

Teaching Assessment and Evaluationⁱ

Introduction

The *Teaching Assessment and Evaluation Guide* provides instructors with starting points for reflecting on their teaching, and with advice on how to gather feedback on their teaching practices and effectiveness as part of a systematic program of teaching development. As well, the *Guide* provides guidance on how teaching might be fairly and effectively evaluated, which characteristics of teaching might be considered, and which evaluation techniques are best suited for different purposes.

Need for the Guide

Teaching is a complex and personal activity that is best assessed and evaluated using multiple techniques and broadly-based criteria. Assessment for formative purposes is designed to stimulate growth, change and improvement in teaching through reflective practice. Evaluation, in contrast is used for summative purposes to give an overview of a particular course and setting. Informed judgements on teaching effectiveness can best be made when both assessment and evaluation are conducted, using several techniques to elicit information from various perspectives on different characteristics of teaching. There is no one complete source for information on one's teaching, and no single technique for gathering it. Moreover, the techniques need to be sensitive to the particular teaching assignment of the instructor being assessed or evaluated, as well as the context in which the teaching takes place. If multiple perspectives are represented and different techniques used, the process will be more valued, the conclusions reached will be more credible, and consequently more valuable to the individual being assessed or evaluated.

Current practices at Loyalist College are varied. In most schools and programs, teaching is systematically evaluated, primarily for summative purposes. Individual instructors are free, if they wish, to use the data so gathered for formative purposes, or they may contact the Office of Teaching and Learning which provides feedback and teaching analysis aimed at growth, development and improvement.

Without denying the value of summative teaching evaluation, the main purpose of this Guide is to encourage program teams and individuals to engage in reflective practice through the ongoing assessment of teaching for formative purposes and for professional development.

Research indicates that such practice leads to heightened enthusiasm for teaching, and improvement in teaching and learning, both of which are linked to faculty vitality.

What is Quality Teaching?

All assessment and evaluation techniques contain implicit assumptions about the characteristics that constitute quality teaching. These assumptions should be made explicit and indeed should become part of the evaluation process itself in a manner which recognizes instructors' rights to be evaluated within the context of their own teaching philosophies and goals. First and foremost then, "teaching is not right or wrong, good or bad, effective or ineffective in any absolute, fixed or determined sense."¹ Instructors emphasize different domains of learning (affective, cognitive, psychomotor, etc.) and employ different theories of education and teaching methodologies (anti-racist, constructivist, critical, feminist, humanistic, etc.)² They encourage learning in different sites (classrooms, field locations, laboratories, seminar rooms, studios, virtual classrooms, etc.) They use different instructional strategies and formats (using case studies, coaching, demonstrating, facilitating discussions, lecturing, problem-based learning, online delivery, etc.), and they do this while recognizing that students have diverse backgrounds and levels of preparedness. In one situation, instructors may see their role as transmitting factual information, and in another as facilitating discussion and promoting critical thinking.

As variable and diverse as quality teaching might be, generalizations may nevertheless be made about its basic characteristics as described in the sidebar.

The criteria for evaluating teaching vary between disciplines and within disciplines, and should take into consideration the level of the course, the instructor's objectives and style, and the teaching methodology employed. Nonetheless, the primary criterion must be improved student learning. Research indicates that students, faculty and administrators alike agree that **quality teaching:**

- establishes a positive learning environment;
- motivates student engagement;
- provides appropriate challenges;
- is responsive to students' learning needs; and
- is fair in evaluating their learning.

¹ Mary Ellen Weimer (1990) *Improving College Teaching* (CA: Jossey Bass Publishers), 202.

² Adapted from George L. Geis (1977), "Evaluation: definitions, problems and strategies," in Chris Knapper et al Eds., *Teaching is Important* (Toronto: Clarke Irwin in association with CAUT).

QUALITY TEACHING

Put succinctly, quality teaching is that activity which brings about the most productive and beneficial learning experience for students and promotes their development as learners. This experience may include such aspects as: improved comprehension of and ability to use the ideas introduced in the course; change in outlook, attitude and enthusiasm towards the discipline and its place in the academic endeavour; intellectual growth; and improvement in specific skills such as critical reading and writing, oral communication, analysis, synthesis, abstraction, and generalization.

Concretely, indicators of quality teaching can include:

- effective choice of materials;
- organization of subject matter and course;
- effective communication skills;
- knowledge of and enthusiasm for the subject matter and teaching;
- availability to students; and
- responsiveness to student concerns and opinions.

Some characteristics are more easily measured than others. Furthermore, since instructors are individuals and teaching styles are personal, it is all the more important to recognize that not everyone will display the same patterns and strengths.

Assessment of Teaching for Formative Purposes

Formative assessment of teaching can be carried out at many points during an instructional period, in the classroom or virtual environment, to compare the perceptions of the instructor with those of the students, and to identify gaps between what has been taught and what students have learned. The purpose of assessment is for instructors to find out what changes they might make in teaching methods or style, course organization or content, evaluation and grading procedures, etc., in order to improve student learning. Assessment is initiated by the instructor and information and feedback can be solicited from many sources (for example, self, students, colleagues, consultants) using a variety of instruments (surveys, online forms, etc. – see classroom assessment below). The data gathered are seen only by the instructor and, if desired, a consultant, and form the basis for ongoing improvement and development.

Summative Evaluation

Summative evaluation, by contrast, is usually conducted at the end of a particular course or at specific points in an instructor's career. The purpose is to form a judgement about the effectiveness of a course and/or an instructor. The judgement enables departments to make informed decisions about changes to individual courses, the curriculum or teaching assignments.

At most colleges, summative evaluation includes the results of teaching evaluations regularly scheduled at the end of academic terms. However, to ensure that summative evaluation is both comprehensive and representative, it should include a variety of evaluation strategies, among them:

- letters from individual students commenting on the effectiveness of the instructor's teaching, the quality of the learning experience, and the impact of both on their academic progress;
- samples and critical reviews of contributions to course and curriculum development, as well as of contributions to scholarship on teaching; and
- evidence of exceptional achievements and contributions to teaching in the form of awards, and committee work.

One's teaching portfolio (see below) is an ideal format for presenting these types of evaluation as a cumulative and longitudinal record of one's teaching.

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Important note: It is crucial that the two processes – summative evaluation and formative assessment – be kept strictly apart if the formative assessment of teaching is to be effective and achieve its purpose. This means that the information gathered in a program of formative assessment should not be used in summative evaluation unless volunteered by instructors themselves. It also means that persons who are or have been involved in assisting instructors to improve their teaching should not be asked to provide information for summative evaluation purposes.

Overview of Strategies for Assessing and Evaluating Quality Teaching and Student Learning

This section describes six (6) strategies that teachers may use to assess and evaluate the quality of their teaching and its impact on student learning:

- 1) *teaching portfolio's;*
- 2) *student evaluations;*
- 3) *letters and individual interviews;*
- 4) *course portfolios; and*
- 5) *classroom assessment*

These descriptions draw on current research in the field and practices and procedures at other colleges and universities in Canada and abroad. All evaluation and assessment efforts should use a combination of strategies to take advantage of their inherent strengths as well as their individual limitations.

1. Teaching Portfolio

A teaching portfolio is a factual description of an instructor's teaching achievements and contains documentation that collectively suggests the scope and quality of his or her teaching. Portfolios can be used to present evidence about teaching quality for evaluative purposes such as teaching award nominations, etc., as they can provide a useful context for analyzing other forms of teaching evaluation. Alternatively, portfolios can provide the framework for a systematic program of reflective analysis and peer collaboration leading to improvement of teaching and student learning. For further information on how to prepare a teaching portfolio, please contact the Office of Teaching and Learning.

Benefits: Portfolios provide an opportunity for instructors to articulate their teaching philosophy, review their teaching goals and objectives, assess the effectiveness of their classroom practice and the strategies they use to animate their pedagogical values, and identify areas of strength and opportunities for improvement. They

TO FOCUS ON:

- ❖ Appraisal of instructor's teaching and learning context
- ❖ Soundness of instructor's approach to teaching and learning
- ❖ Coherence of teaching objectives and strategies
- ❖ Vigour of professional development, contributions and accomplishments in the area of teaching.

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also highlight an instructor's range of responsibilities, accomplishments, and contributions to teaching and learning more generally within the program team and/or college.

Limitations: It is important to note that portfolios are not meant to be an exhaustive compilation of all the documents and materials that bear on an instructor's teaching performance; rather they should present a selection of information organized in a way that gives a comprehensive and accurate summary of teaching activities and effectiveness.

2. Student Evaluations of Teaching

Student evaluations of teaching are the most commonly used source of data for both summative and formative information. In many institutions they are mandatory, and in some institutions they are also standardized. Data should be obtained over time and across courses using a limited number of global or summary type questions. Such data will provide a cumulative record and enable the detection of patterns of teaching development. Information obtained by means of student evaluations can also be used by individual instructors to improve the course in future years, and to identify areas of strength and weakness in their teaching by comparison with those teaching similar courses. Longer and more focused questionnaires are also useful in a program of formative evaluation when designed and administered by an instructor during a course.

Benefits: The use of a mandatory, standardized questionnaire puts all teaching evaluations on a common footing, and facilitates comparisons between teachers, courses and programs. The data gathered also serve the purpose of assessing whether the educational goals of the program are being met. Structured questionnaires are particularly appropriate where there are relatively large numbers of students involved, and where there are either several sections of a single course, or several courses with similar teaching objectives using similar teaching approaches.

Questionnaires are relatively economical to administer, summarize and interpret. Provided that students are asked to comment only on items with which they have direct experience, student responses to questionnaires have been found to be valid. While questionnaires with open-ended questions are more expensive to administer, they often provide more reliable and useful sources of information in small classes. Also, open-ended questions provide insight into the numerical ratings, and provide pertinent information for course revision.

Limitations: While students' perceptions provide valuable feedback to instructors, recent research has identified specific areas of teaching quality on which students are *not* able to make informed judgements. These include

TO FOCUS ON:

- ❖ Effectiveness of instructor
- ❖ Impact of instruction on student learning
- ❖ Perceived value of the course to the student
- ❖ Preparation and organization
- ❖ Knowledge of subject matter and ability to stimulate interest in the course
- ❖ Clarity and understandability
- ❖ Ability to establish rapport and encourage discussion within the classroom
- ❖ Sensitivity to and concern with students' level of understanding and progress

the appropriateness of course goals, content, design, materials, and evaluation of student work. Thus, the use of a variety of techniques as described elsewhere in this document can help to address the gaps and shortcomings in the student evaluation data.

Further, recent research indicates that care should be taken to control for possible biases based on gender, race, discipline, and teaching approach, particularly for those using non-traditional teaching methods and curriculum. Likewise, evaluations can be affected by factors for which it is difficult to control, such as student motivation, complexity of material, level of course, and class size. Care should be taken, therefore, to create an appropriate context for interpreting the data in light of other sources of data and in comparison with other courses. One way to ensure fairness and equity is to ask students to identify the strengths of the instructor's approach as well as weaknesses, and to ask for specific suggestions for improvement.

Teachers have such different perspectives, approaches, and objectives that a standardized questionnaire may not adequately or fairly compare their performance. For example, the implicit assumption behind the design of many evaluations is that the primary mode of instruction is the lecture method. Such an evaluation will be inadequate in evaluating the performance of instructors who use different teaching methods, for example collaborative learning.

3. Letters and Individual Interviews

Letters and/or individual interviews may be used in teaching award nominations, promotion, etc. to obtain greater depth of information for the purpose of improving teaching, or for providing details and examples of an instructor's impact on students.

Benefits: Interviews and letters elicit information not readily available through student evaluations or other forms of evaluation. Insights, success stories, and thoughtful analyses are often the outcomes of an interview or request for a written impression of an instructor's teaching. Students who are reluctant to give information in written form, often respond well to a skilled, probing interviewer.

Limitations: The disadvantage of letters is that the response rate can be low. The major disadvantage of interviews is time. Interviews can take approximately one (1) hour to conduct, about 30 minutes to arrange, and another block of time for coding and interpretation. A structured interview schedule should be used to eliminate the bias that may result when an untrained interviewer asks questions randomly of different students.

TO FOCUS ON:

- ❖ Appropriateness of course goals and objectives
- ❖ Quality of instructional materials and assignments
- ❖ Coherence of course organization, teaching strategies and modes of delivery
- ❖ Comprehensiveness of methods for appraising student achievement
- ❖ Level of student learning and contribution of teaching to students' progress
- ❖ Innovations in teaching and learning

4. Course Portfolios

A course portfolio is a variant on the teaching portfolio and is the product of focused inquiry into the learning by students in a particular course. It represents the specific aims and work of the instructor and is structured to explain what, how and why students learn in a class. It general comprises four (4) main components:

1. A statement of the aims and pedagogical strategies of the course and the relationship between the method and outcomes;
2. An analysis of student learning based on key assignments and learning activities to advance course goals;
3. An analysis of student feedback based on classroom assessment techniques; and
4. A summary of the strengths of the course in terms of students' learning, and critical reflection on how the course goals were realised, changed or unmet. The final analysis leads to ideas about what to change in order to enhance student learning, thinking and development the next time the course is taught.

Course portfolios have been described as being closely analogous to a scholarly project, in that:

“a course, like a project, begins with significant goals and intentions, which are enacted in appropriate ways and lead to relevant results in the form of student learning. Teaching, like a research project, is expected to shed light on the question at hand and the issues that shape it; the methods used to complete the project should be congruent with the outcomes sought. The course portfolio has the distinct advantage of representing – by encompassing and connecting planning, implementation and results – the intellectual integrity of teaching as reflected in a single course.”³

Benefits: The focus on a specific course allows the portfolio to demonstrate student understanding as an index of successful teaching. For instructors, course portfolios provide a framework for critical reflection and continuous improvement of teaching, and deep insight into how their teaching contributes to students' knowledge and skills. For programs, they can highlight cohesion and gaps within the curriculum and enable continuity within the course over time and as different instructional technologies are incorporated. As well, course portfolios can collectively promote course articulation and provide means of assessing the quality of a curriculum and pedagogical approach in relation to the overall goals and outcomes of a program of study.

Limitations: Because course portfolios focus on one course, they do not reflect the full range of an instructor's accomplishments, responsibilities, and contributions (such as curriculum development) that would be

TO FOCUS ON:

- ❖ Effectiveness of instructor through detailed reflection
- ❖ Impact of instruction on student learning and motivation over the longer term
- ❖ Preparation and organization
- ❖ Clarity and understandability
- ❖ Ability to establish rapport and encourage discussion
- ❖ Sensitivity to and concern with students' level of understanding and progress

³ Cambridge, Barbara. “The Teaching Initiative: The course portfolio and the teaching portfolio.” American Association for Higher Education.

documented in a teaching portfolio. Also, course portfolios take time to prepare and evaluate, and instructors should not be expected to build a portfolio for every course taught; rather they should concentrate on those courses for which they have the strongest interest or in which they invest the majority of their energy, imagination and time.

5. Classroom Assessment

Classroom assessment is a method of inquiry into the effects of teaching on learning. It involves the use of techniques and instruments designed to give instructors ongoing feedback about the effect their teaching is having on the level and quality of student learning; this feedback then informs their subsequent instructional decisions.

Unlike tests and quizzes, classroom assessment can be used in a timely way to help instructors identify gaps between what they teach and what students learn and enable them to adjust their teaching to make learning more efficient and effective. The information should always be shared with students to help them improve their own learning strategies and become more successful self-directed learners.

There are a variety of instruments for classroom assessment, either in class or electronically, such as one-minute papers, one-sentence summaries, critical incident questionnaires, focus groups, and mid-year mini surveys. Generally, the instruments are created, administered, and results analyzed by the instructor to focus on specific aspects of teaching and student learning. Although the instructor is not obligated to share the results of classroom assessment beyond the course, the results may usefully inform other strategies for evaluating teaching quality.

Classroom assessment can be integrated into an instructor's teaching in a graduated way, starting out with a simple assessment technique in one class involving five (5) to 10 minutes of class time, less than an hour for analysis of the results, and a few minutes during a subsequent class to let students know what was learned from the assessment and how the instructor and students can use that information to improve learning. After conducting one (1) or two (2) quick assessments, the instructor can decide whether this approach is worth further investment of time and energy.

Benefits: Classroom assessment encourages instructors to become monitors of their own performance and promotes reflective practice. In addition, its use can prompt discussion among colleagues about their effectiveness, and lead to new and better techniques for eliciting constructive feedback from students on teaching and learning.

TO FOCUS ON:

- ❖ Effectiveness of teaching on learning
- ❖ Constructive feedback on teaching strategies and classroom/online practices
- ❖ Information on what students are learning and level of understanding of material
- ❖ Quality of student learning and engagement
- ❖ Feedback on course design

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Limitations: As with student ratings, the act of soliciting frank, in-the-moment feedback may elicit critical comments on the instructor and his/her approach to teaching. However, it is important to balance the positive and negative comments and try to link negative commentary to issues of student learning. New users of classroom assessment techniques might find it helpful to discuss the critical comments with an experienced colleague.

A Sampling of Classroom Assessment Techniques:

One-Minute Paper

The one-minute paper, or a brief reflection, is a technique that is used to provide instructors with feedback on what students are learning in a particular class. It may be introduced in small seminars or in large lectures, in first-year courses or upper-year courses, or electronically using software that ensures student anonymity. The one-minute paper asks students to respond anonymously to the following questions:

- 1. What is the most important thing you learned today?**
- 2. What question remains in your mind?**

Depending upon the structure and format of the learning environment, the one-minute paper may be used in a variety of ways:

- During a lecture, to break up the period into smaller segments enabling students to reflect on the material just covered.
- At the end of a class, to inform your planning for the next session.
- In a course comprising lectures and tutorials, the information gleaned can be passed along to tutorial leaders giving them advance notice of issues that they may wish to explore with students.

The Muddiest Point

An adaptation of the one-minute paper, the muddiest point is particularly useful in gauging how well students understand the course material. The muddiest point asks students:

- 1. What was the muddiest point for you today?**

Like the one-minute paper, use of the muddiest point can helpfully inform your planning for the next session, and signal issues that it may be useful to explore.

One Sentence Summaries

One sentence summaries can be used to find out how concisely, completely and creatively students can summarize a given topic within the grammatical constraints of a single sentence. It is also effective for helping students break down material into smaller units that are more easily recalled. This strategy is most effective for any material that can be represented in declarative form – historical events, story lines, chemical reactions and mechanical processes.

The one sentence summary technique involves asking students to consider the topic you are discussing in terms of who does/did what to whom, how, when, where and why, and then to synthesize those answers into a single informative, grammatical sentence. These sentences can then be analyzed to determine strengths and

weaknesses in the students' understanding of the topic, or to pinpoint specific elements of the topic that require further elaboration. Before using this strategy, it is important to make sure the topic can be summarized coherently. It is best to impose the technique on oneself first to determine its appropriateness or feasibility for given material.

Critical Incident Questionnaires

The critical incident questionnaire is a simple assessment technique that can be used to find out what and how students are learning, and to identify areas where adjustments are necessary (e.g. the pace of the course, confusion with respect to assignments or expectations).

On a single sheet of paper, students are asked five (5) questions which focus on critical moments for learning in a course. The questionnaire is handed out about 10 minutes before the final session of the week. It asks:

- 1. At what moment this week were you most engaged as a learner?**
- 2. At what moment this week were you most distanced as a learner?**
- 3. What action or contribution taken this week by anyone in the course did you find most affirming or helpful?**
- 4. What action or contribution taken this week by anyone in the course did you find most puzzling or confusing?**
- 5. What surprised you most about the course this week?**

Critical incident questionnaires provide substantive feedback on student engagement and may also reveal power dynamics in the classroom that may not initially be evident to the instructor.

ⁱ This Guide is based on York University's Senate Committee on Teaching and Learning's *Guide to Teaching Assessment & Evaluation* (January 2002)