

Institutional Strategies that Foster Academic Integrity: A Faculty-Based Case Study

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Abstract

In recognition that student academic misconduct is a complex issue that requires a holistic and institutional approach, this case study explores the impact of an intervention strategy adopted by the Faculty of Applied Health Sciences (comprised of approximately 80 faculty and an average of 3,240 undergraduate students) at Brock University, St. Catharines, Ontario. In 2006, spearheaded by the Associate Dean for Undergraduate Studies, a Faculty-wide academic integrity strategic plan was designed and implemented. The plan identified 4 principles (collaboration, education, assessment, and monitoring and detection) and recommended 17 initiatives. This case study examines the impact of these initiatives through an analysis of survey data and incidences of student misconduct cases adjudicated between 2005 and 2012 (with 2006 as the point of intervention). Data was coded and analyzed using the Welch's t-test. Results indicated that the intervention strategy led to a significant reduction in the frequency of self-reported at risk behavior and the number of academic misconduct cases. This paper will report on these findings and identify the strategies that helped effect a positive change in the culture of academic integrity.

Institutions of higher learning in the United States and Canada continue to identify student academic misconduct (dishonesty) as a serious problem. Replicating the seminal large-scale study of incidents of student cheating in 99 U.S. colleges and universities by Bowers (1964), McCabe and Treviño (1997) reported, nearly 30 years later, that incidences of academic misconduct in U.S. post-secondary institutions continued to be “widespread and on the rise” (p. 220). In their ‘decade of research’ retrospective, McCabe, Treviño and Butterfield further reported that incidences of academic misconduct in higher education were “prevalent,” with some serious forms of cheating having “increased dramatically” (2001, p. 219). In Canada these trends are disturbingly similar. Christensen Hughes and McCabe surveyed 11 higher education institutions in Canada¹ and reported that academic misconduct is not only “a serious problem on Canadian campuses” (2006a, p. 49)—but that it is recognized as such by over 40% of instructional faculty and Teaching Assistants (TAs) (2006b, p. 18).

This study reports on the results of an intervention strategy that was designed to create a culture of academic integrity in a Faculty within a medium-sized Canadian University. The strategy was initiated in 2005 within the Faculty of Applied Health Sciences (FAHS), at Brock University, St. Catharines, Ontario—a medium sized university with an undergraduate/graduate population that ranged from 17,409 (2005) to 18,190 (2012) full-time students. The FAHS includes five academic departments that span a cross-section of academic disciplines and assessment styles. These range from the medical professions of nursing and public health, to the disciplines of kinesiology, recreation and leisure studies and sport management. The intervention

¹ Brock University participated in the Christensen Hughes & McCabe (2006b) academic integrity surveys in 2005 and 2012.

strategy adopted a number of the recommendations reflected in the academic integrity research literature that included designing effective policies, providing appropriate educational opportunities, employing effective teaching and learning strategies and applying appropriate invigilation and penalty standards (McCabe, Treviño & Butterfield, 2001; Whitley & Keith-Spiegel, 2001; Macdonald & Carroll, 2006; Christensen Hughes & McCabe, 2006a).

In 2005, the Associate Dean of Undergraduate Studies in FAHS struck an Academic Integrity Committee, comprised of one faculty representative from each of the Faculty's five academic departments, one undergraduate student, one graduate student and a representative from the University's Teaching Council from the Centre for Teaching, Learning and Educational Technologies (CTLET). Informed by the institutional survey results generated by Christensen Hughes & McCabe (2006b), the Committee reviewed the Initial Report for Brock University (May, 2005) and examined relevant research in the field. The Committee generated an academic policy statement for the Faculty and created a strategic plan that identified four general principles (Collaboration, Education, Assessment, and Monitoring & Detection (James, McInnis & Devlin, 2002). Each principle was accompanied by a number of specific Faculty initiatives. Committee meetings commenced in September 2005, and by April 2006 the FAHS Academic Integrity Strategic Plan was approved by the Executive Committee and implementation of these initiatives began (see below).

Academic Integrity Strategic Plan

Principle 1: Collaboration

- Draft a new Academic Integrity (AI) Policy for FAHS and disseminate to all instructional faculty, staff and students (develop an organizational chart and standardized communication templates)
- Establish an AI Standing Committee to oversee and monitor implementation of AI Policy
- Establish direct liaison with University AI Officer, Student Ombuds Officer, CTLET and Registrar's Office to coordinate AI training for new Chairs & Directors, instructional faculty, TAs, and all first-year students

Principle 2: Education

- Establish a FAHS Decanal annual budget (\$2,000) for instructional faculty and staff for Professional Development (PD) re: AI training
- Recognize PD AI training in merit/annual reports
- Incorporate AI training into TA and grad TA training
- Create a new Teaching and Learning FAHS website with resources for instructional faculty, staff and students
- Launch a poster campaign with a new AI theme each year
- Institute a new FAHS first-year AI orientation session and banner-signing ceremony (Banner theme: *'We work with academic integrity'*)
- Associate Dean presents AI workshop to all incoming 1st year students

Principle 3: Assessment

- Offer instructional faculty workshops on appropriate assessment design
- Standardize the following protocols for all courses in the Faculty:

- i) inclusion of mandatory AI statement on all course syllabi
- ii) agreement of a uniform late penalty of 5%/day on all assignments
- iii) inclusion of clear and concise referencing standards for all courses
- iv) inclusion of an honour code statement on all assignments
- v) inclusion of software detection education awareness for all students in courses that employ anti-plagiarism software

Principle 4: Monitoring and Detection

- Simplify the investigative and reporting process for instructional faculty and TAs
- Include an educative component in the adjudications of academic misconduct penalties
- Publish FAHS academic misconduct statistics yearly, inclusive of student appeal cases that are either upheld or denied at the University level
- Create and monitor more restrictive examination protocols
- Secure booking of additional classroom space for in-class tests in cases where room capacity is insufficient for effective invigilation

By September 2006, the AI strategic plan was in effect. The AI policy was approved, institutional collaborations were established, and educative and assessment strategies were in place along with monitoring and detection protocols. The Office of the Associate Dean adjudicated all cases of misconduct, and kept confidential records.

In 2012, Brock University once again participated in the Christensen Hughes & McCabe Academic Integrity Survey (2006b). At this juncture, the FAHS was interested in a retrospective analysis of the strategy that had been implemented in an effort to accept one of the following two hypotheses:

H_0 : There was no statistically significant change in the number of cheating behaviours reported before the intervention strategy, or after.

H_A : There is a statistically significant change in the number of cheating behaviours reported before the intervention strategy, and after.

Two sets of data were analyzed. First, given FAHS had participated in two studies on academic integrity, self-reported data from before and after the intervention strategy was available. Secondly, FAHS held records of all incidents of academic misconduct cases from 2005 until 2012. 163 cases were recorded out of a student population of 22,684.

Analysis of Self-Reported Data

The Christensen Hughes & McCabe Academic Integrity Survey captures demographic information and cheating behavior. Students are asked to self-identify “at risk” behavior and assign a frequency value. For example, if students identify the behavior of “Getting questions or answers from someone who has already taken a test,” they are asked to assign a value of (1) *Never*, (2) *Once*, (3) *More than once*, or (4) *Not relevant*. For the purpose of this analysis, values of (1) *Never*, (2) *Once*, and (3) *More than once* were assigned a numerical code of 1, 2 and 3

respectively. All misconduct behavior data was collapsed into a general statistic that represented self-reported risk behavior, and the Welch's t-test (Welch, 1947) was conducted.

For the FAHS, the self-reported at risk student behavior mean for the 2005 survey was 1.309665, with a standard deviation of 0.541302. The 2012 survey results yielded a decrease in the mean value (1.205128), with a standard deviation of 0.439122; yielding a P-Value of 0.0001. This result indicates a very strong and statistically significant change at the 95% confidence level between the 2005 survey and the 2012 survey (See Table 1 and 2).

Table 1 2005 and 2012 summary data of student self-reported misconduct data

Name	2005 Survey	2012 Survey
Mean	1.30966500	1.20512800
SD	0.54130200	0.43912200
N	7760	1872

Table 2 Welch's t-test summary of student self-reported data

Name	Data
P-Value	0.0001
T-Value	8.8109
Degrees of Freedom	3384
Standard Error of Difference	0.012

Analysis of Student Misconduct Data

Similarly, 163 student misconduct cases were coded and analyzed using the two-tailed Welch's t-test (Welch, 1947). Incident data was stripped of all identifiers and coded by sex, incident year, level of course repeat offence, behavior, assignment type, and punishment. The mean of the pre-intervention population was .0105, with a standard deviation of 0.101939. The post-intervention population's mean was 0.5994, with a standard deviation of 0.077189, yielding a P-value of 0.0018. It may therefore be concluded that there was a change between misconduct data pre-

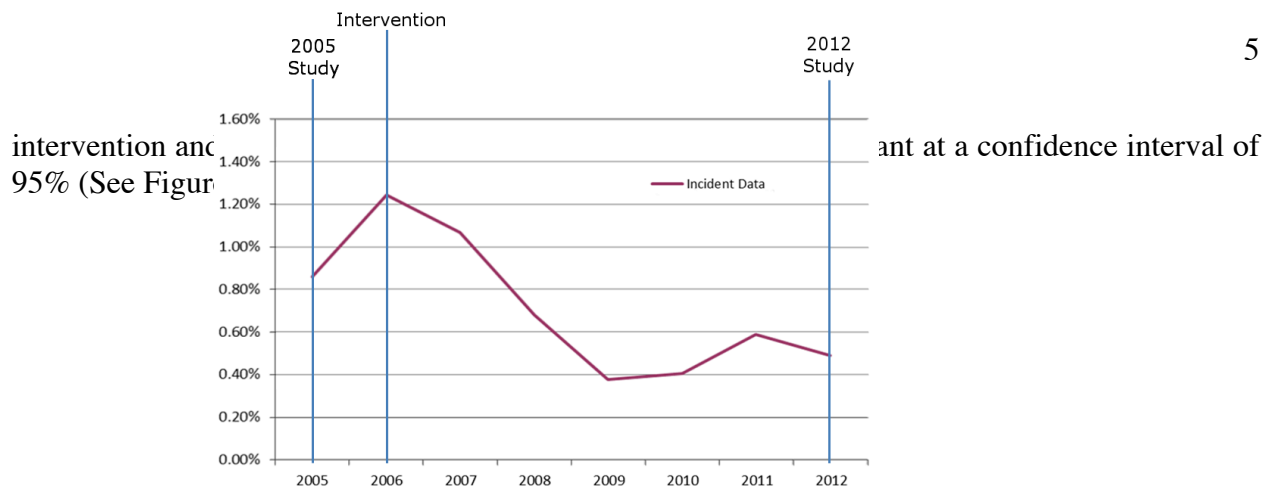


Figure 1 Cases of academic misconduct as a percentage of FAHS population

Table 3 Pre and post intervention summary data of student misconduct data

Name	Pre-Intervention	Post-Intervention
Mean	0.0105	0.005994
SD	0.101939	0.077189

Name	Data
P-Value	0.0018
T-Value	3.1176
Degrees of Freedom	8596
Standard Error of Difference	0.001

Conclusion

The results of this study indicate that the intervention strategy led to a statistically significant reduction in the both the self-reported perceptions of student misconduct and the frequency of academic misconduct cases in the FAHS. As a microcosm of the larger institution, it is our belief that strategies that are effective at the Faculty level may be translated to the institutional level. The next step will be to do so. Brock University has recently approved a new Academic Integrity Policy (June, 2013). This Policy has identified a new governance structure that is positioned to implement the strategies that fall under the collaboration, education, assessment, monitoring and detection rubrics identified in this study.

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This study reports the results of Mr. Prins' undergraduate honours thesis, and draws upon the case history of undergraduate student misconduct cases adjudicated by Dr. Anna H. Lathrop, who served as the Associate Dean, Undergraduate Studies, in the Faculty of Applied Health Sciences between 2005-2012.