

Distance Education- A view in context of India

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Abstract— The higher education sectors are constantly moving towards the incorporation of explicit measures of the outcomes of their activities. It is especially important in the context of distance education to address the issues of being accountable to the society. This paper presents the comparative study of the dimensions of outcome indicators employed by the distance learning institutions at the Asian region. By means of both quantitative and qualitative approaches, the relative importance of the outcome indicators from teaching, research, consultancies as well as cultural and social activities were analyzed in an attempt to understand the differences among the perceptions of outcomes employed by these institutions in the region as well as important issues about the topic.

When quantifying and qualifying Distance Education and Continuous Education interaction, perceptions may be less than reliable. In a study comparing distance education' perceptions of interaction (as compared with observations of their interaction), Sorensen and Baylen (2000) noted that students accurately noted that: across-site interaction was very low, that within-site interaction was very high, that interaction changes with instructor location, that remote site students participate less, and that group activities increase interactions. However, students perceived that less interaction occurred over time (when, in fact, interaction increased), and that technology inhibits interaction (when, more accurately, it seems to create different patterns of interaction).

The OU provides university education to those wishing to pursue higher education on a part-time and/or distance learning basis, including people with health disabilities, who are officially a priority group for the university; nearly 13,000 OU students have health disabilities. The British Government has also tasked the Open University to continue the work of the Council for National Academic Awards (CNAA) when it was dissolved. The CNAA formerly awarded degrees at the polytechnics which have since become universities.

Keywords-Distant Education; Open University (OU); synchronous learning; asynchronous learning.

INTRODUCTION

Education is a universally recognized key tool for the prosperity and overall socio-economic development of the country. Quality Elementary education is undoubtedly the quintessential passport to new opportunities and greater avenues as social, economic or higher education.

Education is everything and entire socio, economic and technological development of the nation depends on the availability of quality education to each and every citizen of the nation. With all the collaborative efforts of the policymaker, the Indian literacy rate could reach up to 74.04% in 2011 from 65.38 in 2001, Status of Literacy. The policymakers are also fully aware about the potential benefits of application of Information and Communication Technologies (ICT) and therefore promoting ICT supported educational environment targeting each category of learner.

Distance education is defined by the Association for Educational Communications and Technology (Schlosser & Simonson, 2003) as: Institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources and instructors.

Distance education or distance learning is a mode of delivering education and teaching, often on an individual basis, to students who are not physically present in a traditional setting such as a classroom. Distance learning provides "access to learning when the source of information and the learners are separated by time and distance, or both." Distance education courses that require a physical on-site presence for any reason (including taking examinations) have been referred to as hybrid or blended courses of study.

Distance education has two major components, distance teaching and distance learning. Distance teaching is the efforts of the educational institution to design develop and deliver instructional experiences to the distant student so that learning may occur. Education, and distance education, is comprised of teaching and learning. This task force concentrated on distance teaching.

Distance education has been practiced for more than 150 years, passing through three phases: first, correspondence study, with its use of print-based instructional and communication media; second, the rise of the distance teaching universities and the use of analog mass media; and third, the widespread integration of distance education elements into most forms of education, and characterized by the use of digital instructional and communication technologies. Peters (2002) has suggested that "the swift, unforeseen, unexpected and unbelievable achievements of information and communication technologies" will require "the design of new formats of learning and teaching and [will cause] powerful and far-

reaching structural changes of the learning-teaching process". Peters' views are well accepted, but there is also consensus that the most fruitful way of identifying elements of quality instruction may be to re-examine "first principles" of distance education and mediated instruction.

PROBLEM STATEMENT

Institutions of the higher education system internationally are now experiencing a constantly changing demand from various stakeholders in a lot of areas. The issues of accountability have been raised in which a clearer picture of what are the outcomes from the higher education sector is being addressed. In particular, the measurement of outcomes in the design and delivery of effective open education programs are of paramount importance in the attempt to understand the through-put and the end product. Hence, various parameters and metrics have been developed and adopted to measure the performance of the conventional tertiary education institutions as well as the distance and open education providers. To this extreme, it is even more difficult and problematic in identifying proper and commonly agreed performance indicators of outcomes in open learning institutions. Research results currently available are limited to address this issue across different providers especially the Asia regional context. Hence, this paper investigates the complexity and discusses the results from a comparative study of the outcome indicators from the perspectives of open and distance learning providers in the region.

Because education (including distance education) is a system, each of its elements interacts with other elements, making difficult the isolation of elements. Interaction (its type, quantity, quality, timing, etc.) for instance, cannot be separated from instructional philosophy, choice of media, and other factors.

On a larger scale, institutions of higher education should understand that distance education is not the "cash cow" that some have mistakenly suggested. Indeed, the development and support of distance education courses and programs is normally more expensive than similar traditional courses and programs. When exceptions are occasionally noted, it is usually found that a difference in scale could explain the savings, as in the IGNOU study that found that preparing and offering a large (430students) general education course at a distance than the cost of the same course delivered traditionally. A second exception is the instance of the very large distance-teaching universities, such as the Uttarakhand Open University, where large enrollments and a long "product cycle" reduce the unit cost per student to about half that common among traditional graduate programs.

Distance education is a broad field with a long history. It is important to remember that, the views of some authors notwithstanding, there is no one "right" way to conduct distance education? At the same time, it would be foolish to ignore the insights and recommendations of long time practitioners of distance education, as well as those whose field

is the study of distance education. Distance education has experienced a marked expansion and, to a certain extent, reinvention in the past few years (coinciding with the rise of the Web and entrepreneurial forces in education). However, it should be borne in mind that online education is not the sum of distance education, that the field existed long before the Web, and that enduring principles of education did not become obsolete with the development of new, electronic technologies.

- To represents the first formal investigation of Distance Education in Open Universities.
- Outcome of the distance education plays an important role in decision and implementation of the innovative schemes for the betterment of the society.
- The outcome of the distance education of any project in pilot phase determines the life cycle of the projects.
- The distance education can be used to assess the quality and impact educational contents over the targeted audience.
- Based on finding, a road map may be planned. If necessary another impact study can be done to determine the improvement in the situation.
- A clear and vast comparison between the distance education programs of IGNOU and Uttarakhand Open University
- Provide access to higher education for large segments of the population, and in particular, the disadvantaged groups such as those living in remote and rural areas including working people, housewives and other adults who wish to upgrade or acquire knowledge through studies in various fields.
- Promote acquisition of knowledge in a rapidly developing and changing society and to continually offer opportunities for upgrading knowledge, training and skills in the context of innovations, research and discovery in all fields of human Endeavour's.
- Provide an innovative system of university level education, flexible and open, in regard to method and pace of learning, combination of course, eligibility for enrolment, age of entry, conduct of examination and operation of the programs with a view to promote learning and encourage excellence in new fields of knowledge .
- Generate awareness and understanding of some specialized areas of education and human development like special needs of education, curriculum development, environmental education, vocational education, teacher education, elementary education, measurement and evaluation, value education and human responsibility so as to widen the horizon of understanding of modern educational practices and to develop critical thinking pertaining to issues related to education.
- As an apex body, it coordinates and monitors the distance education system throughout the country. It has constituted the Distance Education Council and provides expertise and assistance to other open universities and distance learning institutions in the country.

- The University shall Endeavour through education, research, training and extension to play a positive role in the development of the country, and based on the rich heritage of the country, to promote and advance the culture of the people of India and its human resources.

METHODOLOGY

Distance learning may enable students who are unable to attend a traditional school setting due to disabilities, handicaps, or sicknesses such as decreased mobility and immune system suppression to get a good education, and may provide equal access regardless of socioeconomic status or income, area of residence, gender, race, age, or cost per student. Distance education graduates, who would have never have been associated with the school under a traditional system, may donate money to the school.

Although the expansion of the Internet blurs the boundaries, distance education technologies are divided into two modes of delivery: synchronous learning and asynchronous learning.

In synchronous learning, all participants are "present" at the same time. In this regard, it resembles traditional classroom teaching methods despite the participants being located remotely. It requires a timetable to be organized. Web conferencing, video conferencing, educational television, instructional television are examples of synchronous technology, as are direct-broadcast satellite (DBS), internet radio, live streaming, telephone, and web-based VoIP.

In asynchronous learning, participants access course materials flexibly on their own schedule. Students are not required to be together at the same time. Mail correspondence, which is the oldest form of distance education, is an asynchronous delivery technology as are message board forums, e-mail, video and audio recordings, print materials, voicemail and fax.

The two methods can be combined. Many courses offered by The Open University use periodic sessions of residential or day teaching to supplement the remote teaching. The Open University uses a blend of technologies and a blend of learning modalities (face-to-face, distance and hybrid) all under the rubric of "distance learning."

Distance learning can also use interactive radio instruction (IRI), interactive audio instruction (IAI), online virtual worlds, digital games, webinars, and web casts.

Thesis Statement

Distance learning is now at the height of fashion. Numbers of enrolments are immense especially at those mega-universities. Despite that, quality of teaching and learning should not be jeopardized. The system approach to organization suggests that Open University can be treated as the production function. It consists of input, throughput and output. The outcomes should be reflected by the aims of the university concerned including the mission, vision and the key objectives. Universities aim to produce four major types of outputs. These are derived from teaching activities; from

research activities; from consultancy and related activities as well as cultural and social outputs. From the complexity of different types of outputs, this classification may help us to concentrate to look at the more detailed problems and the challenges of outcomes and outputs behind this category.

The development of computers and the internet have made distance learning distribution easier and faster and have given rise to the 'virtual university, the entire educational offerings of which are conducted online. In 1996 Jones International University was launched and claims to be the first fully online university accredited by a regional accrediting association in the US.

In comparative study of India's two large universities we found IGNOU, the largest university in the world with 3,500,000 students, to impart education by means of distance and open education, provide higher education opportunities particularly to the disadvantaged segments of society, encourage, coordinate and set standards for distance and open education in India and strengthen the human resources of India through education. Apart from teaching and research, extension and training form the mainstay of its academic activities. It also acts as a national resource centre, and serves to promote and maintain standards of distance education in India. IGNOU hosts the Secretariats of the SAARC Consortium on Open and Distance Learning and the Global Mega Universities Network (GMUNET) initially supported by UNESCO.

Distance Education encompasses many areas of research, with this work representing the first in-depth research into the topic. This chapter describes whole description about distance education which both inspires and guides this research. Due to the foundational nature of this research, we begin with a wide orbit, examining the phenomena and technologies that motivate this research, and then focusing on how the current solutions address these problems and their contributions. The next section presents a discussion of how to model and describe highly interactive, complex systems. We close with an overview of the description from other researchers on this emerging area of research.

Quality Instruction for Distant Education

Distance education has been practiced for more than 150 years, passing through three phases: first, correspondence study, with its use of print-based instructional and communication media; second, the rise of the distance teaching universities and the use of analog mass media; and third, the widespread integration of distance education elements into most forms of education, and characterized by the use of digital instructional and communication technologies. Peters (2002) has suggested that "the swift, unforeseen, unexpected and unbelievable achievements of information and communication technologies" will require "the design of new formats of learning and teaching and [will cause] powerful and far-reaching structural changes of the learning-teaching process". Peters' views are well accepted, but there is also consensus that the most fruitful way of identifying elements of quality

instruction may be to re-examine “first principles” of distance education and mediated instruction.

Perhaps the first of the “first principles” is the recognition that distance education is a system, and that the creation of successful courses—and the program of which they are a part—requires a “systems” approach. Hirumi (2000) identified a number of systems approaches but noted a concept common to all: that “a system is a set of interrelated components that work together to achieve a common purpose”. He described a system that involved the efforts of faculty, staff, administrators, and students, and consisted of eight key components: curriculum, instruction, management and logistics, academic services, strategic alignment, professional development, research and development, and program evaluation.

Bates (in Foley, 2003) proposed 12 “golden rules” for the use of technology in education. These “rules” offer guidance in the broader areas of designing and developing distance education:

1. Good teaching matters. Quality design of learning activities is important for all delivery methods.
2. Each medium has its own aesthetic. Therefore professional design is important.
3. Education technologies are flexible. They have their own unique characteristics but successful teaching can be achieved with any technology.
4. There is no “super-technology.” Each has its strengths and weaknesses; therefore they need to be combined.
5. Make all four media available to teachers and learners. Print, audio, television, and computers.
6. Balance variety with economy. Using many technologies makes design more complex and expensive; therefore limit the range of technologies in a given circumstance.
7. Interaction is essential.
8. Student numbers are critical. The choice of a medium will depend greatly on the number of learners reached over the life of course.
9. New technologies are not necessarily better than old ones.
10. Teachers need training to use technology effectively.
11. Team work is essential. No one-person has all the skills to develop and deliver a distance learning course, therefore, subject matter experts, instructional designers, and media specialists are essential on every team.
12. Technology is not the issue. How and what we want the learners to learn is the issue and technology is a tool.

A number of these “rules” are overlapping. Three of them (1, 2, and 11) address course and program design. Any examination of “first principles” should first examine instructional design.

While it has been noted that instructors, even those new to distance education, can learn to adapt courses and create materials for online delivery, and the author-editor model has long been an element of correspondence study programs, “what

is strikingly missing in these arrangements, usually, is an instructional designer and many good features of the instructional design approach”. The team-based approach to distance education course development is generally regarded as more likely to result in high-quality materials, experiences and, hence, more satisfactory teaching and learning experiences.

Recommendations for Distance Delivered Instruction

These recommendations are based on the current literature of the field of distance education, some cited above. These recommended guidelines are intended to provide ways to organize courses and be guiding principles that will make courses with equal numbers of semester credits equivalent in terms of comprehensiveness of content coverage, even if these courses are offered in different programs, cover different topics, and are delivered using different media.

A. Organizational Guidelines

In traditional university courses, the 50-minute class session in the building block for courses. Usually, 15 classes were offered for each semester credit. In the online training sector, the building block is often called the learning object. A learning object consists of lesson, study work, and assessment.

Distance delivered courses do not have class sessions. It is proposed that the field use the topic as the fundamental building block for instruction. Government, military, and corporate trainers use the phrase learning object rather than topic. Topics are organized into modules that are further organized into units that are roughly equivalent to a semester credit traditionally offered using 15, 50-minute class sessions.

When courses are planned, the designer will use the Unit, Module, and Topic/Learning Object Approach (U – M – T Approach), as explained next:

Unit/Module/Topic Guideline:

- Each semester credit (750 minutes of face to face instruction) = 1 Unit
- Each Unit = 3–5 Modules
- Each Module (~200 minutes of face to face instruction) = 3–5 Topics
- Each Topic (~50 minutes of face to face instruction or one class period) = 1

Learning Outcome

A typical 3-credit course has 3 units, 12 Modules, 48 topics, and 48 learning outcomes.

Working definitions of Unit, Module, and Topic are:

Unit – A unit is a significant body of knowledge that represents a major subdivision of course’s content. Often, one unit of a course would represent four or five weeks of instruction, and would be equivalent to a semester credit. For example, a unit in an educational statistics course might be Descriptive Statistics.

Module – A module is a major subdivision of a unit. A module is a distinct and discreet component of a unit. Generally, a unit such as Descriptive Statistics might be divided into 3–5 major components, such as Statistical Assumptions, Measures of Central Tendency, Measures of

Variation, and the Normal Curve. Modules generally are the basis for several class sessions and are covered in about a week of instruction and study.

Topic/Learning Object – A topic is an important supporting idea that explains, clarifies, or supports a module. A topic would be a lesson or an assignment. Topics in a module on Central Tendency might be Median, Mode, and Mean. The Topic/Learning Object is often designed to require one hour of work working with the lesson which is usually make up of an objective, multimedia content, and a summary. Students are also expected to study in addition to “online instruction.” Study means reading papers and texts, watching videos, or reviewing materials.

These terms (Unit – Module – Topic/Learning Experience) can be used in a variety of ways. Of importance is the idea that topics form modules and modules form units, and units are the main sub-divisions of courses.

B. Assessment Guidelines:

Assessment is defined as the determination and measurement of learning. In Education, assessment is used for grading. Assessment is directly related to learning outcomes.

Normally there is at least one learning outcome for each topic.

- 1 major assignment per unit
- 1 minor assignment/2-3 modules

A typical 3-credit course has the following assessment strategy:

- 1 examination
- 1 10- page paper
- 1 project
- 3 quizzes
- 3 small assignments (short paper, article review, activity report)
- graded threaded discussions, emails, and chats

Learning Outcome

A learning outcome is observable and measurable. Learning outcomes are a consequence of teaching and learning—of instruction and study. Often, learning outcomes are written with three components: conditions under which learning is Facilitated (instruction), observable and measurable actions or products, and a minimum standard of expectations. Usually, there is at least one learning outcome for each course topic.

For example, a learning outcome for a topic dealing with the median might be:

After studying the text, pages 51–53, reviewing the PowerPoint with audio presentation on measures of central tendency, and participating in synchronous chats, the Child and Youth Studies student will satisfactorily complete the objective test dealing with measures of central tendency at the 90% level.

C. Content Guidelines

Traditionally, instructors have offered content by making presentations during face-to-face instruction.

Additionally, readings in textbooks and handouts are required of students. In distance teaching situations, readings in

texts, handouts, and information on the Internet are often used to deliver content. For high quality courses, there should be an emphasis on the use of various forms of visual media to offer instructional content.

Videos, visual presentations with accompanying audio, and other graphical representations of important topics are important to the well designed course. A variety of delivery systems for content should be considered, including the use of compact disks, electronic files posted to Web sites, and streaming.

Content is organized for students into topics/learning objects. Topics are combined into modules of similar topics and modules are used to form units.

Modules might have 3-5 topics presented in the following ways:

- Readings in the text or other written materials
- Videos supplied on CD, DVD, or streamed
- Audio recordings of speeches or presentations supplied on a CD, as an email attachment, or streamed
- Recorded presentations using PowerPoint with prerecorded audio
- Synchronous chats with content experts

D. Instruction/Teaching Guideline

The pace of instruction for learners is a critical concern to the distance educator. Because many distance education students are employed full-time, it is important to offer instruction in a way that complements their other responsibilities.

These guidelines relate to the pace of instruction and the need for continuing interaction between instructors and students.

- 1 module per week
- Instructor email to students each week
- 1 synchronous chat per week
- 2-3 threaded discussion questions per topic, or 6-10 questions per week
- Instructor comments on discussions as part of threaded discussion board
- Progress reports (grades) submitted to students every two weeks

These course design guidelines are based on the literature of distance education and are derived from the analysis, review, and study of quality courses delivered at a distance.

The simplicity of the Carnegie Unit has made it the standard for course design, primarily because it was easy to apply. It is easy to count class sessions in order to determine if course “measures up.” Distance Education, with few if any face-to-face sessions, does not have such an easily applied standard. The Unit, Module, and Topic approach is being applied in courses and seems to be quickly and accurately applied while establishing standard of quality. Try it out in your courses and write an article for Distance Learning.

Benefits

Distance learning can expand access to education and training for both general populace and businesses since its flexible scheduling structure lessens the effects of the many time-constraints imposed by personal responsibilities and commitments. Devolving some activities off-site alleviates institutional capacity constraints arising from the traditional demand on institutional buildings and infrastructure. As the population at large becomes more involved in lifelong learning beyond the normal schooling age, institutions can benefit financially, and adult learning business courses may be particularly lucrative. Distance education programs can act as a catalyst for institutional innovation.

Distance learning may enable students who are unable to attend a traditional school setting due to disabilities, handicaps, or sicknesses such as decreased mobility and immune system suppression to get a good education, and may provide equal access regardless of socioeconomic status or income, area of residence, gender, race, age, or cost per student. Distance education graduates, who would have never have been associated with the school under a traditional system, may donate money to the school.

Criticism

Barriers to effective distance education include obstacles such as domestic distractions and unreliable technology as well as students' program costs, adequate contact with teachers and support services, and a need for more experience.

Some students attempt distance education without proper training of the tools needed to be successful in the program. Students must be provided with training on each tool that is used throughout the program. The lack of advanced technology skills can lead to an unsuccessful experience. Schools have a responsibility to adopt a proactive policy for managing technology barriers.

Because online courses may have no upper size limit, there is a theoretical problem about the application of traditional teaching methods to online courses. Some see Berwick's work as an influence on the development of Massive Open Online Courses, or MOOCs. He noted that higher education has not established a negative link between large class sizes, generically understood, and reduced learning outcomes. Berwick argued that although a negative link has been established between certain types of instruction in large classes and learning outcomes, higher education has not made a sufficient effort to experiment with various instructional

methods to determine whether large class size is always negatively correlated with a reduction in learning outcomes. Further, he argued that there is no testable evidence to suggest that large class size is always worse than there is to suggest that small class size is always better. Early proponents of MOOCs saw them as just the type of experiment that Berwick had pointed out was lacking in higher education, although Berwick himself has never advocated for MOOCs.

This chapter defines what the Open University, illustrated by simple example is. This definition is used as the foundation for our comparative study of the two open universities, a layered approach that supports translating end-to-end goals into the modifiable elements of the distance education via relevance process. The comparative and relevance functionality of each part in the system is described. At each part of the system, we identify a critical design decision, a design tradeoff that significantly affects the operation and performance of the distance education.

To quantify the impact of these design decisions, we have to develop a special metric: the price of a feature.

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