Graphical Literacy: The Unconsidered Question of Format

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The physical process of producing readable words on paper is one of the great invisible pedagogic questions. It is not even considered in most published works on the topic of writing; what material *is* published is, for reasons that will be presented later, of questionable value. The majority of educators asked about this topic respond with lack of interest; some explicitly state that it is not an issue of any importance. It is the contention of this paper that it is an issue of importance, or at least an issue of importance equal to many of those issues deemed worthy of reams of published material. The reason it has received little or no attention is a function of educators, and the holes in their interests, training and competence, rather than any intrinsic lack of value.

There are two strands to the issue. The first, the different impacts that different tools have on the process of writing itself, is beyond the scope of this paper, and will only be alluded to in passing. Instead the main focus will be on the extent to which educators are or should be taking account of the capabilities of the dominant writing tools in their teaching of writing skills to students. The points it makes are equally applicable to L1 and L2 writing education.

Background

The history of writing is quite well known. The letterforms upon which English and many other Western languages depend can be traced back to the Phoenicians of 3500 years ago, who modified the pictograms of the Egyptians in order to derive a purely alphabetic writing system (Haley, 1995, p. 119). We may not be absolutely certain whether the shape of the letter A was indeed derived from a pictorial representation of the head of an ox, but we do know how that symbol was written: what tools were employed in its construction. The tools employed, whether stylus, pen, brush or chisel, have had some influence, both on the development of letterform shapes, and on the spread of writing skills themselves.

For most of history, the dominant manner in which the act of writing has been conducted, and the action conjured up in the imagination by the word "writing' has been that of making marks on paper using a pen or brush held in the hand. The dissemination of written information was revolutionized by the introduction of movable type, usually attributed to Gutenberg in Germany, though movable type had been developed by Bi Sheng in China in the early 11th century (Bringhurst, 1992, p. 119). But the printing revolution had no effect on the primary means of writing: the word "manuscript"means "written by hand".

The first significant change in the tool used by writers (as against printers) was the invention of the typewriter: the first viable model of which was produced by Christopher Sholes, Carlos Glidden, and Samuel Soule in 1867 in Milwaukee, Wisconsin, USA. As the machine was popularised, it slowly came into its own as an alternative to handwriting, though it has also

always fulfilled the role of a *supplement* to handwriting: a means of rendering scribed forms more legible or even publishable. Thus the typewriter was capable of two functions, previously distinct — the scripting function, and the printing function — and the ambiguity about its role thus produced has led in part to the confusion that this paper is intended to address.

Although the typewriter was significant in being the first mainstream alternative to pen/brush forms of writing, its lifetime as a tool has been remarkably short. Indeed, it can now be considered obsolete. It was superseded by the use of the personal computer as a writing tool, a development that has taken place in the last 20 years. The typewriter, nevertheless, still exerts a very powerful influence on the teaching of physical writing skills, for two main reasons. Firstly, the adoption of the typewriter keyboard as the model for computer input has several implications for the act of writing on a computer. Secondly, education in non-scribal methods of the physical act of writing has been conducted by those brought up with the typewriter as a tool, few of whom have the knowledge or desire required to recognize the differences ushered in by the computer.

While a veritable frenzy has erupted over the implications of the Internet for the dissemination of knowledge, there has been less attention paid to the more general question of how computers affect writing. The Internet is really just a single facet of this issue, and "web publishing" just one flavor of publishing. And the revolutionary effect of computers is that for the first time, the writer is also a publisher, and has control of details that have been, since the time of Gutenberg, the province of a select band of expert artisans. But are writers receiving any education in *how* to control those details?

The Problem

Considerable attention has been given to the use of computers in teaching composition. But it is the old story of interest groups selecting for their own purposes: the interest of the educational community in computers has often been for their applications as *pedagogic* tools. Insufficient attention has been given to their basic role for the learning writer as writing tools.

When teachers instruct students in the use of computers, they tend to certain actions which hamper the students' future use of the computer. Firstly, they teach the word processor as if it were no more than a typewriter with some advanced facilities. Several books have already been written specifically on this issue (for example Williams, 1990). If a previously existing machine must be selected as a base, a computer word processor is analogous to a phototypesetter, not a typewriter. Admittedly, highly advanced typewriters are able to mimic the performance of a phototypesetter (during the 80s, when he was using phototypesetting systems, the author also had experience with a large IBM Selectric Composer which could only be described as a hybrid typewriter/typesetter). But the skills being taught to students are those of the lowest common denominator of typewriters: machines with monospaced lettering, no justification and little, if any, correction.

Computer word processors now come with proportionally spaced typefaces and justification as default. They are capable of producing true dashes and true apostrophes and quotation marks, despite the non-appearance of these typographic necessities on the (typewriter-derived) keyboard. Inability to adjust typing and formatting habits to the new medium (most clearly demonstrated by "5 character" or half-inch indents, yawning gaps between words to achieve justification, foot symbols used as apostrophes and quotes, hyphens used as dashes, and even carriage returns at the ends of lines) results in ugly, inefficient products of the writing process. And as everyone is well aware, writing is a process highly responsive to feedback. A student who produces an ugly looking text will not feel the same satisfaction and reinforcement as the student who produces an attractive looking text.

Teachers also habitually teach a rigid academic format, a "standard text document which is formatted according to guidelines established when typewriters were popular" (Rheinfrank & Welker, 1994). This format is familiar to anyone who has taken Typing 101, and is exemplified by academic handbooks such as that of the Modern Language Association (1995). One inch margins (irrespective of page or font size) and double line spacing are distinctive characteristics of this approach. As more dedicated manuals such as *The Chicago Manual of Style* make clear, the purpose of this style is to prepare typewriter manuscripts for publication. The whole system of style is based on academic publishing, and even in that field, with widespread submission of typescripts in electronic format, it is becoming obsolete. Indeed, a look at a recent edition of *The Chicago Manual of Style* will reveal the extent to which this is the case, and may surprise those who have not glanced in a style guide since putting the finishing touches to their first thesis.

But drilling this standard academic format into students is a mistake. What is happening here is a simple repetition: teachers teach what was drilled into them, taking no account of changed circumstances. The goal of teaching writing in L2 teaching is not merely the production of academic papers: it is the preparation of students for the writing tasks they will face outside academia as well as within it. In the past it was sufficient to ensure that students had adequate penmanship, and basic typewriter skills; one could be sure that an expert would be involved at the production stage if the student later required it (whether that expert be an office secretary or a publisher's compositor). Nowadays the academic style is an obstacle for the student who might have to use a word processor outside the university (and in the current job market, that is a large proportion). The preferred academic format is a highly limited beast, designed for the reproduction of academic papers with the minimum of fuss, and the minimum of attention to design on the part of the academics involved with it. Such is not the case with, for example, magazines, books and letters in the wider world. Teaching students a single rigid approach to the visual formatting of information may speed the process, and assist them in preparing term papers, but in terms of life education it is a hindrance. The basic principles of typography are quite easy to impart.

These problems are intertwined. The half-inch paragraph indents beloved of academics are appropriate to typewriters: in typeset text they are excessive. Moreover, while a monospaced typeface will fit relatively few characters on a line, a proportionally spaced face in the same point size will fit far more. It is well known among typographers that for continuous reading, around 65 characters per line is comfortable, while any more than 90 starts to generate physical obstacles to the reading process. Yet in the standard academic face (Times New Roman) at the default size of Word for Windows (10 points) there will be over 100 characters per line on a full A4 page even with generous margins (and even more on the tubbier Letter size)[1]. Learning this, and using the knowledge to achieve optimum results (whether by increasing the point size, increasing the margins, or changing the typeface to a large, wide, face such as Verdana) is not difficult, and fits the student for tasks outside the academic institution.

Even at an early stage in the use of computers in the composition classroom, it was obvious that students responded positively to them (Bernhardt et al., 1989). The author's own experience in teaching L2 composition classes reinforces this: students are eager to explore the potential of word processors, and to use them to make their work more attractive and readable. The "product" approach to teaching writing may be unfashionable, but experience shows that there is a feedback effect to be gained when students start to recognize that their written work is communicating effectively. Motivation is improved. The problem lies not with the technology, nor with the students, but in the attitude of the majority of teachers.

Like most experts, teachers are resistant to areas outside their experience. Because historically the teaching of writing has never involved anything beyond manuscript (or, at most, typescript) stage, teachers show a marked reluctance to dabble in the typographic field which has been ushered into the mainstream by the new technology. And who can blame them? The same is true of any interest/expertise group. Walter Tracy, a typographer, discusses legibility

research thus: "A great deal of the research, though, seems to be produced by academics for the interest not of designers but of other academics. Their motives are easy to understand: there is the need to add another title to their list of publications, that being the way to academic advancement" (Tracy, 1988, p. 84). As educators, we should remember that our primary responsibility in researching and publishing is not to other academics, but to students, and what will give them what they need.

A recent advertisement for a device called AlphaSmart 2000, aimed at assisting elementary school children to learn to write, actually promotes itself with the phrase "teach writing, not formatting."It is an interesting contention, related to the utopian belief that there is such as thing as content in the absence of presentation. Many years after sixties visionary Marshall McLuhan coined the phrase "The Medium is the Message,"people still believe in pure content. Yet "The 'content' of any medium is always another medium. The content of writing is speech, just as the written word is the content of print" (McLuhan, 1964). Not only is it clearly necessary to teach formatting, it is also something to which students respond positively, especially when they make the discovery that despite all efforts at academic objectivity, a well-presented paper will get a better grade than a poorly presented paper.

Other Facets

Paper printing is far from being the only form of publishing; many believe its days are numbered. Web publishing is the most visible of various purely electronic forms of writing dissemination, and despite its short history it has already developed its own sets of protocols. Interestingly enough, web publishing is one of the few areas where writing instructors habitually *do* take an active interest in encouraging students to think about the presentation of their writing. Future developments may make it easier to extend this to other forms of writing.

For example, the HTML language which is currently the mainstay of web publishing may soon be supplanted by XML, a more flexible language (though a derivative of the same original mark-up format, SGML). XML is more than merely a web publishing format, however. Amongst other things it is also the core of the Open eBook format which Microsoft's eBook Reader (its "LIT"format is a form of packaged OEB) is in the process of bringing to prominence.

Writing for electronic media makes it all the more important that students are instructed in *principles* rather than simply force fed the ready-made formats of yesteryear. One of the essential points to understand in making efficient use of mark-up language is that of structure. The use of, say, *italics* in writing has become an almost invisible convention: experienced writers use it without hardly noticing why they do so. But as should be made clear in teaching writing, italics are used to denote a certain function: which may be emphasis, the title of a work, a foreign word or any one of several other functions. In electronic publishing the text will be tagged according to its *function,* and not according to its visual appearance (the visual appearance can be specified separately and can differ by medium: italics are better in print than on screen, for example). In XML, or indeed any structure-based system, we would therefore write something like: "The use of, say, <emphasis>italics</emphasis> in writing has become an almost invisible convention."

Teaching document format in terms of representing structures also encourages the use of the "styles" and "templates" functions of word processors, features little-used by non-professionals, yet which genuinely harness the power of the computer to make the task of producing finished copy more efficient. Computers excel at performing repetitive tasks with a single command, so there is no need for formatting to be handled on a case-by-case basis. "Styles" are effectively formatting macros: programmable collections of formatting commands which

can be applied to standardize the appearance of text with specified functions. They make formatting revisions easily and speedily achievable. Collections of styles, combined with information about margins, page size etc, are "templates". Because these can all be specified by the writer, it is possible to generate templates for different jobs say, one for academic papers, and another for books. If the names of styles are kept consistent, the same document can be used as both an academic paper and a book, and the format adjusted by just loading a different template. A good example of how these functions of Microsoft Word can be taught to L2 English Composition students can be found at the Hong Kong University Web page (http://ec.hku.hk/writing_turbocharger/).

Conclusion and Recommendations

Writing instructors, challenged to impart to students some rudimentary understanding of formatting, shrug. "It's not important," they say, meaning, of course, that it is not important to them. If the same scenario were replayed, but with the word "spelling" or "grammar" replacing "formatting" then what would we think of the instructors? Yet spelling and grammar are, like formatting and letterforms themselves, merely conventions adopted to facilitate communication. Like it or not, the IT revolution has taken stages in the publishing process which were formerly the preserve of compositors and printers, and put them right on the desktop.

A conscientious educator, shocked by this state of affairs, might ask "What am I to do?" It's a fair question. As already noted, the circular state of affairs in academia means that there are few resources which even begin to address this issue. Some that do are noted in the references for this paper. Looking outside the academic field, an old pair of books by Robin Williams, *The Mac is Not a Typewriter* and *The PC is Not a Typewriter,* are good starting points from the purely print-based perspective. The same author, who has undertaken something of a crusade on this subject, also produced a book called *The Non-Designer's Design Book* which is effective at developing simple visual strategies for those lacking in confidence. But even those old favorites of academics around the world: *The Chicago Manual of Style,* and *Words Into Type,* contain ample resources about publishing. All that is really needed is the leap of faith: for writing instructors to realize that they are now teaching not only composition in the conceptual sense, but in the graphical sense too.

Notes

[1] Macintoshes, which have always had more input from the design community, have a somewhat more generous default font size of 12 points.

About the Author

In addition to teaching at Nanzan University, Paul Mason has 17 years'experience as an editor and publisher.

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