PROMOTING PARTICIPATION AND LEARNING IN HIGHER EDUCATION THROUGH GAMIFICATION

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1. Background on gamification
2. My experience incorporating gamification in class
3. Reflection
GAMIFICATION & POINTIFICATION DEFINED

Gamification = applying the mechanics of games (role playing, points, achievements, etc.) to non-game activities

Pointification = awarding successful goal completion or participation with (arbitrary) numerical feedback
RESEARCH ON BENEFITS IS INCONCLUSIVE

Increased motivation for participation (Westfall et al. 2014)

Improved learning, lower rates of failure (Charles et al. 2011)

Improved skill acquisition in e-learning (DeMarcos et al. 2014)

Less motivation, satisfaction, empowerment (Hanus & Fox 2015)

Benefits due to novelty effect, engagement and interest decrease over time (Hamari, Koivisto, Sarsa 2014)
In the literature, gamification is sometimes reduced to awarding *badges* (graphical representations of achievements).

But collecting badges is extrinsic motivation for learning, diverting focus from what’s really important: learning itself.
“It is also important to note that the use of games in education is not about injecting fun that is missing from traditional learning processes but rather it is about trying to enhance the fun that is inherent in most learning”

(Charles et al. 2011)
Gamification shouldn’t be viewed as a solution, but rather just another pedagogical tool

Although it has limitations and potential problems, some of this might come down to non-ideal implementation (task-completion badges are not enough!)

The rewards in a gamified class do not have to be so arbitrary and abstracted from the student’s natural goals (learn, perform well, etc.)
MY EXPERIENCE

- Instructed Introduction to Business Ethics to ~130 first year students
  - Participation tends not to be great in this class
  - Despite the efforts of great teachers, subject has a reputation for being boring

- Incorporated gamification by:
  - Pointifying participation inside and outside of class
  - Giving continuous feedback through a leaderboard
  - Making the points *count* – students with enough points could opt-out of an extra assignment I added to take the place of a participation grade
  - Adding new rewards for class-wide milestones
GAMIFYING A UNIVERSITY CLASS

Pointify participation inside the classroom

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<th>TIL</th>
<th>Total</th>
<th>Opt-out progress</th>
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</tr>
</tbody>
</table>

XP (Whole Class)

Students
GAMIFYING THE UNIVERSITY CLASSROOM

Pointify learning outside the classroom:

Course Discussions

Participation in the discussion board is entirely voluntary. Posts will be monitored, so be respectful toward each other and mindful of what you write.

Hide Topics for Course Discussions

<table>
<thead>
<tr>
<th>Topic</th>
<th>Threads</th>
<th>Posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIL (Today I Learned)</td>
<td>1,091</td>
<td>1,434 (52)</td>
</tr>
</tbody>
</table>
RESULTS

Attendance hovered around 80% for most of the class

Students reported appreciating the TILs (they appreciated doing extra work!)

Students reported that the experience points system was “motivating” and “invigorating”
Results from an anonymous survey I collected at the end of the course.

Note that only one response out of 55 was negative.
Gamification appears to have potential to help with participation and learning, but there are some things to keep in mind:

- Implementation can be very time intensive (get TAs to help)
- Arbitrary points do matter to (some) students, but a sense of choice and control seems to be the best reward
- Technology like iClickers can be helpful, but not necessary
- Students who fall behind in points might feel demotivated, so have a backup plan
REFERENCES


