

A Study on Innovative Education Technology for delivering ODL in Bangladesh

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Abstract: This study attempts to discuss the innovative use and impact of electronic media for education technology in Bangladesh as the world is changing at a fast rate nowadays. A few decades ago people used radio, television, telephone and telegram as their latest communication technology. In a sense they had been the most important ways of mass communication as well as educational technology for distance education. Computer technology has changed education delivery system and the new technologies brought much innovation in delivering education through distance mode. This research considered the present teaching material in ODL, evaluated different recommended steps to be brought in delivering ODL. This initiative was taken as policy makers, experts and educationists have a feeling to provide more user friendly and effective ways to make this distance learning method more useful and to search innovation in education. Students should be given learning materials which are free, accessible and cost effective. This study also took learners' advice how they would be benefitted in and how the innovative technologies will be helpful for women and rural people in Bangladesh. This research used the existing radio, television programmes and also used the narrowcasting educational video programmes by cable-operators as well cell phones spreading the educational contents of ODL targeting learners of SSC students from both rural and urban areas. The study was supported by existing popularity of ODL to disadvantages group of people and to women specially. Both quantitative and qualitative methods were employed to conduct the research on the students who are using cell phones and the narrowcasting educational video programmes. The recommendation covers material distribution, accessibility, cost, advantages and benefits of education technology to the learners. It is expected that the findings of the research are very appropriate to media specialists, distance educationists of developing countries.

Introduction: Open and distance learning (ODL) is well accepted around the world because of information and communication technology or e-learning. Those who are drop-out because of socio-economic and family problems turn towards the ODL system. Specially in the third world country, the positive impact of ODL is visible. Asian and African Countries including India, China, Pakistan, Thailand, Bangladesh, Indonesia are using ODL in a very effective manner and there are many success stories of the system. "In Asia, social economics has meant a student who is busy e-learning is more isolated from his or her surrounding culture than a student, for example, in London, where the surrounding may be all high technology, conducive, motivating, encouraging and accepting of a person engaged in e-learning. In rural India or China, it is easy to imagine that the student is not only physically alone, but psychologically and emotionally as well without social infrastructure supporting e-learning. Thus, in Asia, computers and multimedia are not simply instruments for the student, but provide total environment for learning (Kawachi, 2005)" It is a matter of pleasure that those who were previously deprived of education are now self-reliant, working and they are participants for development works. ODL has successfully been started in 1992 with the establishment of

Bangladesh Open University. Nowadays it is a demand of ODL to be more innovative and to introduce educational technology which is easily available and cheap so that the learners can access and use the technology without any hindrance and the technology should not involve much investment from the learners' perspective. Because Bangladesh has two aspects to be addressed while delivering education to the learners. Firstly, Bangladesh is still a under-developed country. Secondly, computer technology is not very much available to the people and though some people have computer technology, they in most cases are not habituated with the technology. In Bangladesh, research shows very little use of even computers in education and the region generally uses print, radio, television and audio/video cassettes only (Tandon, 1998). It is still to go far when mass people are using computer technology widely.

Bangladesh Perspective: Still it is a point of hope that people irrespectively of urban and rural areas are habituated to watch cable-network television and are used to mobile phone. Television broadcasting and narrow casting, mobile phones are available, cheap and these are the causes that people are not scared of having a cable-network television and a mobile phone. The availability of technology is very relevant to the education delivery of BOU because the following statement is written as the purpose of BOU establishment:

The purpose of the University shall be to spread multimedialy instruction of every standard, and knowledge, both general and scientific, by means of any kind of communications technology, to raise the standard of education and to give the people educational opportunities by democratizing education and to create a class of competent people by raising the standard of education of the people generally” (Article-5:BOU Act, 1992).

So, these technologies are also popular to the people of the country. In the cable network television, people enjoy programmes which are delivered from recognized international channels and popular national channels and along with those channels, there are local cable-network providers who broadcast entertainment programmes locally on 24 hours basis. These local entertainment programmes are very much popular to tea-stall, housewives and to other inmates of homes and these are also available to bus, train and streamer.

Another aspect of the study is the use of mobile phone among the people of Bangladesh. In the country, there are five mobile companies who are providing cell phone country-wide services to the people. The companies are CityCell, Grameenphone (Telenor Group), Banglalink, Robi: an AXIATA company, Airtel Bangladesh. These companies cover approximately 98,470,000 people of 148,090,000 people (Wikipedia, 2012). These cell phone companies make the cell phone available to all strata of people both remote rural and urban people. In the cell phone, there are facilities available such as memory cards, still and movie camera and Internet.

Bangladesh Open University Perspective: Almost all the learners of Bangladesh Open University are now using mobile phones and they are viewers of cable network television

though most of them don't have computers. The learners of tertiary programmes i.e. Master of Business Administration (MBA), Commonwealth Executive Master of Business Administration (CEMBA)/Master of Public Administration (CEMPA), Master of Education (M.Ed.) may have an access to computer. It is interesting to write that BOU has a smaller number of tertiary learners. 85% learners of BOU are from the secondary and higher secondary and graduate level of education, Most of learners don't have an access to computer and few of them may have access to computer. This technology perspective of Bangladesh is a huge barrier to provide teaching materials. BOU provides radio programmes for one hour each day and television programmes for 45 minutes daily. BOU also provides tutorial services, face to face education once in a week and this service is very limited. There are also defective distribution of study materials which are not reaching learners timely. In delivering ODL, these services are not enough support to the learners. In the perspective, we have to think for way-out to provide timely and up-to-date services to the learners.

Innovative Education Technology: In the research study, mobile phone and cable-network television, which are widely accessible to the mass people of Bangladesh, are used to delivering ODL for the learners of BOU. BOU has a huge size Media Centre which has three video recording studios and three audio recording studios. The Media Centre has almost the facilities to produce video and audio programmes, which are broadcasted through national radio and national television. Since the services from the Media Centre are inadequate to ODL learners, the research initiative has been taken to use the facilities of the Media Centre in an innovative way to meet the needs of the learners and to understand how the innovative usage is effective for the learners. In the recent years, the university has taken steps to upgrade the analog system of the Media Centre to the digital system which has contributed to our study too. The research has been conducted on the learners of secondary school certificate (SSC) programmes. In the 2012-2013 academic year, more than 51,000 learners have enrolled for the SSC programmes. To conduct the research work, two Study Centre, Rupsha High School, Khulna Town (urban area) and Dumuria High School, Dumuria (rural area), Khulna from Regional Resource Centre, Khulna have been selected. There are 300 (three hundred) learners who have been participated in the study as respondents. 150 learners from Rupsha and other 150 learners from Dumuria who have mobile phones of their own have actively responded with the researchers. One cable network television operator, *Khulna Vision* for the both research areas is also selected. The researcher has taken initiative to convert the analog audio and video programmes in to digital system. These converted audio and video programmes are stored in DVDs for cable network television and memory cards for mobile phones. While conducting the research, these memory cards were distributed to the selected 300 learners of the Study Centres and the DVDs were provided to cable network television operator, *Khulna Vision* for narrowcasting to the areas.

To understand the effectiveness of the programmes, structured questionnaire has been served to the respondents after distributing digital memory cards. There was a month gap between distribution of memory cards to learners and to get answer about the usages of the memory cards. Questionnaire was developed in Bengali so that the learners could

easily answer the questions. Before serving the questionnaire, there were discussions related to the questions which needs to be answered appropriately what they felt that time. There were also options to write their own opinion about the narrowcasting services.

There were very few questions related to personal aspects. However, it is necessary to know the age of the learners because age has a motivational impact on learners' learning. The Table-1 shows the different age groups of Secondary School Certificate Programme learners of the Study Centres.

Age of the respondents

16 Years - 25 Years	26 Years - 35 Years	36 Years - 49 Years	Above 49 Years
137	112	34	07

Table-1

Learners of SSC programmes usually attend tutorial sessions on different courses on weekend and it is necessary to know what they do on week days. So, it is required to know what is the working and income status. It is found that 71% learners are working on the week days and 29% are not working and they are involved in non-income generating household work. However, on further inquiry about their income status, it is known that only 17% learners can assist them with the wages they earn.

Working and Income Status

Personal Data	Yes	No
Are you working?	71%	29%
Are you earning enough to support yourself alone	17%	83%

Table-2

It is obvious that the learners are busy since they are working on weekday and attending classes on weekend. So, it is necessary to know how much time they are getting as a leisure. It was explained that leisure means the time when they don't have to do any work for family or for herself/himself. Accordingly, the learners responded and the data is displayed in the following table.

How much hours you have leisure in a week?

7 hrs-10 hrs	11 hrs-14 hrs	15 hrs-18 hrs	Above 18 hrs
123 learners	131 learners	17 learners	29 learners

Table-3

The learners were approached about their television watching habit, the acceptance of academic narrow-casting audio-video programmes, other family members participation in the programme, attraction towards the programmes, timeliness of the programme and

quality of audio-video contents. The learners participated in answering the questions while I also tried to make them understand clearly what they were actually answering. The following questions were raised to the learners though the learners had options to describe their own opinions.

Questions related to Narrow Casting through Cable-Network

Questions	Yes	No
Do you have time for watching television?	91%	9%
Do you feel other people get disturbed because of the television programmes?	39%	61%
Do you feel your other family members are eager to watch the programmes?	78%	22%
Do you find the education programmes interesting?	98%	2%
Do you think the programmes time meets your need?	95%	5%
Do you think the quality of audio-video programme alright?	85%	15%

Table-4

I also talked to learners on the aspects of usage of mobile phones, importance of the programmes using through mobile phones, their usefulness, personal motivation and audio video support. The following questions were raised to the learners though the learners had options to describe their own opinions.

Questions related to Narrow Casting through Mobile Phone

Questions	Yes	No
Do you use your mobile phone for learning lessons?	100%	0%
Do you think these programmes are worthy to listen or watch?	99%	1%
Do you think these programmes are useful?	98%	2%
Do you think these programmes can be listened or watched while you are at leisure or moving around?	99%	1%
Do you think your personal work hampers because of these programmes,?	0%	100%
Do you think these type of audio-video support you appropriately?	100%	0%

Table-5

Recommendation: The research data shows that the narrowcasting is very much benefiting for the development of the learners. Each ODL institution which has facilities for developing audio video learning material can adopt these cheap and easily accessible technologies and tools for providing education. Most of the learners have a feeling that they have got a new way to learn their lessons in case they can not attend the tutorial classes on weekend, they can not avail computers for education, and they can not watch or listen to nationally broadcasted TV or Radio programmes. One of the learning devices special mobile phone is portable and very much user friend and learning material in audio-video micro-digital memory card (2 GB-4 GB) makes certain that the learners are never missing their lessons. Thus, these suitable tools of narrow casting system are contributing hugely towards ensuring quality education specially for the learners who are residing in third world countries in Asia, Latin America and Africa. The easy and friend methods are acceptable to both young-adult ODL learners.

Conclusion: The learners, who are using the narrowcasting system using cable network television and mobile phone, were using televisions and mobile phones as entertainment or communicative devices. However, it is hope that a message has been sent to them that televisions and mobile phones can be used as learning devices which bring more comfort and ease in their learning through ODL in Bangladesh. These teaching materials can be used anytime, anywhere and whenever they have time to learn using these portable and easily accessible devices. In some remote areas of Bangladesh, no digital or electronic device is available, micro-digital memory cards can be used for learning and in the 2-4 gigabytes digital memory cards, a learners can carry learning materials which might have duration varied from 15 to 20 hours. This is a wonderful achievement of modern technology and ODL institutions can use the technology for their own development and achieve and deliver more quality education for the learners.

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