Assessment Trends in Education: A Shift to E- Assessment Learning

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Abstract

Information and communication technologies (ICT) hold a rudimentary position in education pedagogies and have manifold functions and roles in assessment practice. The presence of ICT based assessment paves new ways of learning for teachers as well as for students. It does not confined teaching learning to classrooms but ensure open access to students even outside the classroom. It has become pervasive in all spheres of life and provides diverse horizons to leaning situations. It has changed the primitive outlook of learning towards modern and advanced leaning. Use of ICT continually helpful for personal growth, diverse thinking, problem solving and for collaborative leaning. It has even minimized the gap for those with special needs by providing individual access to essential material to fulfill their educational needs. We get to know its benefits during pandemic when everyone has to work from home and without ICT it was quite impossible for them to continue their routine work. Even teaching and learning remain confined through online mode. Due to paradigm shift from offline to virtual learning environment, educational institutions may include ICT based assessment to monitor the students learning progress. It is important to understand the increasing role of ICT to enhance assessment and evaluation process. The present paper focuses on the performing role of ICT in assessment in the present scenario of virtual environment.

Keywords: *Assessment, ICT, Issues and Technologies.*

Introduction

With the advent of Information and Communication Technology (ICT) the quality of education in educational institutions gets improved and it likewise provides vast opportunities and enormous chances to enhance educational setup. ICT is viewed as a "major tool for building knowledge societies" (UNESCO, 2003) and has become basic component of modern society. One of the benefactions of ICT is e-assessment learning. It is an estimation of students learning about educational outcomes. Harris and Hodges, 1995 defines assessment as a process of data gathering by which students strengths and

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weaknesses are ascertained. Educational institutes gear up in terms of its basic infrastructure and instructional facilities which involves use of techniques and electronic technologies to manage information and knowledge to rethink and redesign the educational systems and processes in order to provide qualitative education to one and all. John Biggs, "What and how students learn depends to a measure extent on how they think they will be assessed." (1999, p.141). By integrating educational pedagogies with e-assessment, both the educator and learner gets a platform which is more motivating and skill centered for teaching and learning. The demands of classroom are fulfilled by using multiple teaching strategies which satisfy the needs and capabilities of the students and provide results in a shorter span of time. The nature of assessment is not only summative but it can be included in a formative way. Formative based assessment provides continuous assessment where students get constructive feedback to improve their learning objectives and prepare a base for summative assessment for overall learning outcomes. "With the ubiquitous availability of information, learning outcomes focusing on transferable skills are increasingly being recognized as important as those focusing on discipline specific knowledge and skills" (Suleman, 2018). However, using several teaching strategies demands multiple forms of assessment which can be fulfilled by adopting new trends of e- assessment. According to AFT, NCME and NEA, 1990, assessment is "the process of obtaining information that is used to make educational decisions about students, to give feedback to the student about his or her progress, strengths and weaknesses, to judge instructional effectiveness and curricular adequacy and to inform policy" (AFT, NCME and NEA, 1990, p.1).

Importance of ICT in Assessment

Effective leaning assessment technology in modern times is supposed to reshape the process of teaching and learning as it offers different tools to enhance leaning in the classroom. It plays an important role in assessing achievement of learners and finding out their leaning outcomes in a more flexible way. It helps to report the student's achievement, drawing inferences, analyzing, synthesizing, predicting, comparing, evaluating student's higher order thinking through electronic reporting systems. Geoffrey (2011) in his Teacher's Handbook on e- assessment stated that ICT based assessments use many technological devices which include desktop or laptops, smart phones, i-pads and so on. Assessment based on ICT has the capacity to use various kinds of formats like text, videos, images and sounds. Taking look over the traditional classroom setting includes teacher and student with former playing the active role and the latter playing the passive role. Apart from this a class was stuffed with the yazil, chair and table, providing no space for innovative technologies which emphasis cognitive development of students

ignoring the other aspects of evaluation. Use of learning management system (LMS) or virtual learning environment such as Google Blackboard and Web-CT not only make teaching learning effective and efficient but inclusion of various online tests and quizzes proved an effective tools for assessment by subsiding the previous concept of route learning and paper & pencil assessment process. But the question arises would such a step be feasible? Would ICT support the constructive alignment process of assessment and evaluation? The main emphasis is not only to provide support to teachers but also should involve students in redefining and redesigning the assessment and evaluation processes which allow both teacher and student to use, apply and adopt knowledge and skills that may help them to learn and gain mastery over things innovatively. This not only provides students feedback with clear information about the whole process of curriculum but also reflect critically and constructively on the outcomes. The school Examination Board approaches to new online assessment and evaluation process provides clear and unbiased examination and marking process. By applying ICT in assessment and evaluation gives reliable, accurate and authentic marking, reduces clerical errors often committed by concerned authority, speeding the process of marking with consuming less time and reducing the cost possibly.

ICT Tools in E- Assessment

"Delivering tests on computers will eventually produce important efficiencies. Yet efficiency is not the end goal. The end goal is to leverage technology to create assessments that help teachers instruct and students learn. Taking such a test should be a learning experience" (Bennett, 2002b, p. 8)**.** In curriculum design and alignment one of the basic and pre requisite elements is assessment but the implementation and the effective use of it is a challenging task. Any approach to analyze the use of ICTs in assessment and evaluation depends on various types of ICT based assessment tools. Before adoption of any assessment tool it must be clear in terms of comprehending its informative role to meet the goals and for their overall development. There are mainly two major forms of ICT based assessment. These are:

- Computer-Assisted Assessment or Computer-Aided Assessment (CAA);
- Computer-Based Assessment (CBA);

Computer-Assisted Assessment or Computer-Aided Assessment (CAA)

Computer-assisted assessment (CAA) is one of the main assessment forms which manage or support the assessment process and helps in evaluate assessments by using computers. CAA uses optical mark reader (OMR) for scoring multiple-choice questions

and questions with short-answer responses. Under the broad term 'ICT-based assessment' McFarlane, 2001: 2002; Weller, 2002 defined (CAA) as :

- The Computer-assisted assessment (CAA) is based on use of computers which helps in marking, delivering and analyzing assignments or examinations. CAA is normally understood to involve use of multiple choice questions and questions with short-answer responses, both of which can be marked online—i.e. automated. The scope of this model includes those subject areas which have a lot of factual information (e.g. geography, mathematics, engineering, and so on) but there is potential to go much wider than this.
- Technologies like multimedia or interactive based online materials can be used as the basis for assessment tasks.
- Recording of student's response could be done via computers and proper feedback should be given by the staff online, whether marking is automated or not.
- CAA uses online discussion boards and chat rooms for group or collaborative assessment and peer assessment.
- Student participation in online discussions can be evaluated from the transcript

Computer-Based Assessment (CBA)

Another type of assessment is Computer based assessment which makes use of digital tools for conducting assessment related activities Computer based assessment can be done using laptops, tablets, and even smart phones. Though Computer Based assessment is having high relevance in present scenario Baird, 2001; Bennett, 2002b highlights some developmental costs and limitation of computer- based assessment system.

- Dependability of hardware and software—interruptions to high-stakes testing activity could have significant effects on student performance;
- Measurement issues—aspects such as familiarity with screen-based work, and variations in speed of Internet connections will affect student performance;
- Security—control of access to both questions and student data (although these are problems with paper-based examinations, too, we have well-understood systems to manage them);
- Equity issues in access to, and familiarity with, computers

- Limitations of question types which are readily available and/or easy to use

Some of the E-Assessment Tools are:

E- Portfolio

E-portfolio is an electronic evidence based report gathered and maintained by a person himself or another person for their achievements on the web. It includes files, written texts, images, multimedia and hyperlinks. It is helpful for assessing person's abilities and leaning progress through which person can determine his development. Traditional and e-portfolio are the two types of portfolio assessment the difference between the two lies in sharing or making the progress or achievement available online (Donier et al., 2010).

Digital Rubrics

A rubric is a pre- determined set of descriptions about student's performance. It is basically criterion that begins before commencement of learning activities and makes students aware about their weaknesses. This will enable teachers to provide their support to students in that particular area in which they need to improve.

Survey Tools

Tools like survey monkey, pole daddy and lime survey are some of the online survey tools which are used to collect bi polar set of opinions. These web based survey tools are useful to collect feedback regarding any subject matter.

Online Assessment

Online assessment is a set of questionnaire formulated by instructor usually to get response from the opponent via web pertaining to some content. These online assessments include formative assessment and bring students reflection through various assessment tools of learning like kahoot, socrative quizzes and questions with real time grading, quick polls, mentimeter pre built education templates and google forms.

Issues Involved ICT based Assessment

Pedagogic Issues: Problems related to paucity of qualified teachers, lack of proper knowledge about various computer skills (hardware and software), electricity and poor project implementation strategies lead to pedagogic issues. The following are some pedagogical benefits of using ICT based assessment.

It emphasis: the pedagogical benefits with a range of assessment methods.

the potential for enhancing student feedback and motivation.

the practical examples of materials in their respective discipline.

the range of technical solutions.

educational effectiveness rather than the technological developments.

Implementation issues: Insufficient and inappropriate knowledge of technology tools and strategies put various challenges for its implementation. Evaluators have to use numerous instruments which are regarded more complicated for assessment procedures and hinder reporting of the results. For effective implementation of ICT in assessment the advanced tools should be adopted:

1. Automated formative assessment computer provides immediate feedback that supports better performance and improve learning.
2. Concept mapping one of the emerging computer based concept with automated scoring can be used for summative assessment of critical and creative thinking related to complex relationships.
3. For effective implementation of ICT students should be persuaded and encouraged to use online collaborative and peer assessment.
4. The use of test material not only improves and enhances student performance but also provides feedback to the trailed test material.
5. The beneficial use of ICT can help teachers by storing and recording information about how students are developing understanding of new material; and by taking over some of the role of assessing and providing feedback to students so that teachers can focus on other aspects of supporting learning.

Future Possibilities

Bennett, one of the key researchers in computer-based assessment in the USA, argues that the use of technology for assessment is in its infancy:

"If all we do is put multiple-choice tests on computer, we will not have done enough to align assessment with how technology is coming to be used for classroom instruction. Sadly, our progress in using the computer to improve assessment has been limited. Almost a decade ago, we moved the first large educational tests to computer, fully intending to use technology to introduce new measurement approaches. These efforts got as far as adaptivity and then due to cost, technical complexity, the need to maintain scale, and sufficiency of multiple- choice for summative decision-making, moved no farther". (Bennett, 2002a, p: 11) Given the fact that ICT based assessment provides the opportunity for both teacher and student to get quick feedback of strengths

and weaknesses of teaching and tutoring. It is essential that ICT based results from several assessments, entrance tests, courses or modules can be collated quickly, easily and accurately so that students' experience with computers and attitude towards them can influence computer-based test performance. It is also recommended that ICT resources should be easily available and how to use it in the process of assessment and evaluation should be explored through various web based training programmes. Various online tools that are used for assessing objective and subjective types of questions will continue to develop but the use of interactive or multi-media materials for assessment tasks is bound to grow. Sound research validated framework for best practices should be incorporated to ensure maximum benefits for all those involved.

References

Bennett, R. E. (2006). Inexorable and inevitable: The continuing story of technology and assessment. *Computer-based testing and the Internet*, *201*.

Dunn, K. E., & Mulvenon, S. W. (2009). A critical review of research on formative assessments: The limited scientific evidence of the impact of formative assessments in education. *Practical Assessment, Research, and Evaluation*, *14*(1), 7.

Donaire,S. R., Garcia, B.A. and Olmo, S. L.D.(2110). E-portfolio: A tool to assess' University skills.

Gill, A. K. (2017). Role of ICT in effective curriculum transaction and evaluation. *International*

Journal of Applied Research, *3*(1), 432-437.

Gipps, C. V. (2005). What is the role for ICT-based assessment in universities? *Studies in Higher Education*, *30*(2), 171-180.

Geoffrey, C. (2010). Teachers handbook on E-Assessmnet. Australian Learning and Teaching Council.

Joshi, A., Meza, J., Costa, S., Perin, D. M. P., Trout, K., & Rayamajih, A. (2013). The role of information and communication technology in community outreach, academic and research collaboration, and education and support services (IT-CARES). *Perspectives in health information management*, *10*(Fall).

Marina, M. (2015). Information and Communication Technology (ICT) and Its Role in

Educational Assessment. *Englisia*, *3*(1), 23-37.

Mertler, C. A. (2003). Preservice Versus Inservice Teachers' Assessment Literacy: Does Classroom Experience Make a Difference?

Quezada, H., & T Soto, S. (2018). Beyond Paper-and-Pencil Tests: Good Assessment Practices for EFL Classes-Authentic assessment of EFL students in Ecuadorian classrooms: What teachers need to know! Be a better teacher, assess authentically. Machala: Universidad Técnica de Machala.

Suri, H., & Krishnan, S. (2019). Assessment hurdles in core first year courses in Australian universities: Are we trying to catch out students? *Assessment & Evaluation in Higher Education*, 1-15.

UNESCO (2002) Information and Communication Technology in Education–A Curriculum for Schools and Programme for Teacher Development. Paris: UNESCO