

## **Adaptation of a Traditional Classroom Evaluation for Web-delivered Courses**

**Barbara Christe**  
**Indiana University-Purdue University at Indianapolis**

### Abstract

The Purdue School of Engineering and Technology encourages the use of a standardized evaluation at the end of each semester. This questionnaire covers several aspects of a course including Instructional Delivery and Design, Communication Skills of the Instructor, Instructional Facilities, Self-Assessment and Overall Assessment. The format uses positive statements and the Likert Scale. It was developed in conjunction with many faculty. Unfortunately, it does not adequately assess the activities of web-delivered courses. Questions such as “Does the course begin and end on time?” are not relevant. The author will prepare a new survey which will have two focal points. The first will be an emphasis on accurate statements regarding faculty functions, which vary greatly from the traditional classroom. The second focus will be use of statements which evaluate content presentation, inter-student work, and the format of the web-based classroom. Questions will be designed to incorporate the Seven Principles of Good Practice as defined by Art Chickering and Zelda Gamson. Other references will include the Flashlight Survey, developed by the TLT group, whose mission is to “motivate and enable institutions and individuals to improve teaching and learning with technology.”<sup>1</sup> The TLT Group is the Teaching, Learning and Technology Affiliate of the American Association of Higher Education.

### I. Introduction

The on-line learning environment is different – there is no debate about that. With many classes now making use of the virtual classroom, the Internet, traditional expectations and assumptions are no longer valid. One prime example of this is in the assessment of both faculty performance and instructional delivery of course materials. Purdue University has long used student surveys at the end of the semester as a tool in the tenure process, as an indicator of student satisfaction and as a feedback sensor to close the loop in classroom assessment. The question types have fluctuated, as well as the number of questions. Even the scoring has been altered over the years. In general however, the method of data collection has remained constant. Students have filled in circles related to statements using the Likert Scale. The focus of the survey is to provide information to the faculty regarding the respondent’s rating of the classroom experience.

However, for this instructor, as technology has stepped into the learning environment, the correlation between the questions previously developed and the student’s classroom has stepped out. To decrease the relationship further, even the method of data collection becomes a challenge when the students do not visit the campus and typically do not choose to fill out a form and mail to back to the school (using regular mail). In the experience of this author, return of

traditional surveys was below 20%. While there are many well documented causes for this dismal return rate, one unique explanation includes the irrelevance of so many of the questions.

Consequently, it behooves the instructor to provide Internet students with a survey that can easily be answered, which solicits relevant opinions and still protects participant anonymity. Given that assumption, the author developed such a questionnaire using other generic surveys (including the Flashlight Program<sup>2</sup>) and personal experience of three years of on-line education.

## II. Traditional Classroom-based Evaluation

List A includes a list questions which make up the Purdue University School of Engineering and Technology at Indianapolis classroom assessment tool. This was designed with the participation and insight of all departments and has been in use for many years. The statements are presented using the Likart scale with 5=Strongly Agree and 1=Strongly Disagree. Students are given time during a class period at the end of the semester to complete the survey. Results are tabulated by the testing center available on campus. Each category receives a total score and an overall score is obtained using all responses (un-weighted). Departments receive these scores and faculty may be ranked within the department using the sub scores or the overall score. Dossiers also must contain the score for each course taught for the previous three years.

## III. Development of Meaningful Statements

As an instructor of Internet based courses, delivered asynchronously, several problems quickly emerged. The first challenge: how to get the forms to the students? The traditional form was not available electronically and so it was decided to mail the surveys to the students. Dismal return rates indicated this plan would not work.

The second challenge was not nearly as straightforward. The survey did not present questions which were relevant to the students and their experience in the course. The class certainly began and ended on time since there was NO schedule! Most of my students do not hear my voice except when using the telephone. This could be defined as tutoring “outside” the classroom and is, therefore, not reflective of the instructor’s enthusiasm or speech patterns. The students did not know how to answer these questions. Also, the questions did not reflect the role of the instructor in the web-based course. Generally, in the virtual classroom, instructors are viewed as guides rather than presenters. Material is provided to the student in many forms and many of which are not directly associated with the instructor.

It was important to create new questions which reflected the actual role the instructor plays in the web-based classroom. List B provides the questions developed to separate instructional delivery and the role of the instructor (notice how linked these are in List A). In the first section, there is emphasis on the course content. Since much of this type of learning is self-guided, it is important to assess the student’s view of their ability to steer their way. The value and design of the material presented is also examined in the statement for student comment.

Notice that the role of the instructor is better reflected in the section of List B which addresses the instructor. Questions focus on communication and response. In the self-assessment portion a

question about comfort with the web based environment is essential. Since the technology can “get in the way” of learning, questions which evaluate the technological aspect of the virtual classroom are also included.

The Seven Principles for Good Practice in Undergraduate Education by Chickering and Ehrann was the framework for the design of the questions. In their recent article relating the Seven Principle to technology,<sup>3</sup> seven points were made to enhance on-line learning. These are:

1. Good Practice Encourages Contacts Between Students and Faculty
2. Good Practice Develops Reciprocity and Cooperation Among Students
3. Good Practice Uses Active Learning Techniques
4. Good Practice Gives Prompt Feedback
5. Good Practice Emphasizes Time on Task
6. Good Practice Communicates High Expectations
7. Good Practice Respects Diverse Talents and Ways of Learning

With these ideas in mind, questions were designed to assess whether these goals were accomplished in the virtual classroom.

#### IV. Delivery of Surveys and Student Participation

Surveys were presented to Fall, 2001 distance education students in Biomedical Electronics Technology Program within the Electrical Engineering Technology Department. It was administered using the Testing Tool available through the virtual classroom called Oncourse. The tool allows for anonymous data retrieval while still ensuring a single survey per student. Students were encouraged to participate. In some classes, return rates were low.

Data from the surveys is presented in a tabular and graphical form shown on the web site listed below. Use of the web site includes the ability to provide data from additional semesters after this paper is published. Its location is: <http://www.iupui.edu/~cletrse/results.htm> It is not possible to compare this information with data collected using the traditional evaluation which was unsuited for the web-based classroom. The data collected is useful to determine which of the areas of web-based presentation need improvement.

To summarize the data, students showed satisfaction with the course design and their ability to proceed through the course. Some improvement is necessary in the areas of instructor communication and the text book used for one of the classes. Great improvement is needed in the connection the students feel to each other. One of the tremendous difficulties this instructor has faced is finding successful tools to promote cross-student communication. Additional work will be done in this area.

#### V. Conclusion

The value of assessment should not be underestimated. Certainly it is used for improvements in course content and delivery as well as instructor evaluation and technology appraisal. However, it is vitally important for the tool to accurately perform the assessment. Asking the wrong

questions will only provide erroneous information. When department chairs and promotion committees depend on the assessment, it's accuracy is even more critical. The survey developed and presented in this paper makes a valuable attempt to succeed in asking the right questions. Data obtained from on-line courses in the Fall of 2001 can be analyzed not for what is said about the course or instructor but about distance learning and the use of technology not in the classroom but as the classroom.

#### Bibliography

1. The TLT Group is the Teaching, Learning and Technology Affiliate of the American Association of Higher Education. URL: <http://www.tltgroup.org/default.htm>
2. The Flashlight Program URL: <http://www.tltgroup.org/programs/flashlight.html>
3. "Implementing the Seven Principles: Technology as Lever" URL: <http://www.tltgroup.org/programs/seven.html>

#### Additional resources:

University of South Dakota Evaluation Form

[http://www.usd.edu/swes/Forms-Documents/Course\\_eval/online\\_course\\_evaluation.htm](http://www.usd.edu/swes/Forms-Documents/Course_eval/online_course_evaluation.htm)

Carnegie Mellon University Evaluation Form

<http://zia.hss.cmu.edu/miller/teaching/courseeval.html>

Columbia College Evaluation Form

<http://www.ccis.edu/departments/distanceeducation/evaluations/eval.asp>

University of Illinois On-line Support Services

<http://illinois.online.uillinois.edu/IONresources/evaluation/>

#### BARBARA CHRISTE

Barbara Christe is an Assistant Professor and Program Director of Biomedical Electronics Technology in the Electrical Engineering Technology Department at IUPUI. She has authored seven on-line classes and is a leader in continuing education for currently-employed biomedical equipment technicians using the web. She has a BS in Engineering from Marquette University and a MS in Clinical Engineering from Rensselaer at Hartford.

#### List A

##### **Instruction Delivery and Course Design**

The instructor began and ended the class on time.

When used, visual aids were easy to see and read.

Theories and principles covered in the course are relevant.

The course syllabus was clear, organized and easy to follow.

The course fulfilled the objectives described in the syllabus.

Course assignments supported the learning goals of the course.

Tests, when given, were helpful to me in learning the goals of the course material.

Graded material was handed back soon enough to be useful.

The instructor's use of course reading material effectively enhanced my learning.  
Related teaching material (handouts, etc.) were current and relevant to the subject.  
This course substantially duplicated others in the curriculum.  
The course was academically challenging.  
The course content matched the course description.  
The course stimulated me to think more deeply about the course material.

### **Communication Skills of Instructor**

The instructor showed empathy in that she or he was able to view the course from the student's point of view.  
The instructor responded appropriately to the student's questions.  
The instructor's speech patterns enhanced the learning.  
The instructor was helpful to me outside of class.  
The instructor encouraged students to participate in class discussion.

### **Self Assessment**

I had the prerequisite skills and knowledge I needed to begin this class.  
I can apply what I learned in this class.  
I would recommend this class to other students.  
I read all assigned readings for this class.  
I can talk openly about my concerns with the instructor.  
This course helped me to develop my writing skills.  
This course helped me to develop critical thinking.  
I performed up to my potential in this class.

### **Overall Assessment**

Course materials were presented in a professional manner.  
The instructor helped me to understand how I will use what I learned in school or work.  
The instructor sensed when students were having difficulty and adjusted accordingly.  
The instructor was enthusiastic about teaching the course.  
The instructor adequately followed the syllabus.

### **List B**

#### **Instructional Delivery and Course Design:**

1. The course syllabus was easy to locate and follow.
2. Course content was divided into manageable parts.
3. Content presented online was clear and understandable.
4. I was able to find and follow directions for assignments.
5. I was able to locate and use the content material necessary to complete assignments.
6. Assignments were well designed to reinforce course content.
7. Graphics and images were used to enhance the content without being a technological burden.
8. Examinations were effectively designed to evaluate my knowledge of course material.
9. Supplemental material, tutorials and links to additional information were available.
10. I was encouraged to interact with other students in the class.

11. The textbook was a useful learning aid.

### **Communication Skills of the Instructor**

- 12. It was easy to contact the instructor when I had a question or problem.
- 13. Comments on assignments were provided quickly.
- 14. The instructor communicated with me frequently.
- 15. The instructor maintained the grade book to allow me to monitor my progress through the course.

### **Self-Assessment**

- 16. I had the technology and web skills needed to begin this class.
- 17. I kept pace with the syllabus.
- 18. I read all the course content presented via the web.
- 19. I used my textbook as effectively as the instructor intended.
- 20. I could talk openly with the instructor.
- 21. The course content stimulated me to think more deeply about the subject matter.
- 22. I feel comfortable in the web-based classroom.
- 23. The flexibility of the course was very beneficial.

### **Technology Support Services**

- 24. I was able to get my network ID and password and begin the class on time.
- 25. If I needed assistance gain to access my class, I was able to find help.
- 26. When I accessed the class, it was always available to me.
- 27. I was able to navigate through the virtual classroom.

### **Overall Assessment**

- 28. The course fulfilled the objectives stated in the syllabus and the course description.
- 29. I was able to master course content in the web-based classroom.
- 30. I was able to feel connected to the class even across a distance.
- 31. The technology required to participate in this class is manageable.