



## MEMORANDUM

**To:** Executive Committee of Faculty Council

**From:** Professor Edgar J. Acosta  
Chair, Teaching Methods and Resources Committee

**Date:** March 29, 2013 for April 18, 2013 Faculty Council Meeting

**Re:** New Course Evaluation Framework Questions and Implementation

### REPORT CLASSIFICATION

This is a major policy matter that will be considered by the Executive Committee for endorsing and forwarding to Faculty Council for vote as a regular motion (requiring a simple majority of members voting to carry).

### BACKGROUND

Having as an ultimate objective the improvement of the learning experience of our students, the University of Toronto put together a Course Evaluation Working Group in 2009 with a mandate of reviewing our course evaluation practices, best practices reported in the literature, and the practices at other institutions. The group was asked to consult with faculty and students, and produce recommendations. The group identified that there was great heterogeneity in the evaluation tools utilized throughout the University and that a substantial fraction of the questions surveyed had flaws in their design. The group cited literature that indicates that valid course evaluation items must reflect the institution's pedagogical and instructional goals and practices, reflect formative and summative purposes for data use, and adhere to survey design methodology. The group recommended producing an evaluation framework that introduced questions that would reflect the pedagogical priorities at different levels: University, Faculty, Department, and instructor.

In 2010-2011, a new evaluation framework was proposed: a total of 20 questions, including eight University-level questions and up to eight Faculty-level questions.

The eight university-level questions developed by a University-level implementation group were:

1. I found the course intellectually stimulating.
2. The course provided me with a deeper understanding of the subject matter.
3. The instructor created a course atmosphere that was conducive to my learning.

4. Course projects, assignments, tests and/or exams improved my understanding of the course material.
5. Course projects, assignments, tests and/or exams provided opportunity for me to demonstrate an understanding of the course material.
6. (\*) Overall, the quality of my learning experience in this course was...
7. Please comment on the overall quality of the instruction in this course.
8. Please comment on any assistance that was available to support your learning in the course.

Questions 1-5 are graded on a 5-point Likert agreement scale: not at all, somewhat, moderately, mostly, a great deal. Question 6 (marked by \*) is graded on a rated scale: poor, fair, good, very good, and excellent. Questions 7 and 8 require written comments from the student. Questions 1 through 5 are primarily designed with formative purposes. Question 6 is meant to be used as a summative question. A large scale implementation with more than 3000 courses in the Faculty of Arts and Science, UT-Mississauga, UT-Scarborough, and others has shown that the mean of the means of questions 1 through 5 is highly correlated with the mean of question 6. Students that have used the new course evaluation framework qualify the new course evaluation as “very good”, according to a recent survey. A recent analysis on the fraction of student responses to the new on-line course evaluation shows that this fraction has not been affected by the move to the on-line delivery.

In 2011-2012, the Teaching Methods and Resources Committee (TMRC) of the Faculty developed the institutional priorities for the Faculty. After a series of meetings that considered the Faculty’s current evaluation survey, a bank of 180+ validated questions provided by the Centre for Teaching Support and Innovation (CTSI) of the University of Toronto, and input from TMRC members, the following Teaching Priorities were identified:

Division priority # 1: Students develop and practice analytical and critical-thinking skills, through the ability to formulate problems, engage in creative problem-solving, and analyze problems

Division priority # 2: Students learn to apply knowledge in an engineering context (or to develop an understanding of how to apply engineering knowledge to novel contexts).

Division priority # 3: Students are engaged in practicing professionalism/ professional behaviour and develop an understanding of ethical issues relating to engineering and the impact of engineering on the environment and society.

Division priority # 4: Students are made aware of cross-connections/integration with other courses and learning environments (laboratories, projects, internships).

Division priority # 5: The instructor’s feedback in the course assignments, projects, tests, and/or papers provide guidance on how students could improve their performance

Division priority # 6: The instructor provides the students with clear expectations/transparency of learning outcomes and their evaluation

Division priority # 7 –Lecture-based courses: The instructor arranged for all necessary infrastructure and made use of the available resources to deliver the course in a clear/concise way.

Division priority # 7- Project-based courses: Students are encouraged to develop and cultivate an aptitude for innovation.

Division priority # 8- Project-based courses: Students have an opportunity to develop and practice oral and written communication skills.

Division priority # 7 – Laboratory-only courses: The laboratory provided an opportunity for the student to gain a more in-depth, practical understanding of the course content.

A motion proposal for the adoption of the new evaluation framework, along with the teaching priorities for the faculty was brought to Chairs and Directors in 2012. The adoption of the framework was welcomed but with reservations around discontinuing question 16 of the current course evaluation form, which is useful as a reference when preparing tenure, promotion or award portfolios. A modified motion was then introduced and approved at the Faculty Council of April 26, 2012 that moved to implement the new evaluation framework using the proposed division priorities, and keeping question 16 of the current evaluation form among the final set of questions.

In the fall of 2012, Dr. Cherie Werhun, Course Evaluation Support Officer at CTSI, and her team developed a set of validated evaluation items (questions) derived from the divisional priorities. On January 10, 2013 the members of TMRC met to discuss these evaluation items with the objective of selecting or narrowing the number of options. In a number of cases, proposed evaluation items were edited to reflect the concerns of TMRC members.

On January 25, 2013 Professor Susan McCahan brought the selected evaluation items to Chairs and Directors. The group recommended broader consultation before bringing a final set of evaluation items to Faculty Council.

## **STRUCTURE**

The set of questions proposed for the new evaluation form are as follow (unless a question has an asterisk or asks for comments, the 5-point Likert agreement scale is used):

### University-level questions

1. I found the course intellectually stimulating.
2. The course provided me with a deeper understanding of the subject matter.
3. The instructor created a course atmosphere that was conducive to my learning.
4. Course projects, assignments, tests and/or exams improved my understanding of the course material.
5. Course projects, assignments, tests and/or exams provided opportunity for me to demonstrate an understanding of the course material.
6. (\*) Overall, the quality of my learning experience in this course was...
7. Please comment on the overall quality of the instruction in this course.
8. Please comment on any assistance that was available to support your learning in the course.

#### Faculty-level questions (all courses)

1. The course helped me improve my ability to formulate, analyze and solve problems
2. The instructor related course concepts to practical applications and/or current research
3. The course expanded my understanding of the ethical and environmental issues concerning engineering in society.
4. The instructor explained how the subject matter related to other courses
5. The feedback I received provided guidance to improve my understanding of course materials
6. The instructor explained the learning objectives for the course
7. (\*) What is your overall rating of the instructor as a teacher? (Question 16)

#### Faculty-level questions (depending on type of course, as identified by the instructor)

Lecture-based courses:

8. The instructor used appropriate means to deliver the material in a clear and organized manner

Project-based courses:

9. The course encouraged innovation in the project
10. The course provided opportunities to improve communication skills

Laboratory-only courses:

11. The laboratory enhanced my understanding of science and engineering concepts

#### Department-level questions and instructor questions:

Department-level and instructor questions can be introduced as long as the total number of questions is 20 or less.

Departments and instructors can select question items from an approved set of 180+ validated items: <http://www.teaching.utoronto.ca/Assets/CTSI+Digital+Assets/PDFs/q-bank-feb2012.pdf> or develop their own validated questions through the Centre for Teaching Support and Innovation (CTSI).

### **PROCESS AND CONSULTATION**

During the Period of January 24 to March 17, 2013, the following formal consultation sessions were held:

- Student Information and Consultation Sessions (January 24 and 28). Summary provided by Jason Arsenault
- ECE Information and Consultation Session (February 15). Summary provided by Wei Yu
- Faculty Information and Consultation Sessions (January 29, February 7). Conducted by Susan McCahan and summarized by E. Acosta
- IBBME Information and Consultation Session (February 13). Conducted by E. Acosta
- ChemE Information and Consultation Session (February 25). Conducted by E. Acosta
- MIE, MSE Information and Consultation Session (February 27). Conducted by Susan McCahan
- TMRC meeting to discuss consultation sessions and generate revised options (March 11 and 12)
- TMRC e-mail vote on revised options (March 15-17)

Feedback from all of the consultations sessions was provided to the committee for discussion and taken into account in developing the proposed items.

The proposed items must be validated (except question 16) by CTSI before being formally adopted.

### **PROPOSALS/MOTIONS**

“THAT the Faculty of Applied Science and Engineering adopt the Faculty-level question items 1 through 11 to evaluate the undergraduate courses offered by the Faculty, and that any minor changes, originated from the process of validation, be approved by the Teaching Methods and Resources Committee.”

“THAT the Faculty of Applied Science and Engineering implement the new evaluation framework starting the Fall term of 2013.”