Gamifying Academic Integrity – the first steps

Zeenath Reza Khan, University of Wollongong in Dubai, UAE
Jarret Dyer, College of DuPage, USA
Sonja Bjelobaba, Uppsala University, Sweden
Sandra F. Gomes, University of Porto, Portugal
Dita Dlabolova, Mendel University, Czech Republic
Shivadas Sivasubramaniam, University of Derby, UK
Soly Mathew Biju, University of Wollongong in Dubai, UAE
Ajrina Hysaj, University of Wollongong in Dubai, UAE
Priyanka Harish Hemnani, University of Wollongong in Dubai, UAE

Extended Abstract for Workshop
Any problem is a problem till a solution can be designed and implemented. This workshop highlights preliminary work done by the working group of ENAI Gamification that aims to explore the possibility of developing and testing a gamified learning module on academic integrity values.

Student cheating is not new. From Bowers (1964) to McCabe and Bowers (1994) and every researcher since, literature has captured numerous instances of self-reported student cheating cases because academics and researchers alike understand the importance of highlighting and speaking out and against misconducts. As technology has infiltrated the world of academia giving rise to Smart Education teaching and learning environments, the challenges have become somewhat more complex and varied (Khan & Balasubramanian, 2012; Khan, 2019).

Neither is contract cheating new. Earliest recorded cases show how fraternity houses used to keep essay mills in their basements and how they would encourage their members to recycle submitted essays (Singh & Remenyi, 2015). Irrespective of the type of misconduct, one thing is for sure. If students are engaging in misconduct, integrity of education is being hit because it is considered to be the foundation of academia.

To help deter students from contract cheating, although recent studies have attempted to aid academics through researching areas such as legal approaches (Draper & Newton, 2017) detection (Rogerson, 2017), analyzing the advertisements (Kaktins, 2018), so on, we believe the focus needs to be more proactive, than reactive. One such method is to design and implement learning modules that train students on academic integrity values and academic writing skills. The Quality Assurance Agency for Higher Education in UK posit "Quality student information and support are central to any strategy aimed at encouraging academic integrity and reducing contract cheating. Providers can foster academic integrity through promoting scholarly institutional values, engaging in dialogue with the student community

and ensuring that academic and professional staff are aware and aligned with a set of common aims and objectives"
(QAA, 2017)

A quick search on various university websites shows most modules focus on promoting studying, writing skills, communication skills, time management and so on. Studies do posit importance of informing students about institutional policies which cover definitions of academic integrity, however, more often than not, there are no modules dedicated to imparting the values to students as a proactive approach. Moreover, a recent white-paper study on the effectiveness of training modules has shown the need to engage students beyond text-heavy, traditional teaching modules (Global Challenges UOWD-UOW Collaborative Project #2018-GC1-ZRSM). The study posits the need for visually engaging, technologically smart, interactive modules that cater to the iGens.

One way to achieve this is to use a digtial disruptor. Digital disruption can be an intimidating phrase, however, it is a vital necessary way of changing how things are done traditionally. One particular digital disruptor, gamification has gained popularity in education in recent years. Gamification, which is implementation of rule of a game along with attributes like points, reward or punishment system into non-game settings, provides an opportunity to solve many problems in the area of education (Lee, J. J. & Hammer). Gamification projects offer students the opportunity to experiment with rules, emotions, and social roles. Games also provide multiple routes to success, allowing students to take responsibility of their own decisions and actions (Locke & Latham, 1990).

Games invoke a wide range of powerful emotions, from curiosity to frustration to joy (Lazarro, 2004). Games also provide positive emotional experiences, such as optimism and pride. They also help students to overcome negative emotions (McGonigal, 2011).

Gamification of Academic integrity has gained some momentum in academia in recent years, with Amada White from University of Technology (Sydney) having created a board-game, Sarah Eaton from University of Calgary (Canada) documenting her experience gamifying an academic integrity workshop for staff, and True North/Carnegie Mellon University's Entertainment Technology Center developing a scenario-based game.

With this understanding, this workshop proposes to explore gamification as a tool to enhancing engagement and commitment of academic stakeholders (students, staff, faculty, management, parents) towards teaching and learning of academic integrity values, thus working towards incorporating a proactive action in building a culture of integrity.

We aim to look at working with the audience to enhance their understanding of gamification of academic integrity values and writing, show stages we are currently using to develop story boards of scenarios for the first phase of the project, that is focusing on contract cheating, and ultimately presenting a sample story board as take away from the workshop.

For Phase One of the project, the working group first discussed the aim of the gamification and learning outcomes expected from the modules developed. Then the group used brainstorming to identify scenarios in contract cheating as pilot test case. This was the big idea. Scenarios are narrative descriptions that provides details of the plot and individual scenes (Kahn & Wiener, 1967). Once identified, the scenario was used to determine and create story board. Story boarding is a process that allows efficient and simple way to develop a game or even a teaching plan (Pradhan, 2018). This allows development of a plan of action, delivery time line, and identifying errors early (Pradhan, 2018).

Using the above method, one scenario was identified which was part of one author's experience. The scenario involved students admitting to not approaching faculty or staff whom they saw as "authority figures" and instead using their mobile phones for easy access to information. This led to students often being presented with contact cheating sites, essay mill portals or academic social networks (such as Coursehero, Chegg, etc). Although students understood these may not have been the most ethical options to get answers, they felt these were "less scary" than talking to someone in position of authority.

Based on this scenario, natural language script was developed which helped to trace out a mind map as shown below.

Figure 1: Mind map for the scenario

Once the mind map was created, it was used to create a story boards.

Figure 2: Story Board

The above example shows how the project is identifying and creating story boards for the gamification of integrity values and knowledge on contract cheating. This is the first phase of the project.

The project is at this early phase where we are now developing such story boards from identifying possible scenarios to highlight. We aim to carry this work forward during the

workshop by taking the audience through the step by step process of identifying scenarios and then developing story boards which will ultimately produce sample story boards as take-aways for the participants and work to add to the database of scenarios for the project's future tasks.

After developing an extensive, inclusive and comprehensive database of such scenarios and transforming them into story boards, the scenarios will be piloted on focus groups of students to capture the effectiveness of the story boards. After eliminating duplicates and non-effective scenarios and updating scenarios based on feedback, the project will then move to its implementation phase where we will develop the game on contract cheating. This is the future scope of the project.

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