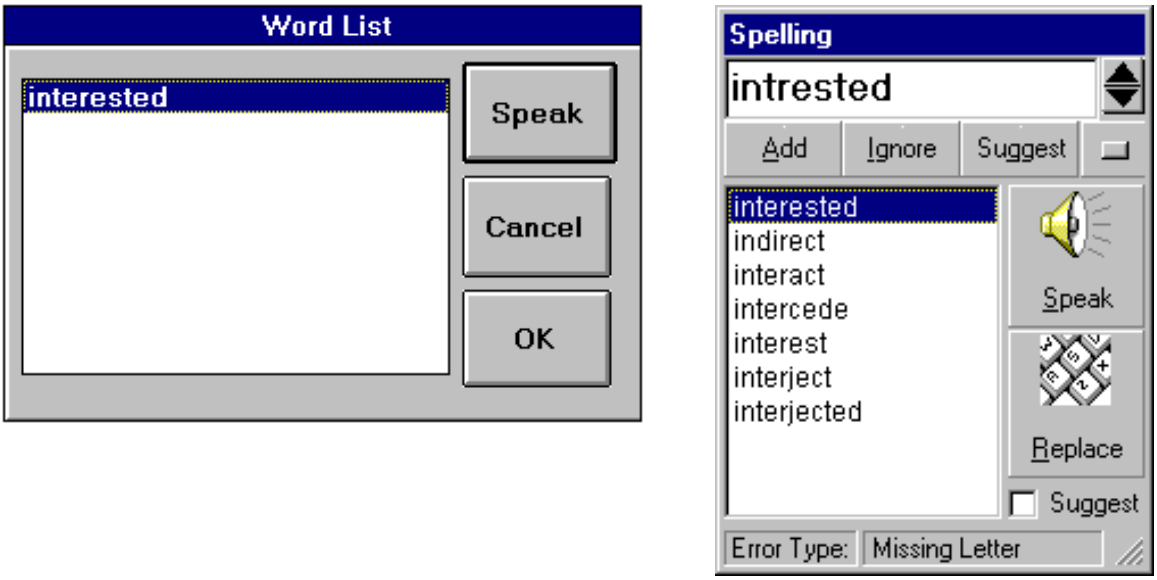
## 5.4 Presentation and user interface

Some spellcheckers tend to offer short lists of words while others offer long lists. Short lists are generally better because there are fewer words to search through, and because the writer is less likely to choose the wrong one. The disadvantage with a short list is that the correct word may not actually be offered, if the spelling is quite unusual. Some spellcheckers therefore offer a relatively long list of words so that it is more likely the correct word will appear. Longer lists of offerings may be effective if the pupil has good word recognition skills and can identify the required one easily from the long list. Early learners or pupils with poor word recognition skills may be better with only a few suggestions. Talking spellcheckers can help the pupil identify the correct word in the list of suggestions. Figure 5.1 shows the long and short lists from *textHELP!* and *Talking Word for Windows*, for the word '*intrested*'.

In this particular instance, *Talking Word* might be regarded as more effective because it only offers the correct word, whereas *textHELP!* offers 7 words. The user interfaces are also worth noting: *Talking Word* has a particularly simple interface which is more suitable for younger users, while *textHELP!* has more buttons and functions so is more appropriate for sophisticated writers who know what they do and how to use them.

Most spellcheckers offer six or seven suggestions because this number can be visually scanned quickly by the average person. If the spellchecker thinks more words match the mis-spelled one than can be displayed in the list, it usually allows you to scroll through the list to see the complete range of possibilities. The best programs put the most likely words at the top of the list; some programs display the words in alphabetic order which will obviously tend to place the correct word some way down the list, and it may be more difficult to spot because it is by definition surrounded by similar looking words.

**Figure 5.1: Spellchecker user interfaces – *Talking Word for Windows* (left) and *textHELP!* (right)**




## 5.5 Speech output, display context and word meanings

Some spellcheckers (e.g. *Write:Outloud, TextEase, textHELP!, KeySpell*) can speak out the words in the list of suggestions and this can help the writer recognise the correct word. It is also easier to spot the correct word if the writer can see how it fits in the sentence in the text. Some spellcheckers (e.g. *Microsoft Word*) automatically move the text window within the document so you can see the sentence, while others (e.g. *ClarisWorks, Write:Outloud*) show a few words before and after the text within the spellchecker window. Figure 5.2 gives a comparison of *Word* and *ClarisWorks*. Some spellcheckers also have an option to give explanations of the word, or examples of the word in use in sample sentences.

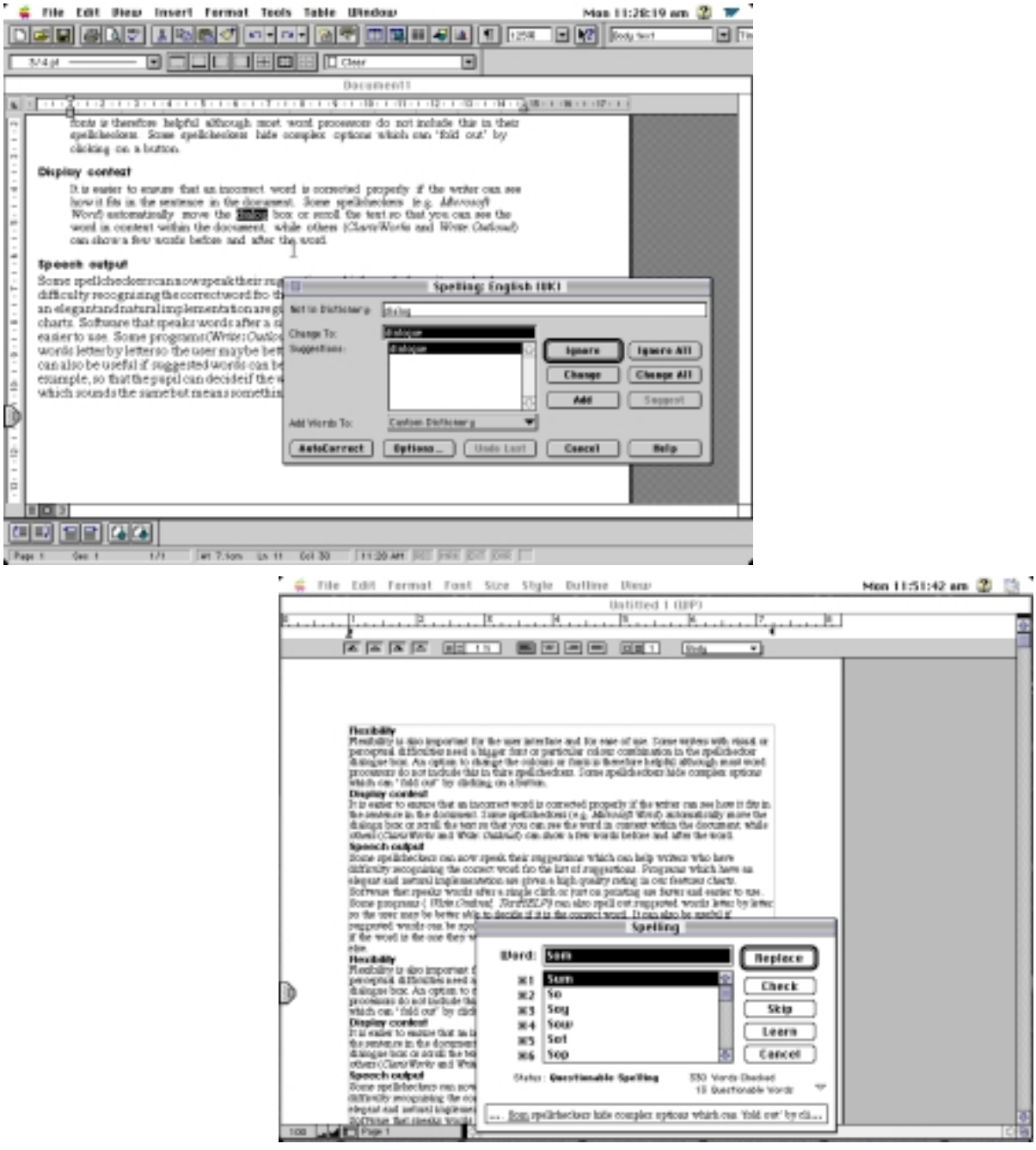
## 5.6 Franklin Spellcheckers

The Franklin spellcheckers are small, battery powered electronic spellcheckers designed for pupils who are learning to spell, or for writers with specific difficulties with spelling. They have small single line screens, run on standard AA batteries and have miniature QWERTY keyboards. There are several different models of Franklin available. The most useful version for young children or those with severe spelling difficulties is the *Elementary SpellMaster*. The *SpellMaster* and *WordMaster* versions are suitable for older pupils. The Franklin *Bookman* devices have the spellchecker and thesaurus functions and can also display a dictionary definition for the word. Of particular interest to writers with word recognition problems (who might have difficulty identifying the correct spelling on the Franklin) is the *Speaking Bookman* (£101) which has a built-in speech synthesiser and speaker. The voice is American and the speech quality poor, but it may still be sufficient to help some writers.

Franklins are available from many suppliers: high-street shops like Dixons and W.H. Smith, as well as specialist educational suppliers like Tandy Education and Scottish Learning Products.

Operation of all the Franklins is straightforward: you type in the word to be checked and press the *Enter* button. If the spelling is correct, the machine will say ‘Correct!’ on the LCD screen. If not, a list of up to seven guesses will be offered with the most likely

**Figure 5.2: Displaying the spellchecked word in context – *Microsoft Word* (top) will always scroll through the document so that a questionable spelling can be seen in context. Although *ClarisWorks* (bottom) scrolls through the text, words can be hidden by the dialogue box, making the 'display in context option' very useful.**




word at the top. The user hits the up and down keys to scroll through each word suggested.

To benefit from a Franklin machine, a pupil must be able to:

- recognise that he or she has made a spelling error;
- copy the mis-spelled word from the page or computer into the Franklin using the small keyboard;
- read the text on the small screen;

**Figure 5.3: Franklin *Elementary SpellMaster* and *SpellMaster***


- recognise the correct spelling when it's offered;
- copy correct spelling back into the computer;
- be motivated enough to want to make sure their work is correctly spelled.

The systems are therefore not suitable for children with severe physical or perceptual difficulties who have difficulty with the small keyboard or screen, or those with really severe reading problems.

## 5.7 Franklin or computer-based spellcheckers?

Franklins and computer-based spellcheckers each have their own advantages and disadvantages, as Table 5.2 illustrates.

## 5.8 Using a Franklin with a word processor

For some pupils, using a Franklin *and* a word processor spellchecker together is extremely effective. The computer picks up and identifies mis-spellings (and so saves the pupil from having to recognise mis-spelled words themselves) while the Franklin may be more effective at offering the correct spelling than the computer-based spellchecker.

There are two limitations with this technique. First, the pupil has to copy the mis-spelled word from the word processor into the Franklin, and then copy the correct spelling back into the word processor, without making any mistakes. Secondly, the Franklin dictionary may not match the word processor's dictionary – the computer checker might not recognise a word and signal an error, but the Franklin may be perfectly happy with it when it is typed in. Nevertheless, if the computer-based spellchecker cannot cope with the user's mis-spellings, it may be worth trying a Franklin as a supplement.

The new version 3 of the *Write:Outloud* word processor has the Franklin spellchecking system built in so should give the advantages of the computer, with the performance of the Franklin.

**Table 5.2. Comparison of Franklin spellcheckers and computer-based spellcheckers.**

| Advantages of Franklin spellcheckers | Advantages of computer-based systems |
|---|---|
| They can be used at any time for checking any sort of work – such as when labelling diagrams by hand in science. Writing by hand can be done in a wider range of different situations and gives an immediate hard copy, and a pen and jotter is easier to carry than a computer. | The spellchecker will check all words as they are typed, confirm those that are correctly spelled and identify any ones which are not recognised. With a Franklin, the pupil must either type all the words in to be sure of picking up every error (which is obviously impractical) or know when a word they have written is not correctly spelled. |
| Pupils with neat, quick handwriting and poor keyboard skills might prefer to write by hand and use a Franklin rather than be forced to use a word processor. | Pupils with poor handwriting can use the computer word processor instead. There is no need to copy the mis-spelling from text into the checker, and then the correct spelling from checker to text, like there is with a Franklin. |
| Spellcheckers on computers vary a great deal in their effectiveness: some are not as effective as Franklins at recognising errors and offering the correct spelling. | The spellchecker confirms when words are correctly spelled. Some pupils with dyslexia waste time and worry over the spelling of correct words – either manually or with a Franklin – whereas the computer-based spellchecker focuses attention on the mis-spellings. |
| Spellmasters have a one line display and some pupils find it easier to recognise the correct word when it is presented by itself. In contrast, most computers offer a list of suggestions on screen which can be difficult for pupils who might be confused by words which look similar. | Some users can identify and select the correct word from a list more quickly than they can scroll down through a Franklin's suggestions. |
| Spellmasters can be more convenient for practising spelling lists. | Computers have a range of programs to develop literacy using sound, images and animation. |
| Pupils can check words where they know some, but not all, of the letters by typing a ? for an unknown letter into the Spellmaster | Computer spellcheckers may have features like speech output or a thesaurus. |
| Franklins are cheap and very portable. | Computers have more facilities and opportunities for their higher cost and size. |

## 5.9 Assessing spelling difficulties

The nature and severity of spelling difficulties can vary greatly: some pupils have particular and consistent difficulty with long words only, while others can hardly spell any words correctly. Different learners will need different supportive writing tools.

Before considering technology it is helpful to review the pupil's skills and difficulties and consider whether anything can be done to improve his or her spelling skills. Structured methods for teaching spelling are described by Ott (Ott, 1997), Thomson & Watkins (Thomson & Watkins, 1990), Miles (Miles, 1993) and Brand (Brand, 1992).

The most important piece of evidence that you need to start assessing whether a pupil could benefit from a spellchecker or other supportive writing technology, is an example of unsupported and unedited free writing. From this it is usually possible to establish the pupil's stage of phonic and spelling development, any particular spelling difficulties, and the likelihood of particular methods and devices being successful. Results from standardised tests of reading and spelling (such as The Graded Word Spelling Test (Vernon, 1983) and WRAT-3 (Wilkinson, 1993) are also useful.

**Figure 5.4: Case Study – between the pre-phonic and phonic stage of spelling development**

a bomb went of in Londing. The air put a bom and it blab up. The polis tic some wone put it the lore and there part at the bank. The men ran away and set the bom and the bank bla up. Mott people got hert by gass fell on them.

The writer of the text above is between the pre-phonic and the phonic stage of spelling development and on the face of it there is little point in using a spellchecker because there are too many 'real word' errors, split words and grammatical mistakes which would not be spotted by the spellchecker. Examples of real word errors which would not be picked up by a spellchecker are '*of*' instead of '*off*' in the first sentence, '*air*' instead or '*IRA*' in the second, and '*tic*' instead of '*took*' in the third. '*Some wone*' is a split word which would not be handled by most spellcheckers; while the whole of the third sentence does not make a great deal of sense.

However, the text sample does not tell us the age of the pupil; skills in other subject areas; how long the pupil took to produce the text; whether it was a first draft, and if so, whether second and third drafts would be any better; and the success or otherwise of learning support programmes which may have been implemented.

In order to make a decision about supportive writing tools, all these aspects must be considered. For example, if the text is a first draft, the writer may be able to use speech output and spell checking to identify and help correct errors. While this would probably help improve accuracy, it is unlikely to make a significant difference and so it is worth considering other tools to support writing.

Most of the words start with the correct letter and so a word predictor would be worth evaluating. It would be important to make sure the predictor lexicon contained the necessary words like 'London' and 'IRA'. Speech output might also be useful to help the writer proof-read for sense, to help sort out the third sentence, for example. It is also possible that the writer would benefit from a teaching programme like the *Talking Computer* or *BorderTalk* methods (see section 11.3) to improve basic levels of literacy. The only thing we can be reasonably sure about is that a standard spellchecker is in itself unlikely to significantly improve the accuracy of the writer's spelling.

The writer of the text in Figure 5.5 is at the phonic stage of development. The piece is hard to read but most words have a clear phonic basis and so speech output might not help the writer to spot the mistakes, so a spellchecker would be required. Table 5.3 compares how a few popular spellcheckers deal with the mis-spellings in the paragraph.

For this text, the best-performing spellchecker is *TextReader*, which was able to offer the correct word for 23 of the 24 errors. The *Franklin* and *DreamWriter 200* checkers, which are designed for children, were next, with 19. *ClarisWorks*, a relatively standard spellchecker, managed 17 words. *Pages* only coped with 12, although it got 17 if the 'Dictionary' option was used. (The *Pages* 'Dictionary' feature gives a much longer list of words in the spellchecker display, so there is more chance of the correct word being offered. The disadvantage is that it is more difficult to find the desired word since the list usually contains 20 words or more.)

**Figure 5.5: Case Study – at the phonic stage of spelling development**

moste cars are two wheel drive but some are four wheel drive.
The poure comes from the enjne. The enjne powers drive shaft.
Yooshaly the powre gowes to the back or to the frunt wheels. Ife youe are staying on the rode ole the time frnte wheel ore back wheel drive is anuf. you are betr off with a four wheel drive vearckl in the snow and off rode. You can goe up a very steap hill. And you can go throo a bog ore a mudu feald. The treds are very wide and deap so they grip.
they are very expsensiv becos they nead more petrl.

**Table 5.3. Spellchecker comparisons using errors from Figure 5.5**

| Mis-spelling | Correct spelling | Claris Works 4 | Pages | Franklin | DreamWriter 200 | TextReader |
|---|---|---|---|---|---|---|
| *Moste* | Most | ✔ | ✔ | ✔ | ✔ | ✔ |
| *poure* | power | ✔ | dictionary | ✔ | phonetic | ✔ |
| *enjne* | engine | ✔ | ✗ | ✔ | phonetic | ✔ |
| *Yooshaly* | usually | ✗ | ✗ | ✗ | ✗ | ✔ |
| *powre* | power | ✔ | ✔ | ✔ | ✔ | ✔ |
| *gowes* | goes | ✔ | dictionary | ✔ | ✔ | ✔ |
| *frunt* | front | ✔ | ✔ | ✔ | ✔ | ✔ |
| *Ife* | If | ✔ | ✔ | ✔ | ✔ | ✔ |
| *youe* | you | ✔ | ✔ | ✔ | ✔ | ✔ |
| *rode* | road | | | | | |
| *ole* | all | ✗ | ✗ | ✗ | ✗ | ✔ |
| *frnte* | front | ✔ | dictionary | ✔ | phonetic | ✔ |
| *anuf* | enough | ✗ | ✗ | ✔ | ✔ | ✔ |
| *betr* | better | ✔ | ✔ | ✔ | phonetic | ✔ |
| *vearckl* | vehicle | ✗ | ✗ | ✗ | phonetic | ✔ |
| *steap* | steep | ✔ | ✔ | ✔ | ✔ | ✔ |
| *throo* | through | ✗ | dictionary | ✔ | ✗ | ✔ |
| *mudu* | muddy | ✔ | dictionary | ✔ | phonetic | ✔ |
| *feald* | field | ✔ | ✔ | ✔ | phonetic | ✔ |
| *treds* | treads | ✔ | ✔ | ✔ | ✔ | ✔ |
| *deap* | deep | ✔ | ✔ | ✔ | ✔ | ✔ |
| *expsensiv* | expensive | ✗ | ✗ | ✗ | ✔ | ✔ |
| *becos* | because | ✔ | ✔ | ✔ | ✗ | ✔ |
| *petrl* | petrol | ✔ | ✔ | ✔ | ✔ | ✔ |
| *Total* | 24 | 17 | 12 (17 with the 'dictionary' option) | 19 | 12 (19 with the phonetic checker) | 23 |

From the analysis, the best spellchecker for the writer of this text is *TextReader* because it had the best performance, and can also speak out the words in the list. Since it is only available for Acorn computers, Mac or Windows users are likely to be best with the new *Write:Outloud 3* which has the Franklin system built in. The *DreamWriter* spellchecker performed well, so if the writer needed a portable computer, **and** the writer was able to spot the correct word in the long horizontal list generated by the *DreamWriter* phonetic checker, then it would be suitable.

Again, before we conclude that a spellchecker is the best form of supportive writing tool for this writer, we need to know more about the author. If the work was produced fairly quickly and easily apart from the mis-spelled words, a spellchecker may help to correct most of the errors – provided the writer can identify the correct spelling when it is offered.

If the writer was very slow and had to think about the spelling of most of the words (including those which are correctly spelled in the text), then a word predictor might be worth trying because it could increase overall writing speed as well as helping to improve spelling.

If the writer has significant difficulty identifying the correct word from the spellchecker or word predictor list, even with speech output, then speech recognition could be worth investigating.

The writer in Figure 5.6 spells simple words correctly and generally makes minor errors for longer, more complicated, words. A good phonetically-based spellchecker (e.g. *DreamWriter*, *Write:Outloud*) would be able to offer the correct spelling for the majority of the errors. However, there are still several 'real words but wrong words' (real word errors) which will not be picked up by a spellchecker. This writer might benefit from the use of speech feedback to help identify errors like 'We would like you to tack his plays' instead of 'We would like you to take his place'.

**Figure 5.6: Case Study – at the phonic stage, but showing characteristic of the visual stage.**

Billy Hughes - the day after
Tommy said wat about Billy Hughes?
Johnston said Billy is to slow.
Tommy replid we have not got enay one ells.
Johnston said he will have to get fit. He will have to eat helthy food and he will have to prakts. He will have to stop waching TV as much.
The hed techer said I am not going to give you a rou. I am going to tell you some good news. One of hour boys has droped out of the relly tem. We would like you to tack his plays. But you will have to get fit.
I will promes to get fit and eat helthy food and prakts.

## 5.10 Choosing a spellchecker

If you think a spellchecker will help a writer it is not necessary to try out all the likely spellcheckers with the pupil. Instead, as we saw earlier, get a sample of the pupil's work and put the text rather than the pupil through the spellchecker. This saves time and reduces stress and frustration.

Before you compare spellcheckers, draw up a 'short-list' of systems that may be suitable. Consider:

- portability (does the writer need a portable machine);
- platform (which computer is he or she using);
- learning task (small writing tasks, in primary school, or essays at University) .

**Figure 5.7: Case Study – testing spellcheckers with the writer's text.**

Richard is in primary 5 and has handwriting difficulties, mostly due to physical difficulty with the pencil and because of tremor. As a result:

- he gets tired when having to grip a pencil for longer than brief periods;
- his writing is fairly laborious, affecting tasks like note taking;
- his letter formation is poor.

He also has difficulty with spelling, with mainly phonetic errors and he uses an *Ace Spelling Dictionary* to help him find the correct spelling of words. He has become so adept with it that he is recognised as being a bit of an expert. Recently, his written work has improved although is still well behind his reading age (NMRA accuracy = 11.4; comprehension = 11.7).

When considered in isolation, the kind of writing difficulties experienced by Richard might be unlikely to suggest the need for a portable word processor or computer. His spelling difficulties were responding to more practice, and he had achieved a lot in response to sound teaching. But it was likely to remain an area of difficulty. His physical difficulties in handwriting appeared on the surface to be due to clumsiness and again suggested more practice was needed in handwriting.

When combined, however, these problems led to avoidance of doing written work, behavioural difficulties and attempts to disguise his difficulties. It was hoped that by developing skills in keyboarding and by using supportive writing technology, some of his broader writing difficulties may be addressed.

Although the class had an Acorn computer Richard really needed a writing tool for his own use, and so portable writing aids were considered. He could have used a hand-held Franklin spellchecker but this was not recommended because keyboarding was likely to become Richard's main means of writing in the future. He therefore needed a portable word processor with spell checking facilities.

The assessment report recommended that Richard should improve his keyboarding first, using a fun typing program such as *Speedy Keys* on the class computer. A *DreamWriter 100* and *AlphaSmart* keyboard were considered. The spellcheckers were tested with sample mis-spellings from his work.

| Mis-spelling | Correct spelling | DreamWriter | AlphaSmart |
|---|---|---|---|
| *brige* | bridge | ✔ | ✔ |
| *shagy* | shaggy | ✔ | ✔ |
| *frighend* | frightened | ✔ | |
| *serched* | searched | ✔ | ✔ |
| *pice* | price | ✔ | |
| *feild* | field | ✔ | ✔ |
| *laghed* | laughed | ✔ | ✔ |
| *pleser* | pleasure | ✔ | |
| *dangerus* | dangerous | ✔ | ✔ |
| *trafic* | traffic | ✔ | ✔ |
| *woired* | worried) | ✔ | |
| **Total Correct** | | **11** | **7** |

The DreamWriter spellchecker managed to offer the correct word in all cases, whereas the *AlphaSmart* only managed 7 out of 11. The *AlphaSmart* had some options which might have been helpful to Richard – for example, the auto-repeat on the keyboard could be turned off to prevent unwanted repeated letters. On balance, the *DreamWriter* was recommended as the most suitable device and one was provided on loan for evaluation.

After using the *DreamWriter* for a few months, the Learning Support teacher reported that Richard was finding the *DreamWriter* helpful, but his typing was still relatively slow. The teacher thought that he was still having difficulty with spelling many words, and that he was trying to avoid using words he knew he could not spell, and so asked to evaluate a word prediction program.

For example, if portability is a big issue (as in secondary school) or the pupil requires the writing tool all the time, then you may be comparing spellcheckers on an *AlphaSmart*, *DreamWriters* or *eMate*. But if the writer is in late secondary school, college or University and is using a desktop Windows PC, say, for writing long pieces of work, you may be comparing *MS Word*, *ClarisWorks*, with or without *textHELP!* or *KeySpell*. You should also consider whether the writer needs other support tools: *textHELP!* is good because it has speech output and word prediction as well as spellchecking, while *KeySpell* has speech output. The analysis in Chapter 14 and the reviews in Chapter 16 will help you narrow down the likely options.

In general, try to choose a spellchecker that can identify at least two thirds of the target words and offer correct suggestions, otherwise the spellchecker may be of limited use and could lead to frustration and rejection by the pupil. Consider whether the spellcheckers that can be adapted to particular types of spelling error, such as *TextReader* and *textHELP!*, would be effective.

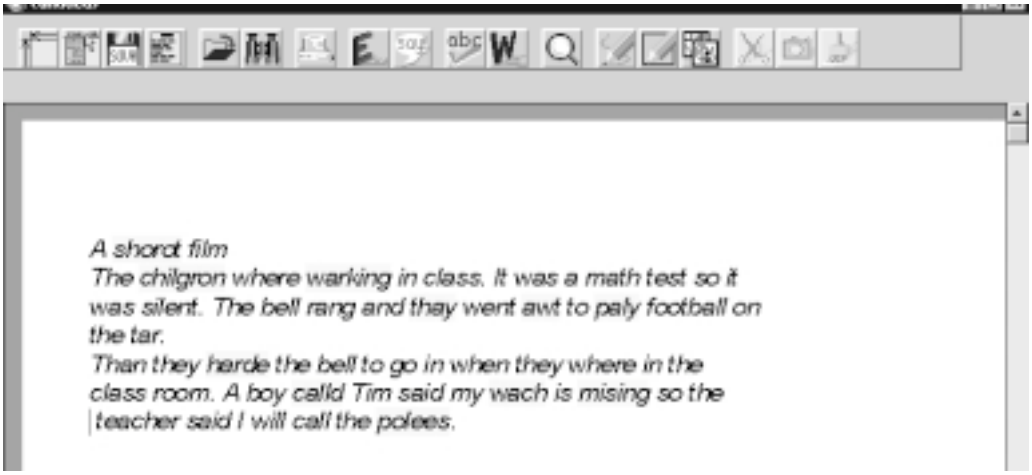
Assuming the spellchecker is able to suggest a reasonable proportion of correct spellings, the next thing to check is that the pupil is able to identify the correct word

**Figure 5.8: Case Study – using a spellchecker**

Michael in Primary 6 has a significant spelling difficulty. However he does not have a sophisticated spellchecker available on the computer he is using. He uses *Pages* with the “highlight all spelling mistakes” facility turned on. This is often enough to allow him to correct text by himself. Because the highlight remains (unlike the beep that some spellcheckers use to signal an error), the spelling of the word can be tackled at the end of the piece of writing.

This method of signalling an error, also used by *TextEase, Word , Word Perfect*, *Write:Outloud* and a number of other word processors, has many advantages. It allows the user to keep on trying to get the word right and once it is changed to a correctly spelled word, the error signal is cleared. The absence of the ‘beep’ used by some spellcheckers avoids the embarrassment of having mistakes ‘broadcast’ to everybody else in the room.

Here is an example of text typed in by Michael into *Pages*. He was asked to ignore the spelling errors until the end. The *Pages* spellchecker could suggest the correct spelling for “shorot”, “warking”, “thay” and “mising”, but could not cope with the other words.




Michael was able to correct the spelling error in the word “shorot” by deleting the unwanted “o” without using the spellchecker. Similarly he was able to sort out “paly”, “calld” and “thay” and “mising” and “calld”.

Some of his other errors – “awt”, “wach”, “polees” were too difficult for him to fix. They would need the support of a better phonetic spellchecker, such as *TextReader* or a *Franklin* (or *Write:Outloud 3*).

from the list of words offered. If the pupil tends to choose the wrong word, a spellchecker with spoken feedback of the list may be needed. Also consider whether the number of words offered by the spellchecker is relevant – maybe the writer can spot the correct word in a short list but has difficulty with longer lists of words.

Although it is obviously better to find a spellchecker which will offer the correct word in the list as often as possible, some writers can get by with a spellchecker which just marks or highlights the errors. They then try different spellings until the highlight disappears, or until the checker comes up with the correct spelling.

## 5.11 Spellchecker summary

*Spellcheckers are useful for pupils with writing difficulties because they:*

✓ highlight possible mis-spellings and (may) offer correctly spelled suggestions;

✓ confirm likely correctly spelled words.

*Most writers find spellcheckers useful if:*

✓ the writer can write fairly quickly and easily;

✓ the writer can spell the majority of words used correctly (i.e. over 50% at least);

✓ the writer can recognise the correct spelling of a word when offered it by the checker (with, or without speech output assistance).

*Then the use of a spellchecker alone may improve spelling accuracy. Otherwise, the writer may need other support tools as well as the checker.*

*Things to look for in a spellchecker:*

✓ the checker offers the correct spelling for at least two thirds of the writer's errors;

✓ an option of marking or highlighting suspect words as the words are typed;

✓ speech output, if the writer has difficulty spotting the correct word in the list;

✓ a checker which offers a fairly small list of words, with the correct word near the top;

✓ quick operation by mouse and / or keyboard.