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APPLYING THE MASTERY LEARNING MODEL IN A WILDLAND RECREATION PLANNING AND MANAGEMENT CLASS

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ABSTRACT: Wildland Recreation Planning and Management is a 400 level course taken by Wildland Recreation majors (B.S. in Forestry) in the spring semester of their Junior year prior to their summer internship. Due to the number of field trips taken during the semester, the course is limited to 12 students. Generally 7-9 students are Wildland Recreation majors with the remaining students from Wildlife and Fisheries Science, Ornamental Horticulture and Landscape Design, or Liberal Arts. The course meets once a week from 12:40 to 6:30 pm although the class period varies with the use and length of field trips.

The Mastery Learning approach in this class evolved out of the desire to raise the competency level of students in preparation for their internship experience and their future professional careers. In particular, the need for a mastery approach was based on the demands and expectations placed on the students by their internship experience. In their internships, students address issues and concerns associated with visitor and resource management often in presentations, conversations, and meetings with people from different backgrounds and disciplines. Essentially, the students are communicating with and educating the public and other professionals about concepts related to resource protection and visitor management.

Assuming that competency in answering multiple choice questions or even essay questions does not mean that a student is prepared for the role of a new professional in an internship, what will prepare students to assume this role? In part, the proposed solution is to actively engage students in learning the course material; that is, listening, talking, speaking, and openly discussing and criticizing ideas and concepts in a sometimes competitive, but otherwise friendly and supportive environment. This environment is more characteristic of professional work settings than the traditional classroom. The assumption is that familiarity with this type of experience in the classroom will help prepare students for similar experiences in their internship and the workplace. This type of interaction in the classroom also allows for immediate assessment, feedback, and re-assessment which is the cornerstone of Mastery Learning Theory.

According to McCabe (1997), the Mastery Learning Model is based on four hypotheses proposed by Bloom. They are:

- (1) "A normal person can learn anything that teachers teach." (Time is the limiting factor.)
- (2) "Individual learning needs vary greatly." (Using a variety of learning techniques will enhance learning for the class as a whole.)
- (3) "Under favorable learning conditions, the effects of individual differences approach a vanishing point, while under unfavorable learning conditions, the effects of individual differences is greatly exaggerated." Is lack of student success in the classroom attributable to poor students or the lack of a favorable learning environment?
- (4) "Uncorrected learning errors are responsible for most learning difficulties." Evaluation, feedback and re-evaluation is the key to learning and a basic psychological precept in learning theory.

In the mastery approach in wildland recreation planning and management, students are given a syllabus with twelve general questions. The objective for the class is for all students to be able to converse intelligently about the information associated with the answers to the twelve questions by the end of the semester. Throughout the semester, the students are actively engaged in and challenged by the course material -- listening, speaking, criticizing ideas, and having ideas criticized in a supportive environment. Students are randomly called on to answer questions. Exams involve applications of concepts and problem solving exercises in short essay format. Answers are stringently graded, returned and discussed with those providing high quality and innovative answers sharing their knowledge with other students. Future exams are individualized and include questions missed on previous exams. During the last week there is a review of the all course material and students are given oral exams covering all twelve questions, but focusing on areas of weakness. Any remaining weaknesses are further tested in individual final exams. This student oriented approach does not lower standards, but raises performance to a higher level of excellence in a collaborative learning environment.

As a result of the Forestry 423 class, I have greater confidence that my students are more prepared for success in their upcoming internship between the junior and senior year. Prior to using this approach, I had a limited sense of how confident I was in how well students were prepared for their internship. For almost all of the students, I now feel very confident at the end of the semester that students can function well as rising new professionals in their internship. Their self-confidence appears to be stronger as well. Certainly there are many factors other than mastery learning involved, but intern supervisors thus far have expressed considerable satisfaction in the performance of our interns, often inviting them to come back for another summer or offering them jobs. Students return from their internships indicating that they were well prepared and that material they learned was relevant to their positions. Certainly other factors common to most recreation training programs, such as interdisciplinary training in communication, human behavior, and natural resources are important in their success. There is also a self-selection factor in terms of who is more likely to choose the recreation field for a career.

Course evaluations from the first two years are significantly more positive for this course than in previous years and are high relative to the Department and College as a whole. One of the highest scores is "instructor commitment to student learning." Overall, comparative mean scores are higher (4.33) than Departmental (3.98), and College (3.89) mean scores for the two years that the mastery learning technique has been used. Four (4) is a "Very Good" rating and "5" is "Excellent."

In summary, a variety of learning methods are used to satisfy various modes of student learning in recognition that "Individual learning needs vary greatly" (Hypothesis #2). Evaluation, feedback and re-assessment are used to enhance learning (Hypothesis #4) with most students appearing to reach a higher level of excellence (Hypothesis #3). The class size and intensive class time (3-6 hours, one day per week) help overcome time as a limiting factor in teaching and learning (Hypothesis #1). These techniques, combined with student performance, seem to satisfy the basic tenets of Mastery Learning as defined by Bloom (1976). Feedback about the course seems to suggest that this application of the Mastery Learning Model (Bloom, 1976) has considerable potential in an applied professional development curriculum in Wildland Recreation Management.

LITERATURE CITED

McCabe, D. (1994). The Mastery Learning Workshop. [on-line] Available WWW: <http://158.132.100.221/M-Lwkshop.folder/MasterLrng.Wkshop.html>.