



## USE OF MOBILES TO INTRODUCE A MECHANISM OF FEEDBACK IN DISTANCE EDUCATION DELIVERED THROUGH VIDEO/TELEVISION FOR THE PURPOSES OF IMPROVING QUALITY OF DELIVERY

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### ABSTRACT

One of the distance education delivery methods used by Bangladesh Open University (BOU) is airing lectures on national television. This method is one way and does not permit feedback on the quality of the lectures or the learning affected. There is also no way to monitor attendance. Given the challenges posed in such delivery, BOU is currently recording a course that converts this delivery methodology into an *interactive* distant education classroom. This paper discusses *methods of feedback* introduced in this pilot Virtual Interactive Classroom (VIC) course that uses mobiles and a computer server together with real students in the studio to show how this method can be used to improve the quality of courses delivered on television or video.

### Introduction

Bangladesh Open University (BOU) was established as the sole distance education provider in 1992 by the Government of Bangladesh. It uses a variety of traditional educational delivery methods including print, radio and television media. The use of Internet to supplement or enhance learning has not made any significant progress largely due to the lack of infrastructure in rural Bangladesh. Given this background, to face the challenges of traditional distance education, BOU has introduced a pilot project titled "Virtual Interactive Classroom" (VIC) following the methodology outlined in [1].

The method involves interacting with a video show using facilities afforded by mobiles and a

computer server. Traditional BOU video lectures involve *scripted* lectures speaking directly into a camera. Such methodology generally produces wrong emphasis patterns and stilted organization that has very little active learning input [2] or student interaction. Jim Bame [2] points out that videotaping of actual/live lectures produces a much better result as viewers feel part of the lesson. As students are the main focus, immediate feedback on learning during a class lecture helps a teacher tailor delivery to suit the learning of the audience. The feedback mechanisms introduced in VIC are compared with the traditional television delivery methods at BOU in Table 1 below:

Table 1: Feedback mechanisms introduced into VIC

| Sl. | Aspect                                      | Traditional BOU Distance Ed lecture   | Virtual Interactive Classroom (VIC)  |
|-----|---|---|--|
| 1   | Feedback from students during lecture       | None – teacher is alone talking to a camera.  | A set of students are present. Students are made to participate in a variety of activities during recording.   |
| 2   | Attendance during airing of lecture.        | No record of attendance. No requirement of watching the video lectures.                         | Students must send their attendance via SMS. The server keeps track of attendance lesson by lesson.  |
| 3   | Feedback during airing of recorded lecture. | None. There is no measurement of how much students have learnt or the problems they are facing. | Students viewing the recorded video interact by answering questions and responding to voice calls. The SMS server responds to the students giving the impression of a 'live' show. The answers of all students are stored allowing post-analysis of answers. |
| 4   | Midterm review                              | Opinion of students is not elicited.  | Students both in class and those watching the video are asked regarding their learning problems and how VIC can further support their learning. The remaining lectures were recorded learning from feedback given by students.                               |
| 5   | Final review                                | Opinion of students is not elicited.  | Students both in class and those watching the video are asked how VIC helped them prepare and can further support their learning.  |
| 6   | Exam  | Students sit exams at tutorial centres.   | Students sit exams at tutorial centres.  |
| 7   | Analysis of student responses               | Scripts marked as examination papers for the purpose of awarding final marks.                   | Student answers during watching video all stored in database. This allows computer analysis and scope for improvement of future recordings.  |

**Results of Survey:** A questionnaire was developed and given to the 12 students who participated in the 28 video lessons immediately after the recordings were completed. The program recorded was the Higher Secondary Certificate 2<sup>nd</sup> year English course. Out of the total 28 lessons, lesson 14 was mid-term evaluation while lesson 28 was final evaluation of the course delivered. The recorded lessons are being aired on national television from May 17<sup>th</sup>, 2008 as the first VIC pilot course.

Out of the 12 students who attended the class while being videotaped, 11 responded. For each of

the above feedback methods, the student responses are examined below:

1. **Feedback during lecture:** All respondents felt that communication between teacher student, student and student as well as students and resource materials was very important. The VIC class allows communication between teachers and students during recording a class as well as distant students through SMS and voice communication. The VIC class enforces pair work (peer group work) through Learning Partners by allowing group wise

registration only. All respondents complained that BOU resource materials were not available on time; they requested that resource materials should be made as available as the course starts. The five teachers participating in recording the sessions all conceded that the spoken English and participation in class had considerably improved.

2. **Attendance:** All students watching the VIC video lessons are required to register their attendance by sending an SMS. At the beginning of each lesson the students are required to send attendance giving the lesson number. The number of classes attended out of the 28 lectures by any student can be easily collated by the computer. The students have been recommended to attend at least 80% of the classes. The percentage attendance of individual students as well as trends in overall attendance can be easily tracked by the SMS server.
3. **Feedback during airing of lecture:** Students interact with the teacher during airing of lessons. The answers are stored for reference and analysis by the SMS server/teachers. The students watching get immediate feedback on the correctness of their answers and observe discussions on wrong answers just like in a live face-to-face lecture. 10 out of 11 and 8 out of 11 students felt that both learning and thinking were promoted during a VIC lesson.
4. **Mid-term Review:** Lesson 14 consisted of a mid-term review of benefits of VIC and learning difficulties. Students requested that teachers should also explain difficult concepts in the local native language Bangla; provide vocabulary support through SMS and give sample examination questions during the lectures. These requests were passed on to the team of 5 teachers and the SMS technical staff. Students were also asked how they could solve their own shortcomings like poor

attendance, learning partners lack of cooperation, etc. The feedback afforded by the mid-term review was two-way – both for the teachers and the students themselves. This promoted ownership on both on part of the teachers as well as the students.

5. **Final Review:** Lesson 28 consisted of asking what students liked most about the VIC and what features could be improved. Before this, students were given feedback on which of the requested features during mid-term review were successfully incorporated. 9 students requested availability of the video lessons on DVD for repeated viewing and 11 students out of 11 requested that more video lessons should be added from the resource book of HSC 2<sup>nd</sup> year English.
6. **Exam:** The examination at the end of second year will also allow checking whether the performance of the students has improved from the previous years and whether intake is rising. This exam is scheduled for March, 2009.
7. **Analysis of student answers from previous years:** Lessons 25, 26 and 27 were spent in analyzing previous student answers and shown how to get better marks as well as what mistakes were common. This feedback to students was designed to help them understand where they themselves go wrong and how they can improve.

All told, the students enjoyed the difference between doing the traditional lesson and VIC. The discourse above shows how feedback at various stages of video recording was used to tailor and improve the delivery of the lessons. Analysis of answers stored in the database will provide learning that would be useful for subsequent VIC lessons.

**Built-in quality consciousness:** The VIC classes are setup so that real face-to-face teaching can take place during recording a lesson. This immediately allows a teacher to adjust delivery to suit the students present in the studio. Mid term evaluation allowed adjustment of subsequent lessons to incorporate delivery suggestions made by students.

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Students have a way to get immediate feedback on their responses in a distance education setting to produce the feeling of a virtual real-time class. The way the VIC has been setup incorporates a quality consciousness that promotes ownership both on part of the student as well as the teachers. Study and analysis of stored student data during airing of lessons will provide learning for subsequent recordings.

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