Designing a Game Based on Monopoly as a Learning Tool for Lodging Development
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Many educators continue to seek teaching methods to effectively engage students in the learning process (Roberts, 2007) and may ask themselves how effectively their lessons facilitate student learning. For example, thinking back over a recent lesson, one educator asked how an instructor could judge his or her performance as a teacher (Johnson, 2007). To consider that question, educators could think about the illustrations, demonstrations, exercises, and other methods used to present content or fix problems and weaknesses. Additionally, consideration of the words used to encourage and motivate students, and whether students leave the classroom with tangible practice goals for the coming week is important. One method that can be used as a teaching tool, that goes beyond those most commonly used to try to engage students fully in learning, is the use of a game or simulation.

People like games for a variety of reasons. Researchers found in a survey of 169 adults that consumers appreciated the opportunity to “fantasize and live uncommon experiences” and be entertained by playing board games such as Monopoly and Scrabble and that men appreciated the rhythm of the games (d’Astous & Gagnon, 2007). Other researchers found that educational games were helpful for learning content and collaborative skills (Dorn, 1989; Michaels & Chen, 2007), practicing decision making skills (Becker & Watts, 1995), and for creating a healthy psychological environment in a classroom (Zapalska, Rudd, & Flaneigin, 2003). This paper describes an effort to improve the student learning process by creating a game as a learning tool to supplement lectures and traditional classroom methods. Students worked with an instructor to develop a game focused on hotel development and this paper describes that experience. The learning tool presented in this article was a game adapted from the standard Monopoly game created in 1934 by Charles B. Darrow of Germantown, Pennsylvania (Hasbro, 2007). In the following pages, background information on the use of games in training and education is presented, the process of the development of the Monopoly based game and pilot tests of the product are outlined, and a model that may be used in the development of an educational game is provided.

Background on Games and Simulations

Universities have to produce management graduates who have the personal, social, and communication attributes that modern organizations need to defend their positions and to achieve their objectives (Carneiro, 2004). Therefore, effective teaching tools including educational simulations and games may help to achieve the necessary learning outcomes and appear to be a natural choice for instructors and students since games seem to be a fundamental part of the human experience. Generations of humans have taken up the challenge of board games across all cultures, creeds, and times; the game of chess is 1,400 years old and backgammon is 2,000 years old, but even that is not old compared to the three and half millennia that tic-tac-toe has been played (Ghory, 2004). Perhaps, as Ghory (2004) argued, many board games can be seen as simplified coded models of problems that occur in real-life, but just what are games and simulations? Definitions of these entertainment and learning options follow.

Definitions

A useful definition of a game is that it is an activity carried out by individuals who may cooperate or compete in seeking to achieve specific objectives and who follow particular rules and operate within particular constraints (Horn, 1977). The lesson(s) in a game is (are) often learned through examining what happened during the activity (American Hotel & Lodging Association (AH & LA), 2006). Alternatively, a simulation is a scaled down enactment of reality and because it is based on reality, the purpose of the simulation is evident (Horn, 1977). In simulations, the lesson is contained in the outcome process (AH&LA, 2006). Additionally, because simulations are a method of representing reality, the essence of a physical or social system interaction, they attempt to replicate essential aspects of reality so it may be better understood and controlled (Horn, 1977).

The Society for Advancement of Games and Simulations in Education and Training (SAGSET) defines a simulation as “a working representation of reality; it may be an abstracted, simplified or accelerated model of a process” (SAGSET, cited in Ruohomaki, 1995, p. 13). To further define simulations, Feinstein and Parks (2002) categorized simulations into four groups according to their design and applications. In terms of design, there are iconic simulations and symbolic simulations. Iconic simulations are “visual, auditory, or kinesthetic representations of real systems” (Feinstein & Parks, 2002, p. 398), and include flight simulators and some video games. Symbolic simulations replicate systems through mathematical processes and can be conducted with only numeric variables on a spreadsheet.

Simulations can be further categorized according to their application. Analytical simulations are used to simulate a certain phenomenon and allow the user to carefully analyze it to support decision-making. An example of this would be one that simulates the flow of hotel guests when they check in and out. This simulation

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allows front office managers to analyze the level of business so that they can implement effective staff scheduling. Management simulations often are, by their nature, more complex than module specific simulations, hence it can be time consuming, particularly at the briefing stage, to familiarize the participants with the simulation system. The integrating approach to simulations involves comprehensive, complex decision-making and to achieve the most desirable learning outcome through such simulations, participants need to have a certain level of understanding of the components of the simulated environment. Therefore, this approach is ideally used towards the end of the curriculum or training program, after students have completed related courses or training sessions. It should be noted that whichever approach is used, the type of simulation and the learning objectives need to match and the faculty member or trainer must know the strengths and limitations of the simulation so that conventional classroom learning can offset such limitations or be complemented by the simulation's strengths (Edelheim, 2007).

In addition, simulations used for educational and training purposes often have elements of gaming. SAGSET further defined simulation games such that, “A simulation game combines the features of a game (competition, cooperation, rules, participants, and roles) with those of a simulation (incorporation of a critical feature of reality)” (Ruohomaki, 1995, p.14). One of the benefits of using instructional simulation games is the development of decision-making skills (Fawcett, 2002; Fripp, 1993). By its definition, a simulation provides a certain level of reality, but it still remains just a representation of the reality. Thus participants can make difficult decisions and simulation games foster participants' enthusiasm and motivation (Feinstein, Mann & Corsun, 2002), resulting in their active involvement and leading to a deep learning process (Biggs, 1999).

Games in Training

Trainers have utilized active learning games and exercises for many years and have documented and marketed “proven and effective” games. Perhaps hospitality educators would do well to explore how games have been used for training purposes. Scannell and Newstrom identified the need for activities and exercises to supplement basic instruction in training sessions. They authored a series of books beginning in 1980 with a book called *Games Trainers Play*. This book was joined in 1983, 1991, and 1994, respectively by the following additional titles: *More Games Trainers Play*, *Still More Games Trainers Play*, and *Even More Games Trainers Play* (Scannell & Newstrom, 1980, 1983, 1991, 1994). Simulations have also become popular in industry because as some researchers note, “In traditional classroom training, employees typically retain only one-quarter of what they hear. By replicating actual business events, business simulations and technologies enable ‘learning by doing’ and faster development of competencies” (Mihaliak & Reilly, 2001).

Organizations continually reassess and strive to enhance “what makes a good manager” by developing new and innovative training methods, including games. To get an idea of the extensive use of games in industry training, read the example of a partial advertisement from the conference program for a session at a CHART (Council of Hotel and Restaurant Trainers) conference that contained the following information:

“Are you looking for a non-traditional format for training traditional-ly boring subjects like P & Is, Flow through, Labor and Food Management, etc? Then you will want to attend this highly interactive pre-conference workshop! You will actually take part in a simulation board game that is a highly interactive, fun and a little bit of a competitive way to learn the money side of the business. IHOP has had so much success with this program that it has been ranked their number one training program since its inception and has been highlighted in multiple trade magazines as a best-demonstrated practice” (Eggleton & Wright, 2007).

Electronic games and simulations have also become prevalent in industry training. In fact, one industry related training source wrote that “E-learning, the use of electronic tools like computers for games and simulations and the Internet to deliver content, has emerged as the fastest-growing segment in the field of training and development and one of the hottest tickets in e-learning is computer-aided simulation” (Worldforce Management, 2005). For example, Cingular (a telecommunications company) used e-learning simulations as an effective training tool for its salespeople by teaching them to represent the Cingular brand and establish guidelines for its sales and service divisions. Due to the fact that there were over 40,000 employees at Cingular, executives decided that electronic training via simulations was the best technique for getting the brand across to the entire sales department in an interactive manner. Cold Stone Creamery ice-cream store provides another example of a simulation experience to its employees with a game on its corporate website that “…teaches portion control and customer service in a cartoon-like simulation. Players scoop cones against the clock and try to avoid serving too much ice cream” (Jana, 2006). This program has been used by approximately 30% of its employees (more than 8,000 people). According to an author who analyzed on-the-job video-gaming, “Corporate trainers are betting that games’ interactivity and fun will hook young, media-savvy employees” and “help them grasp and retain sales, technical, and management skills” (Jana, 2006).

Industry trainers employ both evolved and custom simulations in their training work. As one author stated, “Training and education departments use business simulations because these teaching devices often are more instructive, memorable and enjoyable than the typical lecture, text, slide show approach. The selection of the right simulation begins with a question: Should we use an ‘evolved’ simulation or a ‘custom’ simulation?” (Watters, 2006)? An “evolved” simulation is a training and learning method that has been used by several different companies. A “custom” simulation is exactly the opposite, used solely by one
particular company or industry. Ten reasons have been offered as the rationale for selecting an evolved simulation over a custom simulation: purpose, time, reach, research, input, support, cost-efficiency, space, shelf life, and that you can try before you buy (Watters, 2006). While an evolved simulation may have more benefits than a custom simulation, it is important to note that with a custom training technique, a company is capable of creating a competitive edge over its particular industry competitors by focusing on a custom strategic method for growth potential. For example, in a lodging game such as the one to be described in this article, this could mean competing as companies and therefore, competing through brands such Hilton vs. InterContinental vs. Marriott vs. Starwood, etc…

The trend in training simulations and games is to make them more exciting for employees. “Fun and employee training” are not usually words that companies use in the same sentence. In fact, one author noted that “much of e-learning is e-boring, but several computer training companies are aiming to lighten up the learning process with games and simulations that are anything but dull” (Phipps, 2003). The simulations do not have to be overly exciting (but could and should be) and focus on an employee’s ability to learn and grasp as much material as possible. The game must be learner-centered, enjoyable, and have measurable learning outcomes. Regardless of the format, games and simulations have become standard fare for trainers and add to the fun and entertainment value of training programs in business and education.

Games in Education

Traditional educational methods have not focused on games and simulations, but have primarily stressed lectures (often with electronic slide presentations as support media), job shadowing in practical fields such as hospitality and education, and case studies as standards. One could argue that higher education was originally designed to help students learn the body of knowledge available in a field included within the theoretical framework developed in a specific content area. However, higher education today, particularly in management areas, is more practically oriented and considers the main features of a competitive economy. Therefore, students need to be stimulated to apply creative thinking during their development processes. As Allin and Christie (2002) noted, theory, practice, and reflection must continuously be linked to provide an actionable learning experience compatible with John Dewey’s notion of experiential “learning by doing” (Dewey, 1938) and games may offer opportunities to do just that, learn by doing.

The use of games in the college classroom is a collaborative technique when the games involve structured tasks monitored by instructors as a way to improve learning and social interactions (Rau & Heyl, 1990). According to one scholar, educational games can increase student interest, motivation, retention, and the use of higher order thinking skills (Hogle, 1996). Research has also indicated that games provide insights into the realities of others and the moral and ethical implications of decisions (Dorn, 1989). Using a game-based pedagogical model, one researcher found that authenticity, collaboration, and learning by doing were the major benefits of effective educational games and that games may help make complex educational concepts more approachable to learners (Kiili, 2007). Not surprisingly, in a study of game use, researchers found that non-computerized games and role plays were the most common types of games used in education (Lean, Moizer, Towler & Abbey, 2006). However, some simulations are popular, such as the Beer Game originally developed over 40 years ago to help management students learn about supply chain management (Forrester, 1961) and analyzed by others over the years (Stern, 1989; Reyes, 2007). The Beer Game and its extensions have become some of the most common ways for students to learn about supply-chain management (Reyes, 2007).

Assessment of Learning Through Games and Simulations

Specifically, games that teach also need to be games that test or assess knowledge and skills and fortunately, serious games can build on both (Chen & Michaels, 2005). Playing games as part of a course can be fun for all involved, but one of the primary components of educational and training experiences is assessment of student learning often via testing of student knowledge. As games and simulations move into classrooms around the world, on computers and video game consoles, educators who use serious games will continue this tradition of testing (Chen & Michaels, 2005). The simplest form of assessment is completion assessment such as asking: “Did the student complete the serious game?” In traditional teaching, this is equivalent to asking, “Did the student get the right answer? Or “Did the student finish the assignment?” Since many serious games are simulations, this simple criterion could be the first indicator that the student sufficiently understands the subject taught. Note that this is not the same as asking, “Did the student attend every lecture?” Because serious games require interaction by the students with the material, completing the game could signify more learning progress and comprehension than passively attending lectures in a typical classroom setting (Chen & Michaels, 2005).

Another form of assessment in entertainment games is scoring. Many games even offer comparisons between players with high score lists. These high scores can be a source of bragging rights for the player, but more importantly, the scoring system teaches the player what is important within the game. A positive score indicates a good choice, a negative score a bad choice, and no score at all indicates that the attached action is probably unimportant. Though few classrooms stress the level of competition seen in most video games, the similarity to the posted test grades is unmistakable. In the same way, the education strategy of “teaching to the test” clearly identifies to the student what is important to learn and what can be ignored just like in-game scores (in-game scores, referring to strategies for attaining the highest score
learned from playing a game and the highest scores are posted in the game as a goal for other players; do in entertainment games (Chen & Michaels, 2005). In addition, Williams and Klass (2007) argued that there are ‘hard’ measures for success in games in business such as profitability and ‘soft’ measures such as observation of team dynamics and problem solving. It appears that games and simulations offer opportunities to assess a number of skills as well as a participant’s content knowledge in a variety of fields, and as the following discussion reveals, hospitality is no exception.

**Games in the Hospitality Classroom**

Games and simulations are used in hospitality education and can be viewed as forms of active learning. For example, active learning, specific to tourism and hospitality includes simulations, such as HOTS, BYOB, and reservations systems; and labs, such as food production, table service, and housekeeping; as well as games that simulate travel industry functions (Zapalska, Brozik & Niewiadomska-Bugaj, 2006; Zapalska, Rudd & Flanigen, 2003). Further examples of active learning that can be adapted to hospitality and tourism classes include:

- assigning service-learning projects (such as functioning as an event coordinator for a non-profit organization or volunteering at a soup kitchen),
- utilizing games like Jeopardy with tourism questions, including integrating the use of a Personal Response System in class (aPRS is a handheld device students can click to answer questions much like they poll the audience on “Who Wants to Be a Millionaire”),
- watching videos on guest services and completing corresponding worksheets,
- writing reflective journals or papers as a part of an internship or assigned to students after a tour or field trip, and
- assigning a capstone class to conduct a feasibility study for a local restaurant.

Or, it could be as simple as stopping a class lecture every 15 minutes to allow students to respond to questions (Wolfe, 2006).

Simulations may be very useful in hospitality courses and, for example in the lodging field, can bring the complexity of the hotel business into sharp focus in a classroom (Roberts, 2007). Through a simulation, students can begin to grasp the concepts and coordination needed in the hotel development process, the interaction between the market in which the hotel is being developed, and the demand for room nights for the subject property, including brand and franchise agreements. HOTS is a popular computer-based hospitality teaching tool that uses the integrating approach to simulations in which teams operate a service business (a hotel) in a dynamic and competitive environment, making decisions in accelerated real-time and analyzing results from comprehensive management reports and market feedback (HOTS, 2007). Through HOTS, students simulate the operation of a mid-sized hotel and are required to make decisions for a number of fields such as room rate, yield management, price setting for food and beverage products, advertisements, and capital investments for the improvement or expansion of the facility. Participants must also analyze the market situation based on the market information given by the program or the administrator. The results of the students’ actions are shown on financial statements, and consequently the participants can develop their practical accountancy skills.

Assessments used for a HOTS based course can be spread over 12 weeks of a 14 week of term, leaving only Week 1 for introductions and Week 14 (student exam week) without any assessable item. The negative aspect of this is that the assessments are time-consuming, both for students to prepare, and for instructors to correct and provide feedback to the students. There is almost no break in the term and a common comment on the course feedback form has been students asking the college to add credits for the module, as it is more challenging than other modules in the same term. It is a positive sign that the students have not, as a rule, been asking for less work within the unit, but rather to keep the current content, while at the same time raising its value in credit terms.

**Adaptations of Monopoly in Educational Settings**

The game developed and piloted in this article was not a simulation like HOTS, but instead a rather realistic adaptation of a Monopoly game. Many organizations and educators have used the Monopoly game as a template for the creation of their own game. For example, the National Park Service put together its own version of a Monopoly game with names like Yosemite and Yellowstone replacing Boardwalk and Marvin Avenue (Smith, 2008). Adaptations of Monopoly for educational purposes include Mnemopoly, a game for psychology courses (Schoen, 1996), and Sociopoly, a game that is set up like a regular Monopoly game, but teams have different resources at the beginning of the game, providing students with insights into social inequalities (Jessup, 2001). Variations of Monopoly are abundant and some notable examples follow.

In a particularly lucrative alternative to the traditional Monopoly game, David Colbert of Oshkosh, Wisconsin came up with the idea of convincing every business in Oshkosh to put its name on the game. Laurence (1985) explained that Colbert described the game in the following terms, “I thought what if every name on a game like this, were an Oshkosh business?” That week he drew up a prototype, pasting the logos of local firms on a board. “Rather than the familiar Atlantic City streets, his board featured such haunts as Butch’s Anchor Inn, Prange’s Department Store and First Wisconsin National Bank” (Laurence, 1985). Colbert made quite a profit from the game and did it by convincing local companies to pay him to get into the game. It only took him five weeks to sell out every spot on the game at an average of 5,000 dollars per property. Six months later he was marketing his own version of the game that he called Heritage of Oshkosh. Parker Brothers brought a lawsuit against Colbert, but lost the lawsuit and he was able to continue making his game. He then sold the game to other towns such as...
Denver, Houston, and Louisville. "Businesses pay anywhere between $200 and $3,000 for the privilege of lending their names, phone numbers and a short bio of an ad copy to the board and the title deeds" (Laurence, 1985). Colbert later became the owner of Oshkosh-based Citi-games of America and paid himself a portion of the profits he received from the game.

A German economist named Mario Fischel made a rather realistic game implementing rules similar to those of a Monopoly game. Fischel explained his game in the following manner:

"Players from age eleven and up try to build on an initial one hundred thousand dollars stake by investing in real estate, gold, foreign currencies, stocks, bonds and mutual funds. Investment decisions hinge on predicting the impact of economic and business events found on "News Flash!" cards bearing pronouncements like: "In the face of mounting inflationary pressures, the Federal Reserve Board sharply tightens monetary policy. The player reacts by revising his investment strategy" (Wiener, 1989).

This game is more realistic than some because major issues that occur in the real world happen in the game and can influence a player's investment. Another component that is different about Fischel's game is that players can get tested through the use of so-called "knowledge" cards. "Players engage in learning basic investing and economics via the game and are tested through "knowledge" cards. These cards allow players to bet money based on answers to multiple-choice questions. Wild cards add a touch of humor and offer up verbiage like the following: 'Those horrible paintings in your garage... are worth a fortune; collect three thousand dollars" (Wiener, 1989). Fischel's game is similar to the Wall Street Game of Wellesley, Massachusetts. In that game $125 will buy a player a fictitious brokerage account containing $500,000. The money is not real, but players can use the real stock market to play the game.

The Game Project

The game that is the primary subject of this article was based on an adaptation of the classic Monopoly game and was developed to help students learn the lodging industry and property development knowledge in a creative way that would engage students in the learning process. Anther goal of the game included teaching students to make decisions in a competitive lodging business environment. As part of the game preparation process, the ability to compete effectively in the hospitality business was discussed as one of the learning objectives of the game. For example, students were alerted to the following: "Competitive advantage, whatever its source, ultimately can be attributed to the ownership of a valuable resource that enables the company to perform activities better or more cheaply than its competitors" (Barney, 1991, p. 120).

Students were also presented with the concept that to be sustainable, a competitive advantage should be difficult to imitate or substitute (Barney, 1991). Additionally, students were introduced to other points about competitive business environments including that firms sustain competitive advantage when their competencies possess strong causal ambiguity because competitors are less likely to identify or understand such competencies well enough to imitate them (King, 2007). For instance, students were shown that competitors found it difficult to imitate Starbucks' unique store atmosphere and branding competencies and, as a result, Starbucks sustained its competitive advantage (Michelli, 2006). Issues such as these were introduced to students through discussion and exercises dealing with brand image and value as it pertains to average daily rate (ADR), occupancy, and revenues per available room (REVPAR).

This game development project was tied to a course called Property Planning and Development and students were given the following guidelines to direct their game development process:

- Focus on lodging properties; limited service, mid-scale, and luxury development
- Play the game in teams
- Accompany moves with lodging development questions and "risk cards" to enhance the learning process
- Design the game to be oversized so that it can be displayed on tabletops and on a floor
- Use player tokens that represent local attractions and allied lodging industry operations
- Change railroad spaces to alternative transportation such as bus lines and economy air carriers (e.g. Southwest, Jet Blue etc… )

These guidelines were developed to align with the existing course goal and objectives stated below:

Goal:
- To develop management thinking and decision making strategies through relevant discussion, exercises, reading, assignments, and group projects.

Our objectives in this course are to:
- Identify and discuss current events and trends in the hospitality industry,
- Explain the impact of external publics on the hospitality industry,
- Apply hospitality decision making data to management decision making
- Demonstrate effective use of management decision-making tools,
- Simulate the decision making process utilizing these tools.

The use of the game development process and playing the game itself after it was created were expected to provide students with a hands-on experience to stimulate discussion, act as a catalyst for questions, allow students to apply what they have learned in the classroom, and hopefully enjoy learning.
General Learning Outcomes
In preparing for this learning opportunity, general learning outcomes were identified as:

- **Knowledge**: Students will comprehend and use hotel and lodging development concepts and terminology in the class and in completing actions in the game.
- **Skill**: Students will calculate decision making tools such as average daily rates (ADR), occupancy, mix of demand, penetration rates, revenues per available room (REVPAR), and other decision making tools.
- **Attitudes/behaviors**: Students will be able to utilize learned tools and make decisions using lodging and market data introduced in the game to maximize their equity position. Games also have a focus on effective skills, i.e. interpersonal skills and group processes. Participants can learn about cooperation and competition, receive data about how they are perceived by their peers and practice their leadership and following skills (Berger, 1981).

Instructional Objective
The following instructional objective guided the use of the game as a learning tool.

- **Performance**: Students will participate in the hotel development game and make informed development decisions based on market, introduced information, and competitive decisions.
- **Condition**: Students are limited to the rules of the game, specified dollar allocations, and game banking procedures.
- **Standard**: Students will be judged on their performance continually based on the greatest amount of cash and real estate equity that a team accumulates.
- **Repetitions**: The learning opportunity using the game will be set up for the entire semester. Students will play the game continually throughout the semester. Each time the teams play, the teams will pick up where they left off during the previous play time.

Student Developers
A team of seven students researched and developed much of this project with the instructor as partial fulfillment of a course requirement at a large, public, urban university. The students were hospitality management majors and each brought different skills to the project. For instance, one student focused on real estate and the other on lodging brands, franchises, and operations.

Markets
As previously noted, this game was adapted from Monopoly and developed around the local market and therefore, revised from the traditional Atlantic City Streets to the attractions and landmarks of the city of Memphis, Tennessee. Landmarks highlighted included Graceland, the Memphis Zoo, the Pink Palace Museum, and others. Variations in the game were considered to reflect how shifts in demand for room nights change in the city. Changes from trade shows to corporate conferences and shifts from corporate to leisure business were also figured in as part of the evolving nature of the game to enhance its authenticity. Additionally, the game could be adapted for any market, and it is important to note that the game was intended to be dynamic and fluid so that it may be modified to introduce new concepts and industry trends as they become part of the lodging industry process and culture. Figure 1 shows the set up of the game and the rules that were developed specifically for this version of the game.

Object of the Game
The object of the game is to accumulate the largest asset value possible through all the transactions of the game. The complementary learning object of the game would be to analyze, synthesize, and evaluate hotel development decisions through enhanced research and data accumulation. Therefore, the game offered students a unique learning opportunity.

Similar to the original Monopoly game, real estate development is the key to success and in the learning game, instead of houses, players develop hotels and then blocks of hotels given their real estate purchases and other asset generating activities. As the game is played, students need to continually research and collect data to make the best property development decisions. As noted previously, the game would be played over semester and therefore, from one class to the next students can identify current market data that will help them make decision in the next segment of the game.

Figure 2 describes how players acquire the rights to streets for future hotel development. No other player (Hotel Company) is allowed to build on a street unless the owner sells the property. Throughout the game, players have the opportunity to buy, sell, and collect encroachment fees from other players. The person or team with the most money (equity) at the end of the game—wins! Players are reminded that they represent hotel companies that want to saturate the Memphis market with their hotel brands; these may be limited service, full-service, or luxury hotels and the goal is to dominate the market.

Pilot Games
After the initial development of the game and its rules, an oversized game board and tokens were designed and a pilot game was conducted to investigate how the game would be played and what issues or hurdles might be encountered by players. Seven students, including the students who completed the game development project, played the game for approximately three hours. Several changes were made to the final product based on the trial run of the game. For example, the amount of money that each team or player was given was increased from one million to three million dollars. The reason for this was that it became evident that without significant initial cash that the players would not be able to buy property until a great deal of time had elapsed and therefore, the game would lag. Brands and franchising were some of the topics that were brought up by students during
Banker: Banker rules are the same as in a standard monopoly game except for the dollar amounts. A player is designated banker. The Bank pays out incentives for future development, “... as well as collects all taxes, fines, loans and interest, and the price of all properties which it sells and auctions.” If the Banker runs out of money; they may issue more.

Play: The Banker rolls first. Following the banker, the other player’s roll the dice to see who goes first; this is determined by the highest total number displayed between the dice. Every player starts at the “GO” marker. According to the space which his token reaches, a player may be entitled to buy real estate or other properties, or be obliged to pay rent, pay taxes, draw a Tiger Box or Risk card, ‘Go To Jail’, etc…

“GO”: Every time the player passes the “GO” marker, they are entitled to collect $200,000 from the bank for future acquisition and development of real estate.

Buying Property: Whenever a player lands on a street that has not been purchased, they have the option of buying the rights to the street. Rights include: collecting encroachment fees from other hotel companies (players) and future development of hotels. If the player opts not to purchase the development rights to the street, it is then auctioned off to the highest bidder. Highest bidder gets the street rights certificate. The original player that landed on the street can be included in the auction. Bidding starts at any price. An example of street rights is included below.

Encroachment Fees: When a player lands on a street that is owned by another player, they must pay an encroachment fee stated on the street rights certificate. This fee states that you tried occupying a piece of the developer’s street; therefore, you are responsible for paying a penalty.

Tiger Box & Risk: When landing on one of these two spaces, the player must take the top card from the designated box, follow the instructions, and then place the instruction card at the bottom of the stack. These cards represent deal making scenarios; some successful and some not so successful.

Property Tax and Insurance Premium: When a player lands on the property tax marker, they must pay either 10 percent of their cash or $50,000. This tax goes to the Bank. When a player lands on the insurance premium marker, they must pay $60,000 to the lottery.

Jail: Identical to original rules.

Lottery: When the player lands on the lottery, they are given all the money that has been collected from every player that previously had to pay an insurance premium, damages, etc… The only exclusion is they do not receive tax money or cash from purchase of street rights.

Hotels: Depending on the streets you own, rights to will determine how many and what hotel-type you are allowed to develop. It is important to note that there should always be restrictions for how many hotels of the same brand are built on one street. As a developer, you do not want to over-saturate the market with your brand. You will also find that if you build too many of the same hotel that you are only competing with yourself.

Other Property Ownership: During the game, you are also given the right to purchase other businesses outside of the hotel industry, such as: percentage ownership in taxi and limo services, trolley services, and Greyhound Buses. You are also eligible to purchase an ownership interest in Memphis Light Gas and Water (MLGW) and Comcast Cable. If a player lands on your ownership interest in one of these markers, they must pay you the listed amount.

Bankruptcy: “A player is bankrupt when he owes more than he can pay either to another player or to the Bank. If his debt is to another player, he must turn over to that player all that he has of value and retire from the game.” (Byrd and Poe, 2006)
the trial game. These were recommended as purchase premiums for hotel development, and in the context of a course, these topics would then be discussed and reviewed during class time with all students and the instructor.

Next, the game was introduced to industry professionals at two meetings; SKAL International (an organization for hospitality and tourism professionals) and the Metropolitan Memphis Hotel and Lodging Association (MMHLA). At the SKAL meeting, the game was presented and explained to industry professionals by students. Students responded to questions and noted areas of concern raised by those attending the meeting. At the MMHLA meeting, association members and students played a number of rounds of another pilot game and student players were teamed with local lodging operators and a lodging industry consultant. Industry professionals asked questions of the students about the intent of some aspects of the game and sought clarification of industry content and how that content would be used in the game. Industry professionals offered suggestions for additional information to be introduced to the game. From the game trials, issues relating to course content regarding terminology, operating ratios, branding decisions, and other decisions were identified. Additional trials of the game were conducted by the students to ensure that there would be minimal delays and lags while playing the game. An image of one of the pilot games can be seen in Figure 3.

**Faculty as Facilitator**

Faculty members play a key role as the facilitator of the Monopoly-based hotel development game, becoming the keeper of the rules and in part a source of knowledge throughout the game. It is not enough to declare that “games teach” and leave it at that. Teachers cannot simply hand out a game to a group of students and trust that the students have learned the material (Chen & Michaels, 2005). Serious games, like every other tool of education, must be able to show that the necessary learning has occurred and instructors need to facilitate the learning process. Therefore, when preparing for the game, instructors must prepare themselves for roles as facilitators. During game play times, a faculty member needed to work with the players and keep the entire class engaged in the process. The instructor could do this through questions and coaching on hotels, brands, and the financial implications of decisions. However, as in role playing, the faculty member was not an actual participant in the game and students were allowed to reason and make their own decisions as part of the learning process. The faculty member also documented content based and procedural game issues and problems to process with students at a non-game time.

**Course Use of the Game**

The game was intended to be set up for an entire semester. For example, each week the class and its teams could play several rounds of the game. The players progress around the board and while doing so answer questions and note questions for which they would need to discover the answers. These questions could then be brought to the classroom for discussion and integration into the lecture or lesson for that day. Ultimately as part of their final grade, teams could play for a set amount of time and winners of each round could be determined until only two teams remain. The winning teams could then face off in a timed version of the game.

As informal assessment, students in the course where the game was piloted were asked their impressions of the learning game. At first, they were skeptical and did not see the game as learning. They quickly realized the amount of knowledge and attention to detail that was required to succeed in the game. Their focus shifted from trying to understand why they were playing a game to a more competitive and strategic outlook. They began to see the need for information and search for data to use in the game in order to proceed and succeed.

For the purposes of the game, the team that was ahead at the end of the semester would be the overall winner. However, formative evaluation of success throughout the semester could also provide a learning opportunity for students. Each week there could be a team leading or winning the game much like the yellow jersey in the Tour du France Road Race. Discussion or debriefing the ongoing game with the students would allow students to evaluate their own decisions and therefore, enhance their learning.
To use the game in a course with an enrollment of 24 students there could be 6 teams of 4 students. In the initial stages of the game implementation there was no intention of having a set breakdown for second, third, fourth etc... finishes in the game as they pertained to grades, but the instructor could keep a log of student performance, readiness, and team participation. A rubric on team participation and peer evaluation developed by the instructor would also be completed as part of the game assessment process. Additionally, the instructor would need to conduct team meetings to discuss strategy and results to date. In terms of a class grade for the course where the game was piloted, success or lack of success in the game comprised only 15 percent of a student’s total grade. To evaluate the game itself, students were provided a rubric that noted the game’s point total (150) and the following areas of focus:

- Research; Identification of needed data to make market decisions, sources noted (45 Points),
- Decisions and Justifications; Buy or no-buy decisions, documentation of reasoning for development strategy (45 Points), Final Standing vs. Competition; Total asset accumulation 60 points, 1st place 60 points, 2nd place 50 points, all other teams (40 points).

The final winner(s) of the game was defined as the team that amassed the greatest amount of equity at the end of the game. In addition to their letter grade on the game, students on the winning team would also receive a “prize” provided by the instructor for their achievement.

One of the questions asked was whether the game provided a realistic view of the hotel development process and the initial answer was positive. However, students who piloted the game understood the differences between a game and actual hotel development. Also teams that were not experiencing success in the game sometimes became frustrated and in the pilot games it became evident that frustration turned into heightened competition. Nevertheless, students liked the fact that there was a “winner” of the game and students, industry partners, and the instructor found value in using the game as part of the course. The value of the game as a learning tool can be tied to students completing assigned readings and seeking out and using information pertaining to hotel and lodging development topics identified through game play. For example, when student players land on “Tiger Box and Risk” they are presented with current lodging development scenarios that may require additional market research before the next session of the game.

In traditional assignments, students might, for instance be told to, “read chapter six and there will be a quiz in the next class”, and students are compelled to read the chapter in order to succeed on the quiz. The use of the game made the reading assignments and research needed to succeed in the game “more” necessary from the student’s perspective because they could not succeed in the game without that knowledge. It can be argued that their desire to achieve in the game drove their learning.

It was evident in the take home final exam in the course where the game was piloted that students had done more research and more of the required reading than students in previous classes where the game was not included. In a preliminary assessment of the game, effectiveness grades in two classes were compared on the final examination. In two semesters, one class without the game and subsequently a class with the game, grades on the final examination improved. Examination assessment and evaluation of the quality of research and citations clearly resulted in improved grades. Therefore, one might argue that grade improvement is related to student needs for success while playing the game and this deserves further investigation. The class without the game had assignments for similar research, but extensive research was not noted in their examination answers. Between the two classes, there was a 5%-7% percent increase in final exam average grade and all students’ grades improved. In the course with the game, there were 10% more A’s, 8% more B’s, and conversely 20% less C’s and 7% less D’s than in the other class without the game.

The issue of the use of games and learning assessment from games needs to be further explored in future research studies. However, this positive preliminary assessment is encouraging in terms of the use of games as teaching tools.

Figure 3

Pilot Game
Implications for Learning and Suggestions for Implementing Games in the Classroom Experience

The pilot games and presentation of the game to industry learning partners clarified that the game could be a dynamic learning tool that maintains a basic format yet evolves as the lodging industry changes and new innovations, products, and systems are implemented. In an era when many students are oriented towards games or simulations such as video games, Xbox etc… it is logical to utilize games as learning tools. This game can be used to illustrate lodging segments and focus on brands, amenities, and markets and allow learners to integrate financial decision making tools and development costs with the decision making process.

In lower division classes, less complicated versions of the game could be developed to illustrate simpler processes and concepts such as identifying service levels and segments. From there, learners could progress to fully competitive market feasibility and lodging development issues. An example of a planning model for developing a learning game, using Bloom's taxonomy (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956) and similar to the one developed in the project described in this paper, is offered in Figure 4.

Games such as the Monopoly based hotel version detailed here can be used successfully in education if careful consideration is given to their development and application in the classroom. For example, the development of the game described here mirrored the following suggestions offered in a conference presentation outlining tips for successful board games:

• Be creative—Think out of the box
• Make it a learning tool
• Give it a professional look
• Develop a good set of rules (Harris, 2003).

Further recommendations include having catch up features, emphasizing fun, creating different levels of difficulty, making sure that the rules are easy to understand, and making sure players understand how to set up, play, and win.

Returning to the main question, “Can a game or simulation be an effective learning tool?” the answer is clearly yes. A game such as the one discussed in this article could be used in multiple courses with different foci or in a single course to emphasize lodging development issues. A major benefit of this game was that it offered variety in terms of teaching methods and provided a means of developing the skills of systematic inquiry (Febey & Coyne, 2007).

Management games such as this adaptation of Monopoly can suit the goals of a hospitality course and when properly orchestrated by an effective facilitator can help participants develop:

• the cognitive knowledge required to understand analytical content of management,
• affective understanding critical to personal and interpersonal insight, and
• the behavioral skills needed for effective presentation of self (Berger, 1981).

The use of educational games has benefits as discussed earlier and one of the positive effects of games may be realized when instructors consider how games can be used to address components of scholar Howard Gardner’s theory of multiple intelligences. In Gardner’s seminal work, *Frames of Mind: The Theory of Multiple Intelligences* (1983) he proposed that people possess a unique blend of seven intelligences that include: linguistic, logical-mathematical, bodily-kinesthetic, musical, spatial, interpersonal, and intrapersonal. In a later work he added that people also have variations on naturalist, spiritual, existential, and moral intelligences (Gardner, 1999). An entire paper could be written about games in relation to Garner’s multiple intelligences, but that is a topic for another time. Suffice it to say that games and simulations such as the one described here can provide students opportunities to use and develop multiple intelligences by allowing students to make decisions, think creatively and strategically, collaborate, actively participate in their own learning, and strive to produce high quality work (Infed, 2008).

Conversely, games and simulations can be very time consuming and potentially difficult to construct. The subject of this discussion was a learning game that comprised a hybrid of a Monopoly game and a manual simulation. It was based on hotel development reality, but also was a contrived game with a structured set of rules. The game took time, effort, and much thought to develop, pilot, and implement and those factors need to be considered carefully when incorporating a game into an educational experience.

Three strategies to improve student development and support through games and simulations are: a) shifting expertise to intelligent mission-critical systems b) using enhanced learning techniques, and c) providing learning at point of need (Mihaliak & Reilly, 2001). Shifting to mission-critical systems means that information and business formats must be transferred from the individual to the business system being utilized. Enhanced learning techniques (games and or simulations) allow participants to retain more information from educational or training programs and therefore, a game and or a simulation will enhance student retention of material. The strategy of learning at “point of need” entails delivering information to learners where and when it is needed. This strategy creates more efficiency in the learning process and ultimately in the workplace by allowing learners to learn at a more convenient and steady pace. Therefore, it can be argued that games allow learning throughout the playing process and enable students to learn from decisions in a formative sense and via summative outcomes.

Conclusions

Through this game development project, students and the instructor found that a game could be used as an effective, entertaining, process-oriented learning tool for adult learners. Several decades ago
A Planning Model for Learning Game Development

**Course Content:** Lodging feasibility and property development

- **Course objectives:** To develop management thinking and decision making strategies through relevant discussion, exercises, reading, assignments, and group projects. Identify and discuss current events and trends in the hospitality industry, the impact of external publics on the hospitality industry, hospitality decision making data, management decision-making tools and simulate the decision making process utilizing these tools.

- **Framework:** Bloom's Taxonomy; application, analysis, synthesis and evaluation levels

- **General Learning Outcomes:**
  - **Knowledge:** Students will learn and use hotel and lodging development concepts and terminology in the class and in completing actions in the game.
  - **Skills:** Students will calculate decision making tools such as; average daily rates (ADR), occupancy, mix of demand, penetration rates, revenues per available room (REVPAR) and other decision making tools.
  - **Attitudes/behaviors:** Students should be able to utilize learned tools and make decisions using lodging and market data introduced in the game to maximize their equity position.

- **Lesson Planning: Method—Game and simulation hybrid**

  - **Performance:** Students will participate in hotel development game and make informed development decisions; based on market, introduced information and competitive decisions.
  - **Conditions:** Students are limited to the rules of the game; specified dollar allocations and game banking procedures.
  - **Standards:** Students will be judged on their performance continually based on the greatest amount of cash and real estate equity that a team accumulates.
  - **Repetitions:** the learning opportunity using the game will be set up for the entire semester. Students will play the game continually throughout the semester. Each occurrence; the teams would pick up where they have left off in the previous play time.

- **Game Play:** Interactive teaching metod; Goals, objectives, game rules, faculty facilitation; Pilot game, Classroom use.

- **Assessment:**
  - **Game**—Learning outcomes; revision and update to be consistent with market conditions
  - **Student**—questioning, game financial results, analysis of the decision making processes.
Knowles (1973) emphasized that adults are self-directed and expect to take responsibility for decisions and therefore, adult teaching methodology must accommodate this fundamental aspect. In practical andragogical terms, teaching needs to focus more on the process and less on the content being taught. Strategies such as case studies, role-playing, simulations and games, discussions, and self-evaluation are considered most useful (Wickens & Paraskevas, 2003). Also, according to the American Hotel and Lodging Association, research has indicated that students and learners in general remember:

- 10% of what they read,
- 20% of what they hear,
- 30% of what they see,
- 50% of what they see and hear,
- 70% of what they talk over with others,
- 80% of what they use and do, and
- 95% of what they teach others (AH&LA, 2006).

Therefore, it can be argued that a game or simulation can potentially represent an 80% learning opportunity for students and if they teach the game to others that goes up to 95%. However, as stated earlier, while games can be fun they need to be developed and controlled to emphasize learning. So, while this game matches the potential enjoyment for learning with rigorous content and positive results for all learners, instructors intending to use games should have carefully defined course objectives so that the merits of gaming might be contrasted with other methods (Lanfg & Dittrich, 1982).

Future research of the impact of games and other interactive instructional tools on student engagement, motivation, and use of higher order thinking skills would expand knowledge in this area and provide educators with more tested options (Febey & Coyne, 2007). For the game discussed in this paper, as the use of the game progresses it would be possible to compare students’ learning progress in classes using the game with that of students not using the game through quizzes or other forms of assessment. Additionally, an idea discussed with industry partners was to create a competition in which industry partners would participate to strengthen the industry connection to learning. To date this idea has not been implemented, but hopefully it will become a reality in the future.

This game, like others used in education and training, may be poised to transform the way educators teach and trainers train students at all levels. Education and information, skill training, and even political and religious beliefs can be communicated via board games and video games, but according to some these games and repurposed game technology, collectively called “serious games,” have yet to be fully embraced by educators (Chen & Michaels, 2005). Perhaps as more educators develop and implement serious games in their courses, games will become better integrated into higher education in general and into hospitality education as well.

References


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