

Experimenting Gamification in Legal Higher Education: A Thousand Intellectual Property Rights

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Battling against student boredom and disengagement, teachers need to continuously adapt their teaching methods and approaches to meet student expectations. This article argues that the use of gamification in legal higher education constitutes an adequate pedagogical tool to foster student collaboration, motivation, creativity and engagement. It discusses a personal experiment consisting of the design of a tangible board game with a digital app for intellectual property law students.

Introduction

In a world where information is endless and students are acquainted with the latest technologies, education continuously needs to reinvent itself to meet students' expectations. Even though today's students might not be tech savvy, there is no denying that teachers face the, so far, most technologically integrated generation.² Unsurprisingly, the Socratic Method³ sits uneasily with students continuously connected via digital devices (e.g. mobile phones, personal computers or tablets).⁴ Today's students are continuously stimulated and are exposed to numerous forms of entertainment. Consequently, they become less patient in their personal lives and they have similar expectations for their education. Against this backdrop, law teachers in general need to overcome new challenges in adapting their teaching approaches to students' needs and

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² Chris Jones & Binhui Shao, *The net generation and digital natives: implication for higher education* (2011) available at http://oro.open.ac.uk/30014/1/Jones_and_Shao-Final.pdf (last access date 3/10/2017).

³ Peter Jarvis, 'The Socratic Method' in P. Jarvis (ed.), *The Theory and Practice of Teaching* (Routledge, 2006), 90.

⁴ Heather Garretson, Tonya Krause-Phelan, Jane Siegel and Kara Zech Thelen, 'The value of variety in teaching: a professor's guide' (2014) 64(1) *Journal of Legal Education*, pp. 65-92; Benjamin V. Madison, III, 'The elephant in law school classrooms: overuse of the Socratic method as an obstacle to teaching modern law students' (2008) 85(3) *University of Detroit Mercy Law Review*, p. 293; Thomas Keefe, 'Teaching Taxonomies', (2006) 14 *Perspectives* p. 153, p.156.

preferences to keep them motivated and foster engagement in the learning process.⁵ Indeed, particular pedagogical issues in the legal discipline concern the greater number of students, the expansion of the curriculum⁶ and teaching methods have diversified over the years. And yet, legal higher education continues to face challenges such as the relevance of the degree to enter the legal profession and how implement research in the curriculum. Whilst many universities abide by the research-led teaching approach which intends to promote and embed research in the curriculum, difficulties arise sometimes as to how research fits teaching.

This article aims at reflecting on a personal experiment of introducing gamification in law schools based on my research expertise by the design of a tangible board game and its app version to foster motivation and engagement in- and outside the classroom. Therefore, while many issues can be mirrored in other legal discipline, this article only focuses on the area of intellectual property law. The work is structured as follows: Firstly, this article explains why and how gamification represents a viable teaching method by examining the relevance of gamification in legal higher education and devising the profile of current students. Secondly, the nature and benefits of gamification are described before turning to the personal experiment of gamification in intellectual property education at the University of East Anglia. Based on this personal endeavour, the remaining of this article provides the strengths and weaknesses of the use of gamification and attempts at widening the use of technologies and pedagogies for the future of legal higher education.

1. Relevance of gamification for legal higher education

A recurring problem in legal higher education is the student's decrease in motivation and engagement to participate actively in the learning process.⁷ This situation requires teachers to continuously overhaul teaching methods and find approaches to combat

⁵ D. Donahoe, 'An autobiography of a digital idea: from waging war against laptops to engaging students with laptops' (2010) 59(4) *Journal of Legal Education*, p. 486.

⁶ Including its adequateness to prepare students to enter the legal profession (i.e. requirements are provided by the Solicitors Regulation Authority in the UK).

⁷ This can lead to emotional and psychological distress. Eventually, this psychological distress and isolation may go on to developing depression or other mental health problems during their time either at University or either, in their professional career. Therefore, by tackling isolation, student withdrawal and boredom in the classroom, one could perhaps argue that gamification contributes to battling against mental health disorders in higher education. See N. Kelk, G.M. Luscombe, S. Medlow and I. B. Hickie, 'Courting the Blues: Attitudes Towards Depression in Australian Law Students and Legal Practitioners' (2009) *Brain & Mind Research Institute*, p. 388.

student boredom.⁸ Some teachers tried to solve this problem by introducing features of friendly competition such as leaderboards, scores, points, badges, levels etc which can be integrated on the intranet portal of an institution (Figure 1). These are interesting as it allows students to compare their performance to others in the same class. Whilst these mechanics can contribute to increase attendance and in some way, increase the performance of students, this article argues that for gamification to be

Gamification elements	Description
Score	Each student will receive a score for their assignment performance and their various activities in the system.
Badge	Students will be awarded with badges by completing various actions that are related to their activities.
Leaderboard	Top ranked students will be displayed in leaderboard based on their scores and badges collected.
Title	Each student will get a title based on their received score. The titles are presented in different levels and will be attached to their account name.
Completion track	Each student can see their own progress in the system, what tasks they have finished, and what material they have viewed.

successful in higher education, there needs to be a better integration of game-like elements in the curriculum. It requires appealing to a particular mindset, which fosters motivation, engagement and focuses on emotional student responses to influence the design of learning activities. Hence, the introduction of such features in an educational environment already pertains to the use of game mechanics to improve the learning process. However, further changes have to be done in order to appreciate the benefits of gamification and the related change in student behaviour.

Figure 1 – Gamification elements in Moodle/Blackboard⁹

Kapp defines gamification as ‘using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems.’¹⁰ Whilst games tend to pursue primarily a goal of entertainment, gamification purports the use of game elements and activities in a serious environment to improve independent learning and therefore, commitment.¹¹ Yet, games and education are

⁸ Daniel M. Ferguson, ‘The Gamification of Legal Education: Why Games Transcend the Langdellian Model and How They Can Revolutionize Law School’ (2016) 19 *Chap. L. Rev.* p. 629, p. 630.

⁹ A. Amriani, A. F. Aji, A. Y. Utomo, and K. M. Junus, ‘An Empirical Study of Gamification Impact on E-Learning Environment’ (2013) In: *Proceedings of 2013 3rd International Conference on Computer Science and Network Technology, IEEE*, October, pp. 265–269.

¹⁰ Karl M. Kapp, *The gamification of learning and instruction* (John Wiley & Sons, 2012), p. 10.

¹¹ G. Silverman, ‘Law Games: The Importance of Virtual Worlds and Serious Video Games for the Future of Legal Education’ in E. Rubin (Ed.), *Legal Education in the Digital Age* (Cambridge University Press, 2012), pp. 130-157.

similar as they both aim at achieving a specific goal through overcoming obstacles. These similarities between both environments have been identified by the past, as educational games in general are not new.¹² However, there is very limited use of games in higher education.¹³ Generally, these games are relegated into households and parents wishing to ensure that their kids learn important skills whilst having fun and hopefully later, improve their school performance.¹⁴ The academic success of a student nevertheless shares resemblance with a player's progress in a game.¹⁵ Indeed, students have to achieve various learning objectives and outcomes established in relation to a particular module. Additionally, students' progress is repeatedly monitored – either through active participation in the classroom, through seminars or via assessments. This phase is actually crucial as results and marks determine the future of the student. In this context, educational institutions have already embraced gamified activities and technologies.

Today, most universities use online marking and complex statistical methods to analyse the overall learning experience of students.¹⁶ Furthermore, technology is also used to enhance the student experience. Let's take the use of PowerPoint as an example. Initially, the reliance of this type of visual aids intended to bring lectures closer to the student's environment. However, today, a PowerPoint presentation cannot compete with other typical sources of information created and executed by professional multimedia companies. Therefore, instead of fostering student

¹² First games constituted simulations of war zone scenarios. J. Coleman, 'Learning through games'. in E. Avedon and B. Sutton-Smith (Eds). *The study of games*. (New York and London. John Wiley, 1971), pp. 322-329.

¹³ Though this approach is gaining popularity. Daniel M. Ferguson, 'The Gamification of Legal Education: Why Games Transcend the Langdellian Model and How They Can Revolutionize Law School' (2016) 19 *Chap. L. Rev.* p. 629, p. 633; S. de Freitas, *Learning in immersive worlds: a review of game-based learning* (Bristol: Joint Information Systems Committee, 2006), p.54 available at http://www.jisc.ac.uk/media/documents/programmes/elearninginnovation/gamingr_eport_v3.pdf

¹⁴ J. Coleman, 'Learning through games'. in E. Avedon and B. Sutton-Smith (Eds). *The study of games*. (New York and London. John Wiley, 1971), pp. 322-329.

¹⁵ G. Kiryakova, N. Angelova & L. Yordanova, 'Gamification in Education' (2014) available at <http://www.sun.ac.za/english/learning-teaching/ctl/Documents/Gamification%20in%20education.pdf>

¹⁶ See student statistics' pages on various institutions' websites. E.g. UCL's student statistics data providing information on the composition of UCL's student body. <https://www.ucl.ac.uk/srs/statistics>

engagement, slides led to the opposite effect.¹⁷ Students became even more disengaged, impatient and passive. To mitigate this effect, some teachers use other technologies to increase student participation, for example through the use of clickers in the classroom where students anonymously answer multiple choice questions. Whilst this leads to a group discussion, the number of questions asked remains limited and feedback is not immediate.¹⁸

Gamification aims at increasing the use of game-like elements and technology to track student progress offering new ways of identifying the levels reached by students but also, it offers myriads of ways to incentivise collaboration amongst students instead of competition against one another.¹⁹ Therefore, instead of relying on technological effects to lure students into the learning process, gamification allows to create an environment conducive to interactions and better understanding of information.

Throughout my experience as a teacher, I realised that more and more, students compared their performance with one another and this sometimes leads to feelings of unfairness towards the learning process. Through the transfer of game-like elements to an educational context, this perceived unfairness is mitigated by the focus on collaboration and teamwork towards the same learning goals. Here, students rely less on the teacher for learning to take place which ultimately results in a positive change of student behaviour towards the learning process.

Concentrating on the learning process and the creation of an 'immersive learning'²⁰ environment, instead of being primarily associated with knowledge, gamification fosters a change in the students' behaviour. The inclusion of game characteristics intends to increase the students' motivation, which in turn, improves the level of knowledge in a particular legal field. By focusing on collaboration and commitment,

¹⁷ D. Donahoe, 'An autobiography of a digital idea: from waging war against laptops to engaging students with laptops' (2010) 59(4) *Journal of Legal Education*, p. 488.

¹⁸ Daniel M. Ferguson, 'The Gamification of Legal Education: Why Games Transcend the Langdellian Model and How They Can Revolutionize Law School' (2016) 19(2) *Chapman Law Review*, p. 638.

¹⁹ *ibid*, p. 630.

²⁰ S. de Freitas, *Learning in immersive worlds: a review of game-based learning* (Bristol: Joint Information Systems Committee, 2006), available at http://www.jisc.ac.uk/media/documents/programmes/elearninginnovation/gamingreport_v3.pdf

a new sense of responsibility is developed. In other words, not only does gamification provide a way to render lectures more entertaining, but it offers more flexibility for students to reach a higher level of understanding and acquire skills currently disappearing from education.

2. Student profile

There has always been a mismatch between professors and students. This is somewhat generational but it is even truer with current students. The learner's profile behaves differently than previous generations. For example, yesterday's learners who went on to become professors may have a linear reasoning whereby concepts are tackled one after another and generally text-based. Today's learners believe they can multi-task quickly (e.g. having several programmes running simultaneously on their screens during lectures),²¹ they thrive in collaborative environments and they rely less on teachers for imparting knowledge than any generation before.²² This is not to mean that students do not rely on teachers anymore but the role of the teacher morphing in accordance with the student profile.²³ In an age where information is endless, the teacher becomes a facilitator,²⁴ helping students navigate and acquire new knowledge for future purposes.

Moreover, it is no denying that current students have an increased feeling of entitlement.²⁵ Whatever the driver, the ascent of importance of student satisfaction,

²¹ Hannah Green & Celia Hannon, Young People are spending their time in a space which adults find difficult to supervise or understand (DEMOS, 2015) p. 18-67, available at

<http://dera.ioe.ac.uk/23215/1/Their%20space%20-%20web.pdf>

²² Yet, studies show this is a myth. Y. Ellis, W, Daniels and A. Jauregui, 'The effect of multitasking on the grade performance of business students' (2010) 8 *Research in Higher Education Journal*, <http://www.aabri.com/manuscripts/10498.pdf>; L. L. Bowman, L. E. Levine, B. M. Waite and M. Dendron, 'Can students really multitask? An experimental study of instant messaging while reading' (2010) 54 *Computers & Education*, pp. 927-931; L. Barak, 'Multitasking in the university classroom' (2012) 6(2) *International Journal for the Scholarship of Teaching and Learning*, article 8.

²³ D. Donahoe, 'An autobiography of a digital idea: from waging war against laptops to engaging students with laptops' (2010) 59(4) *Journal of Legal Education*, p. 491.

²⁴ Don Tapscott, Growing up digital: the rise of the Net generation (Meridian, January 1998) available at https://projects.ncsu.edu/meridian/jan98/feat_6/digital.html

²⁵ Already identified in the nineties: Diane Reay, Gill Crozier & John Clayton, 'Fitting in' or 'standing out': Working-class students in UK higher education (2010) 36(1) *British Educational Research Journal*, pp. 107; Peter Sacks, *Generation X goes to college: an eye opening account of teaching in postmodern America* Chicago (Open Court, 1996).

the high fees paid for education, the competitive nature of the job market or a combination of these, students want to be in control of their learning process. They want to choose their modules and have a strong expectation that teaching methods are aligned to their needs and tastes.

Additionally, as in their private lives, students are used to go from one resource to another within a matter of second, they are less patient and call for immediate feedback.²⁶ Whilst feedback is inherently important for improving the learning experience, there is a discrepancy as to the type of feedback expected between the teacher's and the students' perspectives. For example, students tend to complain about the way feedback is provided, its content, the timing and the activities allowing feedback opportunities. Meanwhile teachers, believe they offer multiple feedback opportunities in and outside the classroom, and can take various forms such as oral or written. From the teacher's perspective, students are unable to identify these opportunities, reflect and adapt to enhance their performance.

As student motivation is declining, it is important to understand the profile of students attending law schools today. Studies show that key factors such as discovery, sense of challenge and feedback can positively impact student motivation and sense of control, focusing less on the cognitive process and related efforts, and more on problem solving, creativity, ability to predict challenges and observations.²⁷ Given that legal students are accustomed to instant high quality multimedia and have a very different learning styles, gamification could perhaps provide a way of providing a bespoke and controlled learning experience.

3. Revamping the revision game: *A Thousand Intellectual Property Rights*

A Thousand Intellectual Property Rights is a dedicated IP board game. Aimed predominantly at law students, it draws on well-known game rules to raise awareness

²⁶ Evans describes this as the 'feedback gap'; Carol Evans, 'Making Sense of Assessment Feedback in Higher Education' (2013) 83(1) *Review of Educational Research*, pp. 70-120.

²⁷ Contra: Paul A. Kirschner, John Sweller & Richard E. Clark, 'Why minimal guidance during instruction does not work: an analysis of the failure of constructivist, discovery, problem-based, experiential and inquiry-based teaching' (2006) 41(2) *Journal of Educational Psychologist*, pp. 75-86.

to the complexities of IP issues in a ludic manner. Essentially, students are impersonating inventors at a science fair upon their arrival in the classroom.

Sat in teams around a board, each inventor has to answer cards in turn to progress with their pawn on the board (Figure 2). If the student fails to answer the question correctly, then he has to draw a card from the chance pile. Here, the team has to discuss and answer the question as a team to earn money for future ventures. Yet beware of industrial espionage! At any point, another team player can try to block a player's progress by posing a threat. The first player reaching the end of the board and the team having earned the most money wins the game.



Figure 2 – Presentation of the game

To introduce gamification in a module, one needs a game or at least the introduction of game-like elements in the learning process. I explored the possibility of including gamification in higher education further by designing my own board game, *A Thousand Intellectual Property Rights* as a revision tool for a masters' level intellectual property module based on my research into gamification as pedagogical methods.

From the outset, I knew that I would have to come up with a narrative to immerse the students into the learning process. After all, if I wanted the students to be immersed and engaged, I needed to ensure that they relate to the game.²⁸ Context is therefore

²⁸ On the importance of student connection with information, see Deirdre Wilson and Dan Sperber, 'Relevance Theory' in Horn, L.R. & Ward, G. (eds.) 2004 *The Handbook of Pragmatics* (Oxford:

important as it impacts on student attention. Upon arrival in the classroom, students are put in situation: they have to impersonate inventors at a science fair and they must do everything for their invention to be protected.

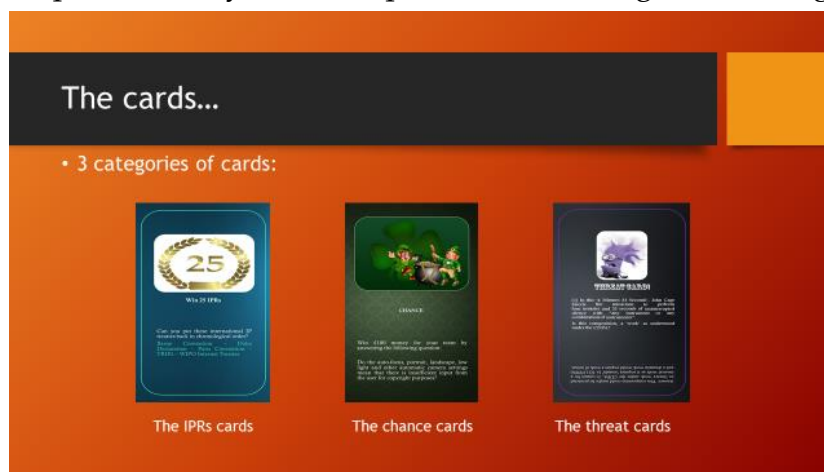
Next, games can lead to mixed emotions: winners generally experience a feeling of happiness whereas losers tend to feel failure and can quickly disengage with the game. Therefore, it is important for the learning activities to enable repeated attempts, to be tailored to the students' level of knowledge and allowing multiple paths to achieve the same goals. I decided to add a twist, compared to traditional games, by setting out two goals. As inventors, they must do everything to secure the success their invention deserves by winning intellectual property rights (individual goal). Not only do they have to secure the 'intellectual property rights' to protect their inventions but they also need to collaborate to gain money for future innovative ventures (team goal). My aim by setting these two goals was to allow stronger students to thrive while mitigating the feeling of failure of other students. This rests on the idea that peer-based learning fosters collaboration, support in the competition and conceptual knowledge in education.²⁹

Inherently, the game requires rules and unsurprisingly, these rules need to work. These rules are crucial to ensure the efficiency of the activity. They need to define what can be achieved to progress and what is not allowed. Additionally, rules should aim at inserting fun and fostering interactivity. Students must want to engage in the learning activity and to do so, rules need to be clear and coherent. To achieve the two main goals of this game, students are divided into teams. Each team sits around a board, which includes pawns for public display of the players' progress. A trusted inventor will keep a record of the money earned by the team on a piece of paper. This makes progression transparent and incite friendly competition amongst students while the learning takes place. On this board (Figure 3), students find a main deck of cards from which they must draw a card and answer the question in turn. This enables

Blackwell, 2004), pp. 607-632; A. B. Frymier & G. M. Schulman, "'What's in it for me?' Increasing content relevance to enhance students' motivation' (1995) *Communication Education* p. 40, p. 44.

²⁹ Curtis J. Bonk & Vanessa P. Dennen, 'Massive Multiplayer Online Gaming: A Research Framework for Military Training and Education' (Technical Report 2005-1) p. 29.

the player to progress on the board. The other deck of cards is the 'chance' pile. To provide multiple paths to meet the game's objectives, students failing to answer the main question can draw a card from the chance pile. Here, students have to collaborate, discuss and agree on an answer to the card as a team in order to earn money and achieve the team goal. Finally, students have some 'threat' cards in front of them which can be played at any point during the game to block another student's progress (mirroring an industrial espionage scenario). These 'threat' cards inject an element of unpredictability and surprise contributing to making the learning



experience more fun. But also, it allows students to think about strategies to achieve targets and get rewards from their progression.

Figure 3 – presentation of the three decks of cards.

As already inferred, the game needs to be fun to play. To add a bit of entertainment in addition to the 'threat' cards, I therefore designed three additional type of cards for the 'chance' pile (Figure 4): a gift card which represents a research grant and therefore additional unexpected money for the team; a card with a spinner authorising the initial unanswered question to be bounced onto another player; and a 'pay your debts' card where the team has to give back money to pay for R&D expenses. While these cards have very little to do with the acquisition of knowledge or the testing of knowledge, they contribute to the narrative, the general theme of being an inventor at a science fair trying to commercialise his/her own IP and to seek collaborations for

future ventures. In essence, these additional cards render the game relatable and add credibility in the eyes of the player.

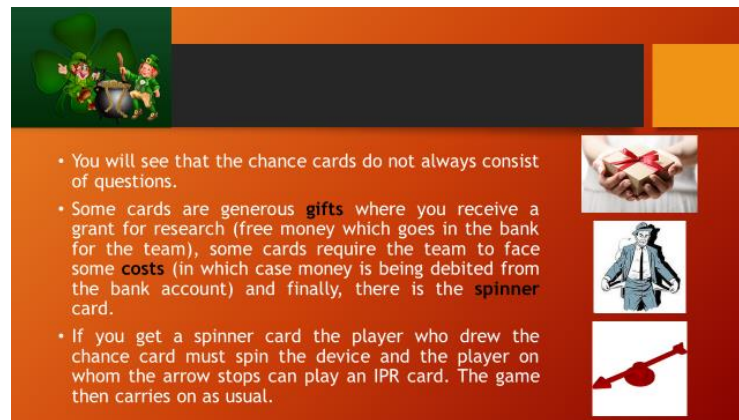


Figure 4 – Special cards within the chance pile

It is essential for the game to include activities enabling students to meet the module's learning outcomes and objectives. This requires a certain element of imagination and creativity on behalf of the teacher introducing game-like elements in legal higher education. I decided to achieve this by providing a wide range of questions covering all topics (approx. 150 questions) covered in Globalisation of Intellectual Property Law. These questions address different skills as cards include multiple choice questions, case scenarios, closed questions and open-ended questions. Furthermore, this endeavour provides two types of feedback. First, feedback is provided throughout the duration of the game as answers with a brief explanation are provided on each card. This increases student performance as students are encouraged to learn from their mistakes and adapt to progress. As such, progress is immediately reflected to the student advancing in the game.³⁰ Second, feedback is obviously provided at the end of the game by designating the individual and team winners.

To consolidate their knowledge during the time building towards the exam, all cards are uploaded on the intranet as flashcards. These cards are downloadable even on portable devices such as smartphones or tablets for students to use at their leisure.

³⁰ Referred to as 'Juicy feedback' in Daniel M. Ferguson, 'The Gamification of Legal Education: Why Games Transcend the Langdellian Model and How They Can Revolutionize Law School' (2016) 19(2) *Chapman Law Review*, p. 636.

Each card includes a QR code³¹ and embedded links redirecting students to resources for further information. These alternative sources have been carefully chosen from a wide range of materials ranging from blog posts, to vlogs and including official reports, videos and podcasts.

4. Strengths and weaknesses of gamification in legal higher education

What was particularly interesting from my perspective as teacher was how the different teams evolved throughout the game. What surprised me was how students started to *own* the game by adapting it to their needs. Whilst all teams started out by simplifying the rules (leaving the 'threat' cards out), most of them played with the full set of rules once they were more acquainted with the game. Also, they made sure that they read the correct answer aloud to allow others to consolidate their own knowledge but more interestingly, students started to take their notepads out and write down concepts that they needed to revise in light of the forthcoming summative assessment.

Furthermore, I very much enjoyed my role as a facilitator. It was easier for me to go through the various teams and identify where clarifications were needed (or what level of knowledge or understanding my students have by this point) rather than if I was facing a group of over 50 students and asking questions sporadically. Here, the 'chance' cards functioned really well. Allowing the team to answer as a group, these cards created a good discussion amongst the students which I could witness and contribute to by providing feedback. From this experience, I quickly realised the benefits in terms of flexibility and opportunities that this game created. In this regard, gamification allows students to have a sense of greater control and to individually tailor their learning experience by relying on interactivity and collaboration to achieve the learning objectives predetermined. Equally, games facilitate feedback as the students will automatically realise the consequences of their actions as the activity progresses.

Whilst I sometimes experienced a decrease in students' motivation and engagement in a traditional learning environment, gamification allowed me to render the learning

³¹ Meaning a two-dimensional barcode.

experience addictive for students. This change in behaviour propelled students to the centre of their learning process, enabling me, as a teacher, to have a better feel and control over what is happening in the classroom.³²

However, the introduction of gamification in legal higher education is not without any inconvenience. The entry costs (e.g. in time) are significant for the teacher as a huge amount is required at the preparation phase.³³ The activities need to be meticulously planned and adapted to the students' level for the game to be successful. Further costs are required for the fine-tuning of the game. Gamified learning is complex and will most likely require adjustments to be made to the first attempts. Because of the nature of legal education, the activities will need to be updated on a regular basis to mirror the legal developments. This naturally increases the time, effort and investment vested in this pedagogical approach. After all, if the design is poor or if the rules do not work, the students will not be motivated or engaged. To the contrary, the change in behaviour may be negative as it may lead to an increase of confusion and disengagement.

Simply rewarding students might increase their impatience and render them less creative. This is the reason why the overreliance on points, badges³⁴ or leaderboards is inadequate in higher education as not everyone is competitive in nature. These students might actually lose interest and disengage with the learning process. It is therefore essential to use game mechanics to 'support an intrinsically rewarding experience'³⁵.

³² Markus Krause, Marc Mogalle, Henning Pohl & Joseph J. Williams, 'A playful game changer: fostering student retention in online education with social gamification' (2015) *Proceedings of the Second ACM Conference on Learning @ Scale*, pp. 95-102.

³³ For more on the 'rollercoaster ride of trial and error'. Clark Aldrich, *Simulations and the future of learning: an innovative (and perhaps revolutionary) approach to e-learning* (Pfeiffer, 2003).

³⁴ See now the introduction of 'open badges'. Anne Hole, 'Open badges: exploring the potential and practicalities of a new way of recognising skills in higher education' (2014) Special edition on digital technologies in learning development, *Journal of Learning Development in Higher Education*, available at <http://www.aldinhe.ac.uk/ojs/index.php?journal=jldhe&page=article&op=view&path%5B%5D=281>

³⁵ Iulian Furdu, Cosmin Tomozei & Utku Köse, 'Pros and Cons: Gamification and Gaming in the Classroom' (2017) 8(2) *Brain*, p. 58.

However, a more embedded approach to gamification in legal higher education might require changes in the design of assessments as some gamified learning experiences do not match the learning objectives easily.³⁶ This drawback could nevertheless be moderated, by better planning, as it is best to align the gamified activities onto the learning objectives set for a particular module from a preparatory perspective.

5. Widening the use of technologies and alternative teaching approaches for the future

In an attempt to deter intellectual property infringements, both the EU and the UK wish to educate young people about intellectual property concepts. Today's youth tend to display attitudes approving counterfeiting and piracy.³⁷ To incite a change in behaviour and better understanding of intellectual property rights, ideas have emerged to introduce gamified learning activities across the curriculum at an early age. Whilst recognising that such behavioural shift will not be an easy goal to reach, European Union Intellectual Property Office ('EUIPO', formerly the Office for Harmonization in the Internal Market or 'OHIM') is ready to assist Member States. By relying on education and subject specific experts, the introduction of gamified learning activities is encouraged. These could then be disseminated in educational institutions to raise awareness of younger generations of intellectual property issues, inherently shaping today's society and economy.³⁸

³⁶ S. de Freitas & T. Neumann, 'The use of 'exploratory learning' for supporting immersive learning in virtual environments' (2009) 52 (2) *Computers and Education*, pp. 343- 352.

³⁷ OHIM, *Intellectual Property and Education in Europe*, September 2015, available at <https://euiipo.europa.eu/ohimportal/documents/11370/80606/IP+and+Education+final+report+September+2015>

³⁸ Similar considerations are found in the UK, see Ian Hargreaves, 'Digital Opportunity: A Review of Intellectual Property and Growth' (UKIPO, 2011), p. 78 available at http://orca.cf.ac.uk/30988/1/1_Hargreaves_Digital%20Opportunity.pdf.

Despite some of initiatives such as the UK IPO Wallace & Grommit,³⁹ the videos and case studies developed by copyrightuser.org⁴⁰ and upcoming Black Swan⁴¹, gamified learning in the field of intellectual property is still nascent.⁴² Recent research posits the gamification market as growing. Market Watch's study forecasts that by 2020, the gamification market would grow from USD 1.65 billion in 2015 to USD 11.10 billion with Asia-Pacific becoming the front runner.⁴³ This growing trend towards the use of game-like elements in serious contexts is welcomed but a lot remains to be done. For example, the EUIPO's suggestion to bring member states, teachers and stakeholders together is an important starting point.⁴⁴

However, for gamification to be efficient, it is recommended to adopt a blended approach, bringing together game-like elements tailored to the goal pursued and social tools to encourage support and interaction amongst the students. Here, it is important to focus less on reward than to provide a learning environment conducive to greater motivation, engagement and interaction. Equally, the development of educational games in higher education should ensure that in addition to the acquiring knowledge, these initiatives encompass ways to challenge the system in place. This is

³⁹ The UK Intellectual Property Office provides a nationwide educational resource called Wallace & Gromit's World of Cracking Ideas, focusing on a wide range of topics from entrepreneurship to intellectual property. The website, featuring characters Wallace & Gromit, was developed in partnership with Aardman Animations and is aimed at children aged 4 to 16. See <http://crackingideas.com/>

⁴⁰ 'The Game is On' has currently three episodes. Each short animation is accompanied by case studies covering a broad range of copyright issues. See <http://www.copyrightuser.org/educate/the-game-is-on/>

⁴¹ This is an educational board game created by a team at Lancaster University. For more, see <https://www.lancaster.ac.uk/enterprise/enterprise-centre/students/ip-game/>

⁴² It is also worth mentioning IPSims. This game focuses less on substantial IP concepts but raises awareness as to the different procedural stages of obtaining a patent while thinking about ways to best commercialise an invention. Hence, this endeavour does not aim at educating students to IP concepts.

⁴³ Market Watch's study: 'Gamification Market by Solution (Consumer driven and Enterprise driven), Applications (Sales and Marketing), Deployment Type (On-Premises and Cloud), User Type (Large Enterprise, SMBs), Industry and Region - Global Forecast to 2020' (February 2016) available at <http://www.reportsnreports.com/reports/479613-gamification-market-by-solution-consumer-driven-and-enterprise-driven-applications-sales-and-marketing-deployment-type-on-premises-and-cloud-user-type-large-enterprise-smb-industry-and-region-global-forecast-to-2020.html>

⁴⁴ OHIM, *Intellectual Property and Education in Europe*, September 2015, p. 79 available at <https://euipo.europa.eu/ohimportal/documents/11370/80606/IP+and+Education+final+report+September+2015>

essentially what the chance cards sought to achieve by providing spaces for the teams to discuss IP concepts and challenge the current system to invite legal reforms.

Whilst the experiment reported in this piece focused on legal higher education, it is reasonable to consider expanding the reach of this endeavour beyond universities. This is not without hurdles. First, the game 'A Thousand Intellectual Property Rights' would have to be adapted to its new audience by multiplying the questions suited for players without any prior knowledge in intellectual property law and by fine-tuning the alternative resources used referred to in the game. Second, support needs to be offered to teachers and schools as these tend to be non-experts in intellectual property law. Finally, teachers would also require greater guidance on the specific assessment methods to verify whether learning outcomes have been met.

As a first attempt to broadening the use of the hard copy board game experimented with my students, I ventured into developing an app, which would be accessible to all, including the wider public, by downloading it onto mobile devices. Whilst this is still underway, the biggest challenge is to reproduce the blended approach described earlier in the digital environment. This goes to show that it is not because an activity works well in one format that it will automatically be efficient in another. To the contrary, any efficient attempt require unique tailoring and careful planning. Therefore, gamification is not a linear process but resembles more the back-and-forth movement of a clock's pendulum.

Conclusion

Education approaches and practices keep on evolving, always aiming at bringing the learning process closer to the student's environment. Currently, law students display a certain lack of engagement towards their studies which ultimately hinders the learning process. Whilst this is perhaps justified by the limited module choices available at their institution, the minimal feedback perceived or the failure to relate to the content of specific modules, gamification represents a viable solution to solve these problems.

We, as individuals, are familiar with game mechanics. We have played games since an early age and it has been proven that games motivate individuals in engaging in particular activities. They enable the player to relate to the learning activity by providing meaning to the experience. Equally, games provide challenges to overcome similar to the challenges faced by students in higher education. Law schools already integrate game elements into their curriculum (badges, points, leaderboards, clickers...), consequently, legal teachers are already game developers. However, for this pedagogical approach to be efficient, there needs to be a greater focus on introducing game mechanics fostering a conducive learning environment. The change of behaviour will only be positive if the gamified learning is adequately implemented. Therefore, these activities need to be carefully thought throughout, fully integrated with more conventional learning processes and emphasise support instead of mere reward.⁴⁵

⁴⁵ The author is happy to be contacted should any intellectual property teacher be interested in experiencing the IP game with their students. Email: sabine.jacques@uea.ac.uk or sabine.jacques6@gmail.com