Chapter 1.58
Evaluating Student Learning in Distance Education

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INTRODUCTION

Evaluating students is critical to education. Evaluation results give students feedback about their performance so that they can learn from their successes and failures. On the other hand, these results allow instructors to determine how well students are performing, and what areas and subjects need more attention. The conventional methodology to evaluate student work is by "pen and paper." It can take many forms—such as traditional exams, open-books exams, reports, practical work, and others—as the next section illustrates.

However, new technologies are bringing changes to the educational process. Over the last few years, distance education has become a popular delivery mode of instruction and learning. Virtual Learning Environments (VLEs) are groupware systems designed to replace or supplement the face-to-face classroom. These systems provide registered members with a co-operative learning space where learners conduct their activities.

They include modules and services for managing pedagogical aspects of the educational process and online teaching activities. Contemporary VLEs (e.g., TopClass and LearningSpace) integrate three main components:

- The learning management system (LMS), embracing all the functions for student and course management, learning assessment, and tracking and reporting on student progress and activity
- The learning content management system (LCMS), focusing on creating, reusing, locating, sharing, or improving learning content
- A variety of asynchronous and synchronous tools (such as e-mail, application and file sharing, chat, live video stream, white-

board, and others) for delivering educational material and enabling interactions among participants

Within these settings, new ways of assessment have emerged. The problem is to measure to what degree the learning goal has been achieved. Distance education itself introduces further problems such as the difficulty in user identification or the inapplicability of traditional evaluation methods. The question is whether assessment methods can be successfully integrated in VLEs. It is obvious that both technological and pedagogical requirements of assessment should be addressed.

In this chapter, we reflect on these requirements and overview evaluation methods of student learning in distance education. In the following section, the concept of assessment is discussed. Then we explore advantages and disadvantages of various assessment techniques, as well as how existing e-learning platforms address the need for a fair learning assessment. Finally, we present strengths and weaknesses of the process, and our concluding remarks.

BACKGROUND

As indicated in the introductory section, assessment is an important task in the teaching and learning process. Some of the reasons are: (a) students can learn from their mistakes and successes; (b) instructors need feedback on how well student learning is going, so that they can adjust and develop their teaching; (c) assessment is often the major factor that gets students down to serious studying; and d) in our society, people are appointed and employed on the basis of their qualifications (Race, 1995).

Besides the conventional method, where tutors assess students' work, three other assessment approaches can be used: self-assessment, peer-assessment, and group assessment (Race,

2001a). Self-assessment involves students making judgment about their own work, while peer-assessment (also referred to as collaborative assessment) involves students and tutor(s) making thoughtful and critical examination of each student's coursework. Group assessment, finally, refers to the following three techniques: first, when a tutor assesses student group work; second, when students from other groups assess group work (inter-peer assessment); and third, when students within a group assess the group's work (intra-peer assessment). It can include self-assessment by individuals or by the group as a whole, as well as their contributions towards the product they have generated.

Three are the basic evaluation methods: summative, formative, and comparative (Wolz et al., 1997). Evaluation is summative when it is used with the intention of assigning a rating or grade. When the intention is to give feedback to guide or improve practice, a formative assessment is adopted. Comparative evaluation is used to compare the effectiveness of alternative elements of a course or curriculum (for example, whether or not collaborative learning improved student performance).

Key issues for a challenging assessment are the following (Brown, 2001; Race, 2001a, 2001b):

- **Fairness:** It is recognized that the greater the diversity in the methods of assessment, the fairer the assessment is to students. Therefore, assessment needs to embrace a variety of kinds of activity, so that candidates have a greater opportunity to demonstrate their skills on at least some of the assessment occasions they encounter
- **Effectiveness:** Effectiveness explores whether it is an appropriate approach to assess the learning outcomes
- **Efficiency:** This is related to the time spent for assessors to accomplish the assessment task

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