

HIBERNIA
COLLEGE

Connect, Learn & Earn Does gamification promote increased engagement in interpersonal connectivity activities on an online orientation programme for postgraduate students?

Item Type	Preprint
Authors	Gavan, Edel;McKay, Allison;O'Connell, Brid;O'Toole, Ciara
Download date	2025-01-23 14:29:51
Link to Item	http://hdl.handle.net/20.500.13012/98

Connect, Learn & Earn

Does gamification promote increased engagement in interpersonal connectivity activities on an online orientation programme for postgraduate students?

Edel Gavan, Rob Lowney, Allison McKay, Bríd O'Connell, Ciara O'Toole
egavan@hiberniacollege.net, rlowney@hiberniacollege.net,
amckay@hiberniacollege.net, boconnell@hiberniacollege.net,
cotoole@hiberniacollege.net
Digital Learning Department & Student Services Department
Hibernia College
Ireland

Abstract

Gamification in education is described as the use of “game, game-like activities or game elements” to enhance learning, motivate students and increase engagement (Brigham, 2015).

In September 2018 Hibernia College introduced a gamification tool to the two-week online orientation for blended learning initial teacher education programmes in an effort to improve engagement and socialisation. The tool awarded experience (‘XP’) points to the student teachers for participating in activities that required interaction with peers. Its impact was evaluated using VLE log data and survey responses, the results of which indicated a marked increase in activity engagement and a positive response from student teachers.

Keywords

Gamification; online orientation; postgraduate; online learning community

1. Gamification literature

For games to be effective, gamification relies on the psychology of motivation to encourage players to play. Good gamification aims to include elements that extrinsically and intrinsically motivate students (Brigham, 2015).

The greatest attraction of applying gamification to a learning activity or a course is that it encourages increased involvement and engagement (Brigham, 2015). Gamification is becoming popular among educators who can see its potential to stimulate engagement, productivity, creativity, and authentic learning (Johnson et al, 2015). Johnson et al also suggest that games can be social and collaborative and highlighted the emotional and social impact games have on human behaviour.

Hibernia College creates support systems for students underpinned by the Community of Inquiry (COI) framework (Garrison, Anderson, & Archer, 2000). The COI guides the creation of a collaborative constructivist learning experience through a focus on three interrelated elements – social, cognitive and teaching presence. A key element when delivering online or blended courses is the development of a sense of community among students. Such communities get to know and trust each other and can be a valuable source of support. It is widely recognised that creating a vibrant learning community is a key aspect of online learning (Swan, 2002; Garrison, Anderson, & Archer, 2000). For students, an online learning

community provides “opportunities for exchange of personal information, reduces their feelings of social isolation and allows them to form individualised perceptions of each other” (Garrison, Anderson, & Archer, 2000).

2. Background to study

Hibernia College is a QQI-accredited provider of NFQ Level 9 Professional Master in Education programmes in Primary and Post-Primary Education. Both programmes are two-year blended programmes (45% online and 55% face-to-face). The programmes commence in April and September each year.

At programme commencement, student teachers undertake a two-week online orientation on the College’s VLE, Moodle. The purpose is to introduce students to their programme, their VLE and to one another. It includes tasks such as videos, presentations, forum discussions, blogs, quizzes, research, and uploading mock assignments. It is complemented by a one-day face-to-face orientation. Student teachers complete a post-orientation survey that has continually shown good engagement with online orientation content but lower engagement with activities that facilitate interpersonal connectivity.

For the September 2018 online orientation, the College desired to improve engagement and enhance the online community as part of the COI framework. The College introduced ‘Level Up!’ (a Moodle gamification plugin), within which student teachers earn experience or ‘XP’ points and move through levels after performing certain actions. The plugin was configured to award points to student teachers for performing actions in the activities in which they interact with one another:

- Reading and posting in various discussion forums dedicated to different topics
- Responding to polls
- Reading content pages relating to blogging
- Reading and posting in a glossary for getting to know one another

The ‘Level Up!’ plugin was styled as ‘Connect, Learn & Earn’. Its purpose was explained to student teachers at the outset and they were encouraged to participate in the chosen activities to earn points and reach the highest level. It was visible as a block on the Moodle page, so at all times they could see what points they had earned.

3. Findings

Quantitative data drawn from VLE log data for 685 student teachers showed a marked increase in engagement in the interpersonal connectivity activities following the introduction of the gamification plugin.

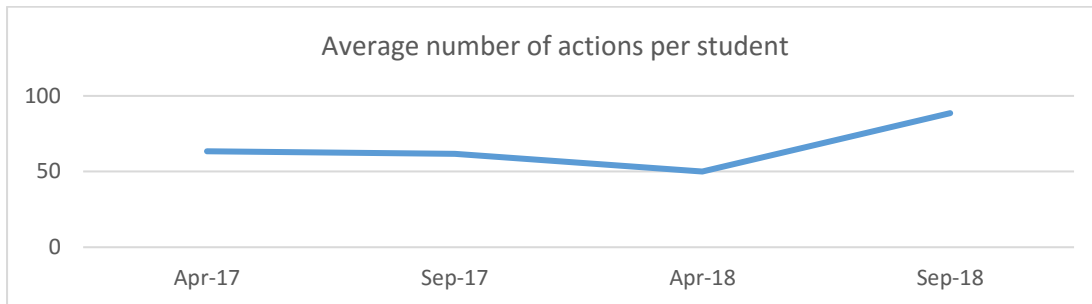


Fig.1: Average hits per student for the four types of interpersonal connectivity activities.

Engagement with the interpersonal connectivity activities in April 2017 and September 2017 was similar, at 63 and 62 actions per student teacher. The drop in April 2018 to 50 actions per student teacher was likely because there was a delay in releasing the online orientation and engagement throughout was decreased.

The average number of actions increased to 89 in the September 2018 cohort, an increase of nearly half from 2017.

421 student teachers from the September 2018 cohort responded to the usual post-orientation survey, which included two questions on gamification. The first was a Likert-scale question: “The presence of the Connect, Learn & Earn block motivated me to participate more in the online orientation activities that promoted connecting with my peers”. The responses were:

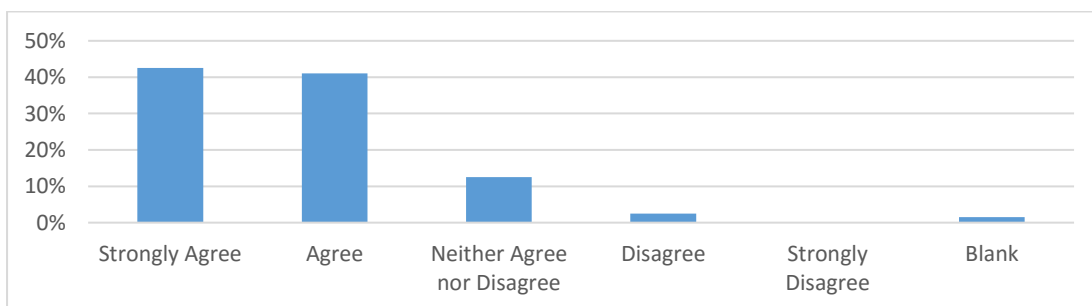


Fig.2: Responses to the Likert-scale question.

The second question was “What are your thoughts on the Connect, Learn & Earn block?” The main sentiment that emerged from these responses was motivation. A number of student teachers commented that they would not normally engage in interactive tasks (such as contributing to discussion forums) but this gamification tool encouraged them to do so. Student teachers also mentioned the socialisation element, competitiveness, that the tool assisted

progression and achievement and its fun and enjoyable aspect. Feedback was largely positive but a small minority felt it was childish, uninteresting, or that it forced participation. A selection of responses are presented below:

“I found it to be a good motivational tool and as both a shy and mature student I felt it aided me in pushing me out of my comfort zone.”

“I think it is a very motivational tool. Seeing the XP points increase gives a sense of achievement and makes me want to do more to see those points increase. It made me interact on discussions and blogs with my fellow students. It is a great motivator to increase interaction!”

“Very good idea, it encouraged me to communicate with people before the onsite orientation day which I probably would not otherwise have done. This helped me to make friends on the day as I had already communicated with them.”

“I didn't particularly enjoy it as I felt I was being forced to respond to someone just to earn points or go up a level. I am not one for responding to things or getting involved in a discussion unless I feel I have something important to say.”

4. Conclusion

The findings indicate that the implementation of a gamification tool in the online orientation had the intended effect of increasing student teacher engagement with the activities that facilitate interpersonal connectivity. The majority of survey respondents felt that the gamification tool motivated them to engage and that it improved socialisation. The results appear to be in line with the literature on gamification. The findings also suggest that gamification can be used as a motivation tool to develop a sense of community among students. The findings are preliminary, however, and further analysis is required to determine the precise extent to which gamification affected engagement and why. Further analysis will involve investigation into student teacher demographics and the potential differences in viewpoints between the teacher education programmes – Primary and Post-Primary. Additional qualitative analysis using focus groups or interviews with student teachers could also yield further findings or increase understanding of the current data. It would also be worthwhile to explore student teachers' reasons for feeling motivated by the gamification tool. The gamification tool will be implemented again in April 2019 orientation and log data will be compared against the September 2018 data to see if the increase in engagement is maintained.

References

- Brigham, T. J. (2015). An Introduction to Gamification: Adding Game Elements for Engagement. *Medical Reference Services Quarterly*, 34(4), 471-480. doi:<http://dx.doi.org/10.1080/02763869.2015.1082385>
- Garrison, D., Anderson, T., & Archer, W. (2000). Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education. *The Internet and Higher Education*, 2(2-3), 87-105. Retrieved November 01, 2018, from http://cde.athabasca.ca/coi_site/documents/Garrison_Anderson_Archer_Critical_Inquiry_model.pdf
- Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., & Freeman, A. (2015). *2015 NMC Technology Outlook for Higher Education in Ireland: A Horizon Project Regional Report*. Austin, Texas: The New Media Consortium.
- Swan, K. (2002). Building Learning Communities in Online Courses: the importance of interaction. *Education, Communication & Information*, 2(1), 23-49. Retrieved November 01, 2018, from https://www.researchgate.net/profile/Karen_Swan3/publication/250889477_Building_Learning_Communities_in_Online_Courses_The_Importance_of_Interaction/links/548083740cf22525dcb5f28d/Building-Learning-Communities-in-Online-Courses-The-Importance-of-Interacti