

# **Student Evaluation of Teaching at Lakehead University Pilot - Phase 3**

## **Executive Summary**

(November 5, 2010)

At the Senate Meeting # 2009-4 (Friday, April 17, 2009) there was a motion to approve a new Student Evaluation of Teaching at Lakehead University survey. The Senate Teaching and Learning Subcommittee stated in their report (April 2009) (<http://senate.lakeheadu.ca/uploads/meetings/2009-04-17/StudentEval.pdf>) that, pending acceptance of the new survey instrument, the Committee would conduct additional analyses during the first year of implementation to verify validity and reliability measures.

During the winter term of 2010, the subcommittee responsible for the examination of the student evaluation of courses at Lakehead University engaged in a research study<sup>1</sup> to evaluate the Student Evaluation of Teaching Survey. The primary goal of the study was to confirm evidence of validity and reliability for the survey based on the internal structure and the response processes previously investigated.

Tenured instructors from the University community were invited to participate during the course evaluation period of the winter term. Individuals that agreed to participate in the study were provided with a consent form and a cover letter describing how the methodology ensured that the responses provided on the revised survey instrument would be handled in a way to ensure anonymity and confidentiality for both the students and the instructors.

The Student Evaluation of Teaching at Lakehead University Survey was distributed and collected in March 2010 and analyzed according to the procedures currently in place in each of the Faculties in order to comply with the Senate approved policy (<http://policies.lakeheadu.ca/policy.php?pid=8>). Student responses were not used to assess the instructor's performance, but rather to provide valuable information about the quality of the items included on the survey.

The Office of Institutional Analysis and Government Relations was provided with the names of the instructors who volunteered to participate along with a copy of each of the signed consent forms. Once the survey results were computed by the Technology Services Centre, the Office of Institutional Analysis and Government Relations gathered a copy of the results for each of the participants and removed all identifying information was forwarded to the Subcommittee for further analysis.

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<sup>1</sup> approved by the Lakehead University Research Ethics Board

## Data Analysis

Eighteen instructors volunteered to participate in the pilot study. Data was captured from 638 surveys collected from 35 different courses delivered during the winter semester of 2010. The survey consists of some 23 questions using an ordinal based scoring system. In 21 of the questions, the response options ranged from strongly agree to strongly disagree, with an option to state when the respondent felt that the item was not applicable. Two of the questions, presented at the end of the survey were also scored on an ordinal scale but the response options ranged from very good to very poor. Frequency distributions for each item were generated to highlight the patterns, frequencies and percentage of responses. The data were further analyzed using the *Cronbach's Alpha Procedure* to establish an estimate of internal consistency for the survey.

Next, correlation coefficients were generated for use in a principal component analysis to determine if distinct factors (constructs) were identified within the questionnaire. All statistical analyses were completed using SAS<sup>®</sup> The Statistical Analysis System.

## Results

### Frequency Distribution of Responses

Visual inspection of the frequency data for the responses to each of the items revealed highly skewed response distributions; that is, the majority of students referred mostly to the positive end of the scale (i.e., "Strongly Agree" and "Agree") to rate their instructors. These results suggest that the students' responses were consistent throughout the series of items, providing evidence to support the reliability of the ratings.

There were no anomalous patterns in the responses across questions based on the 638 responses.

### Cronbach's Alpha

The data were next analyzed using the *Cronbach's Alpha Procedure* to establish an estimate of internal consistency for the items in the survey. Cronbach's alpha is a statistical procedure which measures how well a set of items describe a single, uni-dimensional latent construct.

Cronbach's alpha will generally increase when the correlations between the items increase. Some professionals, as a rule of thumb, require the Cronbach alpha estimate to be 0.70 or higher, and to be obtained on a substantial sample before they will consider an instrument to be useful. The Cronbach's alpha term is an estimate of reliability. The Cronbach's alpha for the overall survey was 0.95 thereby indicating strong internal consistency between the items (i.e. strong reliability). A principal component analysis confirmed that a single uni-

dimensional latent construct (teaching performance) was identified for the instrument.

### **Concluding Remarks**

In summary, the results of the data analyses provide us with some supporting evidence for the Student Evaluation of Teaching Survey. The results suggest that the responses are consistent across the items, that the items are highly related, and that a single construct that describes “overall” teaching performance emerges from the responses.

Student feedback is a valuable source of quantitative and qualitative data for instructors, both for the purposes of documenting teaching performance and for reflecting on ways to improve one’s teaching performance. The Subcommittee also recognizes that student evaluations are but one source of information used by faculty to examine their teaching or to document satisfactory teaching. A copy of the full report approved by the Senate Teaching and Learning Committee is available at:

<http://senate.lakeheadu.ca/uploads/meetings/2010-11-05/STLC%20Student%20Evaluation%20Report%20final%2026Oct2010.pdf>