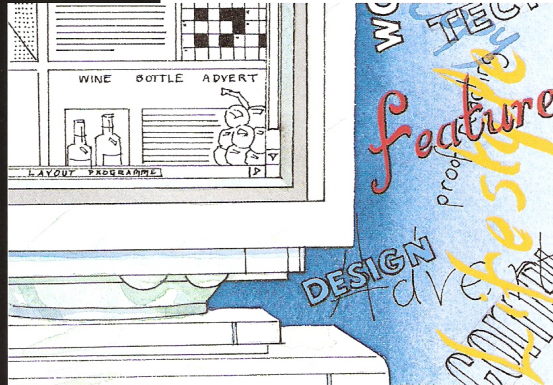# LEARNING TECHNOLOGIES

Computers and Disability

ENGLISH WITHOUT TEARS

Literacy problems can have a huge impact both on the self-confidence of the individual and on the scope of his or her employment prospects. Basic reading, writing and numeracy skills can be lacking for all sorts of reasons, including failure at school and a whole range of physical disabilities. There are also many UK residents for whom English is a second or third language. Recent estimates indicate that as many as six million people may lack basic reading, writing or numeracy skills.

Open Learning is particularly suited to the needs of adult learners. For adults with poor literacy, the flexibility and privacy of the computer environment is an ideal solution. In a discipline such as literacy teaching, which has traditionally depended on intensive face-to-face contact, an Open Learning package can provide essential support for the tutor and practice opportunities for the learner.

The Employment Department has funded two projects designed to capitalise on the versatility and suitability of the Open Learning environment for the adult literacy student.

The Reading Disc was developed by Cambridge Training and Development (CTAD) and is specifically oriented towards teaching English reading skills. Sheffield-based Sanderson CBT (formerly System Applied Technology) has developed a support package for literacy tutors based on 'Smartwriter', an existing word-processor for literacy students.

The Reading Disc

Adult literacy teaching has advanced considerably in recent years. Taking account of the latest thinking in this specialised area, CTAD

decided that its software package would be based on the Language Experience Approach which encourages the individual to define the content of his or her practice materials. Research has shown that progress is maximised when the learner is able to read or write about his or her own interests. The interest factor is successful in overcoming motivational problems.

Before developing The Reading Disc, CTAD canvassed the views of some 300 literacy students at reading centres across the UK. Feedback was analysed, providing the company with a body of information about preferred topics and materials.

The Reading Disc is divided into four areas:

- writing a magazine article
- having an argument with the computer
- designing a magazine cover
- map reading.

Each of the exercises enables the user to access reading materials that he or she has selected or even created.

In 'Writing a magazine article' the user chooses from a series of ten suggested topics. A selection of five headlines and 15 sentences is then offered, from which the user builds up a one-page article. 'Having an argument with the computer' creates the opportunity for a dynamic exchange between the user and the computer. Five topics are offered and the student is encouraged to argue with the presenter who

appears on the screen. In the course of the 'argument', the user creates replies by selecting from a series of 15 sentences. Again, final versions can be printed out.

'Designing a magazine cover' and 'Map reading' are more visual. In the former, the user selects a name for the magazine on the basis of its contents and chooses titles and headlines for individual articles. The map reading exercise gives the user a choice of a series of routes to follow and progress is made by moving a mouse and reading directions.

The Reading Disc was tested at ten reading centres across the UK and feedback was unanimously positive. Users commented on the flexibility and versatility of the system and students who thought of themselves as poor readers were encouraged by being able to perform well in the self-assessment modules.

In 1992 The Reading Disc won an award as the best CD-ROM XA programme in its class. It will be published by Philips and sponsored by the Adult Literacy and Basic Skills Unit. Twenty five centres have already acquired the system, including libraries, Open Learning and Adult Centres and Further Education Colleges.

Support for the Literacy Tutor

Sanderson CBT's support package for literacy tutors was devised in response to demand for a system that would enable tutors to produce lively learning materials easily and effectively.
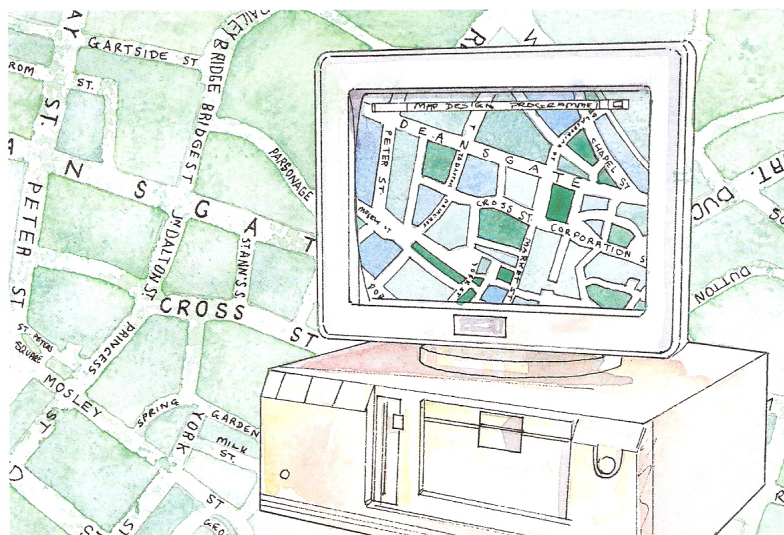
The project was an extension of 'Smartwriter', an existing word-processing package for literacy students. The new system 'Smartwriter Plus' is an authoring tool for literacy materials, able to produce both pictures and text.

A pilot version of the package was created, incorporating sample learning modules in which the screen acted as a picture-menu for a series of different lessons. Field-testing at nine sites in the UK with 16 users involved a one-day training course, followed by further on-site training. The aim was to establish whether tutors could produce or modify training materials using the new software.

Feedback was positive and all tutors were able to produce new materials after only a short training period. More than this, the trials yielded innovative and creative ideas as to how to use the system. These ideas were incorporated in the final version of Smartwriter Plus.

Technology

The Reading Disc uses a combination of the latest compact disc and computer technology in a CD-ROM XA environment. The disc provides up to 16 hours of recorded sound which can be played back in any order and which can simultaneously display images on a screen. It is thus ideally suited to the task of providing large quantities of text and pictures which can then be commented on in recorded speech.

Smartwriter Plus requires a 386 PC and eight MB of free disc space. In order to produce high-quality worksheets containing images or colour images a laser printer is a useful tool.

The Literacy Revolution

The Reading Disc and Smartwriter Plus demonstrate the contribution that advanced computer-based training techniques are making to a crucial area of adult education. The autonomy, flexibility and privacy of the Open Learning environment make it an ideal solution to the problem of training adults in skills that many have been reluctant to admit they lack.

This is one of three Case Studies exploring the use of Open Learning to train people with special needs. 'Look and Learn' and 'The Enabling Computer' describe Open Learning projects with the hearing impaired and physically disabled respectively.

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