

## EVALUATING THE EFFECTIVENESS OF DISTANCE EDUCATION THROUGH MODIFIED SUMMATIVE EVALUATION: A Case Study

Assist. Prof. Dr. Sabina YEASMIN  
Bangladesh Open University, BANGLADESH

Assist. Prof. Dr. Nasirul ISLAM  
Bangladesh Open University, BANGLADESH

### ABSTRACT

Assessment techniques are important tools for assessing the learner competence. In distance education system, the summative assessment gives us more message than that of other assessment techniques. Although evaluation sometimes breaks down in the field of assessment situation yet we can take some rearrangement on the same. However theoretically sound approaches to the exist for determine the effectiveness of learning system, along with the many different methods or modified summative assessment techniques for obtaining answers to the relevant questions.

**Keywords:** Distance Education, Summative, Effectiveness, modified, evaluation

### INTRODUCTION

“Evaluation is the process for gathering information about the worth or quality of something as a way of making decisions designed to increase its worth or quality” Newby et al, 2000. It is the systematic acquisition of feedback on the use, worth or impact of some activity, programmed or process in relation to its intended outcome. Though evaluation is put at the end, it is in fact continuous and on-going process that takes place at all the stages of the training cycle. Depending on the time of evaluation, we can categorize evaluation as formative and summative.

A frequent criticism of distance education has been that it is a package programmed to education underpinned by a behaviorist model of teaching and learning (Islam and yeasmin, 2005, Harris, 1987). The desirability of encouraging student to be more autonomous and self critical by requiring them to self-evaluate their efforts at search on student ratings of courses had identified several common dimensions or groups of items that can be evaluated (Renner and Greenwood 1985). For course appraises the majority of instruments devised are: organization of course and its structure, and even workload and difficulty. Other categories include marking examination and assignment, the learning value of course, the breadth of converge, some impact of the course on students and the global of overall effectiveness of the course.

Not all rating instruments incorporate all the evaluation criteria, but the majority includes evaluations of organization and work load. Adel man and Alexander (1982) examined the usefulness of workload rating, finding them to be much more satisfactory than the other internal group based techniques that tend to be affected by group biases. Rather than describing individual categories and questions at length, however, it is simple to present typical categories and items drawn for an examination of existing questions. Islam and Yeasmin (2006) discussed about the formative assessment techniques and located how to obtain the answer the relevant Question of the assessment techniques when faces problem between distance learner and face to face learners. . Bangladesh Open University has been very careful in this aspect from the beginning. In this

paper, we explain assessment techniques and the effectiveness of distance education through modified assessment by Summative evaluation with an example based on examination system of Bangladesh Open University.

## MATERIAL AND METHODS

### Assessment

Assessment is important to gain knowledge of the learner's Competence. In particular, what competence did they bring to the learning and what competence have they acquired. There are two main purposes for assessment.

- Formative assessment and
- Summative assessment

**Formative Assessment:** It is concerned with identifying the weaknesses during the process of education. It allows us to monitor the progress of the learner and make appropriate changes to the education plan to attain the desired proficiency level. Formative evaluation is also called continuous evaluation.

**Summative Assessment:** As the term indicates, it is evaluation at the end of the class teaching. Such evaluation can tell us about the worth of a education programmed, though it can also indicate how we can improve the quality of the programme and what areas can be improved upon.

Assessments mainly belong to the level of formative and summative support of a learner. If F=Formative, S=Summative, and A=Assessment then,  $A \in \{FUS\}$  i.e. assignment gives the information about the strength and weakens of a student that implies assessment of educational performance of a student. But sometime the performance of education assessed may right or wrong. If we make again assess through assignment on the same then we have truly achieve the result about the learner learn i.e. assignment impact on bloom's matrix. Bloom's matrix contains three components; Cognitive domain, Affective domain and psychomotor domain. Each of three factors is interrelated among of them. If the three factors are interrelated is indicate the presence of Multicollinearity (See, Islam et.al.-2001).

### Assessment Factors

Continuous assessment of work done during courses, end of course assessment of work done during courses and end of course assessment of work done at end of course are three major factors (cognitive domain, affective domain and psychomotor domain) for assessing the educational performance of a learner. Among of the factors respectively belongs to the formative and summative support of a learner. In remarking assessment, technique mark of the final courses and remarked through assignment of the same are inter-related where may be or not present collinearity.

We pointed out some character about assessments factor as follow:

- We need to distinguish among evaluation and assessment.
- Assessment refers to measuring learner's performance, thus assessment can be the part of an evaluation but assessment and evaluation aren't synonymous. More importantly comparing assessment scores for different learning system is a serious, but common, error

### Outcomes of the Construction

Performance measurement generally present the most common types of data collection for summative a distance courses. A proper arrangement should be need for assessing distance student performance is to come with the learning out come of distance student to those learners in the same class on campus. Such companions ignore many factors that influence learning and falsely attribute success.

### Summative Evaluation

Summative evaluation usually aims at assessing the effectiveness of a learner completion. The intention of conducting summative evaluation may be either reporting or validating a course. The following questions may be considered while adopting a summative approach:

- What did the learner achieve?
- What lessons were learnt for the future?

In other words, in a course summative evaluation is used to judge the quality of distance teaching components or effectiveness of support system to see if they have worked as intended.

The evaluation of teachers or instructors may wish to evaluate a 'bought in' course or if they intend to modify or supplement those parts, which they consider inadequate for their learners, then, they would be carrying out a formative evaluation. If the course fell below the expected standard, whether technically or pedagogically or academically, then, it might be expected that the evaluator/ instructor would decide not to use it at all. In other words, the evaluation would be transformed into summative evaluation. We consider that the evaluation is formative when it is used with the intention of developing or improving of an activity or the effectiveness of a component. Where the intention is judgment or conclusion about the merits and demerits of a course or programmed, then, we focus on summative evaluation. In this section, we will consider the pretest-post test or experimental approach through which the students are tested before and after the programme are implemented. In this approach an experimental design (Figure: 1) is adopted to determine the effect at the end of examination. It involves controlled comparison between the learners and other 'treatments' and may compare effectiveness for different types of learners.

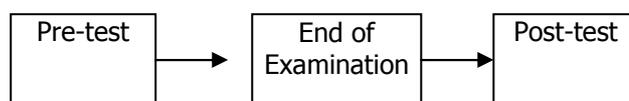


Figure 1  
 Experiment design

However, this approach does have limitations because of trying to control all the variables except for the experimental one. Aathe other drawbacks of experimental approach are:

- dropouts from the test group, possible effect of other variables, effects on the group of constant test
- pre-test and post-test evaluation is inadequate for elucidating complex problem areas and provides little effective input to the decision making process because observation, interviews with participants (students, trainees, counselors and course writers and administrators) questionnaires and analysis of documents and background information are also essential to evaluate. This kind of approach is concerned with description and interpretation rather than measurement and prediction. It may deal in detail with rationale, programme planning and operational.

Test statistic: Student T-test are consider prove the performance of the learners. The test statistics are as follows:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1 - 1} + \frac{1}{n_2 - 1}}} \sim t\text{-distribution with } n_1 + n_2 - 2 \text{ d.f}$$

$$\text{Where, } s^2 = \frac{1}{n_1 + n_2 - 2} \left[ \sum (x_1 - \bar{x}_1)^2 + \sum (x_2 - \bar{x}_2)^2 \right]$$

### Data Collection

Two measures of data are concentrating i) quantitative and ii) qualitative measurements are as follows:

**Quantitative** :Participants take tests that measures changes in their knowledge skill levels and or values beliefs. The test scores are recorded in the assessment records and compared to the pre-test scores i.e. examination record.

**Qualitative**: Observations are made by teachers or tutors on the extent of change in learners' knowledge skill levels and/or attitudes.

### Analysis

Our analysis of learning outcomes relies on assessment of our distance learner performance at two levels. Each module has assignments, many of which are graded not only at the module level, but that also contributed to a student work. At the end of the program, the event is a faculty committee review of each student's to determine if they have acquired the necessary skills and knowledge as delineated by the professional standards of our field. Student grades from individual modules and the results provide helpful measures demonstrating that they effectively produce the intended learning outcomes. Programmatic effects were also collected at the end of our first cohort cycle. Data such as number of students served, their geographic locations, program attrition rates, and professional impacts of their experience, help define our reach and justify the program's continuation.

### Summative evaluation can be express though the example-

Example: Bangladesh Open University has already conducted B.Ag.Ed Examination. Groups of student are randomly selected from ATI GAIBANDHA under Rangpur R.R.C and obtained the pretest mark and post test (final mark) marks as

Final Marks: Pretest ( $x_1$ )	Posttest ( $x_2$ )
40.0 (40)	65.9
31.3 (31)	60.3
42.5 (42.5)	67.9
30.3 (30.3)	61.3
25.2 (25.2)	58.5

The test statistic

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \sim t\text{-distribution with } n_1 + n_2 - 2 \text{ d.f.}$$

$$\text{Where, } s^2 = \frac{1}{n_1 + n_2 - 2} \left[ \sum (x_1 - \bar{x}_1)^2 + \sum (x_2 - \bar{x}_2)^2 \right]$$

$$t = 7.875$$

$$\therefore |t| = 7.875$$

At 5% level of significance tabulated value of two at 8 D.F. is 2.365

Above t-calculated value is greater than that of tabulated t at 8 d.f. So, we can say the performance achievement of the learner is significant. Now, our analysis of learning outcome relies on assessment of our distance learner performance at two levels

## RESULT AND DISCUSSION

Attitudinal outcome data was collected at the end of each examination and also upon completion of the degree. Perhaps the most revealing information came from reflective statements written by students at the end of the program. While the program's intended learning outcomes clearly were being achieved, since students demonstrated the targeted skills, the program's faculty found it especially rewarding to know that our learners felt that their experience and efforts were worthwhile and professionally beneficial.

## CONCLUSION

To create an evaluation plan that determines the success of a distance delivered course or program, begin by defining what you mean by "success." It is increased more academic in perspective, meaning outstanding learner performance, or higher satisfaction of the learners. Success is most likely defined as a combination of these factors, prompting the need for an evaluation strategy that is comprehensive and carefully planned. We hope summative evaluation plan of assessment answering the question of quality in distance education.

## BIODATA AND CONTACT ADDRESS OF AUTHORS



**Sabina YEASMIN** is an assistant professor of Open School of the Bangladesh Open University. I have obtained B.Sc (Hons.) and M.Sc degrees from University of Dhaka, Bangladesh. After graduating with excellent academic record I have joined BOU as a lecturer in January 1996. I have already submitted my M.phil thesis paper (Social Security and Working Women: A Case study in Dhaka City) to Dhaka University authority. Now I am doing my PhD (Study on Design and Development of Self-Learning Materials for Open Schooling with particular emphasis on Gender-Sensitivity: a Case of Bangladesh Open University) at IGNOU, Delhi. I have received many national and international training on

distance education concept, instructional design, and preparation of audiovisual materials from International Extension College, Cambridge, UK.

Assist. Prof. Dr. Sabina YEASMIN  
Open School, Bangladesh Open University  
Gazipur-1705, BANGLADESH  
Phone: +8802-9663744  
Mobile: +8801715835899  
E- mail: [sabina\\_d@hotmail.com](mailto:sabina_d@hotmail.com)



**Nasirul ISLAM** is an assistant professor of Open School of the Bangladesh Open University. He has obtained B.Sc (Hons.) and M.Sc degrees from University of Rajshahi, Bangladesh. He has awarded his M.Phil and Ph.D degree in Statistics from Jahangirnagar University, Bangladesh. I have joined BOU in 1995. I have received extensive training on principles of instructional design and educational planning specially for lifelong learning and flexible learning module from the University of Waterloo and the University of Guelph, Canada. He has published more than 15 research articles and 5 books at university levels.

Assist. Prof. Dr. Md. Nasirul ISLAM  
Open School, Bangladesh Open University  
Gazipur, Bangladesh  
Phone: +88029291109



E- mail: [islamn@bou.edu.bd](mailto:islamn@bou.edu.bd)

#### REFERENCES

Adelman, C. and Alexander, R. (1982). *The self evaluation instillation*, London; Methane.

Harris, D. (1987). *Penness and closure in distance education*. The falser press, Briston.

Islam. M. N and Yeasmin. S. (2005). Assignment Regain the Assessment of Examination System for Higher Education: *Journal of JSTR* vol. 1 pp-75-82, 2005.