Effective Assessment and Evaluation Strategies for Distance Education.

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Abstract

Distance education or ***distance learning***, is a field of education that focuses on teaching methods and technology with the aim of delivering teaching, often on an individual basis, to students who are not physically present in a traditional educational setting such as a classroom (Wikipedia, 2011).

Most institutions across the globe have embarked on distance education to meet the demands from students who under normal circumstances will not be able to attend classes in the traditional classroom format because of time-constraints and, job and family responsibilities. Others institutions have embarked on distance education to reduce capacity constraints and increase their student populations. There are those who have embarked on distance education for profit. There is the compelling need to determine their success through effective assessment and program evaluation.

Much has been written about distance education in terms of types and structures, tools and mode of delivery. However, very little has been written and discussed about the effectiveness of distance learning and the effective ways of assessing distance education programs and the use of program assessment outcomes to improve students' learning, instruction techniques, resources and program management. This paper will discuss the various program evaluation strategies, and assessment tools and practices. Effective program assessment and evaluation not only help in determining what and how students have learned, they also help in improving the quality of education which is central to planning, budgeting, and personnel decisions.

Learning is a continuous process and integrated into it is the ability to put into practice what one has learned. Learning outcomes are, therefore, seen as an integral part of decision making policies of academic institutions.

Keywords: distance education, distance learning, program evaluation, assessment tools.

Introduction

The past decade has seen a rapid growth in distance education programs all over the world. Many universities and other tertiary educational institutions have embarked on distance education programs to expand their market reach and/or bring affordable education to people who might otherwise not have access to higher education due to geographical barriers, employment demands, family demands, and financial constraints. Distance education programs also seek to involve instructors who would otherwise be unavailable to teach on a regular basis and also link students from different socio-economic and cultural backgrounds.

In the past, the quality of educational programs has largely been defined by the popularity of the programs and the size of the institution. The rapid growth of distance education programs has generated public interest in the quality these programs.There are the skeptics who think distance learning does not deliver a quality of education similar to the traditional classroom face-to- face setting.Several literatures have addressed the parameters and themes that address quality, but there are few discussions on the metrics and strategies of accessing distance learning programs in Africa.

A good assessment and evaluation of distance learning programs identify the vision, goals, objectives, outcomes and measures. An effective program assessment should address the following questions:

- What do you like to do?(*Vision*)
- What steps do you take to get there?(*Goals*)
- What do you have to achieve for each step?(*Objectives and Outcomes*)
- How well are you doing it? (*Measures*)
- What and how does a program contribute to the development and growth of its students?

The paper outlines some of the problems associated with successful implementation of quality distance education programs in Africa. It also discusses assessment strategies leading to quality distance learning. Quality assessment issues related to institutional mission statement, students' needs and satisfaction, students learning and course outcomes, instructional technology, and staff needs and support are also discussed.

Categories of Distance Education Programs

Based on technology in use and the location of the program, a distance education program may fall under the following categories:

- Print based courses
- Conferencing courses (video conferencing)
- Computer-based training (CBT)
- Pre-recorded audio courses (tapes, podcasts)
- Radio broadcast courses
- Television broadcast course
- Online courses using Learning Management Systems.

Problems affecting Distance Learning Implementation in Africa

Despite the perceived promises and obvious advantages to distance education in Africa, there are several problems associated with the implementation of distance learning programs. The problems that need to be addressed in order to improve the quality of distance learning programs in Africa include:

- Lack of clearly defined institutional mission statements
- Lack of clearly defined program mission
- Lack of trained and qualified staff
- Dependency on part-time instructors
- Inadequate technological infrastructure
- Inadequate staff training schemes
- Deficiencies in curricula development
- Inadequate laboratory spaces for medical and science-based courses.

In their reports of the use of distance learning to trainhealth care workers in Mozambique and Tanzania, (Nartker et al., 2009a, 2009b), the authors recommended the development of strategic plans and vision for the distance learning programs, provision of improved infrastructure and human resources, increase in awareness and skills of the use of technology, and the decentralization of coordination functions and learner support, and improved program coordination.

In the minds of the general public and academics, when it comes to quality, distance learning seems to bear the "burden of proof". Assessment and evaluations are needed to address these problems to achieve students' goals, validate the quality of the program and maintain standards. The standards used in determining the quality of distance education must be based on the philosophy of "*Principles of Good Practice*" which highlights accountability, effectiveness, impact, organizational context and unanticipated outcomes.

Distance learning can be as effective as traditional face-to-face learning if the "*Seven Principles of Good Practice in Undergraduate Education*" (Chickering, et al, 1987) are applied to distance learning.

- Good practice encourages contact between students and instructors
- Good practice encourages cooperation among students
- Good practice uses active learning techniques
- Good practice gives prompt feedback
- Good practice emphasizes time on task
- Good practice communicates high expectations
- Good practice respects diverse talents and ways of learning.

Assessment Strategies

Analyses of the problems related to successful implementation of quality distance learning have resulted in the need for appropriate strategies to assess the quality of these programs. The standards must be developed over time, and the data collected on a regular basis must be compared with existing standards to determine necessary changes that will steer the direction of the program.

Recent research activities in program assessments and evaluations have led to the adoption of summative and formative assessment techniques. The source of data used in the assessment and evaluations include interviews, surveys, documents, records gathered about various programs, field reports and content analysis.

The assessment should be both self-assessment and external assessment. Self-assessment techniques are used to determine if the objectives of various programs align with the institutional mission statement. External assessment will help judge the validity and credibility of the programs. The external assessors should be made up of scholars with

specializations in the related fields. Their responsibilities will involve assessment of format, curriculum and learning outcomes, student's needs, staff needs and support, and the technology used for delivery.

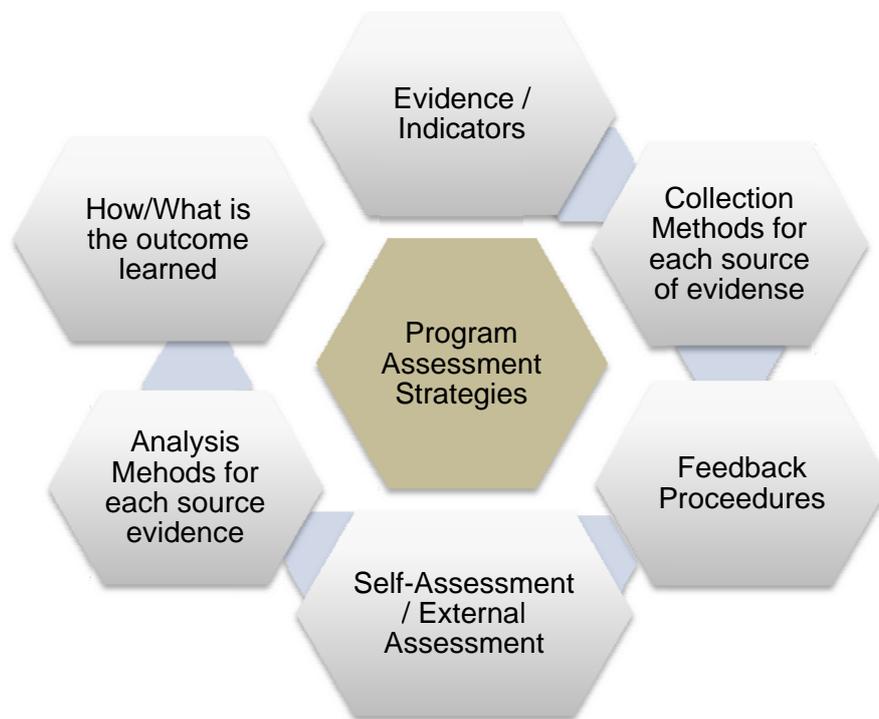Figure 1 shows the various components of program assessment strategies.

Figure 1: Components of Assessment Strategies

Table 1 shows the various assessment metrics and related activities andassessment frequencies,

Assessment Activities	Frequency of Assessment

Institutional Mission Statement
 	
    Accreditation
 	
    Summary of Departmental Program Assessment
 	
    Budget Review
	Site visits as scheduled by accreditation teams
	 Annually as defined by the institution's annual report

Students' Needs and Satisfaction Assessment
 	
    Distance Education Orientations
 	
    Student Profile Study
 	
    Student Satisfaction Survey
 	
    Student Evaluation of effectiveness of distance education
	Beginning of a program or course.
	 Ongoing

Student Learning and Course Assessment Techniques
 Review of Learning Resources
 Course Evaluations
 	
    Classroom Inventory
 	
    Course Development Review
	Both the beginning and end of a program or course.

Instructional Technology Assessment Technology Evaluation	Ongoing in some cases and at the beginning of a program or course.

Staff Needs and SupportAssessment
 	
    Faculty Satisfaction Survey
 	
    Review of Academic Credentials for New hires
 	
    Needs Analyses for training
	Annually

Table 1: Assessment metric, related activities and frequencies.

Institutional Mission Statements

Assessing and evaluating the success of a distance learning program begins at the institutional level. The institution's mission statement should specify the institutions', educational philosophy, and educational objectives. Distance learning needs must be in line with the institution's mission and be considered as providing education to distance learners

using instructional methods that serve the needs of the learners. For effective distance program implementation in Africa, there should be some cooperation with the government, businesses, private organizations, churches and communities.

 The mission of the departments in charge of the various distance learning programs or courses should also identify the missions, goals and objectives of each program or course and align them to the institutional mission. Institution mission, in most cases, are identified in self-study reports. Aligning the department's mission statement to the institution mission statement helps to produce an outcome that will be used in planning, administration and institutional support of the distance learning program. In their report, the Association to Advance Collegiate Schools of Business (AACSB International, 2007), recommends that institutional objects should "specify the educational objectives of each degree, identify the student population to be served, explain how distance learning contribute to the mission, goals and objectives of the institution, and how the institutions distance learning differs from offerings of other providers". Upon assessing student learning outcomes, these will be aligned to the individual program learning outcomes.

Institutional mission assessment should address the following questions:
- Does distance learning program fits into the institution's mission?
- Is the institution equipped to offer distance learning?
- Does the institution have adequate resources to offer distance learning?

The various academic departments involved the institution's distance education program should conduct program evaluation:
- Upon graduation
- At the end of s specific semester
- At the completion of a required set of courses
- Upon completion of certain number of credits
- Upon program completion
- Upon employment
- A number of years after graduation.

The outcome of the institutional mission assessment departmental program evaluation will help shape institutional decision making, planning, and resource allocation.

Students' Needs and Satisfaction Assessment

An important question to ask when it comes to students' needs and satisfaction is: "Does the institution have adequate student support services and apparatus to support off campus students in terms of learning, advising and career development?" Distance learners have diverse needs, which among others; include family needs, business activities, and health issues. Their learning activities can be interrupted by births, illness, loss of job, career change, relocation, death in the family and needed vacations. In some cases, there may also be communication problems due the unreliable nature of the communication infrastructure in Africa. The majority of students enrolled in distance learning programs are working adults. As stated byPallof and Pratt: "Most of our students today are older, are working, and need more flexible schedules" (Pallof& Pratt, 2001)

Students' needs can be identified by getting to know them as soon as possible through the use of profiles and introductory activities that will provide the instructor or facilitator an insight into who the learner is, not only academically, but professionally and personally. If possible, their learning activities must be planned around their schedules, activities and learning styles to create a positive learning experience. Conrad and Donaldson states that: "One common mistake distance education instructors make is by not giving enough time for activities". (Conrad and Donaldson, 2004).

Students' satisfaction can be measured through how instructors and facilitators interact with the learners. Interactivity with students is, therefore, very essential to the success of any distance learning program. Technology in the 21st century makes it easier to interact with students. However, use of technology must be considered as an integral part of distance education, especially in Africa where there is limited technological infrastructure to support distance learning. In planning a distance education program in Africa, focus must be placed on the instructional needs of the student rather than technology. One effective way of interacting with students is through setting up district meeting centers where instructors and facilitators meet with students periodically.

The following factors must play acritical role in determining the students' needs: age, cultural and socio-economic backgrounds, interests and experiences, educational levels, familiarity with distance methods and delivery systems. Students' needs can be assessed by 1) analyzing existing data sources, 2) conducting regular surveys, 3) studying students' profiles, and 4) interviewing community members and focus groups.

Student Learning and Course Assessment Techniques

One of the major components of instructional design is course assessment. Couse assessment standards should aim at achieving learning outcomes comparable to traditional face-to-face programs. The timing and type of assessment is highly essential to bring out the necessary learning outcomes that will strengthen the integrity of the program. Both summative and formative assessment policies should be adopted.

In general, course assessments are intended to measure what students are learning about the content taught. In some cases, teachers aspire to more than simply teach students information about the subject matter. They hope to use the subject matter to teach students to think, in order to develop-higher level cognitive skills, to solve problems, analyze arguments, synthesize information from different sources and apply what they are learning to new and unfamiliar contexts. (Angelo and Cross, 1995)

Effective course assessments should help institutions determine if thedistance learning curriculum fits into the existing traditional program of the institution and if the institution has the appropriate guidelines for course development, review of instructional materials, revision of pedagogy, curricula and course sequencing.

Figure 2 illustrates the core areas of course assessment and expected outcomes.

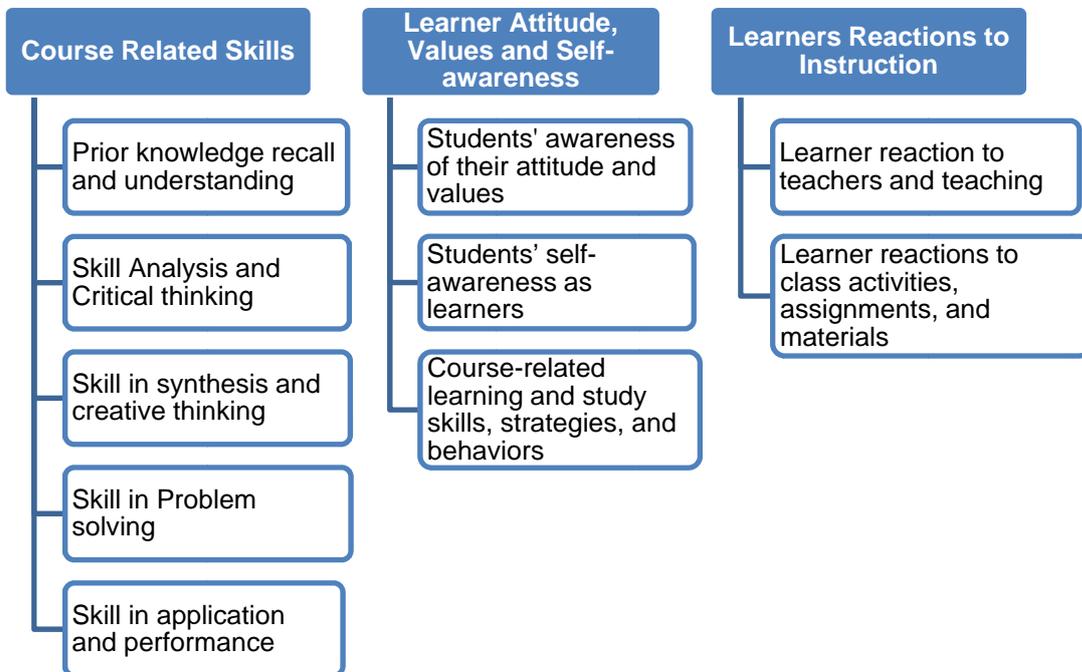| Course Related Skills	Learner Attitude, Values and Self-awareness	Learners Reactions to Instruction
Prior knowledge recall and understanding	Students' awareness of their attitude and values	Learner reaction to teachers and teaching
Skill Analysis and Critical thinking	Students' self-awareness as learners	Learner reactions to class activities, assignments, and materials
Skill in synthesis and creative thinking	Course-related learning and study skills, strategies, and behaviors	
Skill in Problem solving		
Skill in application and performance		

Figure 2: Course assessment metrics and expected outcome

Adapted from Angelo, T. A., and Cross, K. P., *Classroom assessment Techniques: A handbook for College Teachers.*2nd Edition, Jossey-Bass, 1993, pp. 62 – 63.

Learning Assessment Strategies

    A. Direct Indicators of Learning

        1. Capstone Course Evaluation

        2. Course-Embedded Assessment

        3. Tests and Examinations (Locally/Faculty Designed & Commercially Produced Standardized Tests)

        4. Portfolio Evaluation

        5. Pre-test/Post-test Evaluation

        6. Thesis Evaluation

        7. Videotape and Audiotape Evaluation of Performance

    B. Indirect Indicators of Learning

        1. External Reviewers

        2. Student Surveying and Exit Interviewing

        3. Alumni Surveying

        4. Employer Surveying

        5. Curriculum and Syllabus Analysis

Adapted from http*://www.provost.wisc.edu/assessment/manual/manual2.html*

Student learning outcomes can be used to:

- provide the necessary feedback to determine ways of improving student learning activities
- design new courses and revise existing ones
- communicate expectations to students clearly
- help departments align their respective program objectives with the institutional mission statement
- increase learning awareness among students
- help departments, instructors, and facilitators devise effective advising strategies
- design and develop course materials that suit each new technology

Instructional Technology Assessment

TheBates' *ACTIONS* model of quality - " Access and Flexibility, Costs, Teaching and learning, Interactivity and user friendliness, Organizational issues, Novelty, and Speed" can be used as an effective tool to select instructional technologies(Bates, 2000). Instructional technologies should not be limited to just one methodology, but rather a blend depending on the geographical location, nature of the course, accessibility to technology. Cost factor is

also a crucial element to consider since it impacts both students, instructors, facilitators and institutions as a whole.

The choice of technology must facilitate student learning. And greater care must be taken about the choice of technology. In their report, of use of distance learning to train health care professionals in Mozambique and Tanzania, Nartker, et al indicated that lack of technology hinder the effective implementation of the program (Nartker et al., 2009a, 2009b)

Staff Needs and SupportAssessment

Majority of the instructors in distance education are part-time instructors. Issues related to workload, efforts put in developing teaching materials, work being considered as part for promotion/tenure decision making, and consultation time should all be considered when assessing staff needs and support. Staffing issues if notaddressed prior to implementation of a distance learning program may lead toprogram failure.

In their paper on needs assessments Stewartand Cuffman detail some important questions that must be explored in needs assessments(Stewart. R. G., and Cuffman, D.M.,):
(1) What is a needs assessment?
(2) How are needs assessments related to successful distance education?
(3) Where have needs assessments been used in distance education?
(4) Which approach to needs assessment should one choose?
(5) What sources and methods might one use for collecting data?
(6) What factors influence the use of needs assessment results?
(7) What criteria can be used to evaluate a needs assessment?

Needs assessments focus on some fundamental metrics that enable the staff to function effectively as distance education instructors: environment, incentives, motivation, knowledge, skills and proficiency necessary to integratetechnology in instruction and mode of delivery, and the ability to evaluate student achievements at distant sites.

Conclusion

Distance learning is just one strategy to deliver educational programs. While a particular assessment method and strategy is not an "all size fits all", the assessment methods and data collected may vary in each environment. In whatever situation, the data collected and outcomes are useful for charting the course of distance learning in an institution.

By effectively accessing distance education programs the program, with regards to institutional mission statement, students' needs and satisfaction, students learning and course outcomes, instructional technology, and staff needs, the integrity of distance learning can be assured and in the eyes of the public be seen as comparable to traditional face-to-face programs.

Higher educational institutions in the past decade have incorporated distance learning programs into their existing programs. The number of students enrolling in distance education programs is increasing, so are the programs. Quality assurance is critical to the overall acceptance and integrity of distance learning.

To foster quality assurance, there should be accreditation bodies solely responsible for distance learning. In most countries in Africa, quality assurance and accountability are addressed by the governmental agencies, whereas in some developed countries regional accreditors and accreditation bodies for various disciplines, such as CSAB, AACSB, and NCATE.

For internationalization and cross-border acceptance, regional accreditation bodies must be set up within the various economic blocs in Sub-Saharan Africa to oversee the administration and program development of distance education programs.

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