Book Review

Niman, N. B. (2014). *The Gamification of Higher Education*. New York: Palgrave MacMillan. ISBN 978-1-137-33873-0.

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In the first week after the launch of *Pokemon Go* sixty five million people in the USA downloaded the app and, because it was assumed that they owned the game exclusively, Nintendo shares more than doubled in value. The enthusiasm for this game seemed to dwarf the enthusiasm of many university students for their course of study. So what can higher education learn from video games? This book tries to answer that question and proposes a redefinition of the student experience of higher education. The premise is that students often fail to engage with their courses because tutors have not made higher education personal. In games individuals develop through interacting with others and, it is advocated, universities should similarly develop students as empowered members of a learning community.

In the initial section of the book the current challenges that universities face are explored and explained. The topics are not new, but they are explained using creative, thought provoking scenarios. For example, universities are likened to record companies with tutors as their performing artists. When music was exclusively distributed as vinyl discs, record companies were profitable businesses. They controlled artists, record production and disc distribution. The system was sustainable because profits from the sale of discs were channelled back into the recruitment of more talented artists. All was well until music became a digital commodity capable of being shared, and in some cases produced, independently i.e. without record companies profiting. The book postulates that MOOCs (massively open online courses) might be the higher education equivalent of digital music. The challenges that universities face may not be, in themselves, unique.

Universities have learned that knowledge creation through research is much more expensive than the cost of knowledge dissemination. Hence, in an analogous way to the development of large production plants, higher education has changed from an apprenticeship model to a more universal model of standardised products often delivered via lecture to a large number of students. More recently, further economies of scale are being sought through the use of virtual learning spaces which detach the delivery of instruction from physical space. The flexibility offered to students by virtual learning spaces is admirable, but whether this approach maintains the rich learning environment of physical communities is a matter of debate. Perhaps hope for the sustainability of traditional learning environments comes from the observation that the rise of virtual games has not totally supplanted their physical counterparts.

The initial section also notes that university worth is based typically on positions in league tables, but this *worth* may not translate into a better student experience. The reason is that league table position is a product of many variables of which the overall student experience is very often a minor component. Since undergraduate student learning is usually measured in relation to pre-defined course outcomes, opportunities are generally limited for individual student experimentation and identity formation. To counteract this, the book argues powerfully that curricula should be seen as a learning platform that acts as a springboard enabling students to individually tailor their personal capabilities, not, as in the worst case scenario, as sets of isolated units where students blindly accept the vision of how things are supposed to be from their tutors. Control of the learning platform should still rest with tutors, but, just as in a video game, the nature and flow of the experience should incorporate elements developed by the student themselves. Empowering students in this way would enhance individual self-esteem and potentially circumvent the use of other measures of student status such as the number of beers drunk or parties attended.

The middle section of the book considers why individuals find games so compelling and, to a large extent, develops the previously presented ideas; an inevitable consequence of the overall structure chosen for the book. Here, self-determination within a video game is further explored and the case is made that self-determination creates a virtuous circle in that it encourages experimentation, consequent greater self-knowledge, confidence and hence further self-determination. However, since too many possibilities for change can lead to anxiety and consequent inactivity, the role of a skilled game designer is emphasised to provide the degree of variation appropriate to the current state of learning of players. Greater possibilities for experimentation should be made available to those who have progressed to higher levels of the game. In this way games are focussed on the process of playing; a sharp contrast with university learning for which only defined outcomes seem to be rewarded. The challenges players face in games form the principal means of learning with the role of these challenges in measuring previous learning very much understated. The book calls such challenges 'intelligent obstacles' and develops the overall argument that games contrast with higher education because of their focus on skills development itself rather than on the mastery of a previously defined body of knowledge.

It is argued that the reason for the risk adverse mentality of some students is that the benefits of better future job prospects or an enhanced salary after graduation are too long-term to be meaningful. More immediate, potentially adverse consequences of decisions therefore become dominant. The book contrasts this environment with that of games which encourage decision making by enabling players to continuously tailor their environment in ways that match their developing interests and abilities. Success is rewarded by virtual prizes such as badges, armaments or articles of clothing that stay with the player throughout the game and so serve to develop self-esteem and identity. Additionally, game players often have the opportunity to choose the other players or game characters with which they interact and so they exercise control in how they co-create learning opportunities enabling them to turn abstract constructs into relatable concepts that have meaning. In sum, learning emerges from the play itself.

The final section of the book considers the implementation of ideas from games into higher education; so called *gamification*. What higher education changes need to take place to shift the focus from mastery of a body of knowledge towards students' personal growth and

development? The book proposes that simple additions of points, badges and leader boards to current curricula will be insufficient. Instead of asking students to develop a new skill set divorced from what they currently use in their private lives, higher education should endeavour to professionalise the skills that students bring with them. For example, if students are used to providing narratives on social media, such storytelling might be an ideal gateway to a co-created experience enabling learning within the course to become an integral part of what naturally occurs on a daily basis. Only by such integration will true mastery of knowledge take place.

It is acknowledged that, in addition to teaching, a core role of universities is to accredit the learning achieved by students. Hence assessment is an integral part of higher education. Gamification of higher education assessment requires assessment achievements to be embedded directly into the learning process. Multiple low stakes ipsative assessments are envisaged with explicit positive outcomes from each assessment forming the basis of the next task. To enhance motivation, students should also have the opportunity to compare and discuss their grades with peers and, periodically, to pause, reflect on their achievements and to revise their previous work. An approach is proposed with a student cohort split into a number of teams. Within each team peer feedback would contribute to the selection of best student performance. This would be followed by a team winners' competition to be best in class. Additionally, to incentivise the initial peer feedback process, the whole team of the eventual champion would also be rewarded. In this way students are motivated to work for themselves *and* to work for their whole team. The book argues that much of the current student experience is disjointed. In both their social experiences, perhaps brief texts, or posts on Twitter or Facebook, and in their academic experiences, perhaps a collection of individual modules or seminars, students lack exposure to longer term narratives. Hence, they fail to develop the ability to answer fundamental questions including: who am I; what do I want to become; and how will I get there? Linked assessments with elements of student control as described above serve to address this gap.

Big data is seen as a way of empowering students to address questions such as the ones posed above. Video games provide players with real time information concerning their avatar's skills and state of health, so informed decisions can be made concerning readiness for the next challenge or, alternatively, remedial requirements. Similarly, big data concerning the performance of student cohorts would enable each student's personal campus logon page to contain an appraisal of their overall progress relative to current and to previously successful students. It could also suggest courses of action if their performance is below what has previously led to successful outcomes. This might seem futuristic, but the book argues that much of the required data is already available. What is lacking is the software to present the data to students in a meaningful format so that they can make their own informed choices, and also gain subsequent feedback as to whether those choices were beneficial to their progress. Such ongoing feedback serves to bring sense and meaning to the student's overall learning experience.

Finally, the book argues that, to be effective in enhancing students' learning, big data needs to be part of an overall learning environment. The role of tutors must necessarily change from being the providers of knowledge through lectures to the construction and maintenance of that environment. Students will generate their own knowledge through overcoming individual and collaborative challenges, but will require tutors to 'nudge' them along appropriate pathways through both curriculum design and, perhaps, specific guidance

at key decision points. Tutors need to 'nudge', not *tell*, so that students are empowered to make decisions for themselves and, with this skill, become more successful in the life they create after university. Students seeking their own knowledge will form communities encompassing peers, university staff and associated individuals such as employers, alumni and others with expertise. In essence, therefore, tutors need to become more outward looking if they are to survive as curriculum designers and student counsellors. They need to facilitate learning communities that extend beyond the physical boundaries of their individual campus.

Of course, interest in *Pokemon Go* will have waned by the time you read this article. Perhaps another cult game has taken its place? However, one certainty is that video games in general will retain their popularity. Hence higher education should endeavour to learn from their success. This book is a very good starting place to explore higher education gamification ideas further.

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