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ABSTRACT

Examination of the Open University's use of educational broadcasting indicates that it is a valuable resource but a continued emphasis on the hardware, together with a failure to recognize the problems which users may face, will mean that in many cases the results will not match the expectations. The emphasis is too often placed on the hardware when educational broadcasting systems are introduced rather than toward the individuals for whom it is intended, and students often do not possess the skills necessary to make full use of the educational broadcasting programs. Examples are provided from the Open University's experience. (CHC)

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EDUCATIONAL BROADCASTING:
TWO LESSONS FROM THE
OPEN UNIVERSITY EXPERIENCE

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Abstract

The Open University of the United Kingdom has developed a distance learning system which allows adults to study undergraduate level courses at home. Television and radio programmes form an important part of these courses. This successful use of educational broadcasting contrasts sharply with many other projects where the results have frequently not matched the expectations. After a description of the University's teaching system - and the role of broadcasting - this paper uses examples taken from the Open University's experience to suggest two reasons why educational broadcasting has not always been as successful.

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The Open University was set up to provide an opportunity of higher education for adults who were unable to go to university when they left school. Although students must normally be at least 21 years old, and resident in the United Kingdom, the University demands no other entry qualifications. In 1979, its tenth anniversary year, the University has over 75,000 students and has already awarded over 30,000 degrees.

THE OPEN UNIVERSITY'S TEACHING SYSTEM

Students, who are mostly in full-time employment, study at home and select courses from the list of over 100 currently offered by the six faculties - Arts, Mathematics, Science, Social Sciences, Technology, and Educational Studies. For an ordinary BA degree students must obtain 6 credits but for a BA (Honours) they need 8 credits. A credit is awarded for the successful completion of a full credit course lasting 32 weeks from January to November. During this time - although there are obviously wide variations - students can expect to have to devote 12 - 15 hours each week to Open University study.

Students study using a combination of specially written correspondence texts, set books, and specially produced radio and television programmes. Throughout the course optional face to face tuition is available at one of the 260 local study centres spread around the country, but a student's main source of personal tuition is by correspondence.

To overcome the problem of teaching science and technology with students working at home many of the courses in these disciplines also send students a home experiment kit. These kits can contain quite sophisticated equipment but there are obviously limits to what can be sent to students. This is one of the reasons why some courses have a compulsory, residential summer school lasting one week. Summer schools are held on the campuses of conventional universities when the students of those host institutions have left for their summer vacations. Each of the five introductory courses and some higher level courses (particularly those in science and technology) include a summer school. All Open University students will therefore experience at least one week of full-time study.

At the end of each course every student must take a three hour written examination at a specially designated examination centre. As with other British universities these examinations are scrutinized by independent external examiners to ensure that academic standards are maintained. Finally the student's grades for assignments submitted throughout the year are combined with the exam result to determine whether the student will be given a credit.

The Open University's headquarters are at Walton Hall, 50 miles north of London in the new city of Milton Keynes. Here new courses are designed by course teams which include central academic staff, BBC producers, educational technologists, full-time academic staff from the regions and a back-up team of graphic artists, editors, photographers, librarians, etc.

The full-time regional academic staff mentioned as forming part of the course teams are also the core of a regional network which covers the whole of the United Kingdom. Thirteen regional offices are responsible for the 260 study centres where students come into contact with the part-time tutoring and counselling staff. The University employs over 5,500 part-time staff who are drawn mainly from other higher education institutions throughout the country.

Another centre at present away from the headquarters at Walton Hall is the BBC-Open University Production Department at Alexandra Palace in North London. Although a new production centre is currently under construction at Walton Hall the Open University's television and radio programmes have been produced - perhaps rather appropriately - at Alexandra Palace, the building from which the world's first public television programmes were transmitted in the 1930's.

BROADCASTING AT THE OPEN UNIVERSITY

A formal agreement between the Open University and the British Broadcasting Corporation (BBC) provides for the production of up to 300 new television, and 300 new radio programmes each year. This agreement also includes transmission time for the growing number of Open University programmes. In 1979 the BBC transmitted each week, just over 35 hours of television on its two national networks and approximately 26 hours of radio on two of the BBC's national FM radio networks.

The Open University's commitment to broadcasting is therefore considerable. Of the total Open University budget in 1979 - approximately 64 million dollars - almost 12½ million dollars were paid to the BBC for producing and transmitting the television and radio programmes.

This level of production means that just over 300 BBC personnel work in the Open University Productions Department of whom 60 are specially trained producers. As these producers are involved in all stages of the course production process there is clearly a need for them to combine both academic and media expertise. Many were therefore recruited from the academic world and given training in production techniques by the BBC.

As well as the colour television studio, and a radio studio at Alexandra Palace the Department also has its own colour outside broadcast unit which includes videotape facilities. By adding many of the support services, such as film cutting rooms, a video rostrum area, graphic design facilities, etc. the department has become a self-contained production centre - though it still has the advantage of being able to call on central BBC departments for film crews, source material, and technical expertise.

Despite this major commitment it must be remembered that broadcasting only plays a part - though sometimes a very important one - in a complex multi-media distance learning system. Even on the introductory courses, which are given the maximum allocation of radio and television programmes, students receive only one 25 minute television programme and one 20 minute

radio programme per week. On more advanced courses students may only receive one radio and one television programme a month. But despite the comparatively small proportion of a student's time devoted to broadcasting it is an important and successful element of the Open University's teaching system.

THE HARDWARE IS NOT ENOUGH

In contrast to the Open University's experience of using broadcasting as part of an educational system a review of the available literature soon shows that when broadcasting has been used elsewhere the results have frequently not matched the expectations. In the third world, broadcasting was often held up as a panacea for their development problems. In Europe and North America disappointment followed many of the attempts to use broadcasting either as part of compensatory education programmes in the schools, or as a way of handling the explosion in student numbers in higher education.

Since the technical standard of the hardware available to many of these less successful projects was comparable with that used by BBC-Open University Productions; and since many of these projects also used experienced professional broadcasters as programme producers it might be useful to analyse the context in which Open University broadcasting has proved successful. Perhaps in this area some clue can be found to explain why similar hardware can be less successful in one setting than another.

To analyse the ways in which broadcasting is used at the Open University the work of Katz and Wedell seems helpful (1). They have suggested that before the use of educational broadcasting in the third world can be analysed it is first necessary to make a distinction between two types of educational broadcasting. Although the Open University uses broadcasting in a more developed country than those which Katz and Wedell studied the distinction still seems relevant.

Katz and Wedell called these two types "Intensive" and "Extensive" and suggest that they should be seen as the two extremes of a continuum. The extensive form of educational broadcasting includes "... all types of programming that are intended in one way or another to encourage greater understanding among sections of the general audience"(2). These programmes aim at informal education, usually of adults at home, and have no multi-media support, demanding little or no preparation by the viewer. In contrast the intensive use of educational broadcasting is aimed at the formal part of the education system. Specialised programmes are produced for particular target groups of students and multi-media support is usually provided.

If these two types are viewed as the extremes of a continuum along which all educational broadcasting projects could be placed it is obvious that the Open University would come very close to the intensive end of the continuum. Programmes are very specialised and carefully designed as part of a multi-media learning package which can result in a formal qualification for the students.

The First Lesson

From this recognition of the type of educational broadcasting used by the Open University an important lesson can be drawn. Katz and Wedell argue that these intensive uses are less likely to succeed as they can only function with a "... highly developed co-ordinating structure working with considerable resources"(3). They quote Richmond Postgate who gives a clear example of the difficulties in running an intensive educational broadcasting system in a developing country.

"Failures are very common at interfaces. Most new schemes have many interfaces. For instance, a successful school broadcasting radio service involves a producer, teacher, inspector, headmaster, a maintenance system, a local supplier of batteries, a reasonable engineering system to produce a signal, a producer of acceptable support material, a distribution system, an effective feedback system, a personnel training system, and an organisation that sustains, harmonises and finances all these items."(4)

At the beginning of this paper, within the constraints of time, some idea was given of the complexity of the Open University system which surrounds this successful use of broadcasting. Had space allowed, a more complete description of the University would have emphasised even more clearly the tremendous number of interrelated support systems. And yet even this complex structure can only function because within the United Kingdom there are other functioning systems which the Open University can use.

To give just two examples. The University uses the national postal service which - although everyone complains about it - is rapid and reliable enough to allow the University to mail about 20,000 course packages to students every week. This adds up to an average weekly weight of 35 tons. The postal system is also reliable enough for students to mail their assignments to their correspondence tutors and in return receive comments and advice.

The University also draws on the large pool of qualified staff in other higher education institutions to act as part-time tutors and counsellors. If Britain did not have this large higher education system the Open University, as presently constituted, could not function.

Although many other examples could be given the lesson is clear. Even if the BBC-Open University Production Department, together with a national transmission network, were given to another country this would not be a guarantee that this new country would be able to use intensive educational broadcasting successfully as part of a distance learning system. Unless the support systems either existed within that country - or could be rapidly established - the expectations would probably not be matched by the results.

THE NEED FOR A NEW EMPHASIS ON THE USER

Up to this point the user has received relatively little attention in this paper. But sadly this is often the situation when attempts are made to introduce educational broadcasting. Too often the emphasis is on the hardware with little thought for the demands the new broadcasting will make on the individuals for whom it is intended.

Recently there has been an increasing awareness that perhaps people are not as easy to change as we once thought. They find it difficult to 'unlearn' deep-seated roles and behaviours and to adopt the new ones required by an innovation. The implication of viewing innovation in this way is that instead of seeing it as a series of events, and concentrating on the stages by which the hardware is installed, the emphasis should really be on the user. The questions which should be asked are those which attempt to discover what changes the innovation will demand of the users and how they can be helped to make those required changes(5).

But the emphasis on the hardware still goes on. To take only one example. In the Indian Satellite Instructional Television Experiment (SITE), conducted during 1975-76, 82 percent of costs were for hardware - earth stations, studios, television sets, etc. Only 9 percent of total costs were spent on software production - the programmes. The management and co-ordination of the project by the Space Agency accounted for a further 6 percent which means that only 3 percent was spent on social research and evaluation (6).

It would, however, be wrong to give the impression that this lack of forethought in the introduction of new technologies for education is restricted to the developing world. An almost 'classic' example of the problems which can result has been given by John Lee in his book, Test Pattern (7). This analyses the attempts at Scarborough College - part of the University of Toronto, in Canada - to use televised lectures as a replacement for large, year lectures with undergraduate students. This was a response to the projected explosion in student numbers in the second half of the 1960's with the resulting shortage of qualified and experienced teachers.

In the introduction to his study Lee summarises very well the way in which the problems individuals might face were given little emphasis.

"The decision to go all-out for television at Scarborough reflected a general tendency among North American governments to believe that 'crash programmes' could solve urgent social problems. Much less attention was paid to the slower process by which human values and attitudes are changed. Generous budgets and emergency plans might raise new buildings almost overnight and equip them with new technologies, but the attitudes of students and professors could not be altered so fast or so arbitrarily."(8)

As in many other instances of educational innovation the demands made on the users were not given sufficient thought. At Scarborough College, although university teachers were going to have to use television as a replacement for the conventional year lectures it was found that in some cases, when new staff had been appointed the question of using television had not been raised: in fact some appointees were apparently not even told that the television facilities existed(9). The students fared no better. Because the existing lecture timetable was built around fifty minute lectures separated by ten minute periods for class changes the use of television was structured to fit this format (10). No one appears to have questioned the assumption that because students seemed reasonably happy with two or three, fifty minute face-to-face lectures a day they would find two or three, fifty minute televised lectures equally acceptable.

In Scarborough College the lecturers and students had to develop new skills. The former to teach through television, the latter to use television as a learning resource. The roles for both lecturer and student had been radically altered but there is little evidence of opportunities being given for either group to develop the new skills, or practice these new roles.

The Second Lesson

At this point I want to take a second example from the Open University's experience of using broadcasting. It illustrates very clearly that even with sophisticated hardware, skilled producers, and a massive support system it is still possible that the intended outcome of the programmes may not be achieved if the users do not possess the skills required to make use of the learning resource being offered to them.

As part of the Open University's commitment to progressively developing its system of distance education the University has established an Institute of Educational Technology. This Institute was set up to conduct research into the Open University's teaching system and to feed back the results of that research into the production of new courses. There is a staff of about 70 and in 1979 its budget was approximately 1,400,000 dollars - though this was supplemented by funds from external sources.

I am a member of a research group which forms part of that Institute and has been given the task of researching into the audio-visual component of Open University courses. One element of the work of this research group since 1974 has been a number of studies which looked at individual television programmes in great detail. Two of my colleagues, Tony Bates and Margaret Gallagher had conducted a number of these studies when it became clear that one type of programming was resulting in a recurring pattern of problems among students (11).

By 1976 an increasing number of courses were planning to use television to present 'case-studies' to their students. These programmes use what could probably best be described as a documentary format to present student with 'real-world' examples which they can then analyse using the theories, concepts, and criteria they have met elsewhere in their courses. Although this type of programming covers a wide spectrum, and some would question the validity of

of the terminology, 'case-study' and 'documentary' it is clearly a particularly valuable use of the television resource which the Open University is most fortunate to possess. Its value lies in the fact that it presents students with the opportunity to discover whether they can use the theories and concepts they have learned to gain a better understanding of the world about them. In other words these programmes provide an opportunity for students to develop the higher order learning skills such as analysis, synthesis, and evaluation.

The evaluations of these programmes showed that a significant proportion of the students were unable to use these case-study programmes in the ways in which the producers had intended. One example will serve to illustrate these problems.

An advanced level course in the Social Sciences looks at the structural basis of inequalities and their social and political implications. In the first part of this course a television programme uses the role of women in the home and at work to examine conventional assumptions about inequality; to distinguish between inequality and differences; to establish the significance of class in social relationships; and to identify the role of ideology in perpetuating these relationships.

The programme was supported by many pages of printed materials which related to the concepts with which the material in the programme was linked. In addition the objectives of the programme were clearly stated. And yet, despite the care with which this programme had been integrated with the other components of the course, a majority of the students were unable to analyse the material as had been intended.

Here it must be emphasised that this problem was most certainly not the result of shortcomings in either the technical quality of the programme, or of the production skills which had gone into it. Indeed the Open University is fortunate that its link with the BBC ensures both a high technical and professional standard. And yet the problem was there. Many of the students could not make full use of this learning resource.

Here the new use of the technology - broadcast television as part of a distance learning, university level course - was demanding from students a set of skills which many did not possess. In addition the familiarity of the medium, and the documentary style of presentation led students to misinterpret the response which was required from them.

With the programme on inequality the students identified very strongly with different individuals who appeared in the programme. In normal network television a producer would be extremely pleased with this result, however, in this case the objective of the programme had been to give students an example which allowed them to apply the concepts of ideology, class, and social change.

Partly as a result of findings such as these several approaches are being tried to help students develop the skills needed to make full use of

case-study type programmes. A package of materials is being developed to help new students identify the different types of television programme produced by the Open University, and to realise that each type requires a different response. Some individual case study programmes have already been produced with much clearer "signposting" built into the programme to help students identify the most important aspects. But a more long term solution is also being planned. The new version of the introductory course in Social Sciences will structure its use of television to help students develop these skills. Early programmes will include documentary material, but students will be given considerable help with the analysis of that material. As the course progresses the programmes will give students less and less help until, by the end of the course, most students should be able to cope with case study programmes on their own.

CONCLUSION

Although this paper has concentrated on two problems in the use of educational broadcasting these should only be taken as cautionary notes. The danger is that if educational broadcasting continues to be oversold there will be a backlash. Educational broadcasting is a valuable resource but a continued emphasis on the hardware, together with a failure to recognise the problems which users may face will mean that in many more cases the results will not match the expectations.

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