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In this issue:

4. IS Design Pedagogy: A Special Ontology and Prospects for Curricula
Leslie J. Waguespack, Bentley University

14. Teaching Information Systems Courses in China: Challenges, Opportunities, and Lessons for US Educators
Meg Fryling, Siena College
Jack Rivituso, SUNY Cobleskill

20. Progression of a Data Visualization Assignment
Joni K. Adkins, Northwest Missouri State University

27. Agile Preparation within a Traditional Project Management Course
Jeffrey P. Landry, University of South Alabama
Rachel McDaniel, University of South Alabama

34. Building I.S. Professionals through a Real-World Client Project in a Database Application Development Course
RJ Podeschi, Millikin University

41. Using a Multimedia Final Project in an IT Ethics Course
Elizabeth V. Howard, Miami University Regionals
David M. Woods, Miami University Regionals

47. A Longitudinal Analysis of the Reid List of First Programming Languages
Robert M. Siegfried, Adelphi University
Jason. P. Siegfried, Adelphi University
Gina Alexandro, Adelphi University

55 Edugamifying Media Studies: Student Engagement, Enjoyment, and Interest in Two Multimedia and Social Media Undergraduate Classrooms
Robert Bajko, Ryerson University
Jaigris Hodson, Royal Roads University
Katie Seaborn, University of Toronto
Pamela Livingstone, Ryerson University
Deborah Fels, Ryerson University

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Edugamifying Media Studies: Student Engagement, Enjoyment, and Interest in Two Multimedia and Social Media Undergraduate Classrooms

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Abstract

Gamification is an increasingly acceptable alternative to traditional classroom structures and practices that is based on the notion that games can be engaging to students. Gamification consists of applying game concepts such as challenges, rewards, and leaderboards to educational materials and courses. While gamification in the classroom is not new, there has been little research on comparing the same or similar gamification approach in different types of courses. To understand the impact of gamification on student engagement, enjoyment, and interest, two university-level undergraduate courses—one on multimedia and one on social media—from different teaching departments were similarly gamified and evaluated. Students found gamification to be a positive and engaging aspect of course. Competition, being able to gain experience points, challenges, and quests inspired students to take greater interest in the course, including seeking out additional materials. However, there was a difference in attitudes and expectations among gamers and non-gamers. Departmental rules, conventional thinking by others, and restrictions on content delivery methods acted as deterrents to gamified course development.

Keywords: Gamification in education, gamifying education, gameful design, game-based learning, engagement, social media, multimedia.

1. INTRODUCTION

Educational instructors have begun to explore the idea of gamification as an engagement strategy within their course syllabus (Hanhus & Fox, 2015; Cheong, Filippou, & Cheong, 2014; Iosup, & Epema, 2014; Barata, Gama, Jorge, & Gonçalves, 2013; Berkling & Thomas, 2013; Cheong, Filippou, & Cheong, 2013; Giannetto, Chao, & Fontana, 2013; Sheldon, 2011). Gamification is about taking typical game elements such as leaderboards and applying them to course content (Deterding, Dixon, Khaled & Nacke, 2011; Deterding, Sicart, Nacke & O'Hara, 2011). But designing gamified courses requires more than just taking gamified elements and applying to them course content: it requires strategic understanding of how certain elements can affect students' learning (Kalinauskas, 2014).

This research focuses on the gamification of two fourth-year, elective undergraduate courses within media studies: social media and multimedia. This paper is an expanded version of the paper presented at the Information Systems and Computing Education (EDSIG) conference (Bajko, Hodson, Seaborn, Livingstone & Fels, 2015). In this paper, we focus on initial findings for student engagement in the course material, interest in the course material, the learning benefits that came from student and professor's interests, the overall enjoyment of the course and the gamified elements, and some challenges that the instructors encountered in carrying out a gamified curriculum in different departments and with different kinds of students, particularly based on gamer status.

Engagement, Enjoyment, and Comprehension

Gamification was first used in marketing to drive engagement among customers (Ewing, 2012). Since that time, it has been used in many different areas, including, if not especially, education (Kalinauskas, 2014). By applying gamified elements to course work, there can be opportunities to encourage greater creativity and engagement in the classroom because students/players believe that they are a part of something greater than the course (Kalinauskas, 2014). Gamification has also been shown in healthcare education to increase students' comprehension of and confidence in course material (Shawaqfeh, 2015). This can translate into an increased willingness to actively engage with course concepts and activities, rather than feeling as though they are forced to complete course activities within given parameters (Cheong et al., 2014; Kalinauskas, 2014; Bruder, 2014). In particular, Bruder (2014) suggests that students like to be rewarded for their accomplishments in tangible, creative and challenging ways, similar to the way in which games operate. Another element of gaming that is commonly used in gamification is the social aspect, where players build teams, complete quests, and learn together (Giannetto et al, 2013). Through gamification, it is possible for students to find fun and challenging ways to engage with course content that allow them to enjoy themselves as part of a "game" while learning course material (Cheong et al, 2014; Kalinauskas, 2014). For detailed surveys of different examples of gamification that go into descriptions of specific gamification elements in greater depth, refer to Sheldon (2011) and Seaborn & Fels (2015).

Structure and Development

A major challenge when designing gamification for education is the limits imposed by the structure and rules implemented by the program department (Berkling & Thomas, 2013). Sometimes what professors want to do and what they are allowed to do are mismatched, which can result in a restriction on innovation and academic freedom and/or a disregard for departmental/institutional norms, depending on the point of view. Departmental norms may dictate grades being allocated in a specific way, for example with letter grades based on percentages, while gamification often means using alternative reward systems, such as experience points (XP) and badges.

Another major challenge is that people have different ideas of what gamification is and how it should be applied in the educational system (Berkling, & Thomas, 2013). Students with different backgrounds and/or expectations in gaming may have different understandings or about the course management or how games should be used. For example, if students believe that gamification means a free or open learning structure and high-quality visuals (similar to console games) when that is not the case, there can be a negative reaction towards gamification and the course (Berkling & Thomas, 2013).

Student expectations must be anticipated and recognized within the course structure for two reasons. First, so that there is flexibility in managing those expectations. Second, so that there can be opportunities for negotiation and experimentation within departmental curriculum management structures with the goal of

maximizing student engagement and learning. During course development and planning, questions such as "how will gamification applied in a specific course affect student engagement and learning, as well as the course learning objectives?" should be asked rather than simply applying arbitrary standards of course development.

Gamer vs Non-Gamer Students

When designing a gamification layer, understanding the needs and expectations of the students is key (Kim, 2015). Like gamers, many students have different motivations to be in class and may have different expectations for gaming or game elements based on their own experiences with games. Richard Bartle (1996) suggests that there are four main types of game player: competitors, explorers, achievers and socializers. To engage a wide variety of students, gamification elements, such as leaderboards and badges, need to appeal to different types of players, which can make the design process challenging (Bruder, 2014). Here are some examples: Leaderboards may be of interest to competitors and achievers but not to explorers or socializers. Having the opportunity to participate in a group or guild may appeal to socializers but not competitors. Asking students to find and use external resources to solve problems may appeal to explorers and competitors but not achievers or socializers.

Ideally, gamification elements applied to a course should appeal to all the different types of game player in order to be useful for a wide variety of learners. However, this makes gamification elements difficult to apply to education, and indeed it is not as simple as making students compete against each other and using a leaderboard (Bruder, 2014). Appealing to a wide variety of students with varied understandings of gaming and designing content that reflects that variety makes for a difficult design process that takes time and innovative thinking.

Content and Delivery

Content and delivery refers to what specific elements are created for students and what media are used to convey this content (Kim, 2015). As stated previously, a lack of console-gaming style visuals can be an issue for some students, but content style, gamification elements, and general motivation within the course can also be of concern (Berkling & Thomas, 2013). In addition to the different player types, there are also different learning styles. A typical classification of learning is: visual (learners like to have information presented visually/graphically), auditory (learners prefer to learn through listening to data), reading-writing (to read or take text notes to aid in learning), and kinesthetic (to learn through doing) (Prithishkumar & Michael, 2014). These are mutually exclusive categories and many learners embody more than one learning style in their learning patterns. As a result, how learning and gamification materials are presented must take into account these different preferences and not rely on a visual only medium for presenting or applying gamification elements.

In summary, designing gamification elements for the classroom is not as simple as presenting a leaderboard and encouraging students to achieve the highest score (Bruder, 2014). In order for a gamification approach to be successful, there needs to be many different elements taken into consideration, including engagement, enjoyment, comprehension, structure, audience, and the medium of delivery.

2. METHODS

The gamification and data collection of two undergraduate courses was conducted in the winter term of 2015 (January 12 - April 10); see appendix A for questions used. For the purposes of this preliminary paper, only descriptive quantitative data supported by select student and instructor commentary is presented.

Research Questions

We focused on the following research questions:

1) What were students' perceptions of and attitudes towards the gamification elements in terms of engagement, enjoyment, and course interest?
2) Was there a difference between gamers and non-gamers?
3) What challenges emerged for instructors implementing the gamified aspects of the course?

Survey Instrument

An online survey was developed and distributed to the three CMN 450 classes and the one ITM 445 class during the seventh week of class (week of March 2nd, 2015) and the twelfth week of class (week of April 9th, 2015). The survey was made available during class for a period of 45 minutes. Students' responses were coded by allocating a unique number to each person.

The survey was composed of 37 questions organized into five sections. The first section contained eight questions to collect demographic

information such as the course they were enrolled in, which year in their program they were in, gender, age, the program of study, how often they play video games, and what genre of video game they play. The demographic question did not appear on the questionnaire administered at the end of the course. The second section contained eight 5-point Likert scale questions and asked participants about their enjoyment of class (e.g., "Rate your level of enjoyment with this course so far") using the Class Satisfaction and Class Effort questions (Cronbach alpha = 0.70) from Hanus & Fox (2015). The third section contained eight questions related to students' enjoyment of specific gamification elements. (e.g., "I don't enjoy working on guild/team tasks," "Levelling up in this course makes sense to me"). These were developed by the research team for this specific survey instrument. The fourth section contained 13 5-point Likert-scale questions that collected data about grades and perceived performance using the student engagement questionnaire developed by de Byl (2012) (Cronbach alpha = 0.74). This section contained three common questions related to CMN 450 and ITM 445, and five questions that were course specific to each course. The fifth section asked five questions about the overall impression of the course style that was developed for this particular survey instrument.

Participants

Seventy-six students completed the mid-course survey (seventh week of class), and seventy students completed the end of the term survey (twelfth week of class). Not all questions were completed by all participants. Forty-nine of the participants were females, twenty-three were males, and four chose "another or N/A." Sixty-seven were between 18-24 with seven being between 25-29 and two between 30-40. Eight participants were in their first year of university, twenty-two were in their second year, thirteen were in their third year, and thirty-one were in their fourth year. Since both courses were offered from the business and communication departments, almost all the participants reported their program of study to be either communication (37) or business (36). One student was in engineering, another was in the arts, and one did not respond to this question. Thirty-seven students reported they play games daily or weekly, sixteen sometimes, and sixteen infrequently. Six never play games. The top three games played were puzzle, platformers, and sandbox.

Gamification Description

Two media studies courses in different departments at the same university—CMN 450 Participatory Media and Communication and ITM 445 Multimedia in Business—were gamified following the works of Kaufman, Chandross & Gurr (2005) and Sheldon (2011).

The gamification layer in CMN 450, the social media course, was entitled *Social Media Celebrity*. The object of the game was for students in teams of five to earn experience points (XP) by completing quizzes and in class activities, and also earn popularity points through a series of dice rolling challenges. The choice of dice rolling or chance-based activities along with skill-building or experience-based activities was quite deliberate, and designed to reflect the art of creating participatory media, in which experience plays a role in the popularity of a web series or social media post, but luck also plays a large roll. Each week, CMN 450 was structured beginning with a forty-five minute lecture and application activity led by the instructor, followed by a thirty-to-forty-five minute student presentation or activity, and then followed by a break. The students would play through the in class game, which began with a quiz, then included team-based quests (for participation marks and experience points) and ended with a dice rolling activity in which students could earn game related popularity points.

Weekly quizzes were designed to test students' knowledge of assigned readings, and completing these quizzes helped students earn marks toward their final grade for the course, and also earn experience points for their team. Quests were completed in teams and the nature of the activity represented an application of the course material. For example, in the week related to visual participatory communication, students created an infographic related to a concept from the readings (as in Matrix & Hodson, 2014; see Appendix B for examples of the weekly quests). Students could and often did complete more than one weekly quest, depending on how quickly they could work as a team. Following the quests, each group was given the option to complete a dice rolling challenge. The dice rolls could result in a gain in popularity points, a loss in popularity points, or a group challenge, in which students played a fast paced question and answer game against another team of their choosing. Student teams could only win the game if they completed at least one dice rolling challenge, as a win required both popularity points (available only through dice rolling) and experience points (gained through quizzes and quests). The game ran every week

except for the first, last and the midterm week, for a total of nine rounds of the game, one round per week. Quests became progressively more challenging and drew on more skills from the course as the game progressed. The most prolific team in CNM 450 completed up to three or four quests in a forty-five minute period, while the average number of quests completed was two. By the last week of the class, one team was declared the winner, and received a minimum value prize (chocolate bars or dollar store party favours).

The entire multimedia-based ITM 445 course was gamified. This included XP as grades, teams conceptualized as guilds, solo and group (guild) activities/assignments, pop challenges, duels (guild against guild), and a leaderboard. The backstory was that an evil director had stolen all of the files and staff from a multimedia production house. New people (students) were being brought into the company to start afresh. Students divided themselves into groups/guild of four and then chose a responsibility within their guild. There were four possible responsibilities that reflected different types of management activities: 1) Architect who was responsible for the overall planning and timeline management; 2) Explorer who was responsible for finding resources; 3) Scribe who was responsible for managing the reporting and writing tasks; and 4) Orator who was responsible for managing presentations or oral responses to guild challenges. Detailed tasks on assignments and challenges required participation by all guild members but each person also was required to take on their selected management role throughout the course. Examples of different activities included: the solo maker activities which were hands on laboratory tutorials to learn software applications and HTML, a project proposal, and the final exam. These were designed to appeal to the achiever, explorer and competitor type gamer. Guild activities included the production of a multimedia project and a guild presentation of one week's reading materials and weekly guild challenges. Guilds were required to have a gamified element in presentations (to which they could assign XP to classmates for correct responses). These activities were designed to appeal to all of the different gamer types. Weekly guild challenges were selected by rolling dice: one to choose the guild and one to choose the challenge. There were four possible challenges: 1) history challenges covering the previous week's materials; 2) current week's materials; 3) maker challenges covering the hands on portion of the course; and 4) duels where two guilds would compete for XPs in one of the other challenges (designed for the competitors in the class). Members of other guilds could act as helpers during the challenges (e.g., by providing answers to questions) and if the assistance was accepted, points to the assistant were awarded (designed to appeal to the socializers and explorers of the class). Challenges used a variety of techniques, such as multiple choice quizzes, tic-tac-toe, crossword puzzles, word scramble, and a Jeopardy-like game (see Appendix B for an example). Experience points were awarded for all activities and challenges; a maximum of 2000 XP (a grade of A+) could be achieved.

3. RESULTS & DISCUSSION

Student Engagement

At the mid- and endpoints of the course, students reported that they felt more engaged with the course material as a result of the gamification element, stating that it, "keeps students engaged" or it is "engaging and interesting" and "encourages team work and it pushed me to learn in a more fun and interactive way." At the midpoint, 91% reported that they found the course enjoyable or very enjoyable while 88% reported the same findings at the end of the term. They reported that they felt the gamification aspects were a good use of time, rather than a waste of time, and that it encouraged them to participate when they otherwise may not have been inclined to do so. At the midpoint and at the end of the term, 88% and 85% respectively disagreed that the course did not hold their attention at all. They stated that the points system encouraged them to learn, and the competitive part of the gamification layer encouraged them to push themselves harder, such as in the comment "I … like the competitive nature of gamification I think that in a competitive person like myself, it drives me to want to 'win'." These positive outcomes are also reflected in the standard end of term course surveys issued to students. Further, we noticed an apparent difference in student participation in class compared to similar non-gamified courses taught previously or concurrently. As also found in Barata, Gama, Jorge & Gonçalves (2013), students appeared to be spending a greater amount of time on task with activities and were more productive during teamwork time when they were completing quests. For example, we noticed that as students would complete a quest or a quiz, they would ask for more work so as to get ahead in the game. In contrast, when students would complete a similar activity in a non-gamified course, they would often leave the classroom or go off task, rather than actively seek out additional work.

Interest in the Course Material and Learning Benefits

The increased level of student engagement offers a host of benefits to student learning stemming out of an elevated interest in the material being taught. Students reported that the gamified elements "make the course content easier to understand through practical application of our learned skills" and "it allowed us to apply what we learned during the lecture to these tasks so that it was a firsthand experience." Like Cheong, Filippou & Cheong (2013), our students stated that the gamification elements allowed them to apply or experience concepts in a practical way, rather than just reading about theory. For example, "I found that I could relate to the concepts better as we did our games because we are applying them to it. It has been helpful, and I learned more than just the concepts, but also how to use the platform" and "I liked how it encouraged me to learn in a different way as opposed to the traditional method of coming to lectures and listening to the prof, and studying on my own. It also encouraged me to talk to other people and collaborate with them." 93% reported at the end of the term they agreed or strongly agreed that the weekly challenges and/or presentations encouraged them to participate with other students. This, the students thought, contributed to their course outcomes, as they were able to retain course concepts more solidly, particularly beyond the 12-week period of the course; as one student stated: "Concepts learned became more permanent as opposed to memorizing the course content and forgetting them at the end of the semester."

The gamification elements also encouraged students to learn in different ways. For example, teamwork, which is usually a much maligned "necessary evil" of teaching, became an asset when students were encouraged to cooperate with their team in order to progress in the game. Students stated "I like that it encouraged more participation and created a sense of drive to do well in class. I liked that I could be somewhat competitive as I pushed myself to work harder" and "I enjoyed working together with my group and using the gamification element as a study tool to review weekly content." 88% reported at the end of the term that they disagreed or strongly disagreed that they did not enjoy working in groups. Notably, this blend of cooperative team-based competition, rather than strict competition alone, may be one reason our students enjoyed game-based learning. This is in contrast to studies such as the one by Hanus & Fox (2015) which showed negative outcomes from applying solely competitive gaming elements to the classroom.

Overall Enjoyment

Many students reported an increased overall enjoyment with ITM 445 and CMN 450, particularly when compared to other, non-gamified classes (72.5% rated their enjoyment of the class as either enjoyable or very enjoyable). Some students commented that it made the general structure of the course feel "fresher" or revitalized, as in the comment: "It brings an element of freshness and excitement to the already stale grading system" and "I liked the class interaction and more hands on structure that was imparted through the weekly challenges and labs. It was a nice change from my other classes with 3 hour long PowerPoint lectures." Students also commented on the fact that, unlike a traditional educational environment, they found that the gaming elements helped to relieve school related stress, rather than contributing to it, as in the comment: "Some things that I liked from this gamified course was the fact that it had some resemblance to the games I play daily, in which I use to de-stress and relax. Thus, when I come to this course, I tend to have more fun and not feel more pressure from school." In ITM 445 and CMN 450, a majority of students rated the course as "enjoyable" or "very enjoyable" (73% and 91% respectively). Finally, for some students, the course set a positive tone that influenced the rest of their day outside of class. As one student noted, "I enjoy getting to work with a good team and do something that is both interactive and enjoyable. Especially since the class is at 8am, I enjoy being able to interact and get moving so early so that I am more awake for the rest of the day."

Challenges

In developing and running the course, we encountered challenges related to: 1) department structure and rules, 2) gamers vs. non-gamers, and 3) content and delivery. This next section details the various challenges we experienced and how they affected each course.

Challenges of Structure and Department Rules

While we were able to secure special permission from the department to run ITM 445 as a fully gamified course, CMN 450, hosted in a different department at the school, was treated differently. There were concerns at the department level that if grades in CMN 450 were translated into XP instead of the usual percent per assignment measures employed in the course, the department would be open to an influx of student

final grade challenges from those taking the course. As a result, we had to develop two concurrent measures for student success in CMN 450. The first was the regular system of grading, tied to assignments and participation. The second was the in-class game in which the students could earn their experience and popularity points. Thus, even though students earned participation marks by participating in the game, these participation marks had no correlation to the experience points in the game. Although we were initially concerned that not tying marks directly to points in the game would make students less likely to participate, student feedback did not support this. In fact, the act of gamifying the course alone seemed to impact student engagement positively. In the open-ended survey questions, students in both courses reported only some minor dissatisfaction with each course's structure.

Challenges of Gamers vs. Non-Gamers

When designing the gamification layer, we assumed that many students would be casual gamers who were familiar with casual app-based mobile games and perhaps casual analog games, such as Monopoly or Scrabble. Likewise, we assumed that most would have limited experience with other forms of gaming, particularly complex analog or console/PC gaming. We attempted to design a gamification layer for each course that was accessible to a casual gamer or even non-gamer audience, and would allow these students to adopt it without undue frustration while still keeping experienced gamers engaged. To this end, our approach to gamification was relatively successful. However, we received some critical comments, such as the following from a student who identified as an "avid" gamer:

> I'm a very avid gamer, as soon as I heard the course was gamified I was so excited. But I think the main thing … the main sort of game, is there's a goal at the end. And there really wasn't any sort of clearly defined goal, and there wasn't any reward. When people ask if we get something at the end, and we're told no, then what's the point? …[]...I just found a lot of the elements seemed very forced together, there was no point to them, we were doing a bunch of side quests and no main quests.

In contrast, the opposite seemed to be true for some students who identified as non-gamers, such as in the case of one student who commented, "I find it sometimes difficult to understand. Great for people who love gaming, not as great for those who don't." However, for the most part, we strove for a balanced approach, and this was reflected in a consistent level of engagement throughout the course: 77% reported that they disagreed or strongly disagreed with the question "this course didn't hold my attention at all."

Worth noting here is that although students in general are becoming more familiar with the act of gaming, there is still a skill and engagement difference between those who regularly engage with complex gaming environments and those who are casual gamers or non-gamers. Those who regularly game in complex massively multiplayer online role-playing games or console based games may find it easier to pick up course game mechanics, but may also find themselves more quickly dissatisfied because the classroom gaming experience cannot easily or quickly adapt to higher-performing players.

Challenges of Content and Delivery

While we initially envisioned a digital gamification layer for the course, time, and infrastructure constraints resulted in both courses being gamified in a primarily analog format, with a text-based rule book and blended (online and offline) activities. In addition, we used a Learning Management System (LMS) to deliver the quests and accept the submissions of completed quests. This blended format resulted in some challenges to delivery, mostly because the LMS was not optimized for any type of gamification at the time. While other LMS's may offer some gamification features, these LMS's were not viable for us because we were bound to the LMS offered by our university. As seen in Berkling and Thomas (2013), some students in our courses reported that the blending of the analog game elements with minimal LMS tracking was not optimal for their playing experience, such as the student who, when asked about what they disliked about the gamification approach, reported, "It would be better if the stats were electronic and updated in real-time." Despite a few comments on the nature of the delivery, our experience shows that even an LMS that was not immediately conducive to creating course games could be used in a blended context, with some creativity on the part of the instructional team.

In order for gamification to work seamlessly for the students, additional content must be continually created beyond that which would be created in a traditional course. In our case, we often had to create two or three additional quizzes for each week of material and three or four additional quests of activities. Different teams

tended to complete quests at different speeds, and so a continuous stream of new quests needed to be provided to keep students engaged.
It is also difficult to recycle content year after year if, as in the case of ITM 445, the instructor intends to count quests toward course grades, rather than just using the gamification layer as an opportunity to encourage participation in activities. Furthermore, when the entire course is gamified and applied to the student's final grade, each activity must maintain a certain standard of rigor and be related to general course and program outcomes. Thus, the gamification of even part of an undergraduate course is an intense human resource endeavor, but can be made more manageable if course game content is used in multiple years or sections, and is tied to the general participation mark, rather than the full course grade.

4. CONCLUSION

This paper reported on preliminary quantitative data that was gathered from students attending two gamified undergraduate courses where game elements were used as part of the curriculum. Students in both courses were not only engaged but also willing to do extra preparation for the course. An important contribution to the educational process is that gamification can increase student engagement, although the impact on objective performance measures, such as grades, remains uncertain. Furthermore, introducing gamification to any course requires new ways of thinking and tools that simplify the process and work within existing structures.

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Appendix A

Questionnaire

Purpose: To collect information on your experience with and opinions about the gamification elements used in this course. The questionnaire should take about 20 minutes to complete. Your response will be recorded anonymously.

1. **Please type in your participant code: _____**

2. **What course are you taking?**
   - ☐ ITM445
   - ☐ CMN450

3. **What year are you in?**
   - ☐ 1st year
   - ☐ 2nd year
   - ☐ 3rd year
   - ☐ 4th year

4. **What is your gender?**
   - ☐ Male
   - ☐ Female
   - ☐ Another gender

5. **What is your age? Select a range:**
   - ☐ 18-25
   - ☐ 25-29
   - ☐ 30-35
   - ☐ 36-40
   - ☐ 40+

6. **What is your program of study?**
   - ☐ Business
   - ☐ Engineering, Math, or Computer Science
   - ☐ Life Sciences, e.g. Biology, Chemistry, Physics, Psychology
   - ☐ Community Services, e.g. Nursing, Midwifery, Public Health
   - ☐ Communication and Design/Applied Arts, e.g. Image Arts, RTA, Fashion
   - ☐ Arts, e.g. History, Languages
   - ☐ Social Sciences, e.g. Politics, Geography, Economics

7. **How often do you play video games (console, computer, or smartphone)?**
   - ☐ Never
   - ☐ Infrequently (once every couple of months)
   - ☐ Sometimes (once a month or so)
   - ☐ Weekly
   - ☐ Daily

8. **What genre(s) of games do you play? Check all that apply:**
   - ☐ I don't like playing video games of any sort.
   - ☐ RPG (Role-Playing Game), e.g. Final Fantasy, Dragon Quest
   - ☐ Fighting, e.g. Mortal Kombat, Street Fighter
   - ☐ Shooters (FPS or First-Person Shooters), e.g. Call of Duty
   - ☐ Puzzle, e.g. Bejeweled, Candy Crush, Tetris
   - ☐ Strategy, e.g. Civilization, StarCraft

- ☐ MMOs (Massively Multiplayer), e.g. World of Warcraft, Final Fantasy Online
- ☐ Adventure, e.g. Myst, King's Quest
- ☐ Platformers, e.g. Super Mario Bros.
- ☐ Sports, e.g. NFL, racing games
- ☐ Sandbox, Open World, or Simulation, e.g. the SIMs, Minecraft
- ☐ Horror or Survival Horror, e.g. Silent Hill, Five Nights at Freddy's
- ☐ Stealth, e.g. Metal Gear Solid, Thief

Your Enjoyment of the Class:

9. **Rate your level of enjoyment with this course so far:**

Very Enjoyable	Enjoyable	Neither	Not Very Enjoyable	Not Enjoyable At All
1	2	3	4	5

10. **This course didn't hold my attention at all.**

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

11. **In the last month, I've been happy taking this class.**

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

12. **I think this course is boring.**

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

13. **The structure of the course has encouraged me to research and learn about related content that I might not have otherwise explored.**

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

14. **I feel that the course structure adds unnecessary complexity to the course, which has distracted me from my studies.**

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

15. In the last month, I've put in more effort in this course than in most of my other courses.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

16. In the last month, I've put forth less effort in this course.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

Specific Gamification Elements:

17. I don't enjoy working on guild/team tasks.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

18. Levelling up in this course makes sense to me.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

19. I want to get to the top level.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

20. I don't care about levelling up.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

21. I like the solo tasks best.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

22. I find the weekly challenges and/or presentations useful for remembering course content.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

23. The weekly challenges and/or presentations encourage me to participate with other students.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

24. The weekly challenges and/or presentations encourage me to participant more in class than I usually would.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

Grades anD Perceived Performance:

For ITM445:

25. I prefer the XP structure for grades used in this course to the way grades are calculated in my other courses.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

26. Getting XP for weekly theory and practical challenges made me do more of the class work for this course than my other traditionally-run courses.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

27. I found the XP structure used for grades in this course condescending.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree

1	2	3	4	5

28. I checked my XP status for this course more often than I checked my grade status in other courses.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

29. Getting weekly XP encouraged me to turn up to class.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

For CMN450:

25. I would prefer using the XP structure in place of traditional grades.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

26. Getting XP for weekly theory and practical challenges made me do more of the class work for this course than my other traditionally-run courses.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

27. I found the XP component of this course condescending.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

28. I checked my XP status for this course more often than I checked my grade status in this and other courses.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

29. Getting weekly XP encouraged me to turn up to class.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

30. I only do extra weekly exercises and study if I know that it contributes directly to my grade.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

31. I'm only interested in passing the course. A higher grade would just be a bonus.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

32. I want to get the highest grade possible.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

Overall Impression of the Course Style:

33. I <u>do not</u> want to take more courses like this one.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

34. I <u>want</u> to take more gamified courses.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1	2	3	4	5

35. What do you like about the gamification elements?

36. What do you dislike about the gamification elements?

37. How could the gamification elements be improved?

Appendix B

Example of Challenges for CMN 450

It's time to learn about infographics. Your tasks, if you choose to accept them, are as follows: (6 EP)

- Find a few infographics on one term from the Social Media Glossary
- From the definition create your own infographic. YOU MUST do outside research
    - Must include 1 statistic
    - Have to include the definition
    - Must be visually appealing (not over crowded)
- Post your infographic to Facebook with a 50 word description

It's time to learn about infographics. Your tasks, if you choose to accept them, are as follows: (8 EP)

- Find a few infographics on one term from the Social Media Glossary
- From the definition create your own infographic. YOU MUST do outside research
    - Must include 2 statistics
    - Have to include the definition
    - Must be visually appealing (not over crowded)
- Post to your customized blog with a 100 word description

It's time to learn about infographics. Your tasks, if you choose to accept them, are as follows: (10 EP)

- Find a few infographics on one term from the Social Media Glossary
- From the definition create your own infographic. YOU MUST do outside research
    - Must include 2 statistics
    - Have to include the definition
    - Must be visually appealing (not over crowded)
- Post to Twitter or Google+ with an 80 character explanation of what you are posting.

It's time to learn about infographics. Your tasks, if you choose to accept them, are as follows: (12 EP)

- Find a few infographics on one term from the Social Media Glossary
- From the definition create your own infographic. YOU MUST do outside research
    - Must include 2 statistic
    - Have to include the definition
    - Must be visually appealing (not over crowded)
- Cut up the infographic into maximum 6 equal square images and post on Instagram
    - Include a 50 character explanation for each image
    - Make sure each image could stand alone without an explanation

Now that you have access to podcasting let's create a podcast! Your takes, if you choose to accept them, are as follows: (15 EP)

- Pick three terms from the Social Media Glossary and create a 2-3 minute podcast explaining the terms
    - Do not just state the definition! Do some research and include at least one example of how the term is used in the context of social media
- The podcast should include transitions between terms and three separate tem members voices (one per term)
    - This will require you to edit some audio!
- You must upload the podcast to somewhere with a sharable link (google drive will work)

Your next quest, if you choose to accept it, is the following: (4 EP)

- Find two infographics that explains the demographic breakdown of Facebook
- Post both infographics to your Facebook page as curated posts
    - Explanation must be minimum 100 words.

Your next quest, if you choose to accept it, is the following: (6 EP)

- Find three infographics on blogging

- Post both infographics to your blog with explanations on what information they are telling you.
    - Explanation must be minimum 150 words.

Your next quest, if you choose to accept it, is the following: (8 EP)

- Find four infographics that explains the demographic breakdown of Twitter of Google+
    - Must be a breakdown for the network you will post to (if you post to Twitter they must be for Twitter)
- Post both infographics to your Twitter or Google+ page as curated posts
    - Explanation must be maximum 100 characters plus link.

Your next quest, if you choose to accept it, is the following: (10 EP

- Create a 1 minute podcast that explains something you learned in class today
    - Can be from the student presentation, lecture, or the readings for the class
- Must indicate where you learned it from such as…when the group presented we….
- You must upload the podcast to somewhere with a sharable link (google drive will work)

Example of Challenges for ITM 445

State of the Art Challenge

Unscramble These Words

trfiaeenc

dmeayihrpe

asiilubyt

fnitucytoailn

lsyiptciim