Chapter 65
Lecture Capture as a Tool to Enhance Student Accessibility:
A Canadian Case Study

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ABSTRACT

This case examines the incremental introduction of lecture-capture as a learning technology at a research-intensive university with the goal of addressing issues created by increases in both undergraduate enrolments and disability accommodation needs. This process began with podcasting lectures, leading ultimately to a lecture capture system with closed captioning. At each step, the changes were evaluated in terms of their impact on student learning, acceptability to students and faculty, and application to different disciplines. This evidence-based approach is in keeping with the research culture of the academy and has been helpful in advocating for budgetary support and encouraging faculty participation. As a result of this project, the authors unexpectedly gained substantial knowledge about the complexity of students' lives, the impact of that complexity on their approach to learning, instructor misperceptions about the impact of this form of learning, the presence of many unreported disabilities, and the many different ways in which students used the system.

ORGANIZATION BACKGROUND

McMaster University is a public, research intensive university, typically ranked in the top 100 research universities in the world, with an enrolment of nearly 22,000 undergraduate and 3025 graduate students in 2009-2010 (McMaster University, 2011). With a total sponsored research income of $345 million, McMaster University ranks first in the country in research intensity, a measure of research income per full-time faculty member, which averaged $308,000 per faculty member as of 2005 (Research Infosource Inc., 2006). There are six faculties at the University, Social Sciences,

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Sciences, Humanities, Business, Engineering, and Health Sciences, which encompass the full-range of traditional academic units including a medical school in the Faculty of Health Sciences. The institution has an international reputation for pedagogical innovation including the development of the 'McMaster Model' a student-centered, inter-disciplinary problem-based learning approach that has been adopted by universities around the world.

McMaster University's organizational structure follows a presidential model with each Faculty led by a Dean, who reports to the Provost. Most curriculum and financial decisions occur at the Faculty level. The work described in this case study was conducted at the Associate Dean level within the Faculty of Social Sciences, funded by both the Provost and the Faculty Dean. Students from all Faculties on campus enroll in social sciences courses. McMaster University does not support undergraduate level programs that are fully online, but nearly all courses have some form of Web/electronic enhancement.

The McMaster University student population is composed of a mix of residential and commuter students. Almost 6% of students (1220 students) formally reported some form of disability accommodation need in 2010 (CSD, 2010). This number is likely to be an underestimate of the total population of students with disabilities given there is no obligation for students to report a disability and not all disabilities require accommodation in the university setting. Mental health was the most commonly declared disability (37%), with learning disabilities/attention deficit disorder and screening deficits (16%) next highest, followed by students reporting chronic illnesses at 11% (CSD, 2010). Accommodations that are temporary in nature are not included in these statistics (e.g., accommodations that may be necessary due to someone fracturing their writing arm). The McMaster data aligns with data collected more widely in the United States and within the Province of Ontario. The number of university students with psychological, physical and learning disabilities has tripled in the US since the 1970s (Pliner & Johnson, 2004). Similarly, the number of registered students with disabilities in Ontario universities has tripled between 1991-1992 and 2007-2008 (COU, 2010).

As in many other jurisdictions, new legislation in Ontario requires that public sector institutions, including universities, make all of their services accessible to all persons with disabilities. The *Accessibility for Ontarians with Disabilities Act, 2005* (AODA), draws particular attention to the use of lecture capture technologies as a mechanism for meeting the needs of students with a variety of disabilities. The objective of the AODA legislation is to break down barriers to accessibility by mandating universal access for students with disabilities. This proactive legislation requires that stakeholders remove barriers by the year 2025 through an incremental integration process. Failure to accomplish this goal could lead to legal challenges against universities in addition to complaints under the *Human Rights' Code* (OHRC, 1990).

AODA represents a more comprehensive legislative and regulatory framework than its predecessor, the *Ontarians with Disabilities Act, 2001* (Beer, 2010). This new legislation represents a shift in values and attitudes about equitable access to all kinds of services, including higher education, for individuals with disabilities. A commitment to equity, within this context, involves not only the recognition of limitations imposed by a disability but also recognition of students' varying background knowledge, readiness, language, preferences in learning, and interests (Hall, Meyer, & Strangman, 2009). The legislation places responsibility on the public, private, and not-for-profit sectors to develop, implement, and enforce a set of mandatory accessibility standards. It also requires the participation of persons with disabilities as well as stakeholders from the obligated organizations in the development of the accessibility standards (Beer, 2010). This attitudinal shift is intended to foster a transition from an environment in which