

questionnaires distributed prior to the creation of the Distance Education Task Force to determine course need, faculty training needs if a course was delivered by technology, and technology delivery options. Also, many faculty forums were held around the state to gauge input of the task force's draft report. This process of soliciting faculty input throughout the process follows Duderstadt's recommendation (1997, paper presentation) that an authoritarian decision-making approach will make way for academic administrators who facilitate, implement, and sell the transformation process to the faculty.

As has been detailed, higher education is evolving to meet the needs of an ever-changing society. Distance education is one way to address the changes. By developing a strategic plan, which the authors recommend should include a task force approach, colleges of agriculture will be in a better position to develop a quality distance education programmatic structure well into the next decade.

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Reaction Papers as an Alternative To Tests: Some Observations

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Abstract

This paper provides a procedure for, and an evaluation of, reaction papers as an alternative to tests for assessing the performance of students. Students appreciated the use of reaction papers and felt they enhanced the learning environment. A balance between reaction papers and quizzes may contribute to a better learning experience for students. The use of reaction papers enhances opportunities for students to improve writing skills and critical thinking. This approach also provides feedback to the instructor regarding topics which need additional class time and coverage.

¹ Professor

Introduction

Tests are stressful. White and Broder (1988) found that student characteristics, testing, and grading contribute to stress. These authors suggest stress level can be reduced by improved teaching and evaluation techniques.

The overall purpose of this paper is to briefly present and evaluate reaction papers as alternatives to tests. Reaction papers, in general, ask students to summarize or outline the main points of each class session and discuss or react to a central concept or question related to the lecture and discussion material (McLeod, 1995). More specifically, this paper will a) discuss a procedure for incorporating reaction papers as an evaluation technique into a course, and b) evaluate the use of reaction papers as an alternative to tests.

Procedure

Reaction papers were used to evaluate a junior-senior level Agricultural Market Analysis course during the 1997 spring semester. The objective of the course was to understand the economic organization and operation of the food and fiber sector and factors which influences prices of agricultural products.

The overall objectives of writing reaction papers were to give students an opportunity to reflect on what was being taught in class, help students organize the course material and their thoughts, and to improve writing skills. Students were informed, via a class handout, of the procedures for and composition of the reaction papers during the first class period.

Reaction papers were due each week and summarized and evaluated materials covered in lectures during the previous week. Papers, which were identified only with the last four digits of the student's social security number, were then distributed to fellow students in class to be graded anonymously. Student grading reinforced concepts and expanded learning opportunities. Graded materials were handed in the next class period for the instructor to review and record the grades, as well as identify the grader via their social security number. An effort was made to have students grade papers from different colleagues throughout the semester. To facilitate this, students were asked to record each week the social security number of the student whose paper they had received to grade.

Possible benefits of implementing reaction papers in lieu of exams also were discussed during the initial class period. The intent was to provide a better learning environment and educational experience by reducing test related stress, sharpening critical thinking skills, and improving writing skills. Students were the final judges related to these possible outcomes.

Grades on each reaction paper were based on ten total possible points. The content of reaction papers included two sections—a summary of class lectures and discussions and a reaction or discussion session. The outline and summary (Part I) was assigned a maximum of four points and the discussion or reaction section (Part II) was given a maximum of six points. Grades were assigned according to completeness, grammar and spelling, and content. Graders were asked to provide comments and suggestions in the margins of the paper. The grading exercise was intended to provide an opportunity for students to expand their thinking and ideas on the assigned topic.

Reaction paper format is described below (Figure 1). The discussion or reaction questions assigned during the semester focused on current issues in agriculture related to the class material.

There was a three week trial period for the reaction

papers, after which students were given the opportunity to vote anonymously on continuing or discontinuing this exercise. Only one student voted to revert to tests in lieu of the reaction papers.

Finally, I reserved the right to discontinue the reaction paper exercise at any point, including the last few weeks of the semester. The condition was that if at any point in the semester I perceived that there were collusive activities occurring or that students were not upholding their responsibilities in preparing and/or grading the reaction papers (i.e., no evaluation was occurring), I would revert to traditional testing on materials presented the remainder of the semester.

Evaluation and Discussion

The students were asked to anonymously evaluate the use of reaction papers as an alternative to tests in the final assignment. Students, in general, seemed to like the reaction papers as a method of evaluation. Many, however, preferred some testing to reinforce the material. The preference for more class discussion of topics, perhaps initially in small groups was cited by several students.

Two unannounced mid-term tests were given during the 1997 semester. The tests given in 1997 were identical to those given during the 1995 semester. The performance of students in these two classes on the tests is not totally comparable. The tests given in 1997 might, however, be an indicator of how much material students retained and learned as a result of completing the reaction papers. As expected, the average grades on the two tests were lower in 1997, as compared to 1995. The average score on Test I was 50 percent in 1997 and 73 percent in 1995. Test II scores were 60 percent and 74 percent in 1997 and 1995, respectively. Overall grades in 1997 were higher than when tests, along with homeworks and quizzes, were used as evaluation techniques in 1995, 3.43 and 2.94, respectively.

Finally, as the instructor, I found that the reaction papers created considerably more work. Although the students provided an initial reading and grading of the papers each week, the papers needed to be reviewed to assure consistency in grading. The continuous feedback regarding performance was helpful to identify topics which required clarification.

Summary

Students generally enjoyed the reaction papers and believed they contributed to the learning experience. There was no stress related to tests, but some students grew tired of the weekly task. Reaction papers provided an additional experience to enhance writing skills and critical thinking.

Grades were higher using reaction papers, as compared to when they were not. From my perspective, grades were too high in the case of reaction papers and may not have

Figure 1. Format for reaction papers.

SS# _____ (last four digits)
Grader SS# _____ (last four digits)
Reaction Paper Lecture Material Presented (dates)
Part I) Outline of lecture material summarizing the main points of classroom presentations and discussions
Part II) Evaluation and reaction to core ideas discussed in class. <ul style="list-style-type: none">- Implications for agriculture- Applications- Etc.
(No more than two typed pages per lecture)

adequately reflected what students learned. This conclusion is based partially on the results of the impromptu exams given in the reaction paper case, relative to scores from the control course. This observation, however, must be interpreted with caution, since the exams, while identical, were not given under similar conditions. One was announced and contributed toward a grade and the other was given impromptu and did not count toward the final grade.

Students suggested more discussion, perhaps via small groups and in class discussions would nicely complement the reaction papers. They also indicated some testing would facilitate their organization and understanding of material and longer retention.

Finally, although the reaction papers are more work, they are worth the effort. More discussion and some testing, perhaps mini-tests, would be appropriate. Such an approach may still reduce the stress associated with major exams. The traditional testing procedure, supplemented with homework and applied exercises, is likely a better approach than reaction papers for larger lower-level courses which address the fundamentals of a discipline.

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