Beyond FYHE 2020: Imagining the Future of First Year Higher Education

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Abstract

In this nuts and bolts session, attendees will be invited to imagine the first year experience ‘beyond 2020’. In reflecting on the changes technology will bring to higher education, consideration will be given to the types of teaching strategies to employ, and how higher education institutions can embrace the possibilities of flexible, blended and online learning in a first year setting. This session will précis research relating to e-learning and showcase the possibilities for technologies in teaching in the future, including social media, augmented and virtual realities, 3D, immersive and interactive learning and mobile learning approaches. Participants will be engaged in the session through two interactive activities, ‘Brainstorm 2020’ and ‘Change Challenge’.

Beyond FYHE 2020

The only constant is change, continuing change, inevitable change, that is the dominant factor in society today. No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be. — Isaac Asimov

Imagine the first year experience in higher education beyond 2020.

How will teaching approaches have changed? What will be the strategies for student engagement? How will technology play a role in the 21st century first year student? What will be the first year University experience of today’s super-connected 10-year old? The same 10-year old who today is proficient with internet-enabled mobile devices such as an iPhone and iPad, and with a digital whiteboards in primary school classroom, an online electronic portfolio to display their work, and where many answers can be readily found by simply searching Google?

The purpose of this nuts and bolts session is to imagine the future of first year higher education. Based upon the research of e-learning, this session will showcase the possibilities for technologies in University teaching in the future, and to glimpse into the possible worlds of the 21st century University. Participants will explore tomorrow’s higher education classroom set in the world of 2020, and imagined to have the following features:

A new learning landscape incorporating both the physical and virtual

For some first year students, FYHE 2020 will be a blending of both physical and virtual environments. To support learning, first year students will have a blend of face-to-face and real-life synchronous experiences, with learning situated with and complimented by online
learning activities. Students reflect on their learning in personal learning systems and engage with their learning through media-rich web sites incorporating film, high-quality graphics, 3D imagery and interactive technologies. Easily accessible and high-quality open education resources merge different explanations of content knowledge, assimilated and given context through the teaching experience. Learners can create their own content, including digital e-portfolios of work integrating text, graphics, audio and video, and multimedia integrates seemingly into coursework to create a rich learning environment.

The lecture as we know it is gone

The ‘stand and deliver’ traditional style of lecture, with lecture theatres full of tiered rows sometimes numbering well in the hundreds, is now in the past. Instead, engaging, interactive, mobile and web-enabled and social learning experiences and activities encourage students to participate in their learning in an interactive and meaningful way. For some subjects, pre-recorded podcasts streamed online or to a mobile tablet intersperses knowledge and content with engaging learning activities, to be completed when and where students prefer to learn.

Learning can occur in games, augmented reality or virtual worlds

In FYHE 2020, the curriculum is, at times, immersive, utilising technologies such as gaming, augmented reality, 3D environment/animation and simulation. Virtual worlds might replicate a discipline-based setting. An archaeology student, for example, might enter a virtual archaeological site, dig with virtual reality tools, explore archaeological findings and chat with a live but remotely located expert.

For some students, learning may occur through augmented reality (AR). Through mobile technologies a ‘real world’ experience could be augmented with information from a computer. For example, a view of a real object overlaid with ‘X-ray’ vision; a 3D object to explore and understand. A first year student might experience their campus orientation through using AR technology on a mobile device (for example an ‘AR treasure hunt’), or learn online library research skills from an AR application.

In FYHE, there’s a new meaning to social media

In FYHE 2020, online social learning networks and virtual online classrooms create, share and discuss knowledge. Blogs, wikis, podcasts, and synchronous and asynchronous communication are central learning activities for first year students. For mobile devices, applications are tailored towards discipline areas, with Universities creating and adapting apps for their subjects and courses. Mobile learning allows ‘anytime, anywhere’ learning and

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1 This approach is based on the observations of Stacey and Gerbic 2009, and embraces the model of flexible education propounded by several researchers (Littlejohn and Pegler, 2009; Bluus, Goodyear and Ellis, 2010; Toohey, 2008).
2 Based on the description of technology and education by Bates and Sangra, 2011.
3 This approach is based on the literature relating to active learning (Bonwell and Eison, 1991; Ramsden 2007; Prosser and Trigwell 2010).
4 This approach is based on an extension of the current approaches to virtual reality as documented in the literature (for example by Hoffman, Patterson 2000; Barron and Henderson 2002; Sakellariou et al 2011)
embraces the mobile device as ‘personal, collaborative and truly centered learning’ (Naismith, Lonsdale, Vavoula and Sharples, 2004).

**Audience Discussion and Participation**

This session will have a high level of active participation by the audience. After showing a précis of Beyond FYHE 2020 possibilities (in the first 10 minutes of the session), participants will then be invited to engage in the ‘Brainstorm Challenge’ and ‘Change Challenge’ activities for the remainder of the session.

**Brainstorm 2020 Activity**

In this creativity exercise, participants will imagine different ways in which to engage ‘the students of the future’, adapting and applying the possibilities shown to their discipline area or context.

**Change Challenge Quick Response**

In this brief group activity, participants reflect on the changes they have seen in their higher education experience and consider strategies to adapt to the 21st century student. Tools will be provided to participants to help with their reflection and strategy considerations.

These activities are designed to be fun and engaging, and to assist participants in considering the different adaptions and possibilities of technologies in FYHE. Key questions underlying these activities are:

- By adapting and applying the possibilities shown in this session, can you think of ways in which to engage 21st century first year students in your discipline area or context?
- How has the University experience changed in your time?
- What are some mechanisms by which to embrace change in the FYHE context?

**Description of Impact**

Many of the participants in this session will have experienced their own ‘web technologies education revolution’ (Bonk, 2009). For many, it may have been from the move from overhead transparencies to PowerPoints in teaching, or perhaps the introduction of the Internet and accompanying email address from 1994 (Harasim, 2012). More recently, ‘Web 2.0’ may have been part of the University experience, referring to the use of the internet for social communication, interaction and collaboration, including blogs, wikis and Podcasts in the learning experience (Richardson, 2010).

In many Australian Universities, the last decade has seen the rise of the learning management system, and a dramatic increase in the number of online, blended and flexible subjects and

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5 This approach is based on the body of research relating to online collaborative learning (OCL) theory, for example by Roberts 2004 and Harasim, 2012. OCL theory emphasises the importance of collaboration for the purpose of knowledge building and challenges a move beyond didactic learning approaches (Harasim, 2012).
courses. Principles of effective e-learning course design have been well-established in literature (Littlejohn and Pegler, 2009; Toohey 2008; Benson and Brack, 2010).

Change is challenging. Yet, as the quote from Asimov at the beginning of this paper states, the only constant is change, and it is continuing and inevitable. In terms of impact, this session hopes to engage participants with the exciting possibilities for the first year students of the future whilst recognising that the change process itself is difficult.

It is hoped that this starts the conversation as to institutional processes to support technological change in higher education, as well as the pedagogical and technical support for teachers and students (Stacey and Gerbic, 2009). Above all, it is hoped that this session contributes to the ongoing pedagogic considerations for the use of technology in teaching, and to ensure that decisions are made for the purposes of student learning and engagement.

Participation in this session should enable attendees to:

- discover and see the higher education application of the latest in technologies;
- be provided with a précis of e-learning literature in the context of FYHE;
- consider the use of technologies in higher education, whilst reflecting upon their own higher education experience with technology;
- for all participants, the opportunity to discuss in an informal setting teaching practices of the future and start a dialogue with peers.

References


