

APT 2022

20th Academic Practice and Technology Conference (APT2022)
Friday 1st July 2022
Institute of Education, UCL, 20 Bedford Way, Room W3.01
Co-hosted by the London School of Economics & Political Science,
Imperial College London and University College London.

Abstracts

Title of Abstract:	What is the role of electronic case-based learning in medical education? A review of the literature
Presenters (lead & co-presenters)	DR. SARA AL-KHAFAJI
Institution	UCL
Format	Research paper or work in progress
Abstract	<p>Case-based learning (CBL) is a teaching method which links theory to practice by using clinical cases and application of knowledge. Its usage has been well established in medical education since 1920s (Thistlethwaite et al., 2012), where it now has ample of research and literature which prove its effectiveness in enhancing medical students' overall clinical practice and analytical skills (Zhao et al., 2020).</p> <p>Over the last number of decades, the adoption of online learning in medical education has been increasing in popularity. This is especially true since the appearance of the unprecedented Coronavirus Disease 2019 pandemic (COVID-19) (Darras et al., 2021), which created a sudden and noticeable shift towards the exclusive usage of online learning environment as the main source of medical education (Dost et al., 2020). Virtual teaching has shown to be cost- effective, convenient and enables the maximization of institutional resources (O'Doherty et al., 2018). However, some disadvantages of a virtual learning environment have also been recognized, including technical issues and the time constraints to implement the online teaching (Dost et al., 2020).</p>
References	<ol style="list-style-type: none">1. Cook, J., Puckett, H. L. and Steinauer, J. E. (2021) 'Management of Obesity During Pregnancy and Periconception: Case-Based Learning for OB/GYN Clerkships', <i>MedEdPORTAL : the journal of teaching and learning resources</i>, 17, p. 11129. doi: 10.15766/MEP_2374-8265.11129.2. Costich, M. et al. (2021) 'Transition-to-residency: pilot innovative, online case-based curriculum for medical students

preparing for pediatric internships', *Medical Education Online*, 26(1). doi: 10.1080/10872981.2021.1892569.

3. Darras, K. E. et al. (2021) 'Undergraduate Radiology Education During the COVID-19 Pandemic: A Review of Teaching and Learning Strategies', *Canadian Association of Radiologists Journal*, 72(2), pp. 194–200. doi: 10.1177/0846537120944821.
4. Dawson, J. Q., Ching, G. and Huynh, H. (2021) 'Lessons in implementing virtual case-based learning', *Medical Education*, 55(5), p. 662. doi: 10.1111/MEDU.14515.
5. Dost, S. et al. (2020) 'Perceptions of medical students towards online teaching during the COVID-19 pandemic: a national cross-sectional survey of 2721 UK medical students', *BMJ Open*, 10(11), p. e042378. doi: 10.1136/BMJOPEN-2020-042378.
6. Elsayes, K. M. et al. (2021) 'Multidisciplinary Approach in Teaching Diagnostic Radiology to Medical Students: The Development, Implementation, and Evaluation of a Virtual Educational Model', *Journal of the American College of Radiology*, 18(8), pp. 1179–1187. doi: 10.1016/J.JACR.2021.03.028.

Keywords	
Theme	Inclusion and exclusion in the new normal, The promise of current and emerging technologies in shaping the university of the future, Technology, pedagogy and assessment
Session Description (Roundtable, workshops and Hackathons only)	<p>Delivering CBL virtually to medical students is an exciting educational prospect. Although there is a plethora of literature on CBL within medical education, there is a paucity of literature within the contexts of electronic CBL(e-CBL), where the literature seems to be scant and unfocused. Therefore, the aim of this literature review is to evaluate the role and significance of e-CBL within medication education. This will be used to inform medical schools of the value of using e-CBL to teach 21st century medical students.</p> <p>OVID Medline and British Education Index databases were searched with a keyword search strategy (Table 1) which was utilised to limit searches to literature within the topic area. Each key word searched included alternatives to allow for their respective acronyms. Studies were then identified and screened, and the process was reported in a flow diagram below (Table 3). In total, 149 papers were excluded, and the final number of papers used in this literature review is 20.</p> <p>Aims and objectives</p> <p>The objectives of this literature review are organized into the below themes:</p> <ol style="list-style-type: none"> 1- Illustrate the role of e-CBL from a medical education perspective 2- Draw comparisons with the available literature relating e-CBL with other types of teaching 3- Analyze the benefits and limitations of e-CBL

Overall, the delivery of e-CBL to medical students has generally shown to be effective way of facilitating learning, improving learning outcomes and increasing knowledge of medical students across different specialities. There is also a satisfactory agreement between papers that students find e-CBL to be an enjoyable and flexible way of learning, which is encouraging in exceptional and emergency situations such as COVID-19 pandemic that took place where e-learning may be the only option. Other key themes discussed in the literature review centred on the advantages and disadvantages of e-CBL and how it compares with other types of learning.

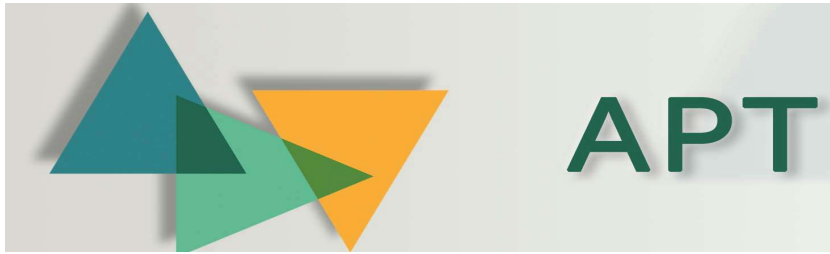
Further research is however necessary to assess the long-term benefits of using e-CBL looking to assess whether the increased knowledge retains over time. Additionally, the findings regarding the superiority of e-CBL when compared directly to other types of teaching, such as face-to-face teaching still remains unclear and require further experimental research.

The impact of the research paper is below

- 1-Encourage e-CBL as a teaching delivery style post-COVID 19 pandemic world (teaching related to occupational health for medical schools)
- 2-Encourage further research into virtual teaching

Session Time

11:40 – 12:30



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Abstracts

Title of Abstract:	A perfect storm - constructing the digital assessment ship to ride the academic integrity wave
Presenters (lead & co-presenters)	Simon Walker
Institution	UCL
Format	Hackathon
Abstract	<p>A perfect storm is brewing for the world of academic integrity. The conventions can be confusing for many students who struggle to understand what is dishonest but the penalties for violations can be life changing. Our assessment regimes don't help as we erroneously assume some assessments are more cheat-proof than others. The storm is brewing because a new technology is threatening to change everything: digital assessment. The digital assessment ship has arrived, and it's set to change the game. With machines now able to write infinitely variable assessments, our rules working practices and assessment methods need to be clarified,</p> <p>In fact, it might even mean the beginning of a new era in which testing becomes less important and more flexible. This mini-hackathon will explore how we might shift our perceptions and design new assessments to test the skills, knowledge and attributes in the 4th industrial age.</p> <p>(this summary was partly written using the Text-curie 001 AI engine with the instruction"</p> <p>"Write a summary for a title of a hackathon "A perfect storm - constructing the digital assessment ship to ride the academic integrity wave" Include the idea that writing can be done by machines so we should be assessment university students differently"</p>
References	Marsden, H., J. Carroll, and J. T. Neill. 2005. "Who Cheats at University? a Self-Report Study of Dishonest Academic Behaviours in a Sample of Australian University Students." Australian Journal of Psychology 57 (1): 1–10. doi:10.1080/00049530412331283426

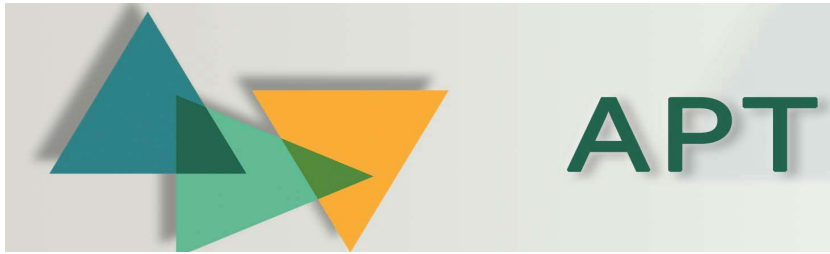
	<p>Rigby, D., M. Burton, K. Balcombe, I. Bateman, and A. Mulatu. 2015. "Contract Cheating & the Market in Essays." <i>Journal of Economic Behavior & Organization</i> 111: 23–37. doi:10.1016/j.jebo.2014.12.019</p> <p>Rowland, S., C. Slade, K. S. Wong, and B. Whiting. 2018. "Just Turn to Us': The Persuasive Features of Contract Cheating Websites." <i>Assessment & Evaluation in Higher Education</i> 43 (4): 652–665. doi:10.1080/02602938.2017.1391948</p> <p>Tracey Bretag, Rowena Harper, Michael Burton, Cath Ellis, Philip Newton, Karen van Haeringen, Sonia Saddiqui & Pearl Rozenberg (2019) Contract cheating and assessment design: exploring the relationship, <i>Assessment & Evaluation in Higher Education</i>, 44:5, 676-691, DOI: 10.1080/02602938.2018.1527892</p>
Keywords	academic integrity; cheating; AI; digital assessment
Theme	The promise of current and emerging technologies in shaping the university of the future, Technology, pedagogy and assessment
Session Description (Roundtable, workshops and Hackathons only)	<p>Since 2021, UCL has adopted a digital assessment platform (AUCL) for all centrally managed exams. In 2022, it was used for 1900 assessments for 65,000 candidates. Prior to the lockdown in March 2021, assessments were undertaken in a large conference centre, hand written on paper and invigilated. Over the 2-year period of lockdown and the pivot to remote assessment, we have seen a pendulum shift from timed exams to open paper formats (lockdown) and, confident that AUCL is secure and robust, a shift back to timed assessments this year. One of the reasons often cited is the belief that timed exams can ensure academic integrity and standards, and heavily weighted assessment and invigilated examinations, in particular, are inherently secure forms of assessment. This however is not borne out in the literature (Bretag 2019; Rigby 2015; Rowland 2018) which concludes that there are opportunities to cheat in any assessment task including authentic assessment tasks. Indeed Bretag notes that students perceive they would be more likely to cheat in heavily weighted assessments and assessments with short turnaround times. Technology plays a role in both detecting and supporting cheating. Many online stores openly advertise products. These range from camera calculator apps that can solve maths from taking a picture of a problem, to text messaging calculators, to invisible headsets connected to devices. The notion that proctoring can prevent cheating in online remote assessments has still to be proved.</p> <p>The adoption of digital assessment within the context of traditional assessment brings a new set of challenges. Despite the widespread use of similarity and anomaly checking software many academic fail to spot collusion and cheating. On top of all this generative AI can now produce</p>

unique human-like text on demand (see abstract that was written largely through an AI tool).

This workshop will consider some of the issues of moving to remote digital assessment. A brief introduction will frame the challenges, and share some examples of generative AI. The main workshop will invite participants to bring along their assessments and try out some generative AI tools. It will conclude by an assessment of the threat and whether assessment in a digital age may need to change to maintain the rigor of academic standards in HE.

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Abstracts

Title of Abstract:	Exam Packages: A Case Study
Presenters (lead & co-presenters)	Gloria Visintini David Perkins de Oliveira
Institution	University of Bristol
Format	Case study
Abstract	<p>The purpose of this presentation is to introduce and discuss our exam packages. This is an online solution designed and implemented during the pandemic to deliver exams at the University of Bristol. Online packages for assessing language acquisition were developed by the Faculty of Arts in collaboration with the central Digital Education Office and the Exams Office. They are accessible via our Virtual Learning Environment, namely Blackboard, and have allowed us to effectively replace our on-campus exams.</p> <p>Each package includes:</p> <ul style="list-style-type: none">• exam paper(s) and additional materials where used (e.g. audio and/or video files);• guidelines on how to access the exam paper, academic integrity, who to contact for technical issues, and how to prepare and submit the exam; and• a submission point. <p>Students are given at least one week to familiarise themselves with the package and practice submitting. They are only given access to the contents of the exam paper at the start of the exam. The packages replicate the on-campus experience as students only have a limited amount of time to complete their exam – which pedagogically has meant we have been able to keep our assessment formats albeit with some changes to task design to allow for the unsupervised format of the online exams. The online exams assess most language skills, such as grammar, writing, and reading and listening comprehension.</p> <p>While in-depth student feedback on the usage of such packages needs to be collected at the end of this academic year, initial findings from students are that they find the online format less stressful and</p>

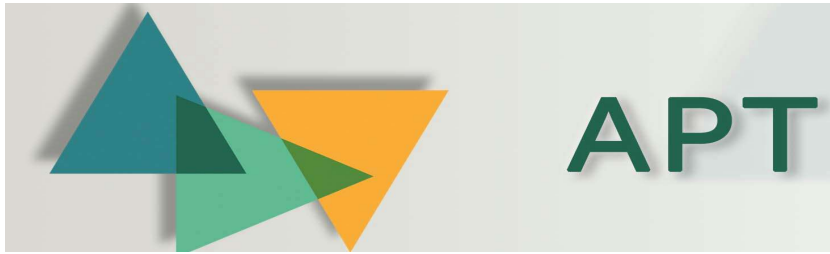
	<p>appreciate the flexibility of taking the exam from their preferred location and environment. As for staff feedback, it has been very positive, despite previous concerns about possible inflation of marks and maintaining academic integrity. The experience of being able to assess language skills online in this way is helping to break down the traditional opposition in our institution to offering hybrid or distance-learning programmes for language-learning due to an assumption that language assessment needed to be carried out in person.</p>
References	
Keywords	language assessment, online exams, institutional change
Theme	Technology, pedagogy and assessment, The promise of current and emerging technologies in shaping the university of the future
Session Description (Roundtable, workshops and Hackathons only)	<p>Our session illustrates a case study that sits within the literature of teaching and learning with technologies, with a specific focus on the role of the Virtual Learning Environment (VLE) in delivery assessment. Indeed, David Perkins and I will be talking about how our online exam packages, designed and implemented in the Blackboard VLE, have allowed language units at the University of Bristol to carry on assessing language acquisition effectively during the pandemic, and are giving us the flexibility to navigate between delivery modes – e.g. blended and online. We will also describe how this new way of assessing feeds well into our already established online processes for marking and moderation, also facilitated via the VLE. Finally, we will explore how these packages will in future potentially help us design and deliver new distance learning or blended learning undergraduate or postgraduate programmes.</p> <p>Moving assessments to an online format is not original in itself. Most institutions and universities have been forced to do that in the last two years. However, how we did it and the beautiful solution we came up with via Blackboard is what is original about our case study. It was designed in collaboration between academic staff and professional services colleagues. It is a technical solution informed by pedagogical principles of distance education and based on extensive consultation to make sure its design meets our educational requirements and our administrative processes as well.</p> <p>Our initial findings are positive and show that our online exam packages are working well - meeting the intended objectives without compromising academic integrity. As such they are demonstrating that language knowledge acquisition can be assessed effectively and fairly online. Before the pandemic, it was a popular belief among linguists that language units could only be rigorously assessed by a combination of coursework and in-person exams.</p>

The online exam packages are part of a bigger revamp of 800+ Blackboard sites undergone by the Faculty of Arts, which involved modernising their looks and adopting a consistent and accessible structure across sites. The effectiveness of the new design, together with the efficacy of our exam packages, suggests that VLEs are still useful platforms for providing digital education. Yes, they are not always perfect; we sometimes have to cope with some technical bugs and/or develop workarounds to overcome them. But despite some shortcomings, with our success story, we are proving that the VLE is not dead as some literature has been suggesting (Weller, 2007; Stiles, 2007).

On the contrary, the VLE can play an important role not just in teaching online but in assessing online too. Our work truly challenges the idea that Virtual Learning Environments need to be replaced (Stiles, 2007; Weller, 2007; Parslow et al, 2008; Phipps, Cormier & Stiles, 2008; Brown, 2010; Meishar-Tal, Kurtz & Pieterse, 2012; Maleko et al, 2013); and agrees with the JISC pre-pandemic publication 'VLE Review Report 2020' according to which, yes, some VLEs might not be glossy platforms, but it is what one does with the VLE that makes the difference.

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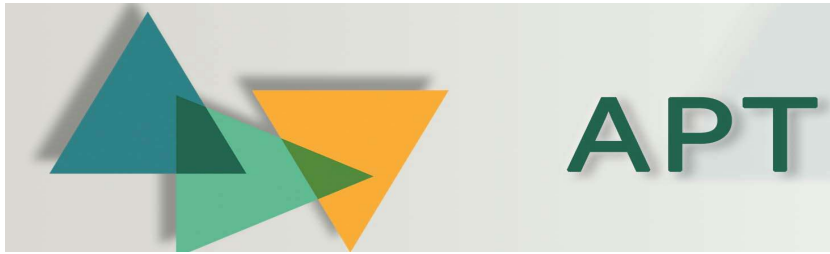
Title of Abstract:	Tackling the Online Student Engagement Dilemma through Virtual 3D Spaces
Presenters (lead & co-presenters)	Paul Tuck Olivia Yiqun Sun, Na Li
Institution	Xi'an Jiaotong - Liverpool University
Format	Field report
Abstract	The pivot to online learning and remote teaching has created challenges for student engagement and connectivity. Creating an enjoyable and authentic online learning environment can help promote student interaction, increase motivation and enhance the feeling of proximity. In this session, we will introduce how 3D spaces and technologies have been designed and used to create broader opportunities for students to participate and learn. Specifically, using H5P, Mozilla Hubs, and simulation games to construct engaging online experiences through an academic poster conference, a virtual language lab, and a 3D computer assembly workshop. In this interactive session, participants will have an opportunity to experience and interact with these virtual environments and learn how they have been used in real cases to engage students in a transnational English-medium university in China.
References	<ul style="list-style-type: none"> • Dixon, M. (2015). Measuring Student Engagement in the Online Course: The Online Student Engagement Scale (OSE). <i>Online Learning</i>, 19(4). doi: 10.24059/olj.v19i4.561 • Garrison, R., Anderson, T., & Archer, W. (1999). Critical Inquiry in a Text-Based Environment. <i>The Internet and Higher Education</i>, 2(2-3), 87–105. doi: 10.1016/S1096-7516(00)00016-6 • Reisoğlu, I; Topu, B.; Yılmaz, R. Karakuş, Yılmaz, T. & Göktaş, Y. (2017). 3D virtual learning environments in education: a meta-review. <i>Asia Pacific Education Review</i>, 18, pp. 81–100. doi: 10.1007/s12564-016-9467-0 • Rizvi, Y.S. and Nabi, A. (2021). Transformation of learning from real to virtual: an exploratory-descriptive analysis of issues and

	<p>challenges. <i>Journal of Research in Innovative Teaching & Learning</i>, 14(1), 5-17. doi: 10.1108/JRIT-10-2020-0052</p> <ul style="list-style-type: none"> • Yuan, J., & Kim, C. (2014). Guidelines for facilitating the development of learning communities in online courses. <i>Journal of Computer Assisted Learning</i>, 30(3), 220-232.
Keywords	student engagement, blended and online learning, H5P, Virtual 3D spaces
Theme	The promise of current and emerging technologies in shaping the university of the future
Session Description (Roundtable, workshops and Hackathons only)	<p>In this session, the presenters will discuss how virtual online 3D spaces have been used in various scenarios to enhance teaching and learning at a transnational university in China. Active student engagement is a fundamental component of student learning, particularly in distance education where students can often become frustrated and detached from their online courses. Dixson (2015) defines student engagement as the degree to which students actively participate by “thinking, talking, and interacting with the content of a course, the other students in the course, and the instructor”. It is thus a crucial factor in maintaining close connection to their university education and correspondingly to their overall learning and development. In addition, feelings of anxiety and isolation among students have been identified as a major challenge for online learning experiences (Yuan & Kim, 2014). The need to mitigate these feelings and foster a more engaging online learning environment has become ever more important due to the impact of the pandemic (Rizvi & Nabi, 2021).</p> <p>The Community of Inquiry (CoI) framework identifies three elements needed to construct an engaging online learning experience: cognitive presence (CP), social presence (SP), and teaching presence (TP) (Garrison et al., 1999). The use of virtual online 3D spaces and metaverse technologies can enhance all three of these core elements by constructing authentic spaces for students to interact and engage with peers, instructors, and learning content. Gamification concepts such as avatars and 3D characters can represent students’ genuine social presence. They are able to communicate with the instructor and one another through audio and text-based chat with emojis (Reisoğlu et al., 2017) in a manner that resembles online multiplayer role-playing games. Multimedia resources such as images, audio and video can easily be added to the space for students to locate and interact with, helping them feel more personally empowered in the learning process and thus enhance their motivation and fulfilment.</p> <p>The structure of the session will be as follows. The presenters will first introduce the context of this project, namely the institution, the teacher and student population, the teaching and learning environment and challenges, and the theoretical frameworks used to construct the 3D online learning spaces. Next, details about the construction process,</p>

i.e. the selection and use of technologies, and the challenges we faced will be discussed. Three examples will be provided: a 3D academic poster conference using H5P, an online language lab in Mozilla Hubs, and a virtual demonstration of computer architecture and assembly with PC Building Simulator. The effectiveness of these online learning environments will be evaluated and discussed through the lens of the Col framework. Methods for measuring online engagement, such as attendance tracking, student self-reporting and behavioural analytics, will also be discussed. Then, participants will have an opportunity to experience and interact with these virtual environments and learn how they have been used in real learning scenarios to engage students in their online university education. Finally, lessons learned and practical tips will be shared to help colleagues adopt this approach in their teaching. There will also be an opportunity for Q&A at the end of the session.

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Title of Abstract:	Hybrid/ hyflex inclusivity tensions: affordances, barriers, experiences and opportunities of simultaneous in-person and online teaching.
Presenters (lead & co-presenters)	Martin Compton Alex Standen, Ben Watson
Institution	UCL
Format	Round table
Abstract	<p>In this round table discussion, we will continue an ongoing exploration and evaluation of experiences and potentials of hybrid (aka hyflex) teaching (that is, simultaneous in-person and online teaching). With a focus on inclusivity in this session, we will specifically interrogate hybrid/hyflex teaching against accessibility and EDI discourses. Using prompt materials from a UCL symposium in June (quotes, collated ideas, discussion summaries), we will ask:</p> <p>How has hybrid/hyflex teaching fostered inclusion? Have hybrid/hyflex teaching practices simultaneously fostered exclusion? What do belonging and community look like in the hybrid/hyflex environment? What future does it have and what still needs to be done?</p>
References	<p>Bashir, A., Bashir, S., Rana, K., Lambert, P., & Vernallis, A. (2021). Post-COVID-19 Adaptations; the Shifts Towards Online Learning, Hybrid Course Delivery and the Implications for Biosciences Courses in the Higher Education Setting. In <i>Frontiers in Education</i> (p. 310). Frontiers.</p> <p>Beatty, B. J. (2019). <i>Hybrid-Flexible Course Design</i> (1st ed.). EdTech Books. https://edtechbooks.org/hyflex</p> <p>Benson, K. (2021). In <i>Favour of Universal Design: The Argument for Continued Hybrid Online/In-Person Courses in the Wake of the COVID-19 Pandemic with a Focus on Students with Disabilities</i>. (June 28, 2021).</p> <p>Detyna, M., Sanchez-Pizani, R., Giampietro, V., Dommett, E. J., & Dyer, K. (2022). Hybrid flexible (HyFlex) teaching and learning: climbing the mountain of implementation challenges for synchronous online and face-to-face seminars during a pandemic. <i>Learning Environments Research</i>, 1-15.</p>

	<p>Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. <i>Educause Review</i> Online. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning</p> <p>Kohnke, L., & Moorhouse, B. L. (2021). Adopting HyFlex in higher education in response to COVID-19: students' perspectives. <i>Open Learning: The Journal of Open, Distance and e-Learning</i>, 36(3), 231-244.</p>
Keywords	hybrid, hyflex, teaching, online, engagement, inclusivity, exclusion
Theme	Inclusion and exclusion in the new normal, The promise of current and emerging technologies in shaping the university of the future, Building communities and networks
Session Description (Roundtable, workshops and Hackathons only)	<p>Teaching students simultaneously online and in-person grew in prominence during the transition back to campus in 2021-22 (Detyna et al., 2022) though it is important to distinguish crisis-driven expediency from intentionally designed teaching in this way (Kohnke and Moorhouse, 2021) in much the same way established, planned online teaching was distinguished from 'Emergency Remote Teaching' (Hodges et al., 2020) adopted across the HE sector at the start of the pandemic. UCL's approach to hybrid teaching was to prioritise scale, and our 'basic hybrid' model represented a remarkable effort in both upgrading our tech and upskilling our staff and students. It afforded access to students unable to attend in person (Bashir et al., 2021), and the techniques developed feature prominently in accessibility discourses (Beatty, 2019; Benson, 2021; Kohnke and Moorhouse, 2021). Such techniques have also woven their way into our everyday non-teaching meetings and activities, and calls for ongoing hybridity are prominent.</p> <p>In early June 2022, UCL hosted an event where colleagues from within and outside the institution reflected on the incredible efforts and challenges of the past year. Together, participants explored opportunities, barriers, enablers, and potential hybrid futures for teaching – and wider working practices – in HE. Our broad goal was to examine if (and if so, to what extent) hybrid/ hyflex events could and should be part of the way we plan for the future. In this Round Table we wish to carry on this conversation with a focus on inclusivity, specifically to interrogate hybrid/hyflex teaching against accessibility and EDI discourses. Using prompt materials from the UCL event (quotes, collated ideas, discussion summaries), we will ask:</p> <p>How has hybrid/hyflex teaching fostered inclusion?</p> <p>Have hybrid/hyflex teaching practices simultaneously fostered exclusion?</p> <p>What do belonging and community look like in the hybrid/hyflex environment?</p> <p>What future does it have and what still needs to be done?</p>

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Title of Abstract:	Transitionism: Towards a New Utopia?
Presenters (lead & co-presenters)	Dominic Pates Julian Bream
Institution	City, University of London
Format	Hackathon
Abstract	<p>Our present can, at times, feel overwhelming and only headed in the wrong direction. Our future, however, remains unwritten - it will shape us or be shaped by us.</p> <p>Transitionism is a belief in the possibility of something better. It provides hope and a counter to the despair of an ever darkening present. Converging across three domains - the digital revolution, the climate crisis, inequity and social justice - transitionism provides a direction of travel for alternative futures.</p> <p>This session introduces and explains the notion of transitionism and asks delegates to consider how it might be applied within academic practice in higher education. Via paired and small group discussions, delegates will be encouraged to reflect on their own agency in effecting positive change in their institutions and within our sectors. The session will result in the generation of sets of ideas for making the digital transformation of our institutions net positive events and for making the future of higher education greener and more just than it is today.</p>
References	<p>Bayne, S., Evans, P., Ewins, R., Knox, J., Lamb, J., Macleod, H. (2020). The Manifesto for Teaching Online. The MIT Press, Cambridge.</p> <p>Figueres, C., Rivett-Carnac, T. (2020). The Future We Choose: Surviving the Climate Crisis. Manilla Press, London.</p> <p>Santos, B. (2020). Negationism, Gattopardism and Transitionism. Other News. https://www.other-news.info/negationism-gattopardism-and-transitionism/ (Retrieved May 11, 2022)</p> <p>Thew, H., Graves, C., Reay, D., Smith, S., Petersen, K., Bomberg, E., Boxley, S., Causley, J., Congreve, A., Cross, I., Dunk, R., Dunlop, L., Facer, K., Gamage, K. A. A., Greenhalgh, C., Greig, A., Kiamba, L., Kinakh, V., Kioupi, V., Lee, M., Klapper, R., Kurul, E., Marshall-Cook, J., McGivern,</p>

	A., Mörk, J., Nijman, V., O'Brien, J., Preist, C., Price, E., Samangoeei, M., Schrod, F., Sharmina, M., Toney, J., Walsh, C., Walsh, T., Wood, R. Wood, P., and Worsfold, N.T. (2021). Mainstreaming climate education in Higher Education Institutions. COP26 Universities Network Working Paper.
Keywords	climate change, climate crisis, climate emergency, equity, justice, social justice, technology, digital, higher education, transitionism
Theme	Inclusion and exclusion in the new normal, Building communities and networks, The promise of current and emerging technologies in shaping the university of the future, Technology, pedagogy and assessment
Session Description (Roundtable, workshops and Hackathons only)	<p>From rampant wild fires and continental heat domes to glacial melting and the now annual flooding of major cities, the impact that humans are increasingly having on the biosphere as we release more and more greenhouse gases into it is becoming ever more alarming. The pace of change of the digital revolution can be exhausting for anyone trying to keep up with it, with workplace employee monitoring software, online proctoring systems and algorithmic bias some of the recent troubling and negative twists in the tale of the unfolding information society, and the 'Fourth Industrial Revolution' (4IR) supposedly just around the corner to bring more paradigmatic change. The COVID-19 pandemic has shone a spotlight on the existing inequalities such as racial and gender injustices that have long blighted our societies, and in many ways, exacerbated them, but many of these also remain as the unaddressed legacies of systems such as colonialism and patriarchy. This year has even seen the return of a major European land war, with the Russian invasion of Ukraine. If we look around at the state of the world in 2022, it is not difficult to feel despair.</p> <p>Writing on the climate crisis, Figueres and Rivett-Carnac (2020) propose that '...we have two choices for our future, which is still unwritten. It will be shaped by who we choose to be right now'. That choice is essentially between business-as-usual or of building a better future. Enter transitionism. Santos (2020) describes transitionism as 'an overturning of things from dystopia to utopia, and utopia by its very definition is not a destination but a destiny'. Transitionism looks at the world via the lenses of three distinct but overlapping domains and sees a system of continuous transitions from one form into another, endlessly moving towards that better future. Individual actions alone may not change the world by themselves, but the aggregation of those individual and small group actions can collectively make the avalanche, the sea change, the tectonic shift that is needed to build the momentum and ultimately change the trajectory for us all.</p> <p>Unprecedented changes across all sectors of society and the economy will be required to achieve national goals of reaching net-zero greenhouse gas emissions by 2050. 4IR suggests profound and systemic changes anyway, if trends in technologies such as artificial intelligence, automation, robotics and the Internet of Things are likely to achieve widespread adoption in ways like the personal computer, the World</p>

Wide Web and the smartphone already have done. If these two major shifts are not approached to be just transitions, we will only perpetuate and reinforce existing inequalities and injustices, missing the rare opportunity to actually make a better world while it is changing rapidly anyway.

What does all this have to do with teaching and learning with technology, or academic practice in higher education? It is the sphere within which we all work, teach, learn and connect, so is where we must look to start (or continue) with building something better. We can start to effect positive change first within our own spheres of influence before it can ripple out to become something wider. Thew et al (2021) propose mainstreaming climate change education (CCE) across all learning activities in Higher Education Institutions (HEIs), embedding interdisciplinarity to ensure that HEIs can harness all the expertise they have to offer, developing learning outcomes for CCE that reflect factors such as the scale, urgency, causes and consequences of climate change, and embracing pedagogical approaches to teaching CCE that enable learners to engage with climate matters as real-world problems, such as through experiential learning. In 'The Manifesto for Teaching Online', Bayne et al (2020) seek to push back against framing of 'impoverished techno-corporate futures for education', the extents to which traditional higher education teaching has so often failed to effectively account for digital methods and the over-privileging of on-campus teaching. Their manifesto articulates that new, creative and highly engaging ways of teaching can be opened up by being online.

Furthermore, in the past few years, our institutions have also seen a profusion of issues around factors such as decolonising the curriculum, digital accessibility, or generally looking to create better environments for equality, diversity and inclusiveness. Collectively, these hint at some ways to begin or continue to become a transitionist actor, but there will be many, many more ideas and actions.

The session itself should therefore relate to all four sub themes of this conference, in generating ideas around inclusion and exclusion, building or leveraging communities and networks, the promise and challenge of current and emerging technologies, and general issues or questions around technology, pedagogy and assessment. The aim of this session is for delegates to leave feeling that they can do something towards making a better world. We will look to achieve that via a series of discussion and reflection activities - small group, paired, individual - framed via the notion of transitionism. We hope that you will leave the session feeling empowered and inspired. Perhaps in 2023, you can come back and tell us what you did.

Session Time

13:30 – 14:20



APT 2022

20th Academic Practice and Technology Conference (APT2022)

Friday 1st July 2022

Institute of Education, UCL, 20 Bedford Way, Room W3.01

Co-hosted by the London School of Economics & Political Science,
Imperial College London and University College London.

Abstracts

Title of Abstract:	Artificial Intelligence Systems in Higher Education: Opportunities and Challenges
Presenters (lead & co-presenters)	Nurun Nahar Aftab Hussain, Victoria Lomas, Kyle Yarwood, Maria Niaz Rehman
Institution	University of Bolton
Format	Case study
Abstract	Emerging evidence suggests that the use of Artificial intelligence (AI) systems could offer, effective support for online learning and teaching, including personalising learning for students; support with assignment preparation and automating instructors' routine tasks. Instead instructors can dedicate their saved time to higher-value work (Seo et al., 2021). This research paper will present results from a qualitative pilot study where two AI systems -FirstPass and AskADA have been integrated into curriculum delivery on an undergraduate 3rd year module to understand and evaluate their effectiveness for teaching and learning and assignment support. Findings indicate that emerging AI systems could indeed shape the future of teaching and learning in Higher Education, only if utilised to compliment tutor mediated support.
References	Bates, T., Cobo, C., Mariño, O. et al. (2020) Can artificial intelligence transform higher education?. <i>International Journal of Education Technology in Higher Education</i> . 17, 42. https://doi.org/10.1186/s41239-020-00218-x Lynch, J. (2017). How AI Will Destroy Education https://buzzrobot.com/how-ai-will-destroy-education-20053b7b88a6 . Nahar, N., Hussain A., Turner, H. and Storey, T. (2021) Ada goes to Uni: Chatbots in a Covid-19 era, TIRI Showcase Virtual Conference, 22 June 2021, University of Bolton. Seo, K., Tang, J., Roll, I., Fels, S., and Yoon, D. (2021) The impact of artificial intelligence on learner-instructor interaction in online learning, <i>International Journal of Educational Technology in Higher Education</i> , 18 (54), pp 1-23, DOI https://doi.org/10.1186/s41239-021-00292-9

Keywords	Artificial Intelligence, Chatbot, Technology enhanced pedagogy, Teaching and learning.
Theme	The promise of current and emerging technologies in shaping the university of the future
Session Description (Roundtable, workshops and Hackathons only)	<p>Artificial intelligence (AI) based technologies and its application is being widely used in some areas of society. However, it's application and potential benefits for teaching and learning in Higher education (HE) is yet to achieve its marked promises and bright future as predicted by some researchers. To date, research in this area primarily focused on the use of AI assistants such as chatbots and other educational software's with programmed algorithms that help with the process of learning. As such a key question facing the large-scale implementation of AI systems in HE is, "to what extent can AI facilitate or even manage the process of teaching and learning itself?". (Bates et al., 2020). In the academic year 2020/21, Nurun et al., (2021) conducted a study in partnership with students, to evaluate the benefits of using chatbots to enhance student engagement in HE. Findings from the study provided some compelling evidence to suggest AI driven systems such as chatbots can influence student engagement and promote a stimulating learning environment if integrated with institutional virtual learning management system (VLMS) such as Moodle or Blackboard. In the current study, we extended the research aim to test if similar AI systems can support students with assignment preparations by providing real time feedback. In this cross-institutional collaborative project, we tested FirstPass and AskADA, two AI systems currently being developed and utilised by Bolton College, a further education institution. AskADA is a campus digital assistant and FirstPass uses AI to provide real-time feedback to open-ended questions. These two systems were integrated with curriculum delivery on a HE6 module. The objectives were to train FirstPass and AskADA, so that they work in harmony to support the computer mediation of open-ended questions and support learning and assessment preparation by providing real time feedback and response, in order to answer research questions such as: Can a computer be trained to classify academic text? Does real-time feedback and response support greater autonomy and self-direction in students as they address answers to open-ended questions while preparing for assessments?</p> <p>We used a qualitative approach to evaluate the impact of the use of FirstPass and AskADA for learning and assignment support. Research tools used were semi -structured interviews of academic members of staff (n=6) on their views of using FirstPass and AskADA for curriculum delivery and assessment support followed by a student focus group (n=9) on the effectiveness of these systems for learning and summative coursework preparation. Findings from the staff interviews indicated that, academics would use FirstPass with caution since assignments are more than a test of learning outcomes and by using a system designed</p>

to analyse response to open ended questions based on assessment criteria, it would restrict a student's creativity as they would be more focused on achieving the targets set on the system. However, academics were more positive with the concept of a digital assistant such as AskADA, as it can be useful for teaching and learning and could significantly assist them with responding to emails related to timetables, induction, enrolment and related administrative tasks. In contrast, focus group findings suggests that students did find the real-time feedback on FirstPass very useful to improve their course work in relation to the assessment criteria or learning outcomes and articulate their coursework better in order to get higher grades. With regards to AskADA, although a chatbot feature on Moodle sites is supportive for learning, it is however limited to pre-loaded Q&As and as such may not be as effective as using browsing platforms such as Google to look up information related to a topic.

Overall, as Lynch (2017) argues, our study indicated that the benefits of these AI systems were limited when it came to helping with the development of higher order thinking skills in learners such as critical thinking, problem-solving, creativity and knowledge management, since AI applications like these tend to adopt a behaviourist model of learning: present/test/feedback (Bates et al., 2020).

We anticipate this research paper to raise some critical questions around the extent of the use of AI systems in Higher education to shape the university of the future. As bates et al. (2020) carefully indicates, AI applications has to 'fit' with modern educational theories and higher education policy researchers, academics and researchers must closely collaborate with AI systems developers in order for us to determine potential improvements to learning and pedagogy that AI may be able to offer so that the relational aspect of learning is not overlooked.

Session Time

13:30 - 14:40