

Use of Media and Technologies at the Bangladesh Open University

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Abstract

A communications network has become an essential tool in today's educational environment. Open and distance education is getting more dependent on information and communication technology and has been playing an important role in the delivery strategies of distance education. Educational technologies (information & communication technology) are replacing direct teacher-student interaction, i.e. education is moving from class room to tele-learning. Technologically backward countries and technologically advanced and cultured countries do not equally benefit from high-tech system of education. Developing nations cannot afford this technological equipment because of their poor economic as well as technological background. Even the vast majority of the people of these countries do not have access to the computer. For example, Bangladesh Open University has not yet adopted computing media (e.g. Internet) and satellite TV channels for teaching, because of resource constraint and poor access. It uses ranges of media, such as print, audio, video and human interaction. This paper focuses on strategies and possible functions of media and technologies which could be employed by BOU in the context of socio-economic, cultural and historical background of Bangladesh.

Abstrak

Sekarang ini jaringan komunikasi sudah menjadi alat yang penting dalam persekitaran pembelajaran. Pembelajaran terbuka dan jarak jauh semakin bergantung kepada teknologi maklumat dan komunikasi dan memainkan peranan yang penting dalam strategi penyampaian. Teknologi pendidikan (teknologi maklumat dan komunikasi) menggantikan interaksi terus guru-pelajar, iaitu pendidikan sedang bergerak dari bilik darjah ke tele-pembelajaran. Negara-negara yang ketinggalan secara teknologi dan negara-negara yang berbudayakan teknologi tinggi tidak memperolehi manfaat yang sama rata dari sistem penyelidikan teknologi tinggi. Negara membangun tidak mampu mempunyai alat berteknologi tinggi disebabkan oleh ekonomi dan latar belakang teknologi yang rendah. Majoriti masyarakat di negara-negara ini tidak mempunyai akses kepada komputer. Sebagai contoh, Bangladesh Open University (BOU) belum lagi menggunakan media komputer (contoh: Internet) dan saluran satelit TV untuk pengajaran disebabkan oleh kekurangan sumber dan tahap akses yang rendah. Ia menggunakan pelbagai bentuk media seperti cetak, audio, video dan interaksi bersemuka secara fizikal. Artikel ini memfokuskan ke atas strategi dan fungsi media dan teknologi yang mungkin yang boleh digunakan oleh BOU dalam konteks sosial ekonomi budaya dan sejarah latar belakang Bangladesh.

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Introduction

With the advancement in communication technology a variety of audio-visual media - radio television broadcast, video cassettes, video compact disc video text, CD, computer and other innovative techniques are used for effective transmission of knowledge to the learners at a distance and open learning system. Rumble (1995) said that four media namely print, audio, television computer are available for teaching purposes, in one technological form or another. The distinction between media and technology is a useful one. A medium is a generic form of communication associated with particular ways of presenting knowledge. There are five important media in education (1) direct human contract (face-to-face) (2) text (including still graphics) (3) audio (4) television (5) computing. The use of each media gives both variety and the chance of accommodating different learning styles. Bates (1993) argues the need of decision maker to try to ensure that the four media namely print, audio, television, computers are available for teaching purposes, in one technological form or another. He goes on to argue that it is better to use a limited range of technologies in order to reduce redundancy and wasteful expenditure; provided all the main media are covered. Each technology-based media can be provided through a number of distinct technologies. Some technologies are associated with more than one medium (Table 1).

Table 1 Media and technologies

Media	Technologies	On-way technology applications	Two-way technology applications
Direct human contract	N/a	Lectures	Lectures with opportunities for questions, Seminars, Tutorials
Text	Print Computers	Course texts, Databases, Electronic publishing	Correspondence tuition E-mail Computer conferencing
Audio	Radio Audio Cassettes Telephone	Radio Programmes Cassette Programmes	Audio Conferencing Telephone tuition
Television	Broadcasting Video cassettes, Video Discs, Cable Satellite, ITFS, Microwave Video Conferencing	Broadcast programmes Video programmes	Interactive TV Video conferencing
Computing	Computers, Telephone Satellite Fibre-optics ISDN CD-ROM CD-1	Computer aided learning (CAL and CAI, CBT) Databases Audio-graphics	E-mail Computer conferencing Interactive Databases

Source: The Guardian, Bangladesh Open University, 1994

Media and technology has brought the means of changing social values. It is now widely recognised that no single medium can be effective for all kinds of learning needs. Each technology has its own strength and weakness. One medium may serve a teaching function better than another in a particular area, culture and learners may have different preference for the technology that best learning form. The socio-economic and cultural background of a person influences their ability to learn from different media technology.

There are a number of factors that need to be taken into consideration before deciding on the appropriate use of media and technology. These include availability and access, unique pedagogic characteristics of each medium, instructional objectives, financial resources and personal resources. Siddique (1987) stated that selection of appropriate media for a learning package is a complex decision influenced by a variety of considerations, such as the specific learning objectives of the unit, the nature of subject matter, learner's, background and experiences and the characteristics of the target group as well as practical constraints including availability of infrastructure and financial resources.

Access is usually the most important criterion for deciding on the appropriateness of a technology in distance education. Delivery to the home is usually the best way to widen access, though even then the technology may not necessarily be accessible. For example, there may be all sorts of reasons why students cannot listen to or watch broadcasts when they are transmitted. It may also be possible to make available technology in local centres, which students have to visit, or in the work place of the learner so that they have easy access to technology. However, the reality is that students may find it inconvenient, time-consuming, and costly to visit such centers.

The use of media and technology requires trained manpower to design, develop, produce and deliver educational materials. A few developing countries have adequately trained human resources for these specialised jobs. Distance education institutions in developing nations often seek to technical and financial assistance in developing their infrastructure for the production and delivery materials. Donor agencies often advocate the use of expensive and sophisticated technological infrastructure to ensure its accessibility to students without taking any consideration of the ability of the receiving organisation to operate and maintain such a system and more so. So we have to think the uses of media and technology in regard to appropriateness and acceptability in the society as well as on the ability of the institution offering the programme.

Bangladesh Open University

Bangladesh has a population of 130 million and is predominantly agrarian. Bangladesh emerged as an independent nation in 1971 after a long nine months war. At that time it had to face new challenge of meeting the educational needs of vast masses of people. To meet the challenge, the necessity for distance mode of education was felt in the country. Bangladesh Open University (BOU) was set up in 1992. Establishment of Bangladesh Open University has open a new horizon for the vast majority, who for various reasons have to drop out of the conventional system of education and have been yearning for opportunities of education. The prime objective of BOU is to transform the country's vast human resources into an educated and trained workforce by extending to them a wide range of academic programmes both formal and non-formal. To achieve this objective BOU has adopted a teaching learning system based on a combination of print and non-print media.

The Bangladesh Open University is the only national distance education institution. Within a short span of time, the University has launched 21 formal and 18 non-formal programmes having an enrollment of 150,000 students (Parhar, 2000). Twelve regional resource center (RRC) in major cities and eighty local study centers in small cities provide instruction and other support services such as learning materials. Print materials are the main medium of instruction. BOU's choice of technologies gives it access to

the four of the five main media necessary for successful delivery of distance taught courses. However, in terms of technology, the university is still in the second generation of distance education.

Media and Technology Use at BOU

Bangladesh Open University is using print, television, radio, audio cassettes and face-to-face tuition to teach its students. It has not adopted computing media and technologies for teaching, for obvious reasons for cost and poor access, but it has adopted a spectrum of four of the five media, and makes use of four technologies (Table 2). This table indicates that the technology-based media is very important for distance learners.

Table 2 BOU media and technologies

Media	Technologies	On-way technology applications	Two-way technology applications
Direct Human Contact	N/a		Lectures/Seminars
Text	Print	Course Texts	
Audio	Radio Audio Cassettes	Radio Programmes Cassettes Programmes	
Television	Broadcasting	Broadcast Programmes	

Source: The Guardian, Bangladesh Open University, 1994.

The BOU provides chiefly through face-to-face contact, though there are other ways, using two-as opposed to one-way media. While the actual range media used by BOU makes considerable sense pedagogically in terms of the relative costs and accessibility of the media. BOU is making use of the radio for distance education in Bangladesh. In spite of advance communication technologies with more glamour and efficiency, the radio is capable of generating the students, own complete and thoroughly satisfying imaginative images (Jones, 1962). Merdian (1979) finds that the radio is able to simulate and make use of the student's imagination to a great extent. Considering the effectiveness the costs and the access to technology Jamison & McAnany (1978) reviewed literature and concluded that the radio is more suitable medium for the third world countries. China, Thailand and Kenya have many years of experiences with the radio correspondence approach to learning. The developed countries like Australia, Canada, Japan and UK make extensive use of the radio for teaching at a distance. From the very beginning audio tapes and radio broadcasts have formed part of the BOU course materials. The University is also engaged in planning, producing and evaluating both radio broadcasts and audio-cassettes for its students.

As on of the non-print media, the BOU aims to advance and disseminate knowledge by television broadcasts. As a medium television can personalise the teaching, enabling the distant students to identify the individuality of the teacher and provide a public image of the university's presence in the community. Sing (1999) reported that broadcast television the most popular because it is the most accessible and most effective telecom technique. It is a good for reaching mass audiences.

The BOU transmits 25 minutes of TV five days a week and 30 minutes of radio broadcasts daily. All schools of the University share these times. Hence, on average, each school has one day per week for its programmes. Bangladesh Television (BTV) the public media network broadcasts on a single channel, which covers 99 percent of the total population area and Radio Bangladesh covers the whole of Bangladesh by medium wave transmissions.

We know that print is the core of BOU's formal system. Printed materials deliver words, numbers, pictures and diagrams. We know that it is representing facts, abstract ideas, and principles. Printed materials for each course are delivered to BOU's 80 local centres, from where students can pick them up when they register for their course. BOU produces audio and audiovisual programmes. Audio cassettes are used to supplement printed course materials. Tutorials are held on Fridays in BOU's tutorial centres. Attendance is not mandatory. This has a direct bearing on the programmes accessibility. The delivery system of the University is mainly one-way and back up largely depends on human interaction at the tutorial centres. But it is also the case that BOU academics probably need greater exposure to the potential uses of the various media. This underlines the importance of having several media that re-enforce each other. A widely used computer and Internet-based electronic communications, is still to be set up. The University is working on setting up a Local Area Network (LAN) on campus and a Wider Area Network (WAN) to bring its regional resource centres under the computer network. Although there is already limited Internet access and e-mail facilities on the main campus.

The University has no reason to plan to launch courses through online or to integrate the IT into courseware due to the limited access of the students into ICT. The university has yet to set up a national satellite-based communication network system, which may allow audio and video teleconferencing in selected areas. The University is now thinking of extending the system to 12 sites to interconnect the 12 regional resource centres (RRC). Bangladesh Open University is using advanced technology to communicate between 12 RRC's by e-mail since 1998. Fax machines have been distributed to all RRC's. There is a possibility of establishing a satellite-based teleconferencing system.

Concluding Remarks

The use of media and technologies make the study easier and flexible. In distance and open education different types of media and technologies are used to transfer education in the learners. Among all the available electronic media the radio and the television appear to be the most common and popular ones for the distance students. BOU is making use of many of the unique teaching characteristics of print and some of the characteristics of other media. The fact is that it is not using computing, which is not a fundamental drawback in the socio-economic context of Bangladesh. In order to ensure the quality of education, the distance education institutions must be careful about the use of proper media and technologies. Effective combination of media and technology is necessary for assuring effectiveness of the distance and open education. BOU has been trying to assess the accessibility of its media, and here at least we are on surer ground.

To use the media and technologies more effectively concerned authority of BOU should be careful. We are in the age of the "Digital University" to which one can have access to unlimited knowledge by pushing a button. This boundless knowledge may not be benefi-

cent to all learners in respect to countries with different socio-economic, political and cultural environments. The availability of knowledge through technology may cause 'indigestion' to the people of many developing countries. The use of media and technologies systems in developing countries need to harmonise socially, economically and culturally.

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