

Micro computers in an art department

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In the Autumn of 1987 we were given the task of evaluating the use of a computer for Computer Aided Design by the County. The package provided was a BBC Master, double disc drive, colour monitor and an Integrex colour jet printer and the AMX Art programme to help us produce images. As I recall, there was no demonstration given in the use of this new equipment but simply the accompanying booklet. As an art teacher for over twenty years and with no previous knowledge of computers, I found the booklet poorly written, filled with jargon and expressions which were mostly unintelligible to the average teacher. I appreciate that all new technology develops its own peculiar syntax but, even after two years experience with similar packages and programmes, I feel that the people who write and produce much of the software material assume far too high a level of 'computer-speak'. I liken it to driving a car or switching on a light: most people can get by without knowing in detail the workings of the internal combustion engine or the physical laws of electricity in order to make these things work. I want a guide that simply tells me which button to press and in what order to make things happen. As far as I am concerned, lack of time and even interest, preclude me from programming or configuring in any kind of language. Computer people really do love to have their secret language and use their 'buzzwords' to confuse and preserve the mystique of what is essentially a piece of hardware which will produce results quickly.

As an Art teacher, I require the speed and flexibility of the micro in order to give as many children as possible just another tool with which to create. Back to the beginning in 1987: we soon learnt how to 'boot up' the programme and produce a screen on the monitor which allowed images to be drawn on it. The words 'boot up' apparently mean pressing two keys fractionally one after the other when the computer groans and coughs and mysterious figures appear on the screen. Pressing a couple more keys on a 'mouse' in a certain order makes the screen change to a drawing area with coloured icons on the side and bottom which do

various things when you point at them using the mouse. This is a small grey object with two or three buttons on it and joined to the computer by a cable (the tail) hence the name 'mouse' ho ho.

As a basic guide to using computers I must perhaps point out that all of the above happens only if you have inserted the correct floppy disc into the appropriate drive. The disc is rather like a black CD disc and has two sides but one doesn't have to turn it over, oh yes, and it has to be 'formatted' first. As I recall, I don't think the instruction manual mentioned any of this — such information has to be gleaned from various sources, the most useful of which should be the computer studies teacher in the school. Based on bitter experience, I would suggest that children's work be saved on specifically identifiable discs rather than hearing the familiar cry the next week of "it was on a black one"!

Hopefully some of the basic starting-up procedure has been done and the teacher will have discovered how to begin to produce images via the printer. Everything on the screen is transitory and is gone for ever if you accidentally press the wrong button unless it has been 'saved' onto yet another disc. This is, in all fairness, explained in the manual but thirty seconds instruction by someone who understands these things will make such turgid reading unnecessary. We now have an image we have produced on the screen and can recall it from disc to add to or change so that, assuming the printer has been 'configured' correctly (that means it will work with your particular micro), then more buttons can be pressed and rather like watching a washing machine, one can wait for four minutes for the print to produce. The largest size print is A5 on the BBC AMX system but it is in colour and has a professional appearance. If sadly you have no access to a colour printer but only a black and white dot matrix printer, then much of what you produce is rather like opening the kiln after an incomplete firing, dark and gloomy and not a pleasant sight. The point is that Art Departments need colour jet printers to achieve creative results. Overprinting can produce quite exciting

effects but it does take twice as long and necessitates printing being carried out throughout the lunchtimes, after school etc for while printing, the system cannot be used and four minutes can be a long time with a queue of eager pupils waiting to 'have a go'.

The small size of the image produced is a drawback but, by clever joining of repeat patterns etc, lengths of print can be made. A major breakthrough was made soon after acquiring the computer set up when one of the teachers in the Department discovered that the ink jet printer would print directly onto fabric if it were good quality cotton and attached to fan-folded paper. The colours are not fast and required treatment with Scotchgard or similar to be permanent but lengths of printed fabric have been sewn together and made into cushion covers, scarves and ties etc. I cannot really see the possibility of dress lengths or curtains being produced with the present set up but then we are a school rather than a factory and the principles of production have been practised at least. I find the speed of production of the ideas the chief attraction in the use of the AMX system especially for 'repetitious shapes or geometrical configurations. I see little point in painstaking drawing with a brick which is basically what the mouse is like to use as a drawing instrument. I visualise simple basic images being produced quickly, printed, taken to the photocopier and distorted, stretched and possibly further manipulated, projected via an Epidiascope and larger scale works being produced.

Speed of production and the ability to produce professional results especially by the less able, are the major attractions of the AMX art programme. Obvious limitations are the initial size of print and the slowness of the actual printing process but such difficulties can be overcome utilising other mechanical methods of production as indicated above. After seeing experiments carried out within the Computer Studies area of the school using a Video digitiser in a BBC Master, I invested just over £100 of the capitation in the purchase of an Eprom chip (whatever that was) and

digitising package (which did not include a connecting cable) from Watford Electronics, to enable the Art Department to investigate the possibilities of this additional facility. Here I do have to give credit to the Computer Studies teacher who worked out a compatible programme to enable us to make this digitising box of tricks work with our equipment. Basically the magic box and other mysterious bits and bobs split any video source picture into individual pixels which produce an effect of myriads of tiny dots in varying degrees of colour which can then be printed out almost as crude Polaroid pictures.

When the micro has been switched on and the programme booted up, the screen gives a series of headings from which to choose, 'digitise the image', means that the picture from the video recorder comes up on the monitor screen in various colours according to which particular 'mode' one has chosen on the control unit. This is scanned every couple of seconds and, by pressing the space bar on the micro, it is possible to 'grab' the image and save it on disc and print it out. If you possess a slow motion replay facility on the video recorder then it is possible to grab sequences of images rather like Muybridge's early experiments. One can control the colour intensity, definition, final printed effect etc by manipulating dials and it can be quite a creative process and not simply a matter of printing the pictures. Inventive and creative possibilities can involve printing the image in a different mode to the original chosen and generally extending and distorting the original concept of the digitising facility. Many 4th and 5th year pupils are making digitised versions of their graphic works and projecting digitised pictures via the Epidiascope (quite the most utilised piece of hardware in the Department) as well as 'out-dotting' the pointillist painters by digitising Seurat and Co.

We additionally have a Grafpad package with the BBC Master but this has been little used as we are still awaiting a 'compatible configuration' programme so that manipulated digitised images may be printed out. There is only one 'user port' on the BBC micro which means that constant interchange of differing facilities produces a lot of wear and tear on the one micro. Since 1987 we have gained an Acorn Archimedes computer which is a vastly improved and more creative machine than the BBC Master and, in conjunction with the Clare Artisan programme and the smaller and more durable hard discs it utilises, much



excellent work has been done with this machine. From September this year, an additional Archimedes was gained and using Art Nouveau programme, this, too, is in constant use to produce graphic images of outstanding quality. The Art department shares facilities additionally with a Foundation area of the school curriculum which has resulted in three further Archimedes being put to use as well as a Canon ink jet colour printer. There is an old Epson dot matrix printer but a desperate need exists for another colour printer as the one in the main art area has to serve the needs of two rooms and three computers.

Because of closer links with other areas and the advent of Design Technology, a further eleven Amstrad computers and four black and white printers, mainly for use by the Business Studies area, have become available at certain times in the week. The possibilities of these are enormous as there is a De Luxe painting package (I do feel the names computer people choose for their products are very silly at times) which is an up-dated version of the AMX programme but, better still, is the 'Signin' programme which consists of a series of differing letter styles which can be printed out as individual letters up to A4 size. If fanfolded paper is used and the 'vertical' selection is made, then lines of any lengths are possible. I visualise the era of poorly proportioned and awful felt-tip lettering on notice boards in schools to be over from hereon. Assuming a three minute instruction programme to all staff and the ability to spell correctly, then there is no reason why layout and notices in schools should not be highly professional. There is a need for INSET for all staff to be made aware of good design and layout and, with the proliferation of new technology in schools, this should be easy to achieve. Fear of new technology by staff could be solved if proper training were given by enlightened tutors, who, by encouraging others to utilise Information Technology, would benefit the education of all. The advent of computer technology in one High School at least has changed our lives and produced new and exciting image-making processes. In the end it is only a tool which we hope we are using creatively by extending its potential in as many diverse ways as possible. The best is yet to come we feel and the fast production of graphic images allied with computer technology has certainly modified and extended the nature of art and design teaching for ever.