

**”Shall We Play A Game?”:
Incorporating Principles of Gamification in the business classroom**

Abstract:

Gamification is the use of game design elements in non-game contexts. In recent years, principles of gamification have been incorporated in management courses in order to improve student engagement, motivation, and learning. In this symposium, presenters will share examples of gamified activities and exercises that have been used in the management courses they teach. Session attendees will participate in a brainstorming activity to come up with creative ways to incorporate gamification in their courses.

Session Type: Symposium

Duration: 60 minutes

Keywords: Gamification, Management Education, Pedagogy, Andragogy

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Introduction

An area of concern for management educators is coming up with innovative ways to engage students in the learning process. Traditional forms of instruction may not serve all students well (Sathy & Hogan, 2019), and in fact, traditional forms of instruction have been criticized by both students and educators in terms of effectiveness. One of the common reasons for this criticism can be centered on incongruence between teaching styles (pedagogy and andragogy) and learner preferences (learning styles). It seems as if the trend in the recent literature regarding pedagogy and andragogy, especially within the area of management education, is to move from passive learning models to more active learning models.

To address this issue, management scholars and practitioners have suggested that principles of gamification could be a potential solution. Through the use of broad game elements such as leaderboards, badges, levels, and points (Lister, 2015), engagement and learning within the classroom can be increased and most likely in an enthusiastic and fun manner for the students (Muntean, 2011).

The purpose of this symposium is to present various examples of gamification and exercises that have been successfully used in management classrooms. It is our hope and goal that by providing examples of what has worked in classrooms, that it will encourage session attendees to think outside the box and to consider ways to incorporate gaming elements within their courses. In addition, it is our goal that through an in-session brainstorming activity with other management educators, session attendees will leave with a repertoire of various techniques that they can incorporate within their courses as needed.

Theoretical Foundation and Teaching Implications

While there is no universally accepted definition, gamification is broadly defined as using the elements of game design in non-game contexts (Deterding, Khaled, Nacke, & Dixon, 2011). By using game thinking and game design elements, improvement in learners' engagement and motivation can occur (Dicheva, Dichev, Agre, & Angelova, 2015). One of the reasons gamification is effective is because gamification typically incorporates a learning principle called Situated Meaning (Gee, 2007) which refers to giving objects specific and unique meaning within a game in order to help students make connections. Incorporating gamification elements in course instruction has been shown to increase student engagement (Armier, Shepherd, & Skrabut, 2016; Gamification in Education and Libraries, 2015; Veltsos, 2017).

Three important factors should be considered when it comes to the relevance and importance of gamification to effective teaching and learning in the field of management. First, gamification is growing in popularity specifically in the context of education. Second, the literature discusses that gamification has the potential to improve student's learning (Dicheva, Dichev, Agre, & Angelova, 2015) in addition to other aspects such as motivation, participation, and achievement (Aldemir, Celik, & Kaplan, 2017). Third, implications regarding generational differences in learning styles should be considered as well. Students in today's business schools are usually from a different generation than those providing the instruction. Research indicates that this up and coming generation of business students prefer instruction that is more engaging and active than perhaps the types of instruction that teachers are traditionally used to providing. Incorporating elements of gamification in management courses could be a solution to bridging this generational gap.

Symposium Overview

During this symposium, presenters will provide an overview of various gamification activities and exercises that have been utilized in their respective management classrooms. A full description of each activity and exercise to be shared during this symposium can be found in *Appendices A, B, C, and D*.

Session Description

This symposium has been designed to fit a 1 hour (60 minute) time slot if selected to be presented at the conference. The anticipated timeline of the symposium is indicated below:

- **5 minutes: Gamification overview.** Session attendees will be introduced to principles of gamification and various types of game elements.
- **20 minutes: Symposium Presenters.** Each presenter will provide a brief overview of the activity and exercise they have used in their courses (see *Appendices A, B, C, and D*). Session attendees will be provided these as handouts.
- **25 minutes: Group Activity.** Session attendees will be divided into groups, and each group will be tasked with coming up with 5 ways to incorporate gamification in a) class lectures, b) team projects, and c) student oral presentations.
- **10 minutes: Sharing, Debriefing, and Closing.** Results from each group will be shared with all attendees. During this time, symposium presenters will provide additional insights for attendees to consider and will answer any questions about their individual activity or about the topic of gamification in general.

References

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Appendix A **“Market Share” Opportunity Points**

Activity/Exercise Title: “Market Share” Opportunity Points

Course: Business Analysis and Strategic Management

Course Level: Undergraduate Students

Overview of Activity: In the 2nd class period of this course, students are introduced to four questions that when answered and accounted for are most likely to lead to the development of a successful business strategy:

1. Where do we compete? (i.e. The attractiveness of a market)
2. What unique value do we bring in relation to our competition?
3. What resources and capabilities do we utilize?
4. How do we sustain our value once it has been achieved?

As a way to get students to think about these questions, students are divided into teams, and they are tasked with applying these questions to the college/university which they are current enrolled at for the purposes of growing the student population by 15% within a 5-10 year period. The deliverable is a 10 minute team oral presentation in a future class period.

As an incentive, a total of 500 “Market Share” opportunity points are available to be earned for this activity. Students are reminded that in a market, when firms offer new products or new services, the market can respond in various ways such as: a) rewarding all firms with approximately equal market share (in terms of purchases), b) rewarding only a few firms with market share (in terms of purchases) and ignoring other firms, c) rewarding only the top firm (in terms of purchases) and ignoring all other firms, or d) ignoring all firms due to no perceived value in the product/service offering. The “Market Share” opportunity points are designed to simulate that in the context of the class. The instructor (representing “the market”) allocates available “Market Share” points to teams based on the quality of their proposal. For example, if a team was awarded 155 “Market Share” points, each member of that team receives 155 “Market Share” points as an individual. It should be noted that while 500 “Market Share” points are available to be earned, the instructor does not have to give out all 500 points. This activity is repeated throughout the semester at the discretion of the instructor.

At the end of the semester, a student can “cash in” the total number of market share points they have earned through various projects and apply them to their final course grade,

Relevance/Relationship to the topic of Gamification: This activity relies on points as a motivator to encourage and incentivize student engagement and participation in the class and in teams.

Appendix B **The Best Example Contest**

Activity/Exercise Title: The Best Example Contest

Course: Organizational Behavior

Course Level: Undergraduate

Overview of Activity: This activity utilizes the principle of gamification to encourage students to apply the material to real-world examples. The activity is simple: students break into small groups and need to come up with an example of course concepts. Groups are encouraged to get creative and use video clips, memes, a short skit, a rap, etc. The groups will then present their examples in front of the class. Following the presentations, the class votes to determine which group presents the best example (students cannot vote for their own group). The group that gets the most votes will then get extra credit points. Students are encouraged to come up with their own strategy of how to win the most votes: will they appeal to emotions? Will they try to be humorous? Will they try to relate the concept to current events/popular media?

This activity works best when there are lots of different concepts that are related so that each group has its own concept. For example, the author of this activity uses it with perceptual biases (N = 10) and assigns each group its own perceptual bias. For fewer concepts, instructors might assign two different groups the same concept in order to maximize individual engagement with the activity (the smaller the groups, the greater the engagement).

This activity also is very valuable in creating memorable associations for students that help them remember the concepts. This is especially valuable when they are learning several concepts that are highly related.

Relevance/Relationship to the topic of Gamification: Students are motivated to come up with the best, and most memorable, example of their concept because the group that receives the most votes will receive extra credit points (I typically give 2 points on the upcoming exam). Extra credit points are a strong incentive for students to perform their best and compete with their classmates, and for instructors, can be used as a tool to get students to engage with the material.

Appendix C CEO Selection and Tenure

Activity/Exercise Title: CEO Selection and Tenure

Course: Current Topics in Management

Course Level: Undergraduate Students

Overview of Activity:

Purpose: To demonstrate the dynamics of the executive selection process, as students will have to make repeated, rapid-fire decisions about retaining or replacing the CEO of their companies.

Resources/Set-up: This is a group exercise that requires one instructional handout and the use of a blackboard or easel for keeping track of fictional resource allocation. Facilitator must select the “resources” to include and assign point values beforehand. The class will be divided into groups (corporations) with 3-15 people per group. Each corporation will have to appoint one **CEO**, one **Chairman of Board** of Directors, and one **Senior Vice President of Procurement**. If the team has more than three people, the others can choose to be employees or shareholders.

Scenario: On route to an industry retreat, your plane crashes in the Rocky Mountains. You are miles from civilization and have very limited supplies available. Several corporations are participating in this industry retreat, and each of you wants to keep as many of the supplies for your own group as possible. It has been decided that the only fair way to divide up the resources is for each corporation to rank the supplies in its order of preference. Each item will be given to corporation whose **CEO** has placed the highest value on that given supply. In the event that 2 or more corporations’ CEOs have placed the same value on a given supply, the then each Senior Vice President of Procurement from the tied teams will be asked to deliver a persuasive speech, detailing why his or her corporation should receive this particular supply. An external and impartial executive who serves on all companies’ boards of directors (the professor) will determine which VP makes the most compelling argument and award that company the given resource. In order to ensure that the VP presenting first is not at a disadvantage, all speechmakers will have to wait in the plane wreckage – the hallway – during one another’s presentations.

Winning: Although there is no one way to win, each resource has a secret objective value known only to the external board member. Once all resources have been doled out, the board member will tell you how many points you have received. Furthermore, the corporation that has the most resources, regardless of value, will get 5 additional points. Finally, all Senior Vice Presidents of Procurement will be asked to give one last presentation, in which they explain how the exact resources their team possesses will allow them to survive the longest. The team that gives the most compelling speech, as judged by the external board member, will have their resource point total doubled. The corporation with the highest score at the end will get rescued, given warm clothes, fed hot soup, and be rewarded with 5 extra credit points. The other teams will freeze and/or get eaten by the Abominable Snowman.

Appendix D **The Restaurant Game**

Activity/Exercise Title: The Restaurant Game

Course: Various Management Courses

Course Level: Undergraduate and Graduate

Overview of Activity: This game is a gamified example of the Fallacy of the Commons problem that comes into negotiation and decision making contexts. The fallacy (alternatively referred to as the tragedy of the commons) was first proposed by Lloyd (1833) and demonstrates a situation in a shared-resource system where individual users, acting independently according to their own self-interest, behave contrary to the common good of all users by depleting or spoiling the shared resource through their collective action. Lloyd illustrated this in a number of ways, including a shared pasture where cows from numerous families would graze. This pasture could sustain one cow per family, and even some extra cows. However, if each family added a cow, the pasture wouldn't be able to support these additions and all cows would suffer.

In the Restaurant Game, I have created an analogous situation where there are multiple restaurants in a town, and sufficient demand in the town to keep all restaurants profitable. Expansion is possible for each restaurant, however if each restaurant expands, all will fail. Each restaurant has a different cost and revenue structure and market share, as well as a different cost to expand (or contract) their market presence and capital level at the start of the game. They are also aware of the impact of any expansion on the overall market as well as their own business.

Students work in groups to determine the move for their restaurant group in the following time period (expand, contract, do nothing). If a group chooses to expand, they must pay the costs associated with expansion immediately, and wait for their new location to be built (a lag time).

There is also a restaurant association in town where each group sends a member once a quarter. Members may discuss their general plans as well as the general economy - this is effectively an opportunity for a multi-player prisoner's dilemma wherein each group has the ability to calculate that mass expansion leads to mass failure, but if only one group expands, that group benefits greatly.

This game usefully illustrates concepts in decision-making, negotiations and trust.