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| PhD Outline Research Proposal | |
| Proposed Title | A sense of academic belonging: Investigating the enhancement of student community through gamification techniques. |
| Potential Supervisors | Dr Glenn L. Jenkins, Dr Ana Calderon, Dr Jemma Oeppen-Hill, Dr Catherine Tryfona |
| Motivation for Research (300 words): <to include background, previous work and key references>  This gamification aspect of this proposal was inspired by my own research whilst teaching modules on the Games programme, and the work of game developer, Jane McGonigal, who has devoted much time to transferring immersive elements from video games into real life, with a view to improving real-world happiness and social engagement (McGonigal, 2011). Also, Kevan Davis’s ‘Chore Wars’, an online portal with which a user can create a Tolkien inspired avatar and gain experience points by completing household tasks in the real world. The belonging and engagement aspects of the research are the result of a long-standing interest in what motivates people to contribute to something bigger than themselves. Also, how the Covid-19 pandemic has played a part in changing the nature of the feeling of belonging (Webster *et al,* 2021). | |
| Aim and objectives of the study (200 words): <single aim>  To explore whether novel and innovative gamification techniques can be created through a platform, accessible and customisable by the students, and used to inspire a greater sense of belonging at higher academic institutes. The long-term objective will be for the students to have access to a system that enables them to become more engaged with their course and the campus. The system can also be used by the student to track how they are progressing through their course, so they can more easily spot where they need to focus their efforts. A proper and thorough understanding of belonging and community will be required to begin formulating the design of the system, and also an understanding of whether engagement in the course is the same as belonging. | |
| Literature review (1000 words):  Gamification is the concept of imbedding elements, such as game mechanics, from games to real-world situations, with the aim of enhancing engagement and encouraging people to feel more engaged and promote productivity (Kapp, 2013; Fischer, 2017).As recorded by Prasad and Mangipudi (2021) and Hammedi, Leclerq, and Van Riel (2016), across many industries gamification strategies have been implemented with positive outcomes recorded regarding employee engagement.  The need to belong, according to Baumeister and Leary (1995), is fundamental to human beings. They considered and researched many aspects of belonging, including cognitive interaction, emotional impact, the positive and negative long and short-term effects on health, and the psychological underpinnings of where this desire for kinship may originate. The implications are wide-ranging for the student as a growing, functioning person; but the aspect of belonging focused on in this case would be *institutional belonging*, as described by Vallerand (1997, p.300, quoted in Thomas, 2012), which is a subjective feeling of being connected to an institution. This is supported by research from Baumeister and Leary (1995), who draw upon the importance of regular and stable social contact, and Goodenow (1993) highlights acceptance, along with being needed and valued; the student being recognised as an individual and part of a wider collective. Goodenow’s work focused on adolescent students in the USA, so it can be argued that her study may not fit with the UK Higher Education system exactly, but there is general support from the work of Maslow (1962) who observed that children who are raised in safe and nurturing environments may be more inclined to accelerate their own learning.  If this behaviour is a matter of human nature rather than age, then there could be support for a sense of belonging leading to a greater academic potential. Student attrition has been linked as a side-effect to a feeling of not belonging (Gillen-O’Neel, 2019), with a correlation to first-generation students who feel that their background does not fit with the expected profile of a ‘typical’ university student (Maunder, 2018; Thomas 2012). Jones (2008) also noted that a lack of familiarity with the academic experience could lead to a disconnect from the course. Happy Educated People Inc (HEPI) reported in 2022 (Jackson, 2022) that only 39% of students surveyed felt a connection to their chosen university community. Furthermore 34% reporting feeling confident, while a sense of imposter syndrome was reported by 39%. HEPI also reported that, despite being a vital role of student life, clubs and societies do not necessarily do enough to create an overall feeling of inclusion (Jackson, 2022). Nurturing the student to feel a part of the university and connected to their chosen course is fundamentally important for their own development.  Studies conducted during the shift to online delivery during the COVID-19 pandemic charted a noted drop in the feeling of belonging among students on STEM courses (Wester et al, 2021), using Trujillo and Tanner’s 2014 study on Affected Learning, which broke the process a student goes through during engagement with their course into: Self-efficacy, a sense of belonging, and cultivating a science identity. The latter is important, not only for the adoption of appropriate methodologies and critical thinking skills, for viewing oneself as a part of the scientific community, which could help to combat the experience of imposter syndrome. Crick *et al*. (2020) noted a common theme, in response to the shift away from face-to-face delivery from academics during the pandemic, which was the effect on the mental health of both staff and students, and the absence of flexibility with delivering more practical subjects.  In her book, ‘Reality is Broken: Why Games Make Us Better and How They Can Change the World’, Jane McGonigal (2011) details several examples where the use of gamification has been successfully applied to everyday tasks and chores, following the notion that the real world does a poor job in replicating the fun and immersive elements of gaming. Notable mentions are ‘Nike+’, a running app designed for iPod which tracks the runner’s steps and presents them with a visual representation of their progress (McClusky, 2009); ‘Chore Wars’ developed by Kevan Davis (2007), which seeks to gamify household chores by reimagining a household as a team of adventurers, similar to that of a fantasy-based Role-Playing Game. The players can choose an avatar and set chores as heroic quests to complete in exchange for experience points and virtual currency. The team can decide how the virtual currency is traded in real life. The underlying principle, according to author Matthew Crawford (2009), is that a lot of the day-to-day work lacks a tangible result or individual agency. Video games, such as online multiplayer game ‘World of Warcraft’ (Blizzard, 2004), contains hours of immersive quests and activities that the player may undertake in exchange for points which they can use to improve their character. According to McGonigal, by 2011 ‘World of Warcraft’ players had collectively spent 5.93 million years, or 50 billion hours, invested in the game (p.61).  An avatar, in a video game context, is typically regarded as the means in which the player is represented in the game world, and also how the player feels connected to the game they are playing (Jin, 2011; Gilbert *et al., 2013*). Further research would be required to determine if this were solely due to the physical representation of the player or the actions and moral and ethical choices they are required to make in the game. The avatar need not be an accurate representation of the player either, with many games in the fantasy and sci-fi genre, particularly Role-Playing Games and Massively Multiplayer Online Games, offering options to play as different races and species. Schenkler (1980) coined the term ‘impression management’ to describe the ways in which an avatar may be used to present a more idealised self, in that ones’ perceived physical flaws could be altered or negated. In this regard, the connection between the player and their avatar can be seen as a form of outward expression. This can potentially have the negative consequence of gamers becoming overly absorbed in their avatar, strong avatar identification being linked to gaming disorder (Green, Delfabbro and King, 2021). Careful consideration and more research will be required to ensure that these negative aspects are recognised and mitigated.  By allowing students to create a customisable avatar that will grow and develop with them on their academic journey, it is hoped that it will provide a route, through gamification and self-identification, by which the student will hopefully increase engagement with their course, peers, and the university community. | |
| Research methodology and the work breakdown (500-word limit).  Phase 1 will begin with initial secondary research into the areas outlined in the literature review, before broadening the scope to incorporate theories surrounding motivation, covering not only what motivates students in their studies, but also what motivates them to study. In addition, examining data on Higher Education before the introduction of tuition fees, and the effects of the Covid-19 pandemic. It will be important to examine as many contributing factors as possible, to ensure that the proposed project aligns to the contemporary student experience as closely as possible; whilst also factoring in the wider historical context.  Estimated timescale 24 months.  Phase 2 will include quantitative and qualitative research, primarily through questionnaires, but may also include interviews, and surveys, conducted on the students studying Video Game Design and Development from level 4-6. The Games students will be the ones that the proposed system will be trialled on, and they may have valuable insights that will guide its direction. The questionnaire will enable the collection of data that can be anonymised. It is not foreseen that any sensitive information, or information that could be linked back to a particular student, although it is possible that during preliminary research this may change and factors such as age and socioeconomic background may become need to be considered in further questionnaires. In this case the appropriate discussions over ethical data storage and protection will take place. The questionnaires will require theming to align with the distinct research aims: Belonging and engagement for Phase 1, and attitudes to character customisation and relationship to game avatars to prepare for Phase 3. Estimated timescale 24 months.  Phase 3 will be taking the conclusions from Phase 1 and 2 and refining them towards the creation of the artifact. The artifact itself will require significant research and prototyping during this phase. The research will be focused on methods of avatar creation and customisation, looking at various styles from well-known games that range from cartoon to realistic. This, combined with information received during Phase 2, will help to determine whether the avatar creation follows a particular route or whether it is desirable or achievable to offer a variety of styles. The methodology for this phase will be a combination of secondary research and questionnaires. It is hoped that the research may indicate whether players historically become more invested in an avatar that is more realistic, or whether it is more the personal preference of the player. There may be an opportunity to tie the artifact into the new Learner Analytics system, but this would require discussions into how possible and secure this would be, and whether it gathers the sort of data that the project is examining. The other area of research will be the realisation of the artifact. This will include research into the most appropriate platform, taking into account if the students will monitor their avatar on PC, webpage, mobile app..), and creation of the assets for the avatar.  Estimated time scale 18 months. | |
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| Collaboration outside the university, if any: | |
| Scholarship / award, if any: < details of any scholarship/ award/ funding  secured already or application in progress or any future applications.  This research project will be self-funded. | |
| Other information:  . | |