Uses and Applications of Assessment Modes in E-Learning System

[1]Dr. Munazza Mahmood, [2]Memoona Bibi

Abstract

In the response of the recent emphasis on the valuable assessment in higher education, careful assessment in e-learning has also become continuously important for accountability and accreditation purpose. As the e-learning is concerned, e-students concentrate through precise combination of interactive media, computerized or simple, on line or distance. The assessment of e-learning is normally controlled through different types of assessments including; focus based assessment directed at an assigned testing focus under the nearby supervision of proctors and the assessment of assignments, for example, reports; tasks, and activities submitted by means of email. The main objective of the study was to; to know about the most frequently assessment methods used in e-learning system and uses and application of modes of assessment in e-learning. Research articles, thesis, case studies and e-books were used to collect the literature. After the literature analysis it was found that there are many approaches of assessment that can be used in e-learning assessment but the most important is that when e-assessment is to be implemented it should be compared with the directions in which students are to be taught. Both e-learning and e-assessment must be significant for the progress of the students.

Key Words: *E-Learning, E-assessment, Assessment Mode.*

1.Introduction

The computer-based learning and training enteredthe nineties with four things conflicting with it. In the first place, innovation changes made it practically difficult to serve every one of the stages that were being used. Second, the restrictions of both equipment and programming rendered programs exhausting and unauthentic. Third, the developing instability of content, and improvement expenses and time, made individuals difficult about spending the money expected to assemble and send a powerful framework. Lastly, the restrictions and issues connected with computer innovation, and in addition an absence of attention to current instructional outline approaches, decreased the commitment of more propelled learning approaches (Meyen, Skrtic, Deshler, Lenz, Sailor & Chaffin, 2000).

A valuable change in the assessment of higher education is getting familiar by changing emphasize from input (number of credit hours taken by the student in a subject) to outcomes (what students have learned and what they are able to do). The e-leaning assessment depends on the three major criteria;

1. E-Learning is organized, which makes it fit for moment upgrading, storage/recovery, dispersion and sharing of instruction or information.
2. It is conveyed to the end-user by means of a computer utilizing standard internet innovation.
3. It spotlights on the broadest perspective of learning arrangements that go past the conventional standards of training.

[1] Assistant Professor, Department of Education, International Islamic University, Islamabad
[2] Ph. D Scholar, Department of Education, International Islamic University, Islamabad

The Web as a specialized instrument has been produced and refined to simulate the greater part of the arrangements utilizing before advances including the face-to-face classroom. The main purpose of the creation of e-learning advancement is E-learning advancements have created to the degree that quality teacher-student exercises can be upheld either among groups or separately and in either constant (synchronously) or in deferred time (no concurrently) (Zou, 2008).

With e-learning, we're not simply presenting new innovation for learning but we are acquainting another path with consider learning. Learning does not really require training or direction. Individuals learn in numerous ways through access to well-designed information, by utilizing new execution upgrading instruments, through experience, and from each other. In the event that we consider learning in this wide viewpoint, it will be less demanding to see new choices for enhancing performance. (Petty, 2016)

The crucial standards of e-learning are:

- Scalability; e-learning can be scaled almost limitlessly at minimal extra cost
- Access; e-learning is accessible anyplace there is an Internet association.
- Timeliness; e-learning can be consistently redesigned with new data and knowledge generally cost adequately.

Interestingly, traditional methods of delivery do not have every one of the three qualities including; an educator can only be accessible to such a large number of individuals at a time, is not accessible at whatever time and anyplace to the learner and may not be fully informed regarding the most recent data and thoughts. Delivery of e-learning can either be synchronous, with participants signed on together in virtual classrooms, or non-concurrent in which courses are self-guided taken by means of the Internet, CDROM, or streamed audio-video Web presentation (Rowlands, 2001).

The development and provision of e-learning products and opportunities are one of the most increasingly growing areas of education and training. However e-learning is thorough internet, multimedia, computer etc. but the development and assessment of e-learning is the mostcritical aspect. The most energizing thing about e-learning is that organizations are together for empowering between huge innovation and media companies, leading global colleges, and enterprising new e-learning organizations (Yorke, 2005).

Assessment in e-learning is to be discussed as vital forthe process of learning and as a major aspect of the management system. It is to be recommended that assessments in e-learning should measure student performance execution and result in criticism to students about their execution. There are nine decisions that should be considered while developing assessments for e-learning instructions;

1. Which points of view of learning will be assessed, intellectual (acquisition of information), behavioral (ability advancement), or humanistic (qualities and attitudes)?
2. Who is going to make the assessment, the student, their companions, or the educator?
3. Will assessment techniques be learning encounters in themselves?
4. Is the evaluation to be formative (giving input amid learning) or summative (measuring learning toward the end of the procedure)?
5. Are judgments of performance to make against associate principles (standard referenced) or set up criteria (paradigm referenced)?

6. By what means can assessment give a harmony amongst structure and flexibility?
7. Will the evaluation be true, identified with genuine circumstances?
8. Will the appraisal be coordinated, trying a scope of learning and abilities?
9. In what manner can validity and reliability of assessment be guaranteed? (QAA, 2007).

However, effective usage of e-learning requires institutional support. This support is not restricted to the arrangement of an e-learning platform, technical help, and investigating additionally incorporates data accessibility. While authoritative support for e-learning can prompt to more noteworthy fulfillment, it can also affect the selection of such frameworks. For sure, e-learning is regularly presented at a rapid rate; if representatives are to be quick to embrace such innovations, they require extensive support, preparing, and direction on the most proficient method to utilize the e-learning framework (Nicol, 2009).

1.1 Objectives

1. To know about the mostly used assessment methods in e-learning system.
2. To explore the uses and applications of modes of e-learning assessment.

1.2 Research Questions

1. What are the most frequently methods used in the assessment of e-learning system?
2. What are the possible applications of assessment modes in e-learning environment?

2.Literature Review

2.1 Introduction and Importance of Assessment in e-learning

These days, e-learning has turned into a mainstream method for learning, it has expanded exponentially lately. With a specific end goal to support the change of e-learning quality, assortments of value measures are produced by analysts and associations. Assessment models and structures differ starting with one setting then onto the next as per the particular yield and reason measure. They concentrate on mechanical viewpoints or on instructive view or on the instructional class or on expanding learner's fulfillment (Northcote, Kendle, 2007).

It is to be suggested by the Graham (2001) that there are two types of feedback that are required in the e-learning environment including; information feedback and acknowledged feedback. With the coming of the World Wide Web and data innovation (IT), it has turned out to be less demanding to execute an e-learning educational modules. An e-learning condition encourages student learning without the requirements of time and separation, giving students more chances to control their own learning (Graham, Cagiltay, Lim, Craner, Duffy, 2001).There are three methods of learning discussed by the Harasim (2000) to differentiate the e-learning from the traditional learning;

- Adjunct mode; utilizes networking to upgrade face-to-face or distance education.

3

- Mixed mode; utilizes networking as important portion of a traditional classroom or distance course.
- Totally online mode; depends on networking as the primary teaching medium for a whole course or program (Harasim, 2000).

According to Jain, 2002 e-learning can be thought to be very identified with learning and instructing (Jain et al., 2002). In this manner, instructional methods are imperative viewpoints for all features of e-learning, coming to from the production of the courseware and use of an e-learning framework to the assessment of the learning progress (Gunawardena & McIsaac, 2003). Considering the conventional showing process, the instructor needs to choose which abilities must be mastered by the understudies to which degree and how the consequence of the learning procedure ought to be measured. Such contemplations are normally acknowledged by deciding learning targets and evaluation techniques for a course (Chellman & Duschateln 2000).

2.2 Assessment, Accreditation and e-Learning

A 2002 report entitled "Accreditation and Assuring Quality in Distance Learning," from the Council for Higher Education Accreditation (CHEA) reports that 5,655 institutions are licensed by the 17 institutional accreditors, regional and national, in their study. Of these, 1,979 institutions offer a type of distance delivered learning system or courses, a few prompting to degrees.

Evaluation of student performance must exhibit results tantamount to those for private projects. The institution must archive that it leads course/program assessments, including assessment of instructive results, student maintenance and situation, and student, staff, and manager fulfilment." In brief, the utilization of e-learning is expanding among schools and colleges and accreditors are reacting with guidelines intended to guarantee quality, including an emphasis on assessment of student learning results. Be that as it may, a late review found that exclusive 41 percent of designing educators who utilize the Internet for direction report that they assess the Internet parts of their courses (Nickles & Pritchett, 2002).

2.3 Usability Assessment in e-Learning System

Usability is a portrayal of user interface quality and one of the fundamental concentrations in communication framework plan. As indicated by The International Standards Organization (ISO-9241), usability is a point of confinement of effectiveness, productivity, and fulfilment of a client with respect to the utilization of a framework to finish a specific objective. With regards to e-Learning, the issue of usability has turned into the concentration these days by making students connected with the framework and how to make students cooperate with it (Semugabi and Villiers, 2010). The act of convenience assessment in e-Learning is about the usability perspectives itself advanced by the communication outline idea, academic adequacy, learning substance, and what number of backings that can be earned by learners. In this way, convenience assessment in an e-Learning framework ought to be centred on the procedures that are upheld by the framework. There are certain usability factors that are in connected with the e-learning system including;

1. Content; includes all of those languages, terms, learning and supporting material that is being used in the e-learning system.
2. Learning and support; all those characteristics that are directly linked with the learning instructions, discussions and assessment.

3. Accessibility; summarizes having the access of website pages and other sources.
4. Motivation to learn; supporting and engaging the learners for learning (Smulders, 2002).

2.4 E-Learning Assessment Modes, Uses and Application

Instrument	Use and Application
Online Discussion	• Incorporate discussion or participation online through chat rooms, gatherings and threaded discussion. • Facilitators can monitor commitments by learners as a part of the class assessment. Set tasks for individual or groups to finish. • Get input and review from different class individuals. • Set every learner a discrete region of work to review and investigate. • Add questionable statements to a threaded discussion and energize learner commitments, with the motivator of credit for interest numbering towards the general assessment.
Collaborative Assignments	• Set authentic tasks that groups need to examine and explain. • Learners must utilize online resources to work cooperatively, share resources and findings • Create learner correspondence and group building aptitudes that are so valued by employers.
Self-Assessment	• Give instant online input through surveys, multiple-choice questions and even through distribution of frequently asked questions (FAQs). • Permit learners to assemble the data they require to focus their study in ranges that need change
Online Exams	• Direct and control online exams with begin and stop times, or with login passwords and timeouts
Online quizzes	• Utilize regular tests online for a little part of final assessment. • Tests can be utilized as developmental evaluation during the course, guaranteeing adequate abilities furthermore, information have been accomplished before endeavouring a final assessment.
Computer-marked	• Set multiple choice tests as a speedy and simple indictor to learner and facilitator alike of the learner's progress because they are simple to manage to huge groups of learners and can be set aside a few

assignments	minutes and place helpful to the learner.
Portfolios	• Portfolios are created utilizing an assortment of online devices or computer programming items. • Learning administration frameworks frequently have portfolio offices where learners can accumulate a scope of materials fitting to the course.
Role play	• Build up a role play to permit learners to get into the character of the general population they are exploring. • Learners can go up against a part which they can inquire about, create and carry on.
Email	• Utilize email for getting and following reports, assignments furthermore, articles. • Return work by email with explanations or, with learner authorization, results can be set on bulletin boards for further discourse or associate audit.
Web Publication	• Motivate learners to compose and distribute articles and assignments in online distributions considering peer also, workforce survey. • Get help and set up a class web based diary with the goal that student work can be distributed and surveyed on the web. • Build up an online frequently asked questions (FAQs) page where regularly asked messages or fascinating messages can be addressed to freely.
Web design and development	• In information technology courses, learners can finish tasks that add to the outline and advancement of their own particular site.
Peer Review	• Permit learners to survey each other's work. • Urge learners to share their work to expand upon the aggregate aptitudes and learning of the gathering.

2.5 Restrictions of Assessment in the E-Learning Situation

Here are some of the restrictions that are to be found by the many writers while examining the literature review about e-learning system;

- **All sort of abilities;** information, aptitudes, and states of mind might be intervened inside an e-learning condition. In this manner, it is conceivable to make learning content including realities applicable for a learner, guidelines how to accomplish an aptitude, or data around a normal conduct. In this way, innovation can be viewed as an empowering

agent for these sorts of abilities, since data can be improved with mixed media resources (Gunawardena and McIsaac, 2003; Park and Lee, 2003).

- **Within an e-learning framework, goals should be characterized in regards to the objective gathering.** As for the institutionalization procedure in the field of e-learning determinations, a target can be viewed as a state inside the framework and does not inform any thing regarding the level of the learning objective. Moreover, it is not really conceivable to achieve learning targets for every one of the three sorts of skills inside an immaculate e-learning circumstance (ADL, 2004).
- Learning targets which are characterized by an educator dependably must be assessed somehow to grade the students and to enhance the nature of the course for future sessions. Considering the conceivable outcomes of e-learning, it is very much archived that we can evaluate the picked up information by utilizing restricted decision questions like tests or different decision questions (Scouller, 1998; Park and Lee, 2003).

2.6. Conclusion

The progression of education from multiple points of view relies upon assessment. Quality assessment structures and models can give associations, people and instructors with valuable data to propel the field all through the assessment of student's execution and the measure of student's fulfilment. Online e-Learning is another option to conventional face-to-face education. The achievement of e-learning can be asses by utilizing, learning styles, learning condition, learning results, showing practices and money saving advantages. Numerous foundations actualize e-Learning to address students' issues, particularly those of non-traditional students with full time employments. Since e-Learning is directed utilizing the Internet and World Wide Web, the learning condition turns out to be more complicated. Students' who are initially received the satisfaction with the technology based e-learning would be able to decide the continuity of the system usage. These days advanced education institutions need to actualize distance education administrations to support the online enrolled students in more advantageous ways. Online instruction administrations are less expensive, powerful, and usable when contrasted with mixed and face to face learning conditions. It is to be needed that e-learning frameworks must incorporate instructional outline based content and web site usability to trigger the students.

In this era, e-Learning is as yet developing quickly, supported by expanding complexity of data innovation and by better comprehension of how to make content and conveyance of e-courses more compelling. In addition, different sorts of e-learning emotionally supportive network have been progressively acquainted with advanced education establishments with an end goal to meet the student focused learning ideal models prescribed by (UNESCO, 1998).

3.Discussion

It is to be considered that e-Learning is fundamentally an online network that makes data or information accessible to clients or learners and slights time limitations or geographic closeness. Although internet learning has advantages over traditional face-to-face instruction (Piccoli et al., 2001), concerns incorporate time, work escalation, and material assets required in running e-learning situations. The costly high disappointment rate of e-Learning usage examined by Arbaugh & Duray (2002) merits consideration from administration and system designers.

Numerous researchers from psychology and data framework systems have distinguished essential factors managing e-Learning. Among them, the innovation acknowledgment model (Ajzen & Fishbein, 1977; Davis, Bagozzi, & Warshaw, 1989; Oliver, 1980), and the desire and affirmation model (Bhattacherjee, 2001; Lin, Wu, and Tsai, 2005; Wu et al., 2006) have mostly added to understanding e-Learning achievement.

Assessment of students' learning and assessment of instructions are of basic significance and can be upheld by e-learning innovation and procedures (Buzzetto-More and Alade, 2016). Great evaluation, particularly of developmental nature, is unpredictable and considerable exertion is required here. Innovation in e-learning makes great developmental assessment practical by removing some of the effecting factors hindering the higher education (Committee on the Foundations of Assessment, 2001). Advancements and methodologies in e-learning can aid the assessment cycle for developmental evaluation of student work (Blayney and Freeman, 2004).

More usefully a comprehensive study conducted by the Australian Flexible Learning Structure for the National Vocational Education and Training System, recognizes key focuses for the execution of e-learning assessment to produce a quality result by following four basic stages.

1. The Planning Stage; Use the skills and learning that you have created for face-to-face delivery and assessment to help control your decision of assessment devices and procedures.
2. Developing Strategies; consider the skills and information that are to be evaluated and decide the best techniques to gather the evidence.
3. Implementation; clearly express the criteria for evaluation forthright to learners. Trust that simple technology can be as powerful as complex technology.
4. Assessor Support and Review; Share resources with individuals in comparative fields to help improve your own materials. Utilize the online condition to survey, think about and assess your evaluation methodologies, prove gathered to approve appraisal (Booth, Clayton, Hartcher, Hungar, Hyde & Wilson, 2003).

References

ADL (2004). Sharable Content Object Reference Model (SCORM) 2004 2nd Edition, Advanced Distributed Learning, http://www.adlnet.org/downloads/70.cfm

Ajzen, I., & Fishbein, M. (1977). Attitude–behavior relations: a theoretical analysis and review of empirical research. Psychological Bulletin, 84, 888–918.

Allen, I. E., & Seaman, J. (2014). Grade change: Tracking online education in the United States. *Babson Survey Research Group and Ouahog Research Group*.

Arbaugh, J. B., & Duray, R. (2002). Technological and structural characteristics, student learning and satisfaction with web-based courses, An exploratory study of two on-line MBA programs. Management Learning, 33(3), 331–347.

Australian Flexible Learning Framework Quick Guides series, Australian National Training Authority, p.2

Backroad Connections Pty Ltd (2002), Assessment and Online Teaching (Version 1.00)

Bhattacherjee, A. (2001). Understanding information systems continuance: an expectation confirmation model. MIS Quarterly, 25(3), 270–351.

Blayney, P., & Freeman, M. (2004). Automated formative feedback and summative assessment using individualised spreadsheet assignments. . *AustralasianJournal of Educational Technology, 20*(2), 209-231.

Booth, R, Clayton, B, Hartcher, R, Hungar, S, Hyde, P & Wilson, P (2003), *The development of quality online assessment in vocational education and training Vol. 1*, (NCVER Adelaide)

Brown, S., Race, P., Bull, J., (2002),Computer- Assisted Assessment in Higher Education, (London Kogan Page), p.195

Buzzetto-More, N. A., & Alade, A. J. (2016). Best Practices in e-Assessment. *Journal of Information Technology Education, 5*, 251-269.

Carr-Chellman, A., and Duschatel, P., (2000) "The Ideal Online Course", *British Journal of Educational Technology*, Vol 31, No 3, p. 234

Committee on the Foundations of Assessment. (2001). *Knowing What Students Know: The Science and Design of Educational Assessment*. Washington, DC:National Academy Press.

Davis, F. D., Bagozzi, R. P., &Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. Management Science, 35(8), 982–1003.

Graham, C., Cagiltay, K., Lim, B., Craner, J., Duffy, T., (2001) "Seven Principles of Effective Teaching: A Practical Lens for Evaluating Online Courses. " *The Technology Source*, March/April 2001.

Gunawardena, C.N. and McIsaac, M.S. (2003). Distance education. In: *Educational Technology Research and Development*, pp. 355-396.

Harasim, L., (2000), "Shift happens: Online education as a new paradigm in learning", *Internet and Higher Education* Vol. 3, p.46.

Jain, L.C., Howlett, R.J., Ischalkaranje, N.S., and Tonfoni, G. (2002). Virtual Environments for Teaching & Learning. In: *Series of Innovative Intelligence*, vol. 1, preface.

Kerka S., Wonacott, M., Grossman, C., and Wagner, J., (2000) *Assessing Learners Online: Practitioner File*, ERIC Clearinghouse on Adult, Career, and Vocational Education, p.6.

Kibby, M. (1999). Assessing students online. The University of New Castle. Retrieved from http://www.newcastle.edu.au/department/so/assess.htm

Lin, Cathy S., Wu, S., & Tsai, R. J. (2005). Integrating perceived playfulness into expectation-confirmation model for web portal context. Information & Management, 42, 683–693.

Meyen, E. L., Deshler, D., Skrtic, T. M., Lenz, B. K., Sailor, W., & Chaffin, J. D. (2001). An academy: Report on linking teacher education to advances in research. Lawrence, KS: Author. (OSEP PR/Award no. H029K73002).

Nicol, D. (2009). *Quality enhancement themes: the first year experience – Transforming assessment and feedback: enhancing integration and empowerment in the first year*. Mansfield: Quality Assurance Agency.

Northcote, M., Kendle, A., (2007) "Online assessment techniques for Indigenous learners", paper presented at *The Biennial Australian Indigenous Education Conference*, Fremantle, Western Australia 3-7 April, 2000, p.5.

Nickles, G. and A. Pritchett, "Software for the Automated Evaluation of Web-Delivered Instruction," *Proceedings ofthe 2002 American Society for Engineering EducationAnnual Conference & Expostion*, Session 2258.

Oliver, R. L. (1980). A cognitive model for the antecedents and consequences of satisfaction. Journal of Marketing Research, 17, 460–469.

Park, O. and Lee, J. (2003). Adaptive Instructional Systems. In: *Educational Technology Research and Development*, pp. 651-684.

Petty, G. (2016). *Teaching Today.* Cheltenham: Nelson Thornes.

Piccoli, G., Ahmad, R., & Ives, B. (2001). Web-based virtual learning environments: a research framework and a preliminary assessment of effectiveness in basic IT skill training. MIS Quarterly, 25(4), 401–426.

Quality Assurance Agency (QAA) (2007). *Integrative assessment: managing assessment practices and procedures.* Mansfield: QAA.

Rowlands, B (2001), *Good practice in online education and assessment,* Department of Education and Training, NSW TAFE, Information Technology, Arts and Media Division, Sydney, p.8, 35.

Scouller, K. (1998). The influence of assessment method on students' learning approaches: Multiple choice question examination versus assignment essay. In journal *Higher Education*, vol. 35, pp. 453-472.

Smulders, D. (2003 February). Designing for learners, designing for users. *ACM eLearn Magazine* DOI: 10.1145/640559.2134466. Retrieved from http://dl.acm.org/citation.cfm?id=2134466

Ssemugabi, S., & de Villiers, R. (2010). Effectiveness of heuristic evaluation in usability evaluation of e-learning applications in higher education. *South African Computer Journal*, *45*, 26-39.

Wu, J. P., Tsai, R. J., Chen, C. C., & Wu, Y. C. (2006). An integrative model to predict the continuance use of electronic learning systems: hints for teaching. International Journal on E-Learning, 5(2), 287–302.

Yorke, M. (2005). Formative assessment and student success. in Quality Assurance Agency Scotland (Ed.) *Reflections on assessment volume 2.* Mansfield: Quality Assurance Agency, 125-137.

Zou, P.X.W. (2008). Designing effective assessment in postgraduate construction project management studies. *Journal for Education in the Built Environment,* 4 (2), 80-94.