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## **Innovative Pedagogies that Embrace Technologies: Debates for Enhancing Student Experience and Empowerment and Modernising Curriculums**

**Dr Jacqueline Leigh, Lyn Rosen, Kyle Charnely, Dr Michelle Howarth, Dr Emma Gillaspay**

Healthcare is facing a period of global unprecedented change and transformation. For example in the UK, NHS England is asking every health and care system to come together, to accelerate its implementation of the Five Year Forward View (NHS England 2015). This Forward View sets out a clear direction for the UK National Health Service (NHS), showing why change is needed and what it will look like (NHS England 2014). UK healthcare transformation is not an isolated case. The launch of the Healthy China 2020 vision aims to extend access to essential healthcare for all residents of China through revising policies and services around key topics such as public health and community care (CPC Central Committee and State Council, 2009). The World Health Organisation (2016) acknowledges the increased demand for social and health care, fuelling around 40 million employment opportunities in the health workforce globally by 2030. What is becoming increasingly apparent is the correlation between the highly skilled healthcare workforce and the delivery of excellent healthcare (Department of Health 2013, Leigh et al. 2015).

The UK has become a focus for internationalisation and is a top destination for international students (BIS 2016). The University of Salford, School of Nursing, Midwifery, Social Work & Social Sciences (SNMSWSS) is experiencing a proliferation of international students accessing postgraduate nursing, education and healthcare leadership programmes. Indeed the University of Salford has recently been featured by the Times Higher Education in their list of the top 200 most international universities (THE 2016). The SNMSWSS has seen a year on year growth of international students studying on postgraduate programmes.

In equipping our global healthcare workforce to operate in this rapidly changing environment, educators are required to help practitioners develop not only the practical skills but also the appropriate behaviours, attitudes and values required by the global healthcare professional. The University of Salford vision *“By pioneering exceptional industry partnerships we will lead the way in real world experiences preparing students for life”* aligns well with the national and international drivers for delivering the future of postgraduate healthcare education. By bringing current workplace experience into the learning environment, students will be empowered to develop their professional identity in a meaningful direction according to their own values and attitudes. However providing real-world experiences for international students, whose professional environment is very different to that in the UK presents a significant challenge.

There are many ways to provide these real world experiences outside the traditional NHS placement model. For example digital technologies have the potential to involve practicing healthcare professionals in designing and delivering curricula directly from their clinical environments. Such technologies could be further exploited to provide a more global perspective to nursing education, for example through expert webinars and professional dialogue using social media. Developments such as these need to be carefully integrated to balance student expectations with dynamic teaching and learning strategies and creating the student who takes control of their own learning (Beetham and Sharpe 2013).

The recent Higher Education white paper (BIS 2016) recommends institutions create flexible solutions to facilitate student learning. Going forward, the UK Teaching Excellence Framework will be a key measure of educational quality in the UK and this provides a timely opportunity to review curriculum development in nursing education (BIS 2016). As a consequence, programme teams are recognising the need for postgraduate healthcare curricula that are dynamic and will effectively prepare healthcare professionals to lead and embrace change. Postgraduate programmes need to equip the workforce to behave professionally and ethically in the digital age. Jisc (2016) found one in four students use social networking to contact their tutors. Jisc chief executive Martyn Harrow stated *“Higher education providers need to ensure that they are tech savvy and that education technology is at the very top of their agenda to secure the future of their institution.”* Digital and mobile technologies have changed the way that students find and interact with material. Students expect that Higher Education Institutions will replicate the accessibility and immediacy of their current social media connected lives. (NMC 2016).

Against this backdrop, Glatthorn et al. (2016:190) suggest that the purpose of any curriculum framework is to guide the formation of a curriculum aligned with standards and benchmarks and embedded within it are evidence based improvements that incorporate research based approaches to teaching and learning.

If educators are to produce the modern healthcare worker who uses technology competently and professionally within their professional practice it is essential that Higher Education curricula embrace innovative pedagogies that include the use of new technologies within the academic learning environment (Open University and SRI 2015). Debates in Higher Education refer to how the design, development and application of teaching and learning strategies should embrace digital technologies by ensuring that any curriculum evolves to meet the changing needs of students and employers (JISC 2016). An evolving dynamic curriculum that is responsive to the driving forces of increasing flexibility and choice for the learner is required. By embedding digital technology at the curriculum development phase rather than adding technology into learning once a curriculum is developed, learners are more likely to be immersed in the real world experience applied to their area of professional practice.

The University of Salford has recognised the need for an evolving and dynamic curriculum and has identified putting “digital first” as a key component of its strategic plan 2014-2018. Balancing the face to face teaching with alternative ways to deliver content, the strategy addresses the need to adopt and promote pedagogies, methodologies, processes and technologies that enable students to learn in flexible ways. Flexibility at the core of a curriculum framework creates the urgency for educators to expertly facilitate learning but in a different way. Strategies such as the single classroom and flipped classroom have been shown to facilitate learning and empower students (McLaughlin et al. 2014). Digital technologies are key components of the flipped classroom, a model that has been popular within engineering & health care education (Bishop and Verleger 2013).

From a SNMSWSS perspective, challenges created by cultural norms as experienced in China may influence the sustainability for digital technology once the student has returned home, leaving many feeling disenfranchised. For example, students from China studying on an evidence based practice module learn how to develop a systematic search strategy to locate evidence to support practice and are subsequently exposed to a range of databases. Many of these databases are precluded from them in China due to information restrictions. Hence, teaching these students could be considered challenging as they are unable to fully use their new skills in their professional context. Equally, students from African states who are exposed to high fidelity clinical simulation suites often return home as educators and are faced with a lack of the technical equipment needed to support these innovative pedagogic approaches.

An increase in international students accessing Higher Education programmes has resulted in progressive and affirmative exchanges within the classroom. Students have reported positively the impact on their learning through the use of digital platforms such as blogs, webinars and social networks such as Twitter and Facebook. The growing demand to ensure that all students are fully engaged however, has led to scrutiny about the best and most suitable digital methods to embed within the curriculum. Whilst there is a move towards supporting such technological advances, whether such approaches are advantageous for international students is still open for debate. Whilst these debates continue, the current stance and philosophy taken by the SNMSWSS is that postgraduate education driven by flexible and creative pedagogies which embrace digital technologies will ultimately empower students to take control of their learning and professional development.

The presenters will use the University of Salford’s transforming learning environments project as an example of how digital technology can be embedded within its flexible learning strategy and used to facilitate learning for postgraduate students. These technologies can be closely aligned with Biggs (2003) four key concepts of constructive curriculum alignment. The premise of constructive alignment is twofold. Firstly, teaching is viewed as a catalyst for learning. The student therefore constructs meaning from the relevant learning activities created by educators. Secondly, the educators create a learning environment to align the learning activities to the intended curricular or programme intended learning outcomes (Biggs 2003). Biggs summarises the key principles of constructive alignment into four key concepts:

1. Define the programme's intended learning outcomes
2. Choose teaching/learning activities that best support achievement of the intended learning outcomes
3. Assess students attainment against the intended learning outcomes
4. Arrive at a final grade.

Table 1 provides examples of digital technologies which can be embedded within each of the four key concepts of curriculum design. Many of these technologies support the increasing numbers of students in postgraduate education and allow for efficient scalability of a curriculum. In addition they provide increased opportunities for flexible and flipped learning and move towards providing a real world experience for students.

**Table 1 Example of Embedding Digital Technologies within a Curriculum Design**

Biggs (2003) Four concepts of constructive alignment	Digital Technologies
<p>1. Define the programme's intended learning outcomes</p>	<p>Dialogue with stakeholders through:</p> <ul style="list-style-type: none"> <li>• Email</li> <li>• Facebook</li> <li>• Twitter</li> <li>• LinkedIn</li> <li>• Blogs</li> <li>• WhatsApp</li> <li>• Snapchat</li> <li>• YikYak</li> <li>• Survey tools such as Socrative and Google Forms</li> </ul>
<p>2. Choose teaching/learning activities that best support achievement of the intended learning outcomes</p>	<p>Content creation and delivery through:</p> <ul style="list-style-type: none"> <li>• Slide decks using PowerPoint</li> <li>• Powerpoint alternatives such as Prezi, Office Sway, Adobe Spark Page</li> <li>• Podcasts</li> <li>• Screencasts</li> <li>• Publicly available video content</li> <li>• Webinars and video conferencing</li> <li>• Quiz and survey tools</li> <li>• Simulation (low to high, including augmented/virtual reality and immersive technology)</li> <li>• Quiz and survey tools such as Kahoot, Socrative, Blackboard quizzes, Google Forms</li> </ul> <p>Curating existing resources through:</p> <ul style="list-style-type: none"> <li>• Open educational resources for example MOOCs</li> <li>• Pinterest</li> <li>• Wakelet</li> <li>• YouTube channels</li> </ul> <p>Social learning between students, stakeholders and future employers through:</p> <ul style="list-style-type: none"> <li>• Email</li> <li>• Facebook</li> <li>• Twitter</li> <li>• LinkedIn</li> <li>• Blogs</li> <li>• WhatsApp</li> <li>• Instagram</li> <li>• Snapchat</li> <li>• YikYak</li> </ul>
<p>3. Assess students attainment against the intended learning outcomes</p>	<p>Online assessments through:</p> <ul style="list-style-type: none"> <li>• Eportfolios</li> <li>• Blogs</li> <li>• Turnitin submissions</li> </ul> <p>Face-to-face assessments through:</p> <ul style="list-style-type: none"> <li>• Simulation (low to high, including augmented/virtual reality and immersive technology)</li> </ul>

	<ul style="list-style-type: none"> <li>• OSCEs</li> <li>• Presentations</li> <li>• Digital content creation</li> </ul>
4. Arrive at a final grade.	<p>Consistency and quality assurance through:</p> <ul style="list-style-type: none"> <li>• Online rubrics</li> <li>• OSCE examination applications</li> <li>• Audio and video feedback</li> <li>• Development of simulation scenarios</li> </ul>

Shifting the culture of curriculum design to embrace digital technologies requires careful leadership. Kouze and Posner (2012) as part of their leadership challenge acknowledge that leadership does not happen without courage and how leadership could be defined as courage in action. Educators must therefore first understand how digital technologies support the pedagogical process rather than following each emerging technology (Sharples et al 2015) simply because it is new. Creating the vision (NHS Leadership Academy 2013) for the application of digital technologies is key and will support successful curriculum change and transformation.

Using the example identified in table 1 the presenters will debate the embedding of pedagogies that embrace technology within postgraduate curricula and will explore their impact on student experience and enhancement. The debate will focus on new curriculum models that balance the use of digital technology with quality time 'face to face' interaction with students; and how to engage the reluctant academic and student follower.

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