Introduction

Research suggests that most undergraduate students do not read assigned materials (Berry et al., 2011). In order to address this concern, I developed a rudimentary gamification system for a senior-level Communication/Information Science course, inspired by literature suggesting positive if somewhat qualified value for gamification in the classroom (Buckley & Doyle, 2016; Hamari et al., 2014). Following the guidelines of prominent texts and researchers in the field, I decided to explore whether gamification could be useful to encourage student reading and retention by assigning meaningful rewards and progress to reading (Kapp et al., 2014; Chou, 2014).

The Course and Design

This project was conducted in COMM/INFO SCI 430: “Information, Media, and Society”, an upper-level capstone course focused on critical analysis of contemporary issues in information and media systems.

For the Fall 2018 semester of the course, I developed several short exercises based on argument construction and analysis, factual retention, and other activities designed to further engage students with the assigned material. Completion of these exercises yielded “XP” that earned perks like extra credit, exam answers, etc. once certain “levels” were attained. This was done as an optional activity alongside required coursework (a paper, exams, in-class debates).

At the start of the semester, students were given the choice to complete a “pre-test” survey evaluating their reading habits in other classes. I presented another optional “post-test” survey toward the end of the semester. These were anonymous, optional surveys conducted via Qualtrics and based on the models of Baier et al. (2011) and Berry et al. (2011). The surveys asked about study habits, reading perceptions, likelihood of class success, student perception of gamification, and other questions. The pre-test survey had 10 respondents; the post-test had 5.

Questions and Results

RQ1: Did exam scores improve once gamification was introduced?

<table>
<thead>
<tr>
<th>Semester</th>
<th>Exam Grade Improvement</th>
<th>Impact on Final Average</th>
<th>Overall Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2017</td>
<td>22</td>
<td>79.85%***</td>
<td>78.75%</td>
</tr>
<tr>
<td>Spring 2018</td>
<td>26</td>
<td>81.4%</td>
<td>81.3%</td>
</tr>
</tbody>
</table>

Students reported less time spent on readings for the IMS class (bottom) than their other classes (top), suggesting further a lack of positive change in reading habits.

RQ2: How did student reading habits change (if at all) prior to and after gamified exercises?

Generally speaking, students did not change their attitudes or study habits much at the start or end of the class. The decision of when to read texts or assigned materials did not vary much, for example:

- Students reported spending less time on readings for the IMS class (bottom) than their other classes (top), suggesting further a lack of positive change in reading habits.

Discussion

The current data presents key takeaways for gamification projects:

1) All-or-nothing: Gamification literature (Sheldon, 2012) suggests course design where gamification is the core of curricular activity. Optional implementation like that of the present project runs the risk of adding additional student workload. As one student put it:

   "I was only able to do a few of the gamified exercises but the ones that I did make it easier to comprehend the material and made me think deeper into the articles I read.

Hence, based on initial findings the “optional gamification” model may need tweaking.

2) Gamification alone cannot change reading habits or guarantee success: While there is evidence in the student reaction to the exercises, serving to explain some of the standard deviation in the scores. For example:

   "If offered in class either during the readings (for class or not doing the readings in favor of the exercises) I felt would take time away from my other homework.

3) There is potential in gamification, but you can keep up with it: Faculty wishing to offer gamified exercises either as part of their curriculum or as the backbone of their course must be able to create a constant supply of relevant activities with different learning objectives.

Limitations & Future Research

The most significant limitation of the present data set is its size. While I am currently collecting data from the Spring 2019 semester, it is not likely the final data set will be particularly large. Moreover, the inconsistent size of class enrollment may potentially skew the data. Given that the surveys were optional and did not have rewards associated with them, students who were already highly engaged may have self-selected to participate. The anonymity of the surveys may have limited more direct comparison on an individual basis, as well. Future research should be more longitudinal in nature and may benefit from other class settings.

Works Cited


