Using Game-Based Learning to Raise the Ethical Awareness of Accounting Students

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ABSTRACT

The accounting scandals of high profile companies such as Enron and Arthur Andersen have created a climate of distrust and loss of confidence in the governance process in corporate America. As a result, educators are being challenged to make concerted efforts to incorporate ethics in the professional development of accounting and other business students. This article supports Game-Based Learning (GBL) and describes the development and use of an ethical awareness board game called **Do the Right Thing!** to raise awareness and promote discussion of ethical issues among 160 accounting students in a series of professional development classes at a university in the southeast. Although this article is based on anecdotal evidence, the author concludes that games can be an effective pedagogical tool when they are based on specific learning goals rather than just the concept of winning.

Keywords: game-based learning, games, ethics, ethical issues, Do the Right Thing!

INTRODUCTION

Accounting scandals such as Enron, WorldCom, and other major corporations, and the recent collapse of the financial markets, have resulted in a loss of public confidence and raised the ethical consciousness of corporate America on the importance of doing business ethically. This erosion in the moral character of Wall Street has renewed discussion among accounting professors on the need to incorporate ethics in the accounting curriculum. Many believe that accounting education has a responsibility not only to enhance the competency and skills of students, but also to instill in them a sense of ethics and moral obligation. In an interview with the Wall Street Journal (WSJ Online, August 20, 2009), Robert Bruner, dean of the University of Virginia's Darden School of Business, noted that one of the lessons business students should learn from the current financial crisis is that "ethics are always No. 1." He believes business schools must share in the responsibility for the financial crisis because the tools and concepts that caused the collapse on Wall Street are taught in the classroom. Thus, as reform in corporate governance based on ethical principles becomes a reality, faculty at many colleges and universities are once again exploring meaningful ways to integrate the coverage of ethics in the curriculum. This paper supports game-based learning (GBL) using an ethical awareness board game as a methodology to raise awareness and promote discussion of ethical issues among accounting students.

GAME-BASED LEARNING (GBL) AS A PEDOGOGICAL TOOL

The Encyclopedia of Educational Technology (2003) defines a game as:

> *"A competitive activity that involves certain skills and is played under a set of rules for the amusement of the players, which compete for points or other advancements that indicate that they are outperforming other players."*

Game-based learning may be defined in different ways since the word "game" has more than one connotation. Caillois (1961) describes a game as a voluntary and enjoyable activity governed by rules, but the outcome is uncertain and the activity does not produce any goods of external value. It may involve a simulation, video, computer, role playing, cards or board game. Carson Learning Services (2009), an instructional game designer, defines it as "the process of taking an idea and creating an activity to deliver that idea in a manner that is motivating, challenging, and fun, and has a measurable learning objective as a foundation." Starting Point (2009), an on-line resource that provides information about teaching methods in the geosciences area, defines GBL as "exercises pitting students against each other or getting them to challenge themselves in order to motivate them to learn better." They indicate that three elements define an activity as a game: competition, engagement, and immediate reward.

Although there is no consensus on a definition for games and game-based learning or which types of games are most effective as a pedagogical tool, there are opinions on what attributes a game should have to be effective. To be an effective and useful learning tool, Lepper and Cordova (1992) believe learning goals must be immersed into the game and be essential to winning. Since it is beyond the scope of this article to evaluate one type of game over another, in the context of this article, GBL is defined as 'an interactive challenging and fun activity involving a board game with defined learning outcomes.'

Ethics may be taught using many different approaches, however, it is the contention of this paper that board games, as an experiential pedagogical tool, are effective because they: (1) provide an enjoyable learning environment that enable students to learn by doing, (2) are easy to implement, (3) require no homework or grading, and (4) engage students in active learning that is retained. Games have been played in most cultures throughout history and have long been used to teach.

LITERATURE REVIEW

Teaching Ethics in Accounting

The financial scandals of recent years have increased stakeholders' expectation for corporations to conduct business in a transparent and ethical manner. This increased level of expectation places a higher level of responsibility on accounting professors to include teaching ethics in the accounting curriculum. While some schools have opted to integrate ethics throughout the curricula, others have developed stand-alone ethics courses. Over the years, however, there has been much discussion about whether business ethics should or could be taught (see for example, Sims and Sims 1991; Sims 2002; Trevino and Nelson 1999), and how it should be taught. Sims (2002) provides various viewpoints and insights on the challenges of teaching business ethics. He believes ethics should be taught and that schools must take more responsibility for teaching students how to recognize and respond to ethical situations. Although he examines various approaches that may be used, he believes an experiential learning pedagogy is most effective, and notes that the two most critical components of any effective strategy for teaching ethics are defining the goals to be accomplished and a well designed outcomes assessment process.

According to Alam (1999), the primary goals of teaching ethics to accounting students is to make them aware of ethical issues in accounting, and to develop a sense of moral obligation. Several studies support the premise that ethics education has a positive impact on the ethical awareness and moral reasoning of students. A more recent study to examine this issue was conducted by Lau (2009). Using a control group and a treatment group that was taught an ethics decision making technique called the JUSTICE model, he concluded that business ethics education does matter and has a significant impact on students' overall ethical orientation.

Pedagogical Approaches

Various pedagogical approaches to teaching ethics have been examined in the literature. Furman (1990) and Etzioni (1991) examined the principal-based (*philosophical)* approach, which introduce students to various ethical theories and their application in resolving an ethical dilemma. They concluded that this approach is too abstract and does not consider organizational factors.

The alternative to the philosophical approach in teaching ethics is use of practical approaches, which may include case analysis, role playing, simulations, storytelling, service and experiential learning activities, games, and other scenario based methods that involve active learning. The challenge, however, is to provide students with experiences that they are likely to incur in the workplace.

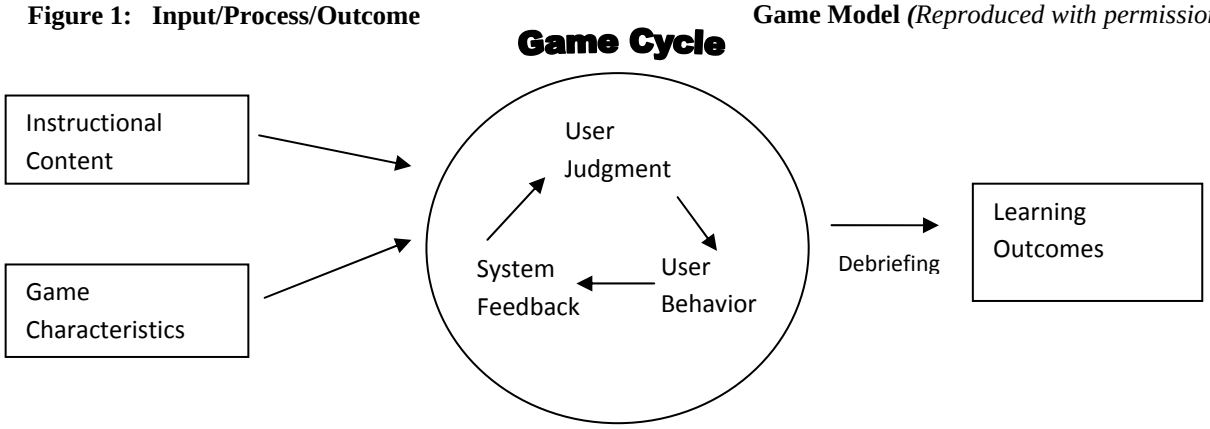
Game-based Teaching

Although there is no empirical evidence on the preferred or most effective method for teaching business ethics, games may be an effective pedagogical tool. A game-based methodology using scenarios may be especially effective in teaching ethics, because it allows students to evaluate and respond to different types of ethical situations that they may be confronted with in the workplace. Ethics games also place students in a position to reflect on their own moral judgment.

The literature supports the use of games and other experiential methods to teach. For example, Garris, Ahlers and Driskell (2002) suggest that games are interactive, adaptive and have outcome and feedback value. Their game-

based input-process-output model indicates that instructional content and certain game features paired together successfully as input will create a game cycle that results in learning outcomes (See Figure 1). The model implies that people do learn from active engagement with the environment, and that learning outcomes will result when the experience is coupled with instructional support.

Figure 1: Input/Process/Outcome Game Model ***(Reproduced with permission)***



Reuss and Gardulski (2001) introduced an interactive game board in a historical geology and paleontology lab/course. They determined that the game reinforced learning and was effective in helping students identify and answer questions about fossils. Reese and Wells (2007) used a card game to teach academic discussion skills in an English class. They reported the game was positively received by students and effective in engaging students in conversations and in building their confidence to have conversations with others outside of the classroom. Lloyd and Poel (2008) concluded that games are effective in engaging students in ethical decision making in the engineering design process.

Prensky (2001) believe that games are effective in learning because they give us enjoyment and pleasure, intense involvement, structure, motivation, and ego gratification. They also allow the simulation of actual work environments. In addition to engaging students in the learning process, research indicates that students tend to retain what they learn if they are actively involved. Starcic (2008) reports that learning and knowledge retention is 10 times greater in game-based learning than with traditional methods.

Many major corporations, such as Lockheed Martin, Boeing, Proctor and Gamble, BellSouth, Honeywell, McDonald Douglas, General Electric, and others are using board games in their ethical training for employees. Lockheed developed the *Ethics Challenge* board game in 1997 as part of its ethics training program. The game, which is based on the cartoon character Dilbert, explores ethical case studies from real-life Lockheed Martin incidents. California State University Northridge and other engineering schools are now using this game as part of their classroom instruction (Bekir, et. al., 2001). Since 2006, Professor Alan Rolins at the University of Minnesota Duluth, has also been using the *Ethics Challenge* to teach students about ethical issues in accounting.

Haywood, et. al. (2004) experimented with an *Ethics Bingo* board game in several accounting courses. The objectives of the game included helping students to identify ethical and professional responsibilities, to enhance their critical thinking skills, and to engage them in the learning process. Although the impact of the game was not measured, feedback from students was very positive.

According to Edens and Gredler (1990), the outcome of academic games should depend on knowledge and skill, rather than luck or chance. They suggests that games may be effective in the classroom when used to achieve one of the following objectives: (1) to practice knowledge/skills already learned; (2) to identify gaps and weaknesses; (3) to review material, or (4) to develop new relationships between materials and principles. . Pivec and Dziabenko (2009) believe games are most effective where skills such as critical thinking, group communication, debate and decision making are of high importance.

Kolb's (2006) experiential learning model suggests that individuals have learned when they can demonstrate their ability to apply theories to real life situations. He purports that learning evolves in a cycle of four basic processes that includes experience (*concrete experience*), that is translated through reflections *(reflective observation)* into concepts (*abstract conceptualization*) and application *(active experimentation).* Games with learning outcomes can be designed to facilitate these processes.

USING A BOARD GAME TO TEACH ETHICS

Developing the Board Game

DO THE RIGHT THING, an ethical board game, is designed to generate discussions on ethical issues in the workplace. It is an educational tool that may be used to integrate discussion in a classroom setting or in an employee ethical training program. The game, including game board, rules for playing, playing cards and pieces were developed and constructed by the author as indicated in Exhibit B, however, a larger playing board was developed and placed on an easel for classroom use and colored stickpins were used to move around the board. The game was designed with input from students. Ethical issues were adapted from a discussion on ethics with students in an auditing course and refined by input from accounting professors. In developing the game, some basic principles were adhered to as follows:

- **Learning Outcomes** – The primary objectives of the game are to: (1) enhance awareness of workplace ethical issues; (2) enhance moral reasoning judgment; and (3) engage students in the learning process through a fun activity that provide consensus answers through discussion. Thus, after playing the game, it is expected that students will be able to: (1) recognize an ethical issue; (2) identify alternative actions, and (3) evaluate the potential out of each action.
- **Scenarios** – The game consists of ethical scenarios encountered in the workplace involving honesty, plagiarism, harassment, misappropriation of assets, use of the internet, etc. Students play in teams selected by the instructor. Each team must go around the board from start to finish collecting or paying tokens. Point values (tokens) are assigned for each response and are awarded to the team based on their responses.
- **Approach to the Game** – ***Do the Right Thing*** is designed to provide players with continuous challenges. As the team goes around the board, they may land on a *Take a Chance, Truth or Consequence, or Challenge square.* (See Exhibit B for example of Take a Chance and Truth or Consequence card). Scenarios on the *Take a Chance* card have four responses with varying degrees of what is "right." The *Truth or Consequence* card has only two responses, ethical or unethical. If a team lands on a *Take a Chance* square, the team selects a scenario card and is given 5 minutes to discuss the scenario and then respond. Each scenario comes with 4 potential responses, which are read by the instructor. After the team selects an answer, the instructor engages students in a discussion on ethical-decision making using KPMG's (2007) CARE ethical decision making model. In the first step, students must *consider* all the facts and identify the ethical issue. Secondly, they *assess* all alternative actions by identifying all parties who may be affected by the situation and their rights. Third, they *review* the ethical issues and consequences of each alternative; and finally, they *evaluate* the potential outcomes of each alternative and decide on the appropriate course of action. Since there are four responses on the *Take a Chance* card with varying degrees of "right", faculty teaching the courses were provided with instructions on how to play the game and teaching notes to enable them to discuss with students why one response is better than the other. A literature search and discussion among faculty was conducted prior to playing the game to arrive at a consensus on the responses and the points allocated to each response. The number of tokens awarded is based on the response.

  When a team lands on a *Truth or Consequence* square, tokens are earned or paid based on the team's response to the situation that is ethical or unethical. After the team selects an answer, the instructor then discusses the situation using the four-step CARE ethics model referred to previously. If they answer correctly, they earn 2 tokens, however, if they answer incorrectly, they will encounter a consequence, which may require them to pay a fine, move back 2 spaces or go to jail. If a team lands on a square that is already occupied by another team, a *Challenge* is initiated. In a challenge, a *Take a Chance* card is drawn and read by the instructor. The team that responds with the best answer wins the challenge. If the challenger wins, the other team moves back to where the challenger was, but if the

defending team provides the best answer, they remain on their space and the challenger moves back to their previous space.

- **Design Rewards –** The object of the game is to learn ethical decision-making. Although extrinsic rewards are provided, students have to engage in discussion on the ethical issue and select the best answers. Awards are based on the number of tokens accumulated and may include grade points, food items, token gifts, etc. Thus, all teams may get some type of reward.

The ***Do the Right Thing*** ethics board game was initially used to teach the ethics module in three professional development one-hour credit courses that all accounting majors are required to complete. Although the curriculum in each course is different, they all include a module on ethics. The first course is taken during the sophomore year and emphasizes self-development. In addition to the ethics module, students work on their professional image and assess their personal interests, values, strengths and weaknesses. The second course is taken during the junior year and focuses on interpersonal development. In this course, students engage in assignments and projects to enhance their networking, teambuilding and business etiquette skills. The third course is taken during the senior year with an emphasis on leadership development.

During the first year the game was used, a total of 160 students participated that included 52 sophomores; 68 juniors, and 40 seniors. Each class divided students into teams. The number of teams in each class varied depending on the class size. Each course met for an hour each week and was taught by three different professors. Because the game does not end until each team has gone around the board from start to finish, it was played over a series of three one-hour class periods. The game has since been used in discussing ethics in the intermediate accounting and auditing courses with different scenarios.

Observations on Game Use

Prior to and after playing the game, pre and post tests were conducted to gauge the impact of the board game and the ethical sensitivity of students. Although the board game uses workplace scenarios, a questionnaire containing 12 ethical conduct issues related to academic situations that students face on a day to day basis and analogous to situations in the workplace was used. Students responded using a 7-point Likert scale. The results are indicated in Table 1.

As indicated from Table 1, it appears that students' perception of what is ethical or unethical did change as a result of playing the game. Students were also surveyed for feedback on their perception of the use of the game. Approximately 88% rate the game as a good or excellent learning tool and are eager to play it again. They provided comments, such as:

- *The game was a fun way to learn*
- *It made you think about situations*
- *Playing the game was an interesting and enjoyable experience*
- *I would like to play the game again*
- *It made me aware of situations I may face on the job*
- *I feel I'm better prepared to deal with some ethical situations after playing the game*
- *Although I didn't agree with some of the responses, I think I'm more aware now of certain ethical issues and how to deal with them*

Initially professors were somewhat skeptical about using the game, but noted afterwards that the game provided interaction and lively discussions on ethical issues. Through their discussions, they felt they were more effective in helping students understand the moral reasoning behind varying responses to some scenarios. On the negative side, some students think that it takes too long to play the game because they have to learn the rules and each team has to go around the board once before the game ends. Some also feel there should be a wider variety of situations, so each time the game is used, students are asked to summit scenarios that they would include in the game for future play. Many have been collected and are being compiled for future use.

Table 1: Ethical Sensitivity of Students – Results of Pre- and Post Tests

Ethical Conduct	Ethical or Unethical? Pre- Game Mean Score	Ethical or Unethical Post – Game Mean Score
1. Cheating on exam	6.78	7.00
2. Whistle blowing on a classmate	2.24	2.8
3. Signing class roll for absent student	2.78	5.87
4. Placing your name on a group assignment that you did not contribute to	4.12	6.74
5. Allowing another student to get credit for work they did not contribute to	5.67	6.69
6. Plagiarism	6.34	6.89
7. Allowing a student to copy your work	4.25	6.85
8. Telling a professor you are ill on day of exam because you are not prepared	2.65	5.54
9. "Kissing up" to a professor to get a better grade	3.97	5.28
10. Making personal long distance calls on office phone while at work	2.98	6.32

CONCLUSION AND POTENTIAL FOR FUTURE RESEARCH

The ethical climate in corporate America today suggest that colleges and universities must do more to make students aware of potential conflicts that they may be confronted with in the workplace and provide a framework on how to deal with them effectively. Although this article is based on anecdotal evidence, it suggests that games may be an effective pedagogical tool to generate discussion of ethical issues in accounting. Although games will not resolve all of the problems and should not be used as the sole basis for teaching, there are various benefits to game-based-teaching. Games are interactive, adaptive to various environments, provide an enjoyable learning experience and can be designed to have learning outcomes.

Dr. Kurt Squire (2005) from the University of Wisconsin-Madison has been actively involved in research on games and learning for several years. His focus is on the use of digital games in K-12 schools and how they can be used to engage students in learning, how people learn from game play, and how they interpret their experience. There is a need for more research on the effectiveness of using games to teach accounting and other business subjects. Thus, it is hoped that this article will enlighten more accounting educators on the use of games, and encourage research to measure the effectiveness of using games and other experiential methods to teach ethics and other subjects in accounting.

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APPENDIX A

Example of TAKE A CHANCE CARD Scenario

You have been assigned to work with a colleague on a project that must be completed within three months. Your colleague has been slack in doing her share, so you have been stuck with doing most of the work.
What do you do?

a. Complain to your supervisor about the situation

b. Do nothing. Let your colleague share credit for the project
c. Use this as an opportunity to demonstrate your capabilities
d. Try to solve the problem by talking to your colleague

In this case, answer 'D' is worth 3 points (tokens); answer 'A' is worth 2 points (tokens); answer 'C' is worth 1 point (token); and, answer 'B' is a penalty of 2 tokens to be paid.

Example of a "TRUTH OR CONSEQUENCE CARD" Scenario

You are an accountant at a major CPA firm that is assigned to the audit team for XYZ Co. You do not want to go over budget so you come in on Saturday to complete a schedule, but you don't report the time on your time sheet.

Is this ethical or unethical?

In this case, an answer of 'unethical' is worth 2 tokens, while an answer of 'ethical' will result in paying a fine of 2 tokens.

APPENDIX B

DO THE RIGHT THING! BOARD GAME*

*Although the game has not been commercially produced, the author will provide the board layout and instructions on playing the game to those interested in using it.

