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Role Playing And Cooperative Learning In The AIS Course

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Abstract

The accounting information systems course is often viewed as difficult to teach because it contains topics that are less quantifiable and structured in comparison to courses in financial or managerial/cost accounting. Yet, many AIS instructors have developed successful teaching techniques that are suited to the AIS course. A creative teaching approach for the AIS course is that of role-playing organizations and their operations, especially for transaction cycles. In addition, cooperative learning can be nicely coupled with role playing because of their common emphases on social interdependence and shared learning. The benefits and guidelines for cooperative learning and role playing are presented and then illustrated with an example for a transaction cycle of an organization.

Introduction

The Accounting Information Systems course has less quantification of a concept than other financial or managerial/cost accounting courses. Hence, some AIS instructors incur difficulties teaching the AIS course using conventional teaching approaches successful in other accounting courses. On the other hand, some AIS instructors view the course as an opportunity to incorporate innovative instructional approaches that facilitate student interest and academic achievement, and also provide opportunities for accounting students to enhance their individual and group social skills. Student groups that role-play an organization's accounting transaction cycles are examples of how instructors have stimulated greater interest in traditional AIS topics.

Group role-playing and cooperative learning both provide instructor and student a structured

Readers with comments or questions are encouraged to contact the authors via email.

approach for sharing some of the responsibility for learning. In this setting, students will work together to learn complex conceptual information and at the same time have fun, develop interpersonal skills, and improve their perception of self. Cooperative learning provides increased motivation for individuals within the role-playing group to promote teamwork, learn by sharing complex information, encourage well thought-out oral presentations, and develop clear and concise writing of the group report. Integrating cooperative learning into group role-playing for accounting transaction cycles is presented as a teaching method well suited for the AIS course.

Cooperative Learning

Overview

Cooperative learning is generally defined as the instructional use of small groups so that students will work together to maximize their own and each other's learning (Johnson et al., 1991).

It has been found to be an effective pedagogical technique generating many learning benefits (Johnson and Johnson, 1989, 1991; Johnson et al., 1991). In various academic disciplines and across different age subjects and settings, cooperative learning has led to enhanced student achievement and attitude, and improved perceived self esteem and social interdependence (Johnson et al., 1981; Johnson and Johnson, 1989). The Johnson and Johnson (1989) findings were supported by a comprehensive review comparing the relative effects of cooperative, competitive, and individualistic efforts on instructional outcomes for over 575 experimental and 100 correlational studies and by meta-analyses of the results.

Even though cooperative learning has not been commonly found in accounting instruction, recent publications in the accounting literature are beginning to acknowledge the benefits to students entering a changing profession in which cooperation and interpersonal skills are highly regarded (Cottell and Millis, 1992, 1993; Lindquist, 1995; Peek et al., 1995). Applications of cooperative learning within the accounting discipline are increasing and studies are corroborating similar findings in other disciplines (Lindquist, 1995; Ravenscroft et al., 1995; Lindquist and Abraham, 1996; Caldwell et al., 1996).

Group Projects Versus Structured Cooperative Learning

Our experience has shown that simply placing students in a group does not translate to cooperative learning. In fact, assuming that group projects are examples of cooperative learning is a misnomer. Groups with unsuccessful cooperative learning will have problems, often with group members learning less than if the instructor had taught by lecturing on the topics. Hence, changing the format of learning does not necessarily translate to improved learning.

The students entering the AIS course often have acquired a learning method from prior ac-

counting courses that is not conducive to cooperative learning. Many accounting students hesitate to change from a lecture format of instruction in which they successfully competed with others to a cooperative learning environment that requires group members to be accountable for the performance of others in the group. In other words, students majoring in accounting will have acquired a learning style from other accounting courses that is in conflict with role playing and cooperative learning.

On the other hand, work in real business settings is usually accomplished by cooperative work groups in which members work together to achieve a common goal. Even though most work in accounting education is performed and evaluated singularly, the future success of accounting majors in the business world is just as dependent upon their group-interaction skills as their technical skills. Furthermore, cooperative learning encourages learning among weaker members of a group in addition to developing teamwork skills

Basic Elements of Cooperative Learning

Structuring cooperation among students can best be achieved by having the following five basic elements (Johnson et al., 1990; Johnson et al., 1991). These elements for cooperative learning counter most of the difficulties previously noted.

- *Positive interdependence* - a cooperative group must have each member rely on each other in achieving success.
- *Face-to-face promotive interaction* - members of a cooperative group must promote each other's learning and success face to face.
- *Individual accountability and personal responsibility* - each member must do his or her fair share of the work and also hold every other member to the same standard.
- *Social skills* - members of a cooperative group must appropriately use interpersonal and small-group skills for the group to be

successful.

- *Group processed evaluation* - members must process as a group how effectively each member is working within the group.

Role Playing to Learn

Webb (1983) identified several reasons why teaching or presenting a topic facilitates the learning of it. One explanation is based on the idea of verbalization. Webb (1982) found that the opportunity to give explanations and the opportunity to receive explanations and feedback from other group members led to improved learning. The thought of presenting concepts to a group is a much greater motivational force to learn the information than sitting back and listening to an instructor give you the information.

Another reason why teaching or presenting material aids the learning is that the learner/presenter must be prepared to elaborate on the material to a greater degree and to develop a more organized cognitive structure for the topic. For example, a common result of teachers verbalizing and presenting instructional material is that they claim to have learned more than the students do. Furthermore, Durling and Schick (1978) found that learners who prepared to teach to actual students learned more than learners who taught to the teacher did.

The listening students' attention level is another reason to have learners teach or present a topic. Increasing the students' attention level often refers to increasing motivation (Grabe, 1986). A student "paying attention" usually refers to his motivation. In contrast, a student "having a short attention span" usually refers to the cognitive inadequacy of the student. Student presentations can foster higher levels of attention by preventing instruction from becoming too predictable and repetitive. The creative and enthusiastic role-playing found in most student presentations also heightens the listening students' attention level.

The following example for role playing and cooperative learning in the teaching of transaction cycles found in AIS courses illustrates how student instruction can facilitate the learning of key concepts. The following section can be used as a handout.

Role Playing and Cooperative Learning for Transaction Cycles within the AIS Course

Overview

For a transaction cycle presentation, members of the group take on key roles associated with the cycle. For example, within the purchases cycle the following roles would be required: inventory control, purchasing, receiving, storage and accounts payable. A manual system is first presented to the class, with another specific requirement being that computer-based systems and their controls should also be discussed as extensions. The role players are clearly identified (e.g., receiving clerk), oversized actual documents (e.g., receiving report) are completed, and actual inventory items (e.g., rubber ducks) are purchased in presenting the transaction cycle.

Objectives of the Presentation

- Help other students understand the transaction cycle by presenting it within the context of a functioning organization.
- Provide students with an opportunity to successfully work within a team towards common team goals.
- Experience role playing as an innovative and effective approach to presenting systems related concepts.
- Evaluate each member in meeting the group's goals. Each group member is held accountable for his or her performance and the performance of others in the group.

Instructor's Role

- The instructor determines individual members of a group.

- The instructor assigns to each member of the group one of the following six core elements of the cycle: events, people, documents, files, controls, and reports.
- The instructor distributes a Presentation Evaluation Form (Appendix A) that identifies criteria for evaluating a presentation. The evaluations are to be completed by the student audience and returned to the instructor.
- The instructor evaluates the group presentation based on the instructions that follow and audience feedback obtained from the Presentation Evaluation Forms.
- After an examination is administered over the transaction cycles, the instructor determines if student examination performance on topics related to a group's transaction cycle warrants 5 bonus points added to that group's score.
- The instructor receives back from the group a Member Assessment Report that distributes 100 points to the members of the group based on the group's perception of each member's relative contribution to the completed project. This report allows the instructor to increase or decrease the individual score of each member from the group score. If the report reflects equal contribution, then each member of the group is assigned the same group score.

Presentation Instructions

The presentation consists of three parts to facilitate the learning of key concepts for the transaction cycle. Part I requires that a handout sheet summarizing the key concepts of the transaction cycle be distributed to the class one week prior to the in-class presentation. The in-class presentation consists of Part II and Part III, a description of the six core elements of the cycle, and the role playing of the operations within the organization, respectively.

Part II begins with an overview of the transaction cycle relative to the organization and other

transaction cycles. Each member of the group then describes one of the six core elements of the cycle as defined below.

Events Each cycle is made of a series of business processes or events. The nature and purpose of each event should be explained. The group's presentation should be built around these events. Use a data flow diagram to depict the most important events in the cycle.

People For the key events previously identified, explain how certain departments, individuals, or functions carry out the processes of each cycle. These key roles will be acted out in Part III.

Documents Several documents are used to carry out the events of each cycle. Describe the purpose of each document and provide oversized documents to be used as props in Part III.

Files The data gathered by the documents are stored in data files. Describe the purposes of the data files, their storage and extraction methods, and possible inquiries of data files useful to management.

Controls Controls are needed throughout the transaction cycle. After briefly discussing controls common to all cycles, describe the controls unique to this cycle and potential losses if they were not in place.

Reports From the data stored for each cycle, describe the nature of reports likely to be generated and the decisions supported by the reports. Present oversized reports to be used as props in Part III.

Part III is the in-class role-playing of the transaction cycle within an organization. The events noted above flow through a mock operating system utilizing the key people, documents, and reports identified above. The goal of the in-class presentation is to leave a lasting impression of the key concepts for this transaction cycle.

The role-playing presentation should be flowing, cohesive and comprehensive. One class period of seventy-five minutes is allotted to the in-class presentation, which should include about five minutes for questions and the completion of the Presentation Evaluation Form by the audience.

Grading of the Transaction Cycle Presentation

Part I - Handout of key concepts	20 points
Part II - Presentation of six core elements (6@5pts)	30 points
Part III - Role playing the transaction cycle	30 points
Presentation clarity	10 points
Presentation style	<u>10 points</u>
Total points possible	100 points

The instructor will consider the Presentation Evaluation Forms completed by the audience in assessing points earned above. All members of the group receive the same group score initially. Then the group score could be adjusted sequentially for two items.

If examination results for questions related to a transaction cycle exceed 80%, then 5 bonus points will be added to the group score for that cycle.

After receiving the group's Member Assessment Report, the final score assigned to each group member may be adjusted upward or downward from the group score.

Summary

The use of role playing and cooperative learning for the instruction of transaction cycles within an AIS course has many benefits. The students will benefit by having an increased level of attention, develop better interpersonal skills working with a team, experience the operations of an organization for a transaction cycle, and complement their textbook understanding of accounting as an information system by observing the key operations of an organization.

The instructors will benefit from adopting role playing and cooperative learning as it represents a new and creative method of presenting accounting transaction cycles. If textbook presentations of transaction cycles are viewed as too predictable and repetitive, then AIS instructors can adopt role playing coupled with cooperative learning to generate a high level of excitement and enthusiasm for learning. So many times we have been delighted with the creative approaches of groups in presenting their transaction cycles.

Suggestions for Future Research

Does role playing coupled with cooperative learning have favorable effects on student academic performance when instructors test the transaction cycles? This should be a reasonable conclusion to our presentation. However, attempts to find such an affect should also be aware of potential problems. For example, what format of testing (e.g., multiple-choice or essay questions) is best suited for finding favorable effects on student academic performance? Another question is related to identifying a valid dependent variable. While it is very likely that students will perform better on test topics related to their specific transaction cycle, is it also likely that there will be an overall improvement in examination scores for all the students across all the transaction cycles presented?

While future studies may provide statistical support for the use of role playing and cooperative learning in the instruction of transaction cycles, we were convinced that the apparent benefits of their use warranted the sharing of this instructional resource.

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Appendix A - Presentation Evaluation Form

Cycle __ Date ____
Completed by _____

Circle the number that best describes your evaluation of the presentation. Written comments can be entered below the numerical scale.

Part I *Quality of the handout.* The handout should succinctly summarize the key concepts for the transaction cycle and be consistent with the in-class presentation.

1 2 3 4 5 6 7 8 9 10
Not Very High Very High

Part II *Quality of the in-class presentation for the six core elements.* The major concepts for each element should be completely taught in the presentation.

1 2 3 4 5 6 7 8 9 10
Not Very High Very High

Part III *Quality of role playing the transaction cycle.* The major concepts for the cycle should be plainly illustrated with examples realistic to an organization. The core elements should be well coordinated.

1 2 3 4 5 6 7 8 9 10
Not Very High Very High

Presentation Evaluation Form

Presentation clarity. Key concepts are best learned when the presentation is clear, concise, and well developed. The audience should be able to understand the material presented.

1 2 3 4 5 6 7 8 9 10
Not Very Clear Very Clear

Presentation style. How the presentation is done can be very important in keeping the attention of the audience. An element of creativity adds to the interest level of the presentation.

1 2 3 4 5 6 7 8 9 10
Not Very Engaging Very Engaging

Notes