To consider referring to the computer mediated creation of text as anything other than ‘writing’ might seem at first to be a piece of pointless perversity. However, research recently publicised in the daily press (Maslen, 1991) reminds us that we would be naive to assume that any activity taking place in an unaccustomed medium is the precise equivalent of the original. That ‘the medium is the message’ has become a cliche which is often mouthed but is seldom explored to its limits.

The interdependence of language, thought and learning invests all aspects of the far than anything significant of both speech and writing with significance for education. Despite the allure of multi-media and plebs by many educators for more varied forms of representation of knowledge, writing remains the dominant form of expression for students, and hence the chief means of evaluation of their learning. It is important not only that we foster the development of a range of language skills in the classroom, but also that we constantly analyse and critically evaluate both process and product.

In what ways can the act of writing with a computer be perceived as different from more traditional means of text creation? How are these differences of significance to education?

As far back as 1984, research emanating from Carnegie Mellon University suggested that differences existed which were sufficiently strong as to have marked consequences on people’s attitudes, decisions and actions in real-world situations. The following paragraphs, taken from the New York Times, appeared in the Age newspaper (Melbourne) in January, 1985:

‘People communicating by computer often use stronger language than if talking face-to-face, US researchers at Carnegie-Mellon University have found. A team of behavioral scientists discovered much more profanity, name-calling and strong expressions of exultation in computer messages than in other ways of communicating. Also, people making decisions by computer took longer to agree, their final decisions tended to be more extreme and they seemed to believe more strongly in the rightness of their actions.

But the unusual characteristics of computer communication were not necessarily all negative, the researchers emphasised. They pointed out that the type of language used often helped to bridge social barriers, and could draw people out. Decision-making via computer was often more democratic, because discussion was not as easily dominated by a person. And more extreme decisions could be innovative and creative, not merely foolish.’

(The Age, 1985)

One might argue that this particular form of computer mediated writing is not typical of the genres practised in most schools. It is nevertheless a writing activity of increasing importance in the world for which we are preparing students, and the report signals the likelihood that aspects of writing with a computer may well cause it to be a significantly different language experience. The causes of the observed phenomena seem likely to be related to such issues as awareness of audience and the degree of ownership felt by the writer for the screen-based text, both factors being well recognised as important by teachers in the language area. Anecdotal evidence suggests that the standardised form of text presentation on the computer screen can result in a sense of distancing from the written product. Awareness of audience can become blurred to the extent that some writers report a feeling that they are writing ‘to the computer’, or even to themselves, as mirrored by the computer. Some have expressed a sense of alienation from the written product, perhaps resulting not only from the impersonality of the screen presentation, but also from the lack of direct bodily connection between the physical act of tapping the keys and the resulting text. A further factor which might contribute is the degree to which writers lacking good keyboarding skills modify their expression in accordance with their abilities — often favouring short words and sentences, summary over exposition, even avoiding words containing certain letters (Dowling, 1987).

Increasingly, schools are able to make available to students from the earliest stages upward the well-accepted benefits of word processing. The capacity to easily make changes to one’s text and to produce legible copy has rendered the task of writing to varying degrees both manageable and pleasurable for a large number of students and their teachers, as it has for the populace at large. But to what extent do the changes go beyond improved spelling and punctuation, and a neat appearance? In addition to the issues discussed above, are there other significant differences, for instance in thinking, that might occur in conjunction with the act of writing at a computer?

Many writers feel intuitively that the capacity to edit and re-edit involves the ongoing development of the ideas which are being committed to print. One ‘thinks as one writes’. Rather than expressing the product of thought, the act of writing becomes an integral part of the thinking process. The written product is not simply better looking, but is also better thought out.

Most teachers would agree that this is the ideal, but the message in regard to the benefit is actually a little equivocal.
Professional editors are familiar with a difficulty which arose as a consequence of the widespread adoption of word processing facilities by journalists. Complaints were received from readers that they could no longer ‘follow’ certain articles. The problem was found to stem from the degree to which the making of deep structural changes during the writing/editing process had been facilitated by the computer. The content of the articles in question was expressed and organised in a more cognitively sophisticated manner than would previously have been the case, but as a result was less accessible to the reader. Where the content had been reworked, for instances along conceptual rather than narrative lines, the reader was present only at the conclusion of the process, and was denied the opportunity of vicariously following the development of the writer’s train of thought.

A common complaint of teachers and of researchers investigating the use of word-processing by students and by novice writers in general is that they fail to utilise the capacity to make complex structural changes. Given the experience described above, teachers should perhaps be grateful, at least while they rely so heavily on writing as evidence of what is going on in students’ heads! While editing in depth may well have benefits for the development of students’ ideas, their writing may less readily reflect their thought processes to the reader. Teachers sometimes express concern about the difficulties created in the area of evaluation and assessment by the more superficial aspects of word processing such as the capacity to cut-and-paste material from other sources undetected. Perhaps an issue of greater pedagogical importance is the degree to which increased facility with word processing may render the development of students’ thinking more opaque to the teacher.

A somewhat different perspective on the special qualities of computer mediated writing was expressed recently by Edward Mendelson, writing in the Times Literary Supplement.

A computer screen flatters you with the illusion that you are labouring over style and content when, with the press of a key, you delete words or transpose sentences.

... But while you convince yourself that you employ all your power and concentration on the challenge of your prose, deep within you, unknown even to yourself, an enthralled teenager is playing PacMan.

... The degree to which a computer or computer program, because it is enjoyable and exciting to use, distracts its user from the task for which it ostensibly designed may be quantified as its PacMan Factor’ (Mendelson, 1991)

Mendelson contrasts the subtleties of paper-based editing with the restrictions imposed by both hardware and software in the computer-based writing environment, making particular mention of the alienation of the writer from the text as it appears on the screen. He concludes by linking his observations with the widely publicised research concerning the differences noted between the writing of students who used Macintosh computers and those who used IBM’s (Halio, 1990), citing the far greater ‘PacMan’ factor of the Macintosh as the culprit, militating against the achievement of writing judged as more mature in content and form.

‘True believers in the benefits of the computer ritualty argue that a computer is merely a tool, and that the quality of the work produced with it depends on the worker, not on the instrument. This argument makes sense only to those who have forgotten how to tell a paint-roller from a paint-brush. The quality and intelligence of the prose written on different computers correlates directly with the PacMan rating of the computers themselves.’ (Mendelson, 1990)

What of the more obvious new dimensions that the computer can add to the act of writing? The capacity to generate text in a range of fonts, sizes and other forms of variation at the click of a button or the touch of a key, let alone the possibilities for producing writing which moves and changes on the screen before one’s eyes, provokes questions as to what these features will convey to the reader. The boundaries between textual and graphical communication are blurring fast in the computing environment, in most cases, I suspect, without the writer being aware of it.

Hypertext environments go a long way towards destroying our long-held assumptions of linearity of text — or do they? Certainly they hold that potential, but the extent to which readers can navigate productively through material by a variety of pathways according to their individual needs and strategies depends heavily upon the extent to which writers can adapt to this new medium, producing segments of text which have a reasonable degree of significance within a range of conceptual contexts. This form of ‘writing’ will operate under very different parameters from, for instance, the familiar narrative or expository modes most favoured in our culture and in classroom writing activities.

The capacity of the computer to support a radically new level of collaborative writing has been welcomed by many writers and educators. Discussing and applauding these possibilities, Frank Smith writes: ‘For two people to be able to write together in this direct, collaborative way is to my mind the most dramatic development in writing technology since it became possible for individuals to write at all.’ (Smith, 1988)

The exploitation of these new possibilities for the co-operative creation of text carries with it significant implications for our traditional concepts of authorship and ownership of the written word.

In view of such considerations as these, is the word ‘writing’ in the context of computer mediated generation of text being used literally or metaphorically? Undoubtedly in an overwhelming majority of cases the intended sense is perfectly literal, but a close examination of the situation suggests that in many cases this assumption of parity is not justified.

If the computer-mediated writing experience is ‘different’, is this difference quantitative in that the same things are being done ‘more’ and/or ‘better’, or is the difference qualitative? Is the meaning of the word ‘writing’ being extended, or significantly altered?

Looking at the question from a different direction, if significant differences are occurring when text is generated at the computer under the name of ‘writing’, are we justified in referring to the process by the same name? If the two activities do involve significantly different language experiences, then the capacity to differentiate between them for particular purposes might well be useful. It could be argued that the use of the same term for computer mediated and for more traditional forms of writing blurs the distinction between them, making it more difficult to choose one over the other in particular circumstances. It may also be that the use of the traditional term, ‘writing’, for the creation of text in the new medium, constrains the user’s expectations of what is possible, and prevents exploration of the full range of new possibilities.
Thus, while the suggestion that 'writing' at a computer is a metaphor may stretch our conception of metaphor beyond what is reasonable, it does provide a very useful point of view from which we can examine some of the effects and implications of this new manifestation of written language and its relationship to thought and learning.

REFERENCES


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