Everybody Should Have One

The everyday use of computers in teaching English

Doug Englebart, one of the founders of the way we use computers now, believed passionately that computers would augment the power of the human brain. This was quite difficult to demonstrate when computers filled rooms and were less powerful than my digital watch, so he invented a practical analogy. He took an ordinary pencil, tied a brick to it, and persuaded someone to try and write with it. Computers, he said, would untie the brick from the pencil.

And so they have. The evidence is immediately in front of me, in the word processor that I am using to write: the difference between that and a typewriter feels exactly like the difference between the pencil with and without its brick. The computer has transformed two thirds of the way I work as an academic, the research and administration, beyond belief and beyond recognition. And the teaching, the other third? No effect whatsoever.

Until, that is, last year. In the last academic year (1997-8) I used a relatively simple and easily available set of new (and not so new) technology components that have transformed the way I teach: it is not too much to say that they have untied the brick from the pencil.

The room I work in is fairly standard for what used to be called the Faculty of Arts. One end of it, opposite the door, is a window, with a table in front of it. I sit with my back to the table and window, facing a loose circle of 13 chairs. On my immediate right is a small table; against the far wall, on my right, is a filing cabinet. The only teaching aids are a whiteboard, on the wall opposite to me (which makes it almost impossible to use) and books, which line the wall on my left. And a decrepit chest, in the middle of the floor, useful for supporting coffee cups and discussions of ontology.

In that room three types of teaching take place: lectures, seminars, and presentations. In a lecture, I do most of the talking, and my objective is to present material that I know and the students don't in such a way that at the end of the seminar we all know it. In this relatively small room lectures are usually quite interactive. In a presentation it is the job of a sub-group of students to present to the other students, and to me, and to organise discussion of the presented material. And in a seminar the aim is discussion only, directed and shaped by the teacher but coming mostly from the students. All of these are perfectly possible with the equipment at hand; but, with the addition of some relatively cheap technology, all have been more or less transformed.

The technology is very simple. Perched on the filing cabinet is an elderly but very serviceable 18 inch TV set. This is hooked up (via an adaptor) to a laptop computer that sits on the small table to my right. The laptop is linked to the Internet, and to a printer. And that's it. There are two add-ons, which are not essential but greatly extend the power of the computer. One is a small digitiser pad, which enables me to draw and paint on the TV screen. The other, rather more important, is a digital camera. These are now mass-market consumer devices, and get cheaper and more powerful on a monthly basis. Mine enables me to capture any image and display it in seconds. It also functions as a basic but serviceable photocopier. Software? I use a simple drawing program, a word processor with an outline module, an image editor for tidying up photographs, a simple web-page creation program, and a Web browser. All of these, like the camera, are mass market devices, which means they are cheap, highly available, and designed to be easy for anyone to use with minimal training.

The addition of this technology has changed the feel of the room very little: this is important. Discussion does not take place freely in an excessively wired environment. But everyone is a very sophisticated TV user now, which means that the TV set is invisible when it is not being used; it also means that when I switch it on (in seconds, with a remote) all eyes swivel to it automatically. I can restore the focus on me as speaker or on the centre of the room in discussion equally easily. In fact the TV is completely unobtrusive (being silent) even if it is left switched on. The laptop is equally unobtrusive and equally silent, which is why it is important to use a laptop rather than a desktop computer: the slight but penetrating hum of the fan is distracting, but much worse is the fact that if the teacher's attention shifts to a VDU, it is as if he has started a private conversation: rapport with the room is instantly lost. This doesn't seem to happen with a laptop screen. And, finally, it is essential to have a permanently hooked-up TV. My Department possesses a large communal monitor balanced precariously on a tower with wheels. This can be trundled down the corridor, teetering dangerously, installed in the room, and hooked up: not
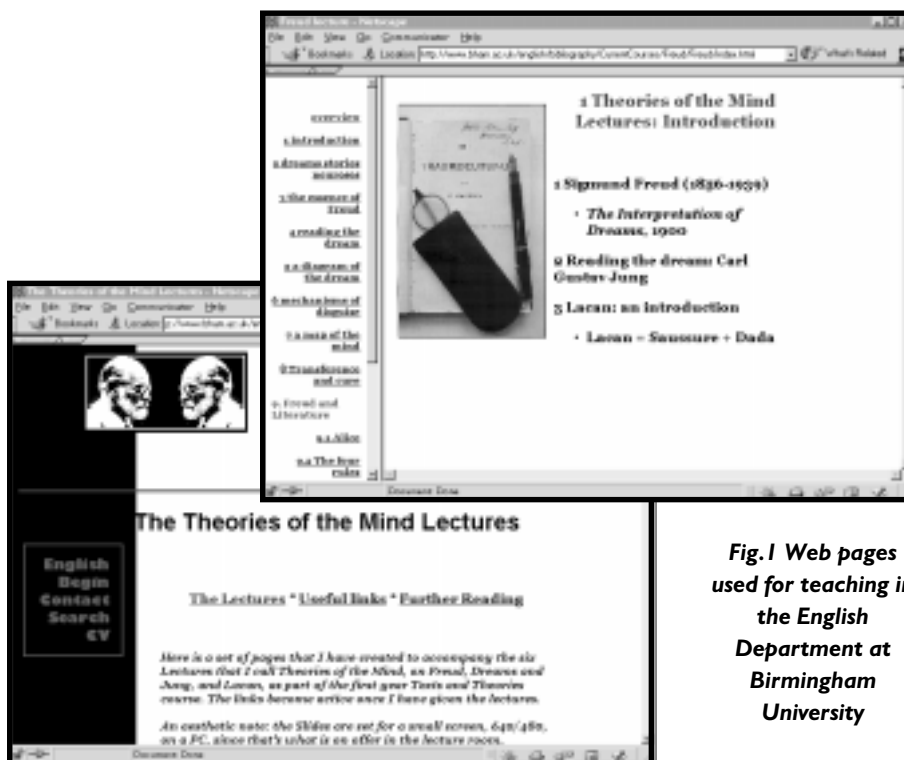

Fig.1 Web pages used for teaching in the English Department at Birmingham University

a graceful nor a speedy procedure. It sits in the room about as unobtrusively as the monolith in 2001. And as often as not it can't be persuaded to work, because the last user has reset some arcane but essential parameter: you are left with a non-functional monolith, a set of prepared images that you can't display, and a ruined seminar. I bought the TV in a sale for £60, out of my own pocket. It was very well worth it.

So: what can all this do? Well, to begin with, lectures are transformed. The TV is a slide show: it shows diagrams, outlines, quotations, booklists, digital photographs, images filched from the Web, anything at all. I prepare all of this in advance as a series of Web pages, and upload them after the lecture so that students can use them for revision or the basis for further work: they are constantly available to anyone with access to a Web browser. The Web is now very information-rich, and has pictures of nearly anything one can ask for; the digital camera can capture images from books or magazines (all of this with due attention to potential copyright problems, of course) and from real life, and anything digital can quickly be put on the Web, displayed, and preserved. It is like having an infinite window, ready to power up and point at any part of the world I wish, waiting unobtrusively for me to awaken it.

Seminars? The TV is a whiteboard. I can draw diagrams or sketch pictures. I can also type names or references or unspellable words in neat 24 point serif letters in a typeface of my choosing, for all to see. I can use an outliner to summarise discussion as it progresses. I can make an image or images the object of discussion: a painting, say, downloaded from the Web. There is a feeling of limitless possibility. And all of it can be uploaded after the seminar as a permanent (or impermanent) record for revisiting and revision.

Presentations? In the real world, the way to make a presentation is (increasingly) to display a set of computer screens, via a monitor or a projector or a set of printed OHP transparencies. Students are nervous of this, but when they find out how easy it is, they take to it with increasing eagerness; they are well aware of the value of the experience for CV purposes. It also encourages them, by externalising the content of their presentation, to lift their eyes from the prepared script and interact with the TV and the audience. They like it.

The results of all of this can be seen on my Web site, http://www.bham.ac.uk/english/bibliography/. However, this is not, like the Web itself, a finished product. In fact, like the Web itself, it is a bit of a mess. And if you look at it when I am in the middle of a teaching term you will find it even more messy: web pages created on the fly, amateur student efforts, archaeological layers of pages dating from previous courses, and so on. It is very good to have educational sites on the Web that present finished products, like published books; but more and more, I suggest, as teachers become familiar with the possibilities of the medium, this sort of site will pop up: like a snapshot of a whiteboard after a busy teaching day, and equally easy to use, but infinitely more powerful.

All of this is now an essential part of the way I teach. To go back to the status quo would be exactly like tying the brick back on to the pencil. I recommend it: in fact, I think everyone should have one.

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