The Influence of Technologies on Financing Options

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Introduction
Technology in itself is not important; it is what you can do with technology that is. Two processes are especially important to the education system. The first is the ability to store information and knowledge, and the second is to make it available. Traditionally, the former has used books and journals, and the latter has been via lecturers and the activities of publishers, booksellers and libraries. Now we have two technologies – the CD-ROM and networks such as the Internet – which will have a significant effect on these services, and it is worthwhile to look at what their implications might be.

Technology
The CD-ROM is a small disk which can store vast quantities of material: text, video, diagrams, and so on. It is able to be reproduced and attractively boxed at about £0.50 a time. The Internet is a means of connecting a personal computer (PC) to a vast warehouse of information and material stored on other computers, and to be able to search it or transport it to your machine. You can access the service from wherever you have a telephone line, and of course you can send mail to other people who have a connection, if you know their address! The use of both requires a computer. Both the CD-ROM and the Internet have their particular uses, although there are some who would suggest that ultimately the CD-ROM and its future derivatives will be displaced by the use of networks. However, more recent thinking is suggesting that it could be a hybrid combination of the two that will dominate the market.

Sadly, within many university funding systems, there is little incentive to make these facilities available, thereby denying many learners of the availability of lower cost services. With this situation it is likely that existing knowledge suppliers will turn towards electronic media and create the products and services once thought to be solely in the academic domain. There is nothing radical about this, as the textbook industry is already in the hands of commercial publishers. Communications companies, publishers, broadcasters and many other organisations will see opportunities, as some have already done, to create vast sources of knowledge in a tutorial format that go well beyond the current emphasis on information and data, and to make them available via cable, TV, the Internet, CD-ROM, and so on. This is a massive task and will require such organisations to work with academics to create the material. It is likely that areas of high demand such as Business Studies, will be fulfilled ahead of, say, Outer Mongolian Dialects.

Whether we like it or not these developments will inevitably create sources of knowledge and teaching materials, using text, video and sound – that is, multimedia – which will rival, if not exceed, the capabilities of our lecturers and textbooks, as perceived by many learners. It is from this
assertion that we have to look at the implications for funding our institutions.

Other Trends

1. There is an increasing realisation that more public money is spent on pupils and students the older they become, and that this is unfair, socially divisive and preserves a class structure. Coupled with the continuing pressure for more students to participate in post-secondary education, it seems that there will be an inevitable future decline in per-capita state support for universities, with funds being preferentially spent on primary and secondary schooling.

2. It is now popular to suggest that universities should service new markets and, in particular they should become more involved in life-long learning. However, current funding arrangements do not allow a seamless continuity between traditional undergraduate learning and that of the life-long learner. It is also clear that the life-span of much university learning is shorter than in the past, and hence the value added to the learner may depreciate rapidly and we have a poorer return on the investment.

3. Society has increasingly become more self-service oriented. We are now familiar with such services for retailing and banking, and the general moves from direct to indirect taxation also reflect the same approach. In education it is perhaps synonymous with student control. We are seeing it emerging with the growth of modular courses, where the student is able to have a greater choice over the content of their total programme. However, if we pursue the ultimate objectives of student choice, we must inevitably find the means to increase the range and availability of learning options. With a genuine choice, students can truly build their own learning strategies, which effectively match with their lifestyle and motivation to learn. This will be particularly relevant for the life-long learner or for institutions which really do believe in offering a seamless service. Transparency of learning options must include the cost, thereby permitting the student to be realistic in their choice. To be effective, however, the learner must feel that the inclusion of the cost of options has a personal relevance, that is, they control the purchase and can benefit by judicious purchasing.

4. In the past, university asset acquisition and management has tended to be for items with a significant depreciation period, for example, buildings and equipment. Initially computers also had a substantial life, often of ten years or more, but now the PC has a perceived life-span of far less. Until recently the PC was not a consumer item, but now high configuration state-of-the-art PCs can be found in the home, where their prime use may be for entertainment. This will place an increasing pressure on universities to be equipped with the latest models, or appear to be out of date. It is highly unlikely that universities can afford the level of purchase necessary to solve this problem of rapid value depreciation. The solution is likely to be that the learner of the future will provide their own equipment, with the university focusing on learning material distribution and access. The problem does not stop here, however, as the content of electronic materials also depreciates, and seems to have a shorter life-span of acceptability than the traditional book. This may be a reflection of the fact that these techniques have been mostly applied to fast-moving topics, but perhaps it is the vastly increased use of visual images that identifies the age of the material too easily.

5. Finally we have the issue of student expectations. To some extent this is expressed through the concept of self-service, but increasingly students are responding to the heightening of competition between institutions by seeking higher quality accommodation, better general facilities, and so on. We must also not forget that an increasing percentage of students are mature, and within the UK already over 40 per cent are over 25 years of age.