Common Technology, Uncommon Results: Game Shows and Cooperative Learning in Undergraduate Entrepreneurship Classes

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Teaching and learning methods that encourage creativity and critical thinking are important to help undergraduate students enhance their abilities and realize their educational goals. Traditionally many instructors have relied on lectures as a teaching tool, and some students have taken notes more intently than they have listened. This encouraged instructors to make lecture notes available, and subsequently, some students did not attend class if examinations focused on facts from textbooks and notes. As a result the lecture-based learning and teaching style has sometimes not been rewarding for the students or the instructors.

While lectures have been beneficial, more active learning tools may enhance that approach. This paper describes a teaching innovation that promoted active and cooperative learning methods in an undergraduate entrepreneurship course at a large, Mid-western university. These experiences may interest instructors as a way to increase students= attentiveness to classroom sessions with technological resources that are common at most colleges and universities. This paper has three sections: a literature review gives the theory behind the innovation; the active teaching methods are described next; and some points are drawn from the outcomes of the experience.

Theoretical foundation

Theories to support innovative teaching methods appear in the literature on active and cooperative learning pedagogy, and technologically-assisted learning (Farrington, 1999; Fiet, 2001a; Katz, 1999). Scholars have argued that the addition of active learning techniques, such as games or students= presentations of their

research, reinforced lecture materials and added to student comprehension (Cyrs, 2000; Sorenson, 2001). These methods have been recognized as good practice and yielded increased student focus, heightened participation in class discussion, and improved examination scores (Fiet, 2001b; Huehner and Kallgren, 1999; Phipps, Phipps, Kask and Higgins, 2001; Yuretich, Khan, Leckie and Clement, 2001).

Cooperative learning theory has posited that interactions with peers, to assimilate information and transform it into knowledge and then to relay that knowledge to another person, fostered superior learning outcomes (Johnson, Johnson, and Smith, 1998; Sorenson, 2001). These types of structured processes that cooperative learning supports have offered alternatives for communication and instruction. And integrating technology into classrooms has also expanded interaction options for students and teachers in spite of organization and economic challenges (Windelspecht, 2001; Graves, 1999). Technology has provided greater accessibility for students and instructors outside classrooms, increased flexibility and discussion time, and allowed better access with email usage or World Wide Web support (Ali and Franklin, 2001; Hedges and Mania-Fernell, 1998; Tiene and Luft, 2001; and Windelspecht, 2001). While cooperative and technologically-aided learning have necessitated skills upgrades, the outcomes have generally been positive (Graves, 1999; Hedges and Mania-Fernell, 1998; Johnson, Johnson, and Smith, 1998; and Windelspecht, 2001).

Encouraging examples of these methods in action have been documented across diverse disciplines such as oceanography, history, and biology to show benefits to students from active learning methods, cooperative instructional techniques, and technologically-enhanced teaching strategies in many forms and formats (Huehner and Kallgran, 1999; Windelspecht, 2001; Yuretich, Khan, Leckie, and Clement, 2001). Application of these techniques could have merit as a vehicle to improve undergraduate business, economics and other areas of instruction as well.

Application of theory to the classroom

Administrators have encouraged improvements in pedagogical methods with seminars and workshops (Cyrs, 2000; Fiet, 2001b; Johnson, Johnson, and Smith, 1998; Lant, 2001). One of the authors had the opportunity to participate in a few workshops, and it became clear that an introductory entrepreneurship course would be a candidate for the use of cooperative learning methods and games because of the number of new concepts and amount of new terminology (Allen, 2001; Drea, 2001). Since the instructor, textbook, and classroom were to be the same before and after the methods change, spring 2001 through spring 2002, it provided a good experimental setting. The World Wide Web and email system had supported the course, but the primary instructional method had been lectures supplemented by review sessions prior to the examinations. The instructor added the new techniques to the entrepreneurship course in fall of 2001, and students have participated in the changed learning and teaching experience since then.

While lectures remained an important part of the course, the students reinforced concepts from lectures with cooperative learning exercises (Lant, 2001). The students= first active learning assignments were to organize themselves into three-person groups during class time. Tasks based on assigned readings were given to each group and they prepared a presentation of their tasks results, all within five minutes. At the deadline, the instructor selected teams randomly to explain their positions before their peers. One or two of these cooperative learning sessions punctuated classes for a few weeks, and the composition of the three-person teams changed for each class so that students would have worked with a variety of classmates. After three weeks, the students formed self-selected teams that worked together for the remainder of the term. Meanwhile, email reinforced the advantages of expanded communication with opportunities such as small extra credit assignments (Board of Trustees of the University of Illinois, 2001).

Conditioning the students to these working situations was vital preparation for transformed review sessions, AJeopardy@-like competitions, to foster team spirit and to facilitate the logistical complexity of each team=s assignment. Possible roles and responsibilities and the competition=s format were explained in a

briefing emailed one week before the scheduled event (Johnson, Johnson, and Smith, 1998; Drea, 2001). Three teams of students competed while non-contestant teams had responsibilities as scorekeepers, judges, photographers, or classroom furnishings arrangers. No team was assigned a role until one hour before the competition so that all students had an incentive to prepare academically to avoid embarrassment in front of their peers.

The game featured new terminology and concepts emphasized in the entrepreneurship course and served to enhance reviews before examinations (Drea, 2001). Student teams arranged the classroom furnishing and the competing teams, scorekeepers and judges settled into their places. Easier materials constituted the initial round of answers for which the students supplied questions, and more difficult materials appeared in an advanced round. Special features of PowerPoint software, action buttons and custom animation, added interest and excitement to the learning experience. Three contestant teams vied to give correct questions for the answers on the AJeopardy@ board by using their signaling devices, which included duck calls, maracas, or squeaky toy animals. Students could refer to their textbooks or class notes during the game, but contestant teams had limited time to produce a correct question. After the final AJeopardy@ question, the highest point total determined the winning team, the victors were declared, and the winners chose small items as prizes. Class photographers took a few shots and the student teams assigned to arrange furnishings reassembled the classroom into its original configuration. By having assigned responsibilities to all teams of students, each person took an active part in making the session a success.

Points learned

The results have been encouraging. Several students said that they felt the game had helped them to prepare for the examinations, and scores have improved after spring 2001. This should be considered in the context that the tests covered materials from the same textbook delivered by the same instructor in the same classroom over three semesters; the one change was the introduction of a game that replaced a traditional review session and some cooperative learning

methods that reinforced important ideas. Some students with learning disabilities have reported the game to be a great help, especially when the competing teams had struggled to formulate a question. Many students have voluntarily reported that they enjoyed the lively fun of the team assignments and that they looked forward to the competitions. It appears that these methods have assisted successful teaching and learning and have also been enjoyed by the students and the instructor.

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