Assessment In Nontraditional Courses

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Introduction

Educational assessment is a formal attempt to determine students' status with respect to educational variables of interest. Why should we assess the students' comprehension and understanding of a subject? Assessment can be used to:

- diagnose students' strength and weaknesses
- monitor students' progress
- assign grades
- determine one's own instructional effectiveness—instructional intentions.

There are various types of assessments an educator can use in the classroom. These include the following three types of assessment:
Cognitive assessment targets those skills that deal with the student's intellectual operation—for instance, when the student displays acquired knowledge or demonstrates thinking skills such as decision making or problem solving.
Affective assessment targets those skills that deal with the students' attitudes and values, such as a student's self esteem, risk–taking tendencies, or attitudes toward learning.
Psychomotor assessment targets those skills that deal with a student's large–muscle or small–muscle skills. Examples of psychomotor assessments which take place in school would include tests of students' keyboarding skills in a computer class or their prowess in shooting a basketball in gym class.

Faculty members at Wright State University—Lake Campus use a

variety of assessment methods and instruments to evaluate and to test their students' abilities and comprehension of the subject matter. This article contains four faculty members' views and how they implement various types of assessments. The four views represent the disciplines of economics, English, chemistry, and office technology.

Assessment Issues In Delivering A Course Using Distance Learning Technology

Roger McDermott

Roger McDermott has taught traditional courses (pharmacology and nutrition) by a nontraditional means (distance learning). The two courses discussed here are Pharmacology 340 (3 credit hours) and BMB 250 (Human Nutrition, 4 credit hours). Both courses are high in factual content; e.g., the pharmacology text has 56 chapters. Both courses were taught one day a week over 10 weeks in the summer. The students were almost all nursing students. Some of the students pursued the standard bachelor's degree in nursing (BSN), and the rest were registered nurses (RN's) pursuing a BSN–completion program. Almost all the RN's held full–time jobs in the health field at the time of the course.

The classes were taught by distance learning with 6 of the 10 class meetings originating in Celina and the remaining 4 in Dayton. WSU—Dayton and WSU—Lake Campus are about 80 miles apart. About 75% of the students were on the Dayton campus. The courses were interactive in that the instructor could see the students on camera at the remote location; in addition, the students at the remote location could ask questions and interact from the remote location. Many handouts were given to supplement the lecture and the text.

The assessment was mainly done by exams or quizzes, each given over the previous lecture topics. The frequent testing gave feedback to the instructor as to whether or not he was reaching the students. Also, the frequent testing divided the copious course material into more manageable parcels.

The downside of the frequent testing was that the instructor had to send the tests to the remote location well ahead of the test date. These deliveries had to fit the schedule of the university courier who runs

between Celina and Dayton three times a week. The numerous handouts also had to be fitted into the courier's schedule so that the specific handouts arrived before the specific lecture. All of this scheduling required more pre–planning and organization than did the conventional course. Arrangements for test proctors had to be made at the remote site on each of the test days. The completed tests then had to be sent immediately for grading and then be returned by courier so the tests could be reviewed at the next class meeting.

The instructor taught from the remote location (Dayton) 40% of the time, an important point since the instructor intended to get to know his students. Upon questioning, the students who were usually in the remote location greatly appreciated the instructor's effort and felt it enhanced the educational experience.

It was also very important to have a reliable contact at the remote location. In this case, it was a person in the nursing department. Without this person, the handling of tests and handouts at the remote location would have been almost impossible. This person was also invaluable for test makeups at the remote location.

A final and most important link of the instructor to the distance–learning students was e–mail. Innumerable times this link worked when most other means failed. The access of all the students to e–mail is a necessity.

The student evaluations of the two courses were reviewed and compared to the evaluations of BMB 250 and Pharmacology 340 taught in the traditional classroom lecture with no distance learning hookup. The overall evaluations for the course are given on a 4.00 scale with the campus–wide evaluation average being about 3.20. The BMB 250 course had an overall evaluation of 3.48 with distance learning and 3.81 with the traditional classroom lecture. With Pharmacology 340, the results were 3.21 for the distance learning class and 3.80 for the traditional classroom lecture. There is a drop in the overall evaluations for both courses taught by distance learning, but both evaluations are above the campus–wide evaluation average. The lower evaluations for the distance learning classes are to be expected. The personal contact with the instructor can not be as frequent as in the traditional classroom. However, most student comments in both the distance learning and traditional classes were positive. Most constructive criticism comments in the

distance learning classes had to do with aspects of making the course more user friendly and personal.

The letter grade distribution was compared for BMB 250 and Pharmacology 340 for both the distance learning classes and the traditional classroom lecture classes. With BMB 250, the grade distribution was almost identical. With Pharmacology 340, the distribution was very similar with the distance learning class, actually showing a higher percentage of A's than the traditional classroom lecture class. Therefore, it appears, based on a very small sample, that the students were achieving mastery of the material on a level with those who were in the traditional classroom lecture.

In general, the assessment phase of a distance learning course is similar to a conventional course. However, the implementation of the assessment in distance learning is much more difficult than the conventional course. It requires much more planning and effort from the instructor. This type of course requires the cooperation of quite a few other people: liaisons, proctors, technical support for the equipment, etc. Although these particular distance–learning courses required much more effort than the conventional course, we were still able to serve a significant number of students who would not have been served otherwise.

Assessment In A Self–Paced Economics Course

Joe Cavanaugh

Similar to those of online or distance learning courses, self–paced courses face challenges with assessing student performance. In all of these course formats, there are special problems with ability to capture the students' understanding of the material, academic dishonesty, and logistic concerns.

Since there are no regular class meetings, students in the self–paced sections do not have the advantage of many of the examples and informal comments that are made in a typical class, making it particularly difficult for the student to apply material beyond what is found in the book. Testing is, therefore, more specific to the book than for a non self–paced course. I provide a wide range of assessment that corresponds to

the differing presentation modes of the material. For example, there are three main sources of information available to the student: the book, electronic presentations, and articles with essay questions and answers. The tests are multiple choice and essays. There is a short essay assignment for each chapter and article write–ups. The essay assignments and article assignments are due at three times throughout the course to provide feedback to the students.

As with any class, there is the potential problem of academic dishonesty, an even greater problem with a self–paced course where the instructor has limited meetings with the student. To minimize the problem, I have a large percentage of the grade placed on the proctored tests and a much smaller percentage of their grade on the outside assignments. When I meet with the students at the beginning of the quarter, I emphasize that the take–home assignments are to help them with understanding the material and that cheating will ultimately hurt their grade.

There are two goals of the assessment logistics: first, to maximize the flexibility to the students and, second, to minimize the time grading. Since the students are generally taking the self–paced section due to scheduling difficulties, I make every effort to be flexible with their assessment. Students must pre–schedule the day and time they take the midterm exams, but it is during a particular week that is specified on the syllabus. Similarly, they have three days during finals week to pre–schedule the day and time of their final exam. At the conclusion of the pre–scheduling, the faculty secretaries can arrange a room for the students to take their tests and ensure they are available to proctor. The students turn in the first essay assignment and article assignment at the very beginning of the quarter so that I can quickly provide them feedback. The remaining essays and articles are turned in when they take their midterm and final exams. Since the students are all turning their work in approximately the same time, I can grade them all at one time and reduce grading time considerably.

The response to this course has been very positive. As with any self–paced course, certain students do better than others. It is a course designed for the highly motivated individual.

Assessment Issues In Delivering An Interdisciplinary Seminar Over Distance Learning Equipment

Martin Kich

The Honors Curriculum at Wright State University is intended to promote the following: independent learning, articulate speaking and writing, critical and disciplined thinking, problem solving and use of the scientific method, awareness of complexity, the ability to apply knowledge to new contexts, ethical sensitivity, curiosity, awareness of one's place in a cultural tradition, international understanding, and a willingness to take risks. No single course is expected to serve all or even most of these goals. Instead, it is expected that courses in various disciplines and courses delivered in a variety of manners will complement each other in such a way that students completing the Honors program will have acquired many, if not all, of the skills and sensibilities that the program has been designed to foster.

Honors courses fall into two broad categories: special sections of existing courses in the general–education curriculum or in specific disciplines and interdisciplinary seminars. For the past six years, I have taught one or two interdisciplinary seminars each year, often to sections in both Dayton and Celina over interactive distance–learning equipment. In these seminars, I covered such topics as: The Native American in History, Popular Myth, and Literature; The Meanings of Rivers; Australian Landscape, Life, and Literature; American Murder: The Cultural Meanings of Mayhem; Great American Cities; and An Interdisciplinary Look at Chicago, which I am currently teaching and which is an expanded version of one segment of the Great American Cities seminar.

Because the courses are entirely of my designing, there are none of the assessment issues that one finds in a course in which the material to be covered is very much defined by the place of the course in a set sequence of courses or in which the material to be covered is defined simply by the technical nature of the course. In addition, because the students are honor students, there is a much–reduced need to assess basic comprehension of the material.

As a result, I have gradually moved toward two main assessment

tools: first, book reviews slanted toward the course topic, delivered orally and submitted as papers, and, second, take–home exams which require students to locate several periodical articles related to material covered in class and to synthesize what they've found with what I have presented and we have discussed. Because the course topics range from the somewhat to the very unusual, they are typically both interesting and challenging to the students. Because the students have a great deal of choice in what specific elements of the topics they wish to address in the reviews and exams, they typically express themselves articulately and substantively. Also, because I offer the courses in an informal cycle, it is unlikely that students will be tempted to submit the work of former students which is the most likely sort of cheating I can imagine occurring. In any case, I keep copies of all work submitted for these courses. If a review or an exam essay seems unusually familiar, I can skim through my files.

In sum, if an instructor is going to offer any sort of course over interactive distance–learning equipment, interdisciplinary Honors seminars present a minimum of assessment issues and may be very close to ideal for such a format.

Assessment In Technology–Based Courses

H. Roger Fulk

One of the difficulties associated with using computers intensively is in the incompatibility of technology–based learning with current assessment techniques. Teachers fear that their students will not perform well on tests if they spend too much time away from traditional drill work. Technology teachers need to learn other ways to assess students beyond the traditional end–of–the–chapter multiple–choice tests.

The Office Information Systems Program at Wright State University—Lake Campus offers many technology–based computer courses in a variety of delivery systems. These include self–paced courses, one–day Friday and Saturday courses, seminars, as well as the conventional quarter–system courses. The courses are designed to accommodate various learning styles and students' schedules.

In technology–based courses, assessment takes many different forms,

including the following forms of assessment:

Portfolio Assessment—Students in courses using *PowerPoint*, desktop publishing, and computer graphics develop a portfolio of work throughout the quarter. Each completed work is assessed. Then the student updates or enhances it. Finally, the completed document is included in the portfolio. A checklist of items to be included in the portfolio and an assessment evaluation checksheet are developed and given to the students. At the end of the quarter, a grade is awarded for the overall development of the portfolio. Furthermore, when a student goes for a job interview, the portfolio of completed projects is an excellent tool to take along to enhance the interview process.

Hands–on Assessment—To ensure that the students are actually using proper formatting, functions, acquired skills, as well as other features, a hands–on assessment tool should be included. Take for example a keyboarding course—it is not only important for the student to learn how to key properly but also important to assess the student's posture, keystroking procedures, and other work habits. A hands–on assessment involves using an evaluation form and performing an observation of the student performing the skills.

Project Evaluations—Projects which are completed in technology–based courses should be checked using some type of evaluation form. The students must be informed ahead of time of the evaluation criteria. Grammar and spelling errors definitely must be counted in the overall evaluation score.

Theory Tests—Theory is important in the total comprehension of technology–based courses and software packages. Using correct terminology, knowing what each function does, as well as being able to explain it to another person, are important in the total understanding of the application. Therefore, theory tests (true–false, multiple choice, fill–in–the–blank) serve as valuable assessment tools, in addition to other nontraditional assessment methods.

Production Assessment—Timings and production packets can be used to assess students in technology–based courses. Given a specific time limit, the student must decide to prioritize documents and then proceed to complete as many as possible in the allotted time period. This procedure trains the student to successfully complete many of the various types of testing or assessment being used by companies during

the employment process. Furthermore, production assessment trains students to complete work in a given turnaround period, thus preparing them for success in the business world.

Online Assessment—Many textbooks used today have online testing capabilities. These tests assess the student's ability to perform functions associated with the computer software package. For example, using a word processing package, a student may need to center, boldface, and italicize a word. The computer tests the student's skills in performing these functions. In addition, there are many other companies offering online testing assessment for computer–based courses—the most common one being MicroSoft (MOUS) certification. When a student can pass the certification test at a certain level, it indicates mastery of that skill.

Assessment in technology–based courses can take various formats. Educators must use a variety of instruments in order to successfully evaluate the total understanding and mastery of a student's skills.

Drawing an analogy with learning to upgrade a computer makes the point clear. Suppose that, after instruction in identifying the parts of the computer, a group of students using traditional classroom methods spends its time reviewing the chapters in the textbook covering the terminology and steps involved. A hands–on group, however, spends its practice time tearing a computer apart and then reassembling it. At the end of the unit on computers, both groups are tested. They take the traditional true–false or multiple–choice test. Chances are good that the traditional group will score higher on the test. But which students will have learned how to upgrade a computer?

Summary

Assessment plays an important role in the overall success and total education of the student, no matter what the discipline. Assessment should be a part of instruction—not apart from it. Educators in every discipline must use traditional and nontraditional assessment methods and instruments in order to fully gauge the students' abilities. Educators teaching nontraditional courses must develop nontraditional assessment tools rather than use the standard methods of testing and evaluation.

Biographies

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