

## SCANNING THE HORIZON

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I am going to start my talk with an anecdote to illustrate what I believe is the state of the art of using modern technology. The situation I shall describe is rather negative, but I would like you to view it as an example of trying 'to fit square pegs into round holes', in other words, misuse of modern technology. I shall go on to argue for what I believe to be the 'proper' use of modern technology and why I believe this to be the case. Finally I shall look in some detail at the implications of the use of modern technology for teaching and evaluating students' written work.

Sitting in a lecture hall the other day waiting for a conference to start I was faced by an OHP, a slide projector, a video player and projector, a television, three microphones and two screens. As all four of the people plugging and unplugging apparatus were situated to the left of the dais, I immediately moved to the left-hand side of the row I had chosen to sit in as I believed that that was the only way that I would be able to see anything on the screen which was located at that end of the dais. The screen displayed a cry of help from the machine which begged someone/anyone to please check the connections as no input signal was being received. This message was to return to haunt us intermittently throughout the conference. Things became more complicated for my position in the row when the people helping to set up the equipment moved over to the other end of the dais to focus the slide projector and OHP onto a second screen set up at the opposite end of the dais. I decided to wait where I was for further developments and, sure enough, the screen had to be moved further back so that the slides could be properly focused on it and, even though the projector was placed on a special table for this purpose, the angle was not suitable so that first a box (telephone books being hard to find in a lecture hall) and then some pieces of polystyrene were found to raise the legs at the front of the projector. Ah, I thought, books will always have a place in this world of modern technology. Rather like a Hoffman story, the fact that the screen had been moved so that the slide projector would focus meant that the OHP had lost focus and frantically we in the audience, who had suffered from similar problems, tried to communicate this fact to the young lady who had set it up in the first place, but to no avail.

After thirty-five minutes it looked as if the conference could begin. The portable microphone was hoisted by the person introducing the first speakers but nothing could be heard. A switch was indicated on the base of the object which was duly turned on and we were off. The first speaker was giving us a talk on new technology but he hadn't brought the actual computer program that he was going to discuss so he would attempt, by means of the slide projector and the video, to demonstrate what it did. The OHP was also made use of to illustrate some of the points in his talk. The lights were dimmed to help us to see the slides. Another problem arose, slide number three was back to front. Out it came and was turned this way and that and replaced in the carousel. This time the third slide was upside down. Off came the cover, turn, twist, peer and back it went. During this process the projector had slipped off its polystyrene support and we were looking at a lopsided picture on the screen. This was corrected and backwards and forwards we went through the slides. The third slide now disappeared into the projector and wouldn't come out. Off came the carousel and fingers disappeared into the recesses of the projector, the slide was recovered and off we went again. But no, this time no slides would appear. On came the lights and a helper or two appeared and began to dismantle the slide projector. The speaker decided to use the video the lights were dimmed and all went well for a while. Then he needed to move forward to another frame to illustrate what he was saying but he couldn't see the buttons to press and so the lights had to come back on again. Then he forgot to press the scan button to find his pre-prepared frames and so we stopped and started for a few moments, with some Keystone cops chases in between. These are always so much fun for the audience.

A colleague sitting next to me in the audience had already whispered after the first thirty minutes that she supposed that anyone who was at all put off by new technology could only be having their worst fears confirmed by the antics we were watching. She also mentioned an experience that she had had a short time before which had made her ponder whether using modern technology was a worthwhile activity. She had taken her office computer into the classroom in order to demonstrate a mathematics application she felt her students should see but this had involved dragging out the cables which were cunningly hidden behind her bookshelf. So much effort expended, she said, for so little. The second speaker at the conference after many of the same problems outlined above told us that she had learnt that modern technology should not be used in presentations of the type

she had just given us. So many negative views from people who believe in the value of modern technology and who reflect their country's position on the use of modern technology in education.

The U.S. Secretary of Education, Richard W. Riley, in an article entitled *Education in the United States* in the Electronic Journal of the U.S. Information Agency **U.S. Society & Values** December 1997:6 argues for American schools using new technology. He claims that, "Computers and other forms of telecommunications technology are a vital part of a sound education future and offer tremendous potential to help students learn basic and advanced skills and even complete academic programs and graduate degrees." However, in the same journal 1997:36 Dr Seymour Papert of *Mindstorms* fame warns that the use of technology in education is at a first stage, rather like the first movie cameras which were put "in front of a stage on which actors performed as they always had", in which "technology is used to enhance what people did before without it."

This continues to be the crux of the problem; so much time and trouble is spent on preparing materials to use and then there are so many obstacles to using the materials and making the most out of them, largely because the changes that need to be brought about have not yet happened. Classrooms have not even adapted to the proper use of the overhead projector. As the name implies, OHPs should project information OVER our heads and not on the wall or screen immediately behind us! Jones (1984) describes how the OHP screen should be pointed away from the windows and should be at an angle of 30° so that the image is square. He was not up on the latest methodological ideas however, and recommends using a permanent screen on the OHP if a shadow is cast by the teacher onto the projected image. We now all know that teachers should stand to the left of the OHP and not turn and talk to the screen. Lifelong education is a tenet of all modern educational policies but it seems that we take a lifetime to learn some lessons. The problem is that however much we learn to use these and other aids, we will never be able to put our methodology to work when the circumstances do not permit us to do so.

The European Round Table of Industrialists in their report *Investing in Knowledge The Integration of Technology in European Education* February 1997:4 claim that Information and Communication Technology (ICT) "has an essential role to play in European education where it can improve individual performance, enhance equality of opportunity and help combat social exclusion."

I would draw attention to their focus on "individual performance" and "social exclusion". It has become obvious to me, despite much effort since the nineteen eighties, that the idea of using computers for whole class activities is very unlikely to become the usual methodology for computer use in the language classroom. The prevalent model is for individual use (or perhaps pairs) with all the concomitant complaints of how computers are leading to the increasing isolation of young people today and even causing the breakdown of the family! However much these effects are to be deplored, this individual, isolated use of computer technology cannot be ignored. Communication with other human beings then takes place mainly through the written medium, via the computer keyboard. This state of affairs has led to a lack of means to discuss some of the aspects of the way that computers are used. A simple example of this is through punctuation.

### Punctuation

A glance at a computer keyboard shows all of the following: ( ), { }, [ ], < >, « » but do you know what they are called in English? (Answers: round brackets, braces, square brackets, angle brackets and chevrons.) A quick survey of my colleagues showed that some of these were not usually referred to, merely used and their names caused considerable debate and speculation between us. Microsoft computer manuals do give guides to their (idiosyncratic?) use of these and many other computer *icons*, *buttons* and even types of *cursor* ( a word which appears to have fallen into disuse these days, *arrow* or *pointer* being used in preference ).

Other examples of the way that punctuation has changed because of computers are web-site and e-mail addresses. How do you say: <http://www.nbceurope.com> or my own e-mail address: [susanhow@dlc.ua.pt](mailto:susanhow@dlc.ua.pt)? The *oblique* or *stroke* has now become *slash* and computers are responsible for the invention *backslash* used to return to the root directory in MsDOS. Similarly, the *full stop* or *period* is now a *dot* and who would ever have predicted that the *colon* and the symbol for at @ would become so important?

One could of course debate whether these are important and whether we should be concerned that we cannot tell others our e-mail addresses and talk about interesting web-site locations or that our students cannot understand us unless we point to keys on the computer keyboard or icons on the monitor. Punctuation, besides not being fixed or static anymore than the English language is, seems to be an area that is often overlooked in

teaching and, in turn, this means that our students as future teachers will be in no position to teach what they themselves have never learnt. But just as we are at the mercy of the book publishers for punctuation norms in print, we appear to be at the mercy of Bill Gates and the Microsoft Corporation for the modern names applied to word processing procedures and keys on the computer keyboard.

In terms of teaching Portuguese students, it reminds us that those *difficult* letters of the English alphabet like *h*, *w* and *y*, have assumed even greater importance in the world today. Moreover, being able to pronounce them correctly is an important skill and demonstrates the difference between the educated foreign language speaker and the person who has perhaps at best only a partial idea of how they are said. The latter may produce some vocal representation which raise a laugh (or worse still versions that meets with embarrassed silence).

So much for individual letters and punctuation, what about long pieces of written work?

## Bin Theory

Using a word processor in order to write assignments or dissertations has changed many of the traditional approaches to written work. In the past teachers would tell students to structure their work carefully. The students would be told that the means by which they could achieve this was through writing a plan and then sticking to it. Time was spent studying cohesion; how to connect sentences and paragraphs, and how to write introductions and conclusions. This may no longer be important when students using a word processor can start at any point and then add an introduction, a conclusion or further examples to illustrate any point they wish to make later. They can perhaps even consult a thesaurus to find alternative words to use in the text. Although it could be argued that there are similarities between word processed writing and what is known as 'process writing', I have dubbed this new manner of writing *Bin Theory*.

Bin Theory's first premise is that in a long piece of writing writers will write on any aspect of the topic without following a linear or logical order. Secondly, writers will move on to any other aspect of the topic that they feel ready to say something about without attempting to connect this to the other work in progress. In this way writers develop a number of *bins* which

contain different amounts of work on different aspects of the same topic without having any obvious logical connection or relevance to the other *bins*. Writers can return to any of these *bins* later and add or delete work until they have exhausted that aspect of the topic or perhaps their knowledge of it. Finally writers can arrange these *bins* in any order that appeals and connect them together as necessary. This final stage can be the most difficult as only one screenful of information can be seen at any one moment and so an overview of the document is difficult to obtain until a hardcopy (a printed copy) of the document is produced. (This state of affairs, incidentally, explains just why it is that *more* paper is used up when working with computers rather than less, as the first printed version invariably contains errors that will need to be corrected, perhaps more than once, until a satisfactory document is produced. )

Bin Theory would appear to be more akin to process writing where students are asked to jot down all their initial ideas on a certain topic and then develop any one of those ideas. However, through word processing it is possible to develop *all* of the ideas the student has on a particular topic which may lead to some very disjointed work. It seems possible by working in this way to be both exhaustive and fragmentary!

### **Evaluation**

After the students have used the word processor, optical scanner, e-mail and the internet we come to the question of evaluation. Bin Theory may have seemed to suggest totally original work done by students but this may not necessarily be the case if students have access to other multimedia applications like encyclopaedia and the internet. What may increasingly be the case is a mixture of original and other factual information on a particular topic, often presenting widely differing styles and registers of English.

If students have scanned information from books or magazines which is then included in their work, there may be a number of characteristic or telltale signs of this, apart from the style differences mentioned above. If there are some strange letter combinations like an *r* for a *t* or *f*, an *m* for *rn*, or a *v* for a *y* you may well be reading material that has been scanned from a book or magazine.

One other use of the *bins* of work produced is to apply some or all of



them in a new combination to satisfy the teacher in another discipline who has been set a topic which could conceivably be covered by some of the work originally produced for another topic entirely. An example of this might be work done on the environment being used in an argumentative essay on whether animals should be kept in captivity. Work of this kind often shows little adherence to the topic as set and often meanders away completely as it was written with a different emphasis in the first place and the students want to include as much as they can get away with.

How should this kind of work be evaluated?

We can always ask the students to own up to their sources by giving a bibliography, of course. However, it is the wide range of possible combinations in written work that can cause the most difficulty for attributing grades. The work may be:

- a piece of work that is totally "lifted" with no input whatsoever of the student's own but totally appropriate;
- work that is a patchwork quilt of information loosely stitched together by the student and where the seams are all too obvious;
- a totally original piece of work which has nothing like the same content of the former or which uses previously researched material on a similar topic.

In the past teachers could always console themselves that at least students were copying out good examples of English which, through the laborious longhand method, may have caused the student to absorb some more or better English. In contrast now, by downloading or scanning information, the students may feel that they only need to give the information a cursory read to be sure that it is on the right topic before including it 'wholesale' in their work.

Furthermore, the experience the student has of word processing may also introduce dilemmas into the process of grading. Some students will be only too aware that they can use a spelling checker on their work and so only inappropriate words will indicate that this checking has been done by the computer and not by the student. An example of this would be *there* - *their* or *now* - *know* both 'correct' words but clearly defined and distinguished by their contexts, a feat the computer still cannot achieve alone and would therefore not be corrected (even typing errors may sometimes be overlooked when they lead to the production of a correct word, for example, *the* - *they*, or *tin* - *thin*.)

How the teacher evaluates these differences in written work needs to be addressed as we are now facing a situation where not only content may be obtained through the computer, but errors may also be corrected by the computer itself. Experienced computer word processor users can also change the look of their work quite easily and often manage to stretch a piece of written work to something which appears to be of about the stipulated length. Will we have to get the students to indicate the number of words in a document to compare length more accurately, another feature which word processors provide? Alternatively, will students use this word count feature to produce precisely the number of words that have been stipulated for an essay? Will this not be detrimental to the quality of the work produced because of the preoccupation with numbers of words? Most of us have had the frustrating experience of students demanding to know exactly how long a piece of work must be as soon as it is set.

I would like to present one final example to illustrate just how difficult this evaluation process can be: One of my students in the third year of the Portuguese/English course studying American culture produced an assignment on American sports. She not only scanned some information from the book on American culture that we were using but also put this together as a multimedia file which was accessed using Netscape Navigator. The class used the multimedia program as an exercise in the computer room. The program allowed the students to find further information by clicking on words which were highlighted in the text and they could see some animated visual displays of some of the sports described. Very little of the work was original and it was only too apparent which pieces these were because of some tortuous sentences and grammatical errors. There were no spelling errors, of course. How can such a piece of work be evaluated? It was effective, the rest of the class found it interesting and it was well put together. The only problem was the student's English. As this student will eventually become a teacher herself, should I console myself that her teaching materials will be very well produced, interesting for the class and even well-written provided that she doesn't write any of them herself?

I should be interested in hearing from anyone who has had similar experiences as to how they overcame these problems.



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