DIGITAL LEARNING CONFERENCE 2017

Book of Abstracts

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**UNIVERSITY OF PLYMOUTH
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TEACHING & LEARNING WITH PLYMOUTH UNIVERSITY

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Keynote Biographies

Sheila MacNeill is an Senior Lecturer in Digital Learning at Glasgow Caledonian University and the current Vice Chair of ALT (Association for Learning Technology), the UKs leading member organisation supporting the learning technology. A self declared open practitioner, Sheila has work in the education sector for over 15 years, as a researcher and practitioner and is currently part of the Academic Development Team at GCU working to develop effective pedagogical approaches through the use of digital technologies. Current areas of work include: open education, learning analytics and developing digital capabilities. Before joining GCU in late 2014, Sheila was one of the Assistant Directors of the national educational technology innovation centre, CETIS, which supported the development and implementation of open educational standards, open software and open educational resources.   Sheila is a regular blogger and you can find our more about her work and current thoughts on a range of educationally related issues on her blog . Sheila is also active on a range of social media. You can find and follow her from here .

Helen Beetham is a writer, researcher and adviser on digital learning issues. Since 2014 she has worked on a series of Jisc-funded studies into 'digital students'. She helped to develop the Digital Student Tracker and has just published findings on the digital experiences of more than 20 thousand UK students. Helens' edited collection *Rethinking Pedagogy for a Digital Age* (Routledge) is a set text on many PG Cert and Masters' courses in education and is just going into its third edition. Helen developed the 'six elements of digital capability' framework in the UK and advocates for the teaching of critical approaches to digital technology and media. She is passionate about using technology to redress inequality and respecting learner differences. She also works on projects for the EU, the NHS, OECD, and universities across the English-speaking world.
Blogs at helenbeetham.com. Tweets as @helenbeetham.

Keynote Abstracts

Sheila MacNeill

Learning Analytics: The good, the bad and the ugly

The effective use of data and analytics has never been so prominent in higher education. As a sector we are becoming increasingly held accountable via various metrics such the REF and the TEF by funders and students alike. Every institution collects vast amounts of data related to learning and teaching, but are we using it effectively? Learning analytics, seems to be the future now of learning and teaching. In this presentation Sheila will share some of her experiences of trying to develop an institutional approach to developing learning analytics capability. She will share some of the good, the bad, the ugly challenges of that experience and some of the key issues for future developments in this area.

Helen Beetham

Who are our 'digital' students and what do they want from us?

Behind the headlines about young people being digital natives, students' attitudes to digital technology are complex. Some have had negative experiences: others are technically proficient but fail to see how these skills support their learning. Many learners use digital tools in a familiar but uncritical way. Others find that conventional study does not suit their digital modes of thinking and understanding the world. With more and more jobs requiring digital skills, with automation threatening conventional ways of working, and with digital media dominating social life, it is more urgent than ever that we support students to thrive in a digital society. This keynote will look more deeply at the diverse experiences of today's 'digital students' and ask what they need from higher education. It will question what universities can offer in a world where online learning is abundant, and where a well-managed digital reputation may be count for more than a degree. What kinds of teaching meet the needs of digital learners now, and can support them into the future?

Abstracts

Dr Lisa Bunn
School of Health Professions, Plymouth University Physiotherapy lecturer

Clinical CPD in Devon and Cornwall: Surveying current constraints to accessing activities and scoping the potential for web-based CPD delivery for clinicians

Introduction: Continuous professional development (CPD) is a valued means of maintaining and improving knowledge, skills and competence and performance at work. Despite motivation for CPD, physiotherapists in geographically remote areas may encounter constraints in accessing CPD opportunities.

Methods: 114 physiotherapists in Devon and Cornwall participated in an action research project. An online survey identified constraints to accessing CPD activities and perceived value of web-based activities. Using new information regarding web-based solutions, physiotherapists participated in a follow-up web-based activity and a follow-up survey about their experience of this activity lasting 40 minutes.

Results: Physiotherapists in Devon and Cornwall most frequently encounter time, location and funding constraints to accessing CPD, potentially highlighting inequality issues within the workforce. Web-based solutions do appear to be of perceived value as do other flexible forms of CPD activity. Participants engaged in the web-based trial CPD activity found this of value and were likely to engage with similar activities in the future.

Discussion: Physiotherapists' CPD in Devon and Cornwall is disadvantaged due to accessibility constraints. Web-based forms of CPD could offer a feasible, accessible medium for CPD activities, which could in turn increase the frequency and breadth of CPD activities that professionals engage in.

Dr Arunangsu Chatterjee
PU PSMD Associate Professor & Director of TEL
L McGowan, E Seymour, R Hart, Thomas Gale

mHealth simulation for training and educating in rural West Africa using digital storytelling

At the peak of the EBOLA crisis, a partnership between the Masanga Hospital in Sierra Leone, Mentor Initiative in Liberia with links to diaspora groups in the UK, the Plymouth University Peninsula Schools of Medicine and Dentistry ("PUPSMD") set out to promote resilience across these communities through infection prevention control (IPC) training and community awareness. Two modules were designed and developed using an agile approach, borrowing features from game design and digital storytelling while ensuring cultural nuances were retained. The modules were distributed using tablets and were designed to augment existing face-2-face training. More importantly the modules were key in delivering refresher training without the need for face-2-face interventions.

The main findings so far demonstrate that a platform utilising virtual reality and distributed simulation is effective in improving confidence and competence of healthcare workers. It is equally effective in improving knowledge and awareness among general population while acting as an important source of data for the respective health authorities. Data from the training sessions point towards an overwhelming positive response and its enormous potential to deliver quality cost effective education in rural locations.

Dr Arunangsu Chatterjee
PU PSMD Associate Professor & Director of TEL
Robert Hart, Karen Johnston, Sally Hanks, Tracey Collett

Supporting student voice ubiquitously

Eliciting formal and informal feedback from students presents challenges for teachers but to develop "young people who will be confident, connected, actively involved, life-long learners" demands that they are both willing and able to provide feedback to teachers not only about their learning needs but also about the teaching they experience (Plank, Dixon and Ward, 2014).

More importantly, student feedback as an ongoing formative activity could act as an invaluable tool to improve learning experience within any institution without waiting for any end of module feedback. It is an incredible opportunity to encourage students to provide feedback and allow for improvements rather than use NSS as a tool to elicit their dissatisfaction!

Understandably such an initiative could be a logistical burden and hence the proposal to use a simple technology enhanced intervention was designed for PU PSMD. The PU PSMD Student Voice Working Group introduced a new feedback app enabling students to seamlessly provide mid-range and individual feedback using their preferred device. This did not supersede or replace existing mechanisms but was placed as an alternative to augment the feedback collection process in a much more ubiquitous manner.

The app allows students to provide 2 types of feedback.
  (i)   Requested Feedback - Students use this when academics/providers explicitly request feedback from students. The feedback provided is anonymous and the academic receives an email digest with all the feedback once a week. Actions on feedback and communication are the sole responsibility of the academic. However, academics are encouraged to report actions via "You said we did" section on the DLE. It was made clear that the feedback data will not be monitored via the committee unless there are exceptional circumstances.
  (ii)   Spontaneous Feedback – Students are able to provide feedback anytime but need to recognise themselves and receive a formal response. The feedback is forwarded to a dedicated email inbox monitored by the quality team. The quality team then forwards an anonymised version of feedback to the respective team/academic for a response. On receiving the response it is communicated to the student ensuring that its dealt in a meaningful and timely manner. Through this session we would like to demonstrate the application, its integration with the PlymUni app, student usage and demonstrate how we can utilise such data holistically without compromising the privacy facets in the contexts of academic staff.

Dr Nichola Harmer
Plymouth University Lecturer
Co-presenter Dr Rebecca Vickerstaff. Co-author Dr Mark Holton

PlymTour a new mobile online educational resource for students on Plymouth's people and places

Considerable attention has been paid in recent years to both the benefits of teaching and learning outside of the classroom and of using mobile digital technologies to enhance students' place-based learning. This paper discusses a research project which capitalised on several unique strategic opportunities to develop and evaluate such mobile digital learning technologies.

We developed 'PlymTour', a digital walking tour of central Plymouth (UK) for use on mobile devices, which aids disciplinary-based learning and encourages students to explore and learn about their term-time location. Developed as a collaboration between Geographers and Learning Technologists, PlymTour, situated within the Mobile With Plymouth University app, is a multi-media resource, containing narratives, photographs, audio / video material and weblinks, all housed within a dedicated Plymouth University Digital Learning Environment (DLE) page.

To examine how students might engage with PlymTour we observed groups of Stage One Geography students in March 2017 as they conducted a walking tour of the city. These observations provided us with opportunities to evaluate its use as both a pedagogic tool for deepening knowledge and as an orientation device to explore how students make sense of the socio-economic geographies of Plymouth.

While the results of these trials have allowed us to refine and re-calibrate the app in terms of both its usability and its content, it has also extended our pedagogic knowledge of the benefits and limitations of mobile applications in the discipline of Geography and beyond. Our findings extend previous understandings of place-based learning by examining how students' use of mobile technologies provide stimulating ways of engaging with digital mobile learning that encourages more critical reflection of how students' learning may be influenced by technology. We expect that PlymTour will become more widely available to students and staff across the university and we anticipate it having wider impact by making it available to visitors to Plymouth seeking to learn more about the city in the run up to the Mayflower 400 celebrations.

Robert Hart
PU PSMD eLearning Developer
Marianne Glover, Luke McGowan, Arunangsu Chatterjee, Hilary Neve

Enhancing reflective learning and assessment using PebblePad: A Medical School perspective

The Medical School Educational Strategy (Neve et al., 2013) aims to promote active, collaborative, experiential and self-directed learning along with embedding a culture of reflective practice. Reflective practise within PU PSM is being promoted in a variety of ways, specifically via Small Group Learning and portfolio analysis (PA) among others.

In a 2014 PA Review group meeting it was highlighted that currently data required for reflection is stored across multiple sites e.g., DLE forums, folders, emails, logbook or own computer (e.g. STAR forms). It was difficult for students to "look back" or access previous years/reflections especially if paper based or forum data is overwritten every year. Data was not accessible beyond the formal educational years at PU. Anderson et al. (2009) emphasise the importance of producing a reflective narrative as a learning journey, with links to attached evidence that was lacking in PSM. Additionally, students usually refer to assessments, but often not to clinical experiences or relevant prior learning from other areas of the course and not all students include all evidence e.g. STAR forms. Foundation trainee survey's indicated poor preparedness of Peninsula graduates in using ePortfolios, which is widely used at postgraduate level.

As a consequence, the medical School have utilised PebblePad for formative and summative assessments since 2015. Starting with Portfolio Analysis (PA) where students submit formative (yr1) and summative assignments (2x) each year. At each stage, students review required content, upload and attach relevant documentation as evidence before submitting. Their academic tutors then mark at each stage before feedback is released by administrators. Through this session, we intend to share our experience (including staff and student feedback) of implementing an ePortfolio solution to replace paper-based portfolios for both formative and summative assessments with a wider audience. We will also share how we planned incremental improvements, created support mechanisms for staff and students, and discuss plans for the future.

Maurice Lukadi
GSM London Lecturer/Programme Leader
Dr Iyabo Yaz Osho & Ms Ann Healey

The Use of Video Assessment Reporting As An Engaging Alternative To Written Assignments

Assessments are a methodical approach of gathering, evaluating, and reviewing students' understanding in order to enhance learning. They are a vital component of Higher Education and can provide valuable insights into necessary modifications to teaching methods to enable more meaningful and effective learning. Consequently, assessment and testing can have an impact on the lives and subsequent careers of learners. Race et al. (2005) argue that assessment needs to be "fit-for-purpose"; meaning it should enable learners to extend their knowledge and provide an opportunity to demonstrate that learning, whilst ensuring that assessment is valid; reliable; authentic and transparent. Educators need to consider the value of particular assessment methods and strategies for its subsequent adoption.

GSM London's Definitive Module Records (DMR) for undergraduate and postgraduate programmes call for assessments which include written reports, presentations, reflective logs and an end of semester examination paper as a method of summative assessment. According to Progosh (1996), vision is the most perceptive sense individuals use in communicating, processing and receiving information. Information visualisation systems have become exceptionally sophisticated and their use is increasingly widespread across a variety of fields. Developments in technology and innovation practices are changing the education system in terms of learning and assessment. Nonetheless, even though universitiy's educators are keeping up-to-date with implementing innovation in the classroom and the consequences it has on learning (Greene and Crespi, 2012), the pedagogy in most traditional colleges are not keeping up with this pace of change.

There is tremendous value in merging literature with digital images to show students how course materials can be understood and perceived beyond the classroom, towards industry specific competencies. By using video assessment as an engaging alternative to written assignments, students will be better able to utilise their computer skills building information and social capital (Huysman and Wuff, 2004) as well as building content knowledge to understand, analyse and evaluate assessment questions.

Black (2007) asserted that with the widespread use of video editing software applications and the rise of inexpensive cameras, portable PCs, and tablets, students can produce their own videos to demonstrate their interpretation of theories and concepts learned during workshops or tutorial sessions. This way of learning gives students autonomy as well as ownership of learning. Video assessment reporting can reinforce critical thinking skills when students produce their own content. As stated by Kearney & Schuck (2006), learner-generated video content can support "rich, authentic learning experience and motivate learners' self-sufficiency and ownership". This ultimately creates meaningful student roles and interactions, particularly when learners are given the chance to debate, illustrate and celebrate their production with a relevant audience. Consequently the following study will focus on the use of video assessment reporting as an engaging alternative to written assignments. The paper will contain a critical discussion in regards to the e-commerce module assessment; analysis and benefits of video reporting; the change of practice justifications and implementation process. Finally, the research will contain the measurement strategy in relation to the change introduced.

Dr Lynn McCallum
Plymouth University Programme Lead Healthcare Science

Introduction of Peer Assisted Learning in Clinical Skills to enhance professional practice

Peer assisted learning (PAL) is well recognised in providing successful learning strategies by collaborative and peer tutoring to complement and supplement professional teaching (Topping and Ehly, 1998). However, the use of PAL within clinical skills and professional training is not well reported. We have introduced PAL in Healthcare Sciences to identify if this will reinforce student knowledge, competence and confidence in clinical skills and evaluate the psychological benefits of the experience for both learner and leader.

Interim analysis of feedback from students has shown that learners have had a really positive experience; they have gained enhanced clarity and practice with clinical skills techniques, online portfolios and the importance of professionalism in practice. Using Kirkpatricks pyramid, we can identify positive impacts on student learning, skills and behaviours for professional practice with the most frequent keywords associated with the tasks including 'confidence', 'knowledge', 'understanding, 'inspired'. Similarly, YR2 students as leaders, identify the importance of being organised, providing a positive learning experience and inclusion of modifications in component delivery. The keywords most frequently identified from leaders in the evaluation feedback included 'satisfaction', 'skills', 'enthusiasm' and 'inspired'.

We will also look to identify impacts of PAL in NHS placement activity by measures of confidence, competence on placement practice by evaluating placement practice feedback and grading from NHS mentors for students undertaking PAL activity vs full cohort.

Dr Anne McDermott
Plymouth University Research Fellow
Emma Purnell, Carole Sutton and Joanne Sellick

Digital Capabilities in the Curriculum

This workshop has been developed as part of a project focusing on maximising curriculum innovation and enhancing the student experience in the key area of Digital Literacy. Funded through Plymouth University's Pedagogic Research and Teaching Innovation Fund, it aims to identify means of overcoming barriers to professional and student digital capabilities development.   As part of this work and building on the digitally capable Learner Profile (Jisc, 2017), the project has developed a toolkit aimed at helping programme teams to think about how they develop students' digital capabilities in the curriculum.

The session will use part of the toolkit to facilitate activities and discussion aimed at developing an understanding of:
•	the relevance of different digital capabilities
•	what this means in different schools and disciplines
•	how a curriculum supports digital capabilities.

 This workshop will be useful for anyone who is involved in programme and module design or who supports the development of staff and student digital capabilities.

Luke McGowan
Peninsula Schools of Medicine and Dentistry Senior Learning Technologist
Jamie Carmichael, Arunangsu Chatterjee, Payal Ghatnekar, Robert Hart

Exploring Virtual and Mixed Reality for Teaching & Learning

The introduction and acceptability of Virtual Reality (VR) interventions has had strong implications on technology enhanced learning within healthcare education, training and patient care (Grant & Marriage, 2012; Handa, M; Aul, G; Bajaj, 2012; Reiner, 2011). Simulations that can be offered through currently available Head Mounted Devices (HMDs), such as the Oculus Rift, HTC Vive and Samsung Gear VR, are realistic and moving toward greater sophistication - thereby having positive implications on user immersion which in turn shortens the user learning curve (Tully, Dameff, Kaib, & Moffitt, 2015; UCI, 2014; White, 2015; Xu, Chen, Lin, & Radwin, 2015).

Currently, healthcare VR experiences appear to cater toward three types of users - students, staff and patients. In the area of student education and training, VR is being used to teach and enhance empathy and interpersonal communications skills amongst medical students (for example Patient VR used at the Torbay Horizon Centre). Chen, Kiersma, Yehle, & Plake (2015) have employed similar interventions (Geriatric Medication Game and aging simulation) to study their effect on pharmacy and nursing students' empathy levels and have found that such experiences can help students overcome challenges in empathy demonstration. According to Jackson, Michon, Geslin, Carignan, & Beaudoin, (2015) and Monthuy-blanc et al., (2013), virtual avatars can affect users through social presence, which can have significant impact on the empathy outcome. Another area of student and staff education and training where VR has been widely used is within clinical contexts such as laparoscopy (Burden, Oestergaard, & Larsen, 2011; Gurusamy, Aggarwal, Palanivelu, & Davidson, 2009; Lucas et al., 2008).

The session will provide a chance to discuss the relative pros and cons of Virtual Reality and Mixed Reality (MR) and the educational challenges and opportunities on offer. Considerations include new interaction design challenges, questions about 'presence' and digital etiquette in VR and MR worlds, delivery and cost considerations, development process, barriers to adoption and how to work with academic colleagues to realise teaching content.
In the workshop we will:
•	highlight current examples of VR and MR being used for learning, teaching and training as well as for health and social care.
•	demonstrate the relative merits and challenges involved in working with these technologies, including the development process, the logistics of using it in a teaching environment, suitability and some of the unique pedagogical opportunities the technology affords
•	provide hands-on demonstrations including the Microsoft HoloLens and a number of VR devices for mobile and desktop
•	generate ideas in groups with the intention of feeding these into the Gaming and Simulation-enhanced Learning PedRIO theme group
•	discuss longer term predictions of where this technology might go and the collaborative opportunities for use in teaching and learning

Dr Mahrukh Mirza
PU PSMD Lecturer and Distance Learning Lead
Jamie Carmichael, Arunangsu Chatterjee

Developing Distance Leaning at PU PSMD: Enablers and Barriers

In the current era of disruptive education system, an increasingly greater role is given to methods of active cognition, self-education, and distance learning. Distance learning is a concept in which at least one of three items, teacher, students and course content, is located in a different place, and a learning method that combines these three education items to produce an effective learning by means of several technologies (Picciano, 2000). PU PSMD aspires to be a world leader in clinical education provider and hence any offering must be of high quality and educational value. As a result, PU PSMD has set a challenging vision that aspires to be an academic leader recognized for innovation and quality in the delivery in online distance health education by 2025.

In September 2018, PU PSMD will offer two new distance learning MSc programmes. These postgraduate programmes will be available for both UK and overseas applicants delivered via the Universities' Digital learning Environment. In order to develop distance learning courses, the knowledge used in the process of traditional education is not sufficient for a distance teacher. A leading idea to all educators was given in Dormido (2002): "Educators must have an open attitude towards new technologies. They should sensibly incorporate new technological development to avoid the risk of teaching the students of today, how to solve the problems of tomorrow, with the tools from yesterday." Practical implementation of this direction implies special training of academics in the area of organizing and performing the distance learning. Therefore, the academics (at PU PSMD) in preparation to this mode of teaching are currently provided with staff training workshops on technological tools, online communication and course development. Curriculum structure and content delivery are being revised in order to offer an engaging and effective student learning experience based upon contemporary pedagogical approaches to successful web based education.

Distance learning student support structure is being planned and the relevant services (at the University) are contacted. An Induction programme is been designed to cover all aspects of the student experience including an academic induction that would address the skills required to complete the Postgraduate degree and a Support induction which amongst other things will cover access to student services at the Plymouth University. Through this poster we will outlines the steps taken towards the design, delivery and development of these programmes and share preliminary lessons learned including the need for a focussed strategy, roles and responsibilities, additional tutor support, marketing and recruitment needs.

Silke Prodinger-Leong
Lynda.com @Linkedin Senior Customer Success Partner

Flipping the Classroom - supported by Lynda.com

This talk focuses on the overall approaches and steps to start using the flipped classroom for your teaching practice. After initially looking at some base rules and good practices we will also look at some concrete examples of the structure of flipped classroom and look at some recommendations and best practices that can be found in 2 tutorials on Lynda.com and are an excellent resource for building out skills for the flipped classroom and teaching with the complement of an online resource. Overall aim is to inspire participants to consider their various options to adopt the flipped classroom principle and apply some hands-on tips & tricks with a concrete resource available at University of Plymouth. Expect interactivity and questions!

Elizabeth Seymour
TELMeD - Plymouth University Peninsula Schools of Medicine and Dentistry eLearning Developer
Elizabeth Seymour, Luke McGowan, Arunangsu Chatterjee

Technology Enhanced Team Based Learning

Plymouth University Peninsula School of Medicine (PU PSM) has introduced and embedded Team Based Learning (TBL) as part of the existing Problem Based Learning (PBL) consolidation week activities to enhance engagement and improve targeted and personalised feedback by making it challenging and collaborative eventually fostering improved team working skills. TBL requires the students to think and assess independently first, and then spend time in groups (involving peer instruction) to reach a consensus answer. The strength of peer instruction is in the interaction it fosters between students, who by virtue of their similar ages, language, and common experience, are often 'better at clearing up each other's confusions and misconceptions' than their instructor (Haidet et al., 2012).

Traditionally TBL is implemented using a set of paper based scratch cards. However, we at TELMeD (Technology Enhanced Learning for Medicine and Dentistry) implemented a technology enhanced variation for our TBL intervention using Responseware (RWS) and a custom built web-app, to offer an efficient means to monitor progress of individuals and groups and to intervene when a group or the entire cohort is confused or analyse that they have understood the concept.   This will be an interactive session and will cover the implementation process, demonstrations of the technology used and a discussion of lessons learned.

References Haidet, P. et al., 2012. Ovid: Perspective: Guidelines for Reporting Team-Based Learning Activities in the Medical and Health Sciences Education Literature. Academic Medicine, 87 (3) (2012), pp. 292-299.

James Pearson-Jenkins and Dr Matthew Aldridge,
University of Wolverhampton, Faculty of Education, Health and Well Being
Sara Smith and Dr M Khechara, Univesity of Wolverhampton, Faculty og Sciene and Engineering

Using augmented reality to enhance the students' laboratory experience

The laboratory environment is a daunting place for students as it is full of equipment and unfamiliar practices. Students are bombarded with information which results in cognitive overload causing disengagement and a feeling of being 'lost'. Enabling provision of 'on-demand' information and accessible support to each student encourages engagement and active learning. Technology provides a range of options to address this need. Augmented Reality (AR) is a form of virtual reality where digital information is added to the 'real world' providing additional active content and 'just-in-time' support.   Two simple forms of AR were employed in a large level four science laboratory class and a clinical skills laboratory for nurse training at undergraduate level. The first involved the use of quick response (QR) codes. These barcode like patterns provide a door to digital content accessed by the student using a reader app on their mobile device. Secondly, Auras generated by the online and mobile device application Aurasma allowed students to discover additional content by simply pointing their mobile device camera at an image to reveal the linked video content. Codes and tags were added to equipment, documentation, chemical reagents and even laboratory learning spaces. These provided additional technical information, safety documents and tutor recorded demonstrations of techniques and equipment, allowing students to navigate their way through the previously uncharted environment. The practicalities and lessons learnt from the implementation of this intervention will be discussed, highlighting students' perceptions of mobile technology, AR and its role in supporting the students' laboratory learning experience.

Carole Sutton,
Associate Professor (Senior Lecturer) Sociology, School of Law, Criminology and Government, University of Plymouth
Joanne Sellick, Associate Dean Teaching and Learning, Faculty of Business, University of Plymouth
Emma Purnell, Senior Learning Technologist, Faculty of Business, University of Plymouth
Anne Mcdermott, Research Fellow, Academic Support, Technology and Innovation, University of Plymouth

Digital Literacy: Maximising curriculum innovation and enhancing the student experience

Digital capabilities are a set of necessary skills for those teaching, learning and working in the twenty first century. This poster will highlight the latest outputs from a Plymouth University project focusing on maximising curriculum innovation, and enhancing the student experience in respect of this key area.

The work includes constructing a simplified version of the Digital Capabilities Framework developed by Jisc (2017) to create a manageable resource for colleagues and students to self-assess and develop their capabilities in a number of digital domains; these include ICT proficiency; Digital creation, problem solving and innovation; Digital communication, collaboration and participation; Digital learning and development; Digital identity and wellbeing; and Information, data and media literacies. Tools to facilitate the inclusion of digital capabilities in the curriculum are also in development.

The work supported by Plymouth's Pedagogic Research Teaching and Innovation fund and is being carried out in the Faculty of Business.

Jisc (2017) Building Digital Capability https://www.jisc.ac.uk/rd/projects/building-digital-capability [date accessed 23 May 2017]

Prof Neil Witt,

Head of Academic Support, Technology and Innovation, University of Plymouth

Prof Pauline Kneale, Director of PEDRIO - Teaching and Learning Support, University of Plymouth

Prof David Coslett, Interim Vice Chancellor (2014-2016), University of Plymouth

Dr Anne McDermott, Research Fellow, ASTI, University of Plymouth

Effective Learner Analytics: A senior leadership – staff – student informed approach

This poster sets out the background and development of the University of Plymouth's approach to implementing Learning Analytics for the support and promotion of student engagement, enhancement of outcomes and improvement in retention.

Our students leave electronic footprints as they interact with the physical and virtual campus, for example records of library visits, coursework submissions, tutorial attendance, coursework marks, use of the digital learning environment (DLE) and electronic library use. This and other information can be used by Learning Analytics to present students with a 'real time' view of their engagement and performance and help tutors better understand learner needs. Using data to provide students with an insight into their personal learning journey is used by a growing number of universities, in the UK and worldwide, however it is still a greatly underused asset (Higher Education Commission, 2016).

Most analytics data is already collected by universities albeit in a variety of manual and computerised systems. However, bringing it together for systematic analysis is new and it is to be expected that there will be concerns that it should be used fairly, ethically and transparently. A range of stakeholders, including students, university governors and academic professional and support staff, were consulted about these issues and the poster outlines their perspectives.

Overall, worries about legal and ethical problems were most likely to be voiced by academic, professional and support staff but the need for transparency was considered essential by most. Subject areas varied in the degree to which they were comfortable with Learning Analytics but there was a surprisingly low degree of anxiety and a high degree of trust that the institution in general, and tutors in particular, would behave responsibly with personal data.

This work resulted in a series of recommendations relating to institutional processes, policies and technology. These reflect challenges faced by numerous other colleges and universities, such as the need for a unique student identifier and a 'single source of truth' for institutional documentation. Perhaps surprisingly, technology is reckoned to be the least problematic area.

Reference

Higher Education Commission (2016) From Bricks to Clicks: The potential of data and analytics in Higher Education. Retrieved from http://www.policyconnect.org.uk/hec/research/report-bricks-clicks-potential-data-and-analytics-higher-education [date accessed 13.02.2017].

Dr Lynne Wyness
University of Plymouth Teaching and Learning Support Educational Developer
Emma Purnell (ASTI)

Using the Compass Portfolio in PebblePad to record graduate attributes: findings from a pilot study in personal tutoring

The Compass Portfolio has been created in PebblePad to enable students to record their progress towards developing the twenty graduate attributes identified in the Plymouth Compass.
 This presentation will outline the premise and structure of the Compass Portfolio and report the key findings and recommendations from a year-long pilot study with personal tutors across Plymouth University. Following this pilot, the Plymouth Compass and accompanying Compass Portfolio will be rolled out across the University from September 2017.

The Plymouth Compass is a set of future-facing attributes in four key areas; the critical and creative learner, the sustainable and global citizen, the competent and confident professional, and the resilient and thriving individual. We hope that by engaging with the ePortfolio and its activities, students will be encouraged to talk with their tutors about what it means to be a Plymouth Graduate, whilst having the online space to evidence their development in these areas over the course of their time at Plymouth.

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A Rotational Blended Learning with Internet-Based E-learning in Computer System Engineering Courses

On examining the changing ways students are seeking help, information and support in higher education, studies have shown that using an internet-based e-learning approach by incorporating material from on-line web sites to display students' projects enhances learning and is the best way for students to learn and achieve.   There is an urgent need for us to rethink meaningful pedagogical intervention regarding internet-based e-learning.

Current face-to-face teaching needs to devote more attention on fostering internet-based e-learning. From our faculty teaching experience we listed three central concerns in our final year computer systems engineer courses:
1. How can we ensure that every student has the ability to articulate his/her understanding about computer system engineering concepts?
2. How can we ensure that every student has access to the experience needed to become a computer engineer?
3. How can we ensure that every student has been taught essential practical skills that shape their practices as a computer system engineer in their future professional engineer career?
To address these challenges, we have to rethink fundamental skills and proficiency that computer engineering students acquire in their learning experiences. These build the foundation of essential engineering abilities: research skills, technical skills and critical analysis skills - which can be used to foster students' ability to search for, synthesize and disseminate complicated information. In this work, research skills refer to the ability to pool knowledge and compare notes with other information to develop a full understanding of the subject; critical analysis skills are the ability to evaluate the reliability and credibility of different information sources; technical skills are the ability to integrate existing systems and technologies to apply for computer system engineering paradigms. Taking advantage of existing teaching modalities (lectures, seminars, and group projects), in this work we demonstrate a rotational blended leaning techniques that use three various learning models to improve the traditional one-way style teaching method.   A quasi-experimental design is used to estimate the impact of an intervention on the experimental group that used our rotational blended learning method. Compared with the convenient sampling selection method, samples are randomly selected from all students; in addition, a specially designed independent variable in the design allowed us to evaluate the rotational blended learning strategies. The analysis on students' final grades among the controlled group and the experimental group showed the positive impacts of teaching methods used in classrooms and demonstrated an effective way of embracing an e-learning environment into the class.

Furthermore, we also demonstrated that various learning methods are able to combine together without having to recreate the whole process. We also found out that students in the control group that started with the e-learning rotation intended to voluntarily go back on seminar rotation, since they wanted to review their learning to gain further understanding. Starting with pair-programming, those students were much more engaged during the seminar rotation than the other students who started with the e-learning rotation. It is noted that the first rotation might have had an impact on students' learning outcome due to their previous knowledge, although students had randomly chosen their first preference.

Stands

Office 365 features have been steadily rolled out over the past year, offering a variety of collaborative tools available anywhere, any time and on any device. In addition to the portability, security and accessibility of these tools, they have added benefits of improved search functionality, audit trails and are available to staff and students alike .Visit the Office 365 stand to find out more about these tools and how they can support you in delivering an enhanced teaching and learning experience and improving collaboration and information sharing between students and staff across the different University campuses and beyond.

The Academic Support, Technology and Innovation (ASTI) stand will be on hand to provide information and advice on the use of technology to enhance teaching and learning. We will be providing guides and case studies on a number of the University's supported systems, including: Content Capture; eAssessment; ePortfolios; Lynda.com training videos; Podcasting; Turning Point classroom polling; Video for teaching, and Webinars.
Come and speak to us to discuss any ideas, ask questions, or just to find out more.

The Charles Seale-Hayne Library operates at the heart of the digital information revolution. Whilst we remain committed to the provision of a high quality physical environment, we have a 'digital first' policy and recognise that the inclusivity and accessibility of our digital space is of equal importance to our wide range of onsite and offsite library users.
Visit our stand to find out how we connect our users with information and help build the skills to transform this into knowledge.
Give us your feedback on the changing face of the tools provided to access digital information, hear about the skills training we offer to effectively use these IT tools and take the Primo challenge!

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