

Online Assessments for Higher Education Students (Educational Perspective of Online Assessments)

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Abstract

The development of online learning is never ending. Teacher and others education components are challenged to response massive data of the education process as soon as possible. Online assessment promises automatic score and feedback effectively. Although online assessment is not guaranteeing the quality of learning, but it can handle the massive data of assessment accurately. This article explores the advantages and disadvantages of online formative assessment for higher education students based on previous researches and articles, and the importance of policies in online learning. The result of the analysis shows that online formative assessments have more advantages than its disadvantages for higher education students. The advantages of online formative assessment are: foster students to enhance interactivity, create learning strategies, stimulate students to use tools of online assessment, lead students to complete assignment, and lead students to do the test in procedural steps. The disadvantages of online assessment are: the result of online assessment is not always better than paper-based assessment, succeed on website exam did not guarantee to

greater ratings of quality, preference, and persuasiveness. A policy in online learning is needed to provide guidelines and to manage user privacy.

Key words: online assessment, formative assessment, online-based test

摘要

線上學習的發展是永無止境的。教師和其他構成教學的組件受到必須快速反應教學過程的大數據的挑戰。線上評估能夠自動評分以及提供有效的回饋。雖然線上評估並不能保證學習的品質，但它可以精確地處理其龐大的評估數據。本文探討有關於高等教育學生線上評估的優勢與劣勢是以文獻、過去相關的研究資料以及有關於線上學習的重要方針為基礎。分析的結果說顯示線上評估對於高等教育學生的優點多於缺點。

線上評估的優點是：培養學生以增強互動性、創造學習策略、促使學生使用線上評估工具、帶領學生完成作業，並帶領學生做的程序性、步驟性的測驗。線上評估的缺點是：線上評估的結果並不總是比書面的評估好，在線上測驗中取得好成績不完全保證就有較好的學習品質、偏好、及說服性。線上學習的一個重要的方針是其必須提供指導方針和控管其用戶的隱私。

关键词：線上評估，形成性评估，基于在线测试

Introduction

The development of online learning courses required a new challenge for educators to find assessment tools that cover traditional multiple choice questions and able to score automatically (Attali, 2013; Jorge-Botana, Luzo´n, Go´mez-Veiga, & Marti´n-Cordero, 2015; Kealy & Ritzhaupt, 2010, in Thompson & Braude, 2016). Electronic assessment (e-assessment) is a kind of solution to handle the massive assessment of student that could effectively score students' answer. It reduces the administrative workload and helps teachers to give feedback quickly. The main advantage of the use of e-assessment is in the automatic and instant feedback which generate based on collected and processed data (Ibrahim, Atif, Shuaib, and Sampson, 2015).

Seo and Jong (2015) state three contributions of paper and online assessment, namely; comparable for statewide assessment, comparable with other studies, and rational and practical for a comparative study design. *Comparable for statewide assessment* means the two modes; paper and online assessment. Both of them are a systematic and practical approach to do the test that require equal characteristic. *Comparable with other studies* means the result of papers and online assessments are equivalent within the past few years. *Rational and practical for a comparative study design* means the result of comparability studies would not be valid without an appropriate sampling design.

An assessment of online version has a good and bad impact to the students that enhance students' achievement. It can drive students' motivation to have high achievement and also have bad effects for the students. This article will explore the impact of online formative assessment for higher education student, and the importance of policies in online learning. It will be started with the definition of

online assessment then followed by the impact of online formative assessment. Next, the needs of policies for e-assessment. The end of this article is a conclusion.

Terminology

The indicator of succeeding education is a good result of assessment.

“Assessment is the exploration of how educational environment and the participant in the educational community support the process of student as they learn to become independent and collaborative thinkers and problem solvers (Johnston, Afflerbach, Krist, Pierce, Spalding, Tatum, Valencia, 2010, p.2)”. Assessment can be defined a procedure or an activity of education to gather information about knowledges, attitudes, or skills of a learner or group of learners.” (Kellaghan and Greany, 2001).

The purpose of assessment depends to the institution or teachers. Jiang (2015) classifies two kinds of classroom assessment; “teaching to assessment” and “teaching with assessment”. *Teaching to assessment* refers to the opportunities of students to memorize their knowledge to tackle examination. *Teaching with assessment* refers to the test items from standardized test that make students more understand and can apply the knowledge. Yates (2000) stated that the main purpose of an assessment is to judge the effectiveness of school and performance of an education system. For instance, at individual student, it can be used to describe students’ learning, to diagnose their problems, to guide their learning, to motivate, to certify and to select the next education level.

Educational assessment can be classified into two models, namely, the curriculum-based and the outcome-based model (Ibrahim, Atif, Shuaib, & Sampson, 2015). *The curriculum-based model* refers to the quality of the curriculum presented to the students and learning methods implemented by the institution. *The curriculum outcomes-based model* refers to the material that students should know and can do after their completing learning. The components of outcomes-based model are

curriculum design and enhancement, define intended learning objectives, define assessment tools and rubrics, measure selected outcomes, analyze data, and create remedial action plans (Ibrahim, Atif, Shuaib, & Sampson, 2015). Slavin (2014) states the assessment can be done through portfolio, performance assessment, and contract grading. *Portfolio assessment* refers to the students' collection during their learning, e.g. book report, artwork, computer printout, paper. *Performance assessment* refers to actual demonstration of knowledge in real life, for instance, students might be asked to conduct an oral history project. The quality of the oral histories indicates the degree of understanding of materials learning. *Contract learning* refers to the students' negotiation with teachers and they will receive a certain grade if they finishing amount of work on performance. They also can assess themselves through the learning contract.

Darling-Hammond et al (2013) categorized the high quality of assessment into five criteria: assessment of higher-order cognitive skill; high-fidelity assessment of critical abilities; internationally benchmarked standards; instructionally sensitive and educationally valuable; valid, reliable, and fair. *Assessment of higher-order cognitive skill* refers to the transferability of learning rather than emphasizing basic skills and procedure only. Critical thinking and knowledge must be balanced. *High-fidelity assessment of critical abilities* refers to the standard of articulated capability, for instance, communication, collaboration and problem solving. *An internationally benchmarked standard* refers to the content, task and level of performance that should be covered. *Instructionally sensitive and educationally valuable* refers to the concept of materials that will be taught. Students should be involved in preparing and participating in assessments. Assessment includes *valid, reliable, and fair* refers to the measurement and capability of assessment. It should reliable, accessible, and unbiased. McLoughlin and Luca (2006) give five examples type and skill of online and

computer-based assessment, namely, bulletin board discussion, blogger, portfolio, learning contract, and self and peer assessment. *Bulletin board* refers to interpersonal skills, collaboration and higher order thinking. *Blogger* refers to reflection. *Portfolio* refers to lifelong learning, self-direction, metacognition. *Learning contracts* refer to self-evaluation, peer-evaluation, collaboration, reflection metacognition. *Self and peer assessment* refers to collaboration, reflection, metacognition, self-evaluation, and self-monitoring.

Electronic assessment sometimes known as online assessment is computer-based assessment or computer assisted assessment-CAA (Bahrani, 2013). It covers summative, formative or diagnostic assessment that use computer to assess it (Jordan, 2013). Australian Flexible Learning Framework and National Quality Council (2011, p.3) defines electronic assessment is “the use of technology for any assessment-related activity”. Ashton and Wood (2006) define online assessments as a conventional web browser that serve learners to view the single question at a time or several key parts to answer and may have option steps. Based on the definition, it can be summarized that online assessment is tools or technology that provide question or several option steps to assess learners’ ability through summative, formative, or diagnostic assessment.

The Value of Online Assessments

Every beginning of a semester, teachers and students discuss an agreement about learning contract that covers the materials, schedule, evaluation or assessment, assignment, and reference. Assessment is an important element of education that should be followed by students to describe the understanding of materials. Assessment can be done through paper-based test and online-based test. Seo and Jong (2015) argue that the online-based test (OBT) and paper-based test (PBT) is comparable.

There is no student felt uncomfortable with the use of computers. Even around 70 % of respondent prefer to OBT.

Online formative assessment is a new trend in the 21st century that can support higher education system. It fosters students to enhance an interactive and formative feedback (Gikandi, Morrow, Davis, 2011). Students to be challenged to update their knowledge based on new technology to guide them to be familiar with online assessment that can influence students' learning strategies (Zlatovic, Balaban, Kermek, 2015). The announcement of online assessment stimulates students to learn how to use tools to answer the online assessment. They also instead their learning style because online assessment is difficult to be manipulated. Ibrahim, Atif, Shuaib, and Sampson (2015) state the tools of web-based assessment improves students' achievement of learning. The student will easy to define, to assess, and to evaluate the learning outcomes.

Baleni (2015) states online formative assessment can encourage students and central part of teaching. Students will complete their assignment because the requirements of systems to complete it before start the online assessment. Comments and feedbacks from peers' student encourage them to prepare well answer of their assignments. This argument supported by Cukusic, Garaca, and Jadric (2014) that the implementation of online self-assessment is significant correlation between exam result and self-assessment test. A teaching and course of Information Technology positively effects students' success.

Alizadeh, Tomerini, & Colbran (2016) create the application of online assessment, namely the "online studio diary", that blending virtual and physical environment for the first year student. The purpose of an online assessment is to ensure teaching, social, and cognitive elements are presented when there is no face-to-face contact between the teaching team and students. It has highly valuable for

teaching team because of the following reasons: a place to track students' progress; a place to identify cohort and individual concerns; a place to examine students' written expression; a place to identify individual group work commitments and examine.

On the other side, online assessment is not always better than offprint assessment. It depends on the way to perform the assessment (Ardid, Gomez-Tejedor, Meseguer-Duenas, Riera, and Vidaurre, 2015). In an evaluation-proctored exam, for instance, there was no significant difference between online and offprint exams. In training-homework, there was a significant difference between online and offprint exams. Students that pass in online exam didn't assure more credible than offprint exam. Greer and Pan (2014) state succeed on website exam did it lead to greater ratings of quality, preference, and persuasiveness. Web site and blog can be used to gather information online and less relevant to online message assessment. However, online exam was a good indicator of the final mark.

The Needs of Policies in Online Learning

Online learning policies can be categorized into two approaches; the internal users of online learning sites and the community of online learning sites based on its country. The first approach, user of online learning site policies, refers to the rule of communication between instructors and students that provided in the site. The online learning system has facilities to cover communication between users or between instructors and students. For instance, chats, class notes, online quizzes, e-mail, instant messaging (IM), feedback on blogs. Policies are needed to minimize the gap or misunderstanding between users that guide instructors to get what they expect from the site and students will know what they have to do. Based on instructors' views, policies in online learning cover nine aspects, namely; course syllabus, student privacy, email, discussion, software standards, assignment, getting technical help, student code of conduct, and intellectual property policies (Waterhouse and Rogers,

2004). Course syllabus policies relate to the regulation to join courses and the effect if students ignore the policies. Student privacy policies relate to the procedure to protect a student's legal right to privacy and confidentiality. E-mail policies relate to the content of emails. For instance, no picture, no biography, indicates comments on chats, etc. Discussion policies refer to the guidelines for student to participate in chat forums. Software standard policies provide the software that recognized the file format and document. Assignment policies cover the guideline to submit assignments and keep a record of all assignments. It will minimize student's frustration for submitting assignments. Getting technical help policies are guidelines to help students to get contact regarding technical issues in online learning. Student code of conduct policies covers behavior in electronic communication, attendance, self-motivation and self-direction, cheating and plagiarism that should clearly guide the students to communicate with their instructors. Intellectual property policies help students to understand and to avoid improper use of the intellectual property of others.

The second approach, community of online learning sites, refers to the regulation in the country. Every country has a specific goal to reach vision based on its dimension. Kong, Chan, Huang, and Cheah (2014) state the four major Asian cities; Singapore, Hong Kong, Taiwan, and Beijing are different dimension. Singapore focusing the scaling up good practices of e-learning among teacher community, Hong Kong focusing on creating digital classroom, Taiwan focusing on cultivating student with 21st century skill, and Beijing focusing on providing digital resources and e-textbook based on school curricula. The policy in certain country will guide online learning community to emphasize the step that must be done.

Conclusions

Online formative assessment is a technology or a set of tools to assess learners' capability through summative, formative or diagnostic assessment. Quick feedback of

assessment is a characteristic of this assessment. Assessor and assessee can get the result soon because the automatic scoring system.

Online formative assessment has advantages and disadvantages for higher education student. The advantages of online formative assessment are: foster students to enhance interactivity, create learning strategies, and stimulate students to use tools of online assessment, lead students to complete assignment. Procedural steps in online formative assessment lead student to do the test coherently and completely because it cannot be manipulated.

On the other side, the result of online assessment is not always better than paper assessment. It depends on the method of the assessment. Succeed on website exam did not guarantee to greater ratings of quality, preference, and persuasiveness. The bad effect of online assessment usually started from learners' views. If they have a bad view about this assessment their result of the assessment also bad and otherwise.

Online learning need policies to manage internal users and community users of online learning. Policies in the internal users of online learning sites function to guide users in internal communication, and it should be provided on the site. The community of online learning sites refers to the regulations and goals that be emphasized by the country.

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