

Chapter 15

Leveraging Technology to Promote Assessment for Learning in Higher Education

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ABSTRACT

Assessment for learning (AFL) is a highly effective strategy for promoting student learning, development and achievement in higher education (Falchikov, 2003; Kirby & Downs, 2007; Nicol & Macfarlane-Dick, 2006; Rust, Price, & O'Donovan, 2003; Vermunt, 2005). However, since AFL relies on continuous monitoring of student progress through instructor feedback, peer collaboration, and student self-assessment, enacting AFL within large-group learning formats is challenging. This paper considers how technology can be leveraged to promote AFL in higher education. Drawing on data from students and instructors and recommendations from an external instructional design consultant, this paper documents the process of pairing technology and AFL within a large-group pre-service teacher education course at one Canadian institution. Recommendations for the improvement of the web-based component of the course are highlighted to provide practical suggestions for instructors to evaluate their own web-based platforms and improve their use of technology in support of AFL. The paper concludes with a discussion of areas for continued research related to the effectiveness of this pairing between assessment theory and technology.

INTRODUCTION

Given increased demands for higher education across Canada, the United States and many parts of Europe, large-group learning formats continue to dominate as a mode of education delivery (Weber,

1999). As such, innovative pedagogical strategies are needed to maintain educational quality within this climate. Assessment for learning (AFL) has been identified as a highly effective strategy for improving student learning and achievement in higher education (Falchikov, 2003; Hargreaves, 2005, 2007; Kirby & Downs, 2007; Nicol &

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Macfarlane-Dick, 2006; Rust et al., 2003; Vermunt, 2005). AFL involves the ongoing monitoring of student progress through non-graded assessment activities. This form of assessment has been characterized as the assessment that occurs between summative tasks to promote student learning (Black & Wiliams, 1998). As AFL typically involves instructor feedback, peer collaboration, and student self-assessment, enacting AFL within a large-group structure is challenging. This paper considers how technology can be leveraged to promote assessment for learning in higher education. Drawing on data from students, instructors, and recommendations from an external instructional design consultant, this paper documents the process of pairing technology and assessment for learning within a large-group pre-service teacher education course at one Canadian institution.

Specifically, the site for this research was a required module for teacher candidates at the Faculty of Education, Queen's University in Ontario. The Assessment and Evaluation Module (AEM) was one of four components of a larger course on *Concepts in Teacher Education*. The module was developed in response to recommendations by the Ontario College of Teachers (2004) for greater emphasis on assessment education in pre-service programs. Given the increased reliance on assessment and testing in Ontario schools, the goal of the module was to enhance the development of teacher professional knowledge on issues of assessment language, policy, theory (i.e., concepts of assessment for and of learning), and large-scale testing. The purpose of the module was to enable teacher candidates to examine the inherent complexities of (a) measuring change in learning, (b) making judgments about individual growth and achievement, and (c) making justifiable decisions about grading. The module consisted of two streams, one for elementary teacher candidates (PROF 150) and the other for secondary (PROF 155), and involved nine hours of lecture-based instruction spanning a three-week period. It was first offered in the fall

of 2006 with enrollment of approximately 700 students divided evenly between the two streams.

Members of the Assessment and Evaluation Group (AEG), responsible for the module's design and implementation, assumed a developmental-orientation and anticipated continual modification and improvements to course structure and content. In order to inform changes for the second year iteration of the module, members of the AEG undertook an evaluation of the module's first year implementation. One of the central aims of the evaluation was to examine the use of technology to support learning and, in particular, to evaluate the adoption of assessment for learning principles within this context.

This paper presents findings from the module's first-year evaluation as they relate to the use of technology in supporting AFL. In order to contextualize these results, this paper begins with an overview of the instructional design of the AEM followed by a description of the evaluation framework and evaluation plan. Recommendations for the improvement of the web-based component of the module are then highlighted. These recommendations are offered to provide practical suggestions for readers so that they may evaluate their own web-based platforms and improve their use of technology in support of AFL. The paper concludes with a discussion related to areas for continued research.

INSTRUCTIONAL DESIGN OF THE AEM

In the first phase of development, members of the AEG conducted an extensive needs analysis to inform content selection for the module. According to these findings, course content was organized around four main units for assessment literacy development including: (a) assessment language and policy, (b) assessment theory and practice (specifically concepts of assessment for and of learning), (c) links between assessment

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