Conference theme – Scholarship of Learning, Teaching and Organizing
Title (20)

Using classroom based research to inform learning and teaching – using an ethics simulation game to design an effective learning experience.

Abstract (150)

This session addresses the conference theme by showcasing current class based teaching practice at a micro level to develop a research project to support learning and teaching design. Acknowledging societal and accreditation agendas calling for educators to produce ethically minded graduates, the presentation will demonstrate how research on a web based 3D game 'Marketing Mayhem', has been designed and developed to address the issues of engagement and understanding when delivering Business Ethics to undergraduate students. Using a quasi-experimental study the findings evaluate different approaches in pedagogic online delivery. Practice based research shows that a macro level change is needed in business ethics curriculum teaching structures and processes to allow for effective integration of online technologies. Showing that when correctly implemented, the nature of pedagogic delivery can have a strong impact on improving the learning experience of business students developing the ethical sensitivity and decision-making skills of future managers of industry.

Theoretical framework (600)

The theoretical framework acknowledges management education, gaming technology and ethics. Management education is criticized as too 'narrow and analytical' in orienting future managers (Waddock & Lozano, 2013), with some authors arguing that not all students actually want to behave ethically (Giacalone, 2012). Pedagogic research suggests ethics education meets the needs of these students by developing teaching methods going beyond standard analytical approaches (Floyd, Xu, Atkins, & Caldwell, 2013) because analysis techniques alone can lead to detachment, detracting students from learning leadership skills (Waddock & Lozano, 2013). Moral psychologists argue that students are less likely to engage in an ethics course with analytical approaches as a result of lack of engagement on a personal level (Nisan, 2004). The educational challenge is to develop ethical managers who can identify an ethical issue in a business context and manage people within that context, while able to reflect on and personally commit to a positive worldview. To achieve this the research builds on the work of Arbaugh (2013) who argues that experiential or active-learning is necessary for informing and enhancing conceptual learning, encouraging the development of new concepts, and increasing students' motivation, higher level learning, and confidence in learning. However, how to achieve this learning through online gaming is a challenge, with Kebritchi (2008) identifying that advances in game technology are outpacing research on design and effectiveness and that 'relatively little is understood about how to apply what we know about teaching and learning to optimize game-based learning'. Marketing Mayhem was designed and developed to achieve the learning outcomes in an ethics course and pedagogically represents experiential learning

through *gamification* – with provision for immersion in the story, competition for points, and autonomy as players choose their own direction and make their own choices within the game (Gee, 2003). Significantly the role-playing element inherent in VR games helps players learn to see things from different points of view – a key requirement in ethics education; this type of activity facilitates prosocial attitudes, empathies, sympathies and related behaviors (Vieira, 2012). With Schneider et al (2004) finding that a greater sense of presence and more affinity with characters was found when a game was structured around a storyline. The resulting *Marketing Mayhem*, is a VR game for business ethics learning, taught using a combination of rules- and values-based approaches. Rules-based approaches focus on stakeholder analysis, typically referring to philosophical ethical theories (Crossan, Mazutis, & Seijts, 2013). Values-based approaches emphasize personal and moral values using virtue ethics, Kohlberg's theory of moral development stages, and other methods that challenge existing personal beliefs and reflection in the light of business decisions (Gu & Neesham, 2014; Roca, 2008).

Methods (400)

It is our intention as class based practioners and researchers to provide fresh insight into the use of 3D gaming as a potential facilitator for learning business ethics particularly in relation to: games usability; designing to teach business ethics; and the use of *gamification* techniques. To achieve this we designed a quasi-experimental study to test the impact of using two different pedagogic delivery methods, objectivist vs. constructivist at two UK post 1992 universities. To evaluate the success of the respective delivery patterns adopted, a mixed method approach was designed to ensure a wide collection of data using both quantitative and qualitative formats. Central to the quantitative research was use of the Technology Acceptance Model (TAM), used to predict and measure individuals' reactions to a technology application. This was further developed by Yusoff et al (2010) who devised and used an adapted version of the TAM to test whether serious computer games can be used as effective pedagogical tools to facilitate the learning experience of students. Our research builds on this work by utilizing three of their constructs: *situated learning*, *transfer of learnt skills* and *reward.*

The study comprised of an online survey using a Likert scale to establish pre-test constructs prior to playing the game. 177 undergraduate students completed the game and 100 completed the survey, 56% were female, subjects were aged between 18-25, and whilst 38% were white Caucasian there was a variety of ethnic mixes. 62% of participants were employed and 56% rarely played online games. The focus groups were targeted specifically to students in both institutions' final year Business Ethics courses who had played the game to evaluate how the game impacted on their learning of business ethics and deal with more complex issues such as the level of immersion and integration into the course. Students were encouraged to come forward and two focus groups were created (one from each institution) from this opportunistic sample. The focus group sessions were recorded and lasted just over an hour. The facilitators for both groups were not involved in teaching the students on the modules nor involved in marking their work. Both universities' ethics committees had

approved the studies and consent forms outlining the details of the research and treatment of the data had been distributed to participants.

Findings and conclusions (300)

The project contributes to the areas of pedagogy, ethics and research. Pedagogic research supports the view that learning styles are evolving as a result of technological innovations. Survey results confirmed that students perceived this approach to learning business ethics as useful in helping them relate and apply their learning of ethics to their needs and interests. The game utilizes a new learning style that has evolved with the development of technology. Pragmatically, it is possible to engage participants in active learning without the instructor having to be physically present or having to mark large volumes of student work. This is where web-based technology can play a part in reaching large numbers in any location with a suitable broadband connection. Games of this nature could be used on employee training and induction schemes in conjunction with other methods of e-learning interaction (forums and discussion groups and assessment) to provide employees with a more interactive way of understanding particular ethical dilemmas that may occur in their work environment.

Within Ethics the game offers an interactive environment that mirrors the real world in which students can experiment and experience to some degree the consequences of their ethical choices. Learning theoretical concepts can make ethics a dry subject and students clearly appreciated this alternative method to apply the theory to real life dilemmas.

From a research perspective our variant of the TAM model can potentially be used and adapted in future studies to measure and understand technology acceptance in the context of serious games. Practice based research is informing an importance aspect of the theory of business ethics teaching – showing we can engage students enough for them to see why ethics is important to them personally, rather than as an academic exercise or box-ticking requirement.