

This special technology enhanced learning issue of *Compass* contains a fascinating range of articles: critical appraisal of published reports on new technologies; skilling the visual effects artists of the future UK film industry; a student perspective of flipped learning; a series of insights into and reviews of various technological tools with application to higher education; self-assessment to counter student dissatisfaction with assessment feedback; technology-related continuing professional development; a call for equal emphasis on verbal skills' development in a digital age; aspects of course and activity design. It presents a multi-faceted and inter-related picture of contemporary higher education that is rich indeed!

The Horizon Reports – published by the New Media Consortium (NMC) – come under appraisal in a paper by Sonja Grussendorf which seeks to redress a perceived lack of critical engagement with them in the academic literature. Sonja is concerned that these reports, popular among the educational technology community and influential for their predictions of technologies likely to be of value to the higher education sector, should be scrutinised properly; after all, they influence purchasing decisions and thus, inevitably, pedagogy as well. The paper, in some detail and with credible objectivity, explores the degree of influence wielded by the reports and assesses their predictive accuracy and consequent impact; it also seeks to discover whether they subscribe to any ideology and, if so, whether this is made explicit by the NMC.

'VFX HE Online Mentoring Programme 2017', a project led by the University of Greenwich, set out to provide students with an in-depth understanding of visual-effects (VFX) productions and of the hard and soft skills required for making them; to do so, it harnessed the expertise of three professional facilities. The British Film Institute has identified widespread VFX skills' shortages in the UK and the industry is having to source talent from abroad. The higher education sector thus needs to respond, by equipping UK students with appropriate training. Jin Zhi's case study outlines the two-part, technology-enhanced mentoring and learning programme in Greenwich's Department of Creative Professions and Digital Arts: provision to the students of exclusive learning videos made by the three VFX companies; end-of-week online question-and-answer sessions for the students to interact directly with the companies' senior creative artists. The study also provides key findings and offers recommendations for the future versions of the programme.

Gemma Boden and Fon Yan Li offer a balanced and well-referenced analysis of the application of flipped learning and is a positive and helpful addition to the literature on this topic. The authors draw on personal experience of well-managed flipped learning to argue that this approach has much to offer. Their view is that it overcomes – by means of such directed prior learning as recommended reading and the watching of relevant videos – disparities in student understanding. It thus improves classroom engagement with, and engenders enthusiasm for, a range of stimulating activities; the learning becomes student-centred and the flexible classroom a safe space for interaction, discussion and debate. The paper makes clear that it is incumbent on the teacher to be proficient in the method and sensitive to individual learning styles, and on the student to put in the effort to complete the preparatory learning.

Identified problems with the traditional assessment model of a University of Greenwich land law course, together with changes proposed for professional legal education, led to alternative assessment methods using learning technology. Sandra Clarke offers a review of

this process and considers, in a very balanced appraisal, the advantages and challenges of using the Moodle Workshop tool for a new formative, peer-reviewed and peer-marked exercise and the Moodle Quiz tool for the online replacement of a seen written exam. Some very helpful guidance is offered for the design of multiple-choice questions in the latter case. Sandra also makes very clear the need, especially for assessing the full range of skills demanded of lawyers, for an appropriate selection of modes of assessment across the course.

A comparative case study explores the respective contexts, institutional drivers and evolution of the use of the Carpe Diem Learning Design methodology by Glasgow Caledonian University (to support the development of online programmes) and the University of Northampton (to develop blended programmes). Julie Usher, Sheila MacNeill, and Linda Creanor provide a meticulously-detailed account of these institutions' applications of Carpe Diem, concluding that it is well-suited to purpose, as long as some customisation and contextualisation is incorporated to meet institutional priorities. Though the two examples are not alike, common benefits and challenges emerged; the paper's appraisal of these certainly fulfils the authors' desired aim of contributing to the collaborative narrative about what is involved in implementing and embedding a formal learning-design process.

A technology review, containing the careful analysis of six (free or free-with-paid-add-ons) web-based 'student response systems', intends to help others to choose from the many such tools on the market; Martin Compton and Jason Allen consider these six the best available, on the basis of functionality and ease of use, and highlight their unique selling points. (The paper endorses the deliberate incorporation of student-owned mobile devices into teaching and learning sessions to harness the associated benefits of such hardware and to minimise possible in-class misuse.) Following their informative analyses, Martin and Jason confirm that all six can improve student engagement and interaction and suggest that teachers should be encouraged to try out at least one of them, with appropriate training and support and with due consideration of data protection guidelines. They add that teachers 'should always know what they expect of students and apprise them of those expectations and of what they will be sharing.'

Kahoot!, a game-based student response system, is examined by the authors of a review of this software. Gemma Boden and Lindsay Hart say that its bright colours, graphics and music make it an ideal medium for enthusing students in the classroom. Accessible via personal mobile devices, it can be deployed by the teacher – using a computer and the class screen – at the beginning of a session, to assess prior learning or, at the end, to review key points or test what the students have learnt in class. Essentially, it presents topic-related quiz questions and participants select from multiple-choice answers on their devices. The paper's provision of a SWOT analysis of its strengths, weaknesses, opportunities and threats does lend some balance to this review, but Gemma and Lindsay confirm that their own observations of it in class and students' informal feedback both support an overall favourable judgement of its merits. Not only is it straightforward for staff to use, but it also, from visible (and aural!) evidence, stimulates engagement and improves concentration. Perhaps, best of all, it is free.

Formative assessment in Mathematics by means of Moodle's quiz option is examined in relation to the development of students' understanding by means of a series of non-

assessed online quizzes. Steve Lakin, whose paper considers the application of this technology, discusses the opportunity of creating various versions of the same question; the multiple-choice options can be specified, to include one correct answer and other variants, covering common mistakes that students make. Feedback indicated that students found the approach very useful for exam preparation, though Steve clearly identifies the application's limitations: Moodle doesn't have many important mathematical functions built into it, so that questions do have to be manipulated to allow for any randomisation; it doesn't allow for any graphical randomisation. The conclusion: 'useful, but limited.' Steve, however, does see its possible application to other subjects with a core mathematical or statistical element.

John Casey's paper focuses on web annotation, its tools and standards to consider their 'potential to support learning and teaching across a range of activities using existing web resources', for 'annotations can be published, shared, managed and curated, as well as re-published via social media channels.' Web annotations are overlaid on the original web page, are separate from it and are under the *annotator's* control; to a third-party viewer, however, they co-exist with the original content. There are thus implications for copyright, authorial reputation and ownership. John explains that there is opportunity in web annotation for interaction both with content **and** other web users – marginal notes can 'become media-rich and shared with others'. In 'face-to-face', online and blended classrooms', annotation (whether of text, image or audio-visual resources) combines traditional and digital literacies.

Against a carefully-considered theoretical background, David Thompson presents the study of an attempt to counter evidence of student dissatisfaction with assessment and feedback practice, in this case in undergraduate film production courses, and to deal with 'the characteristic indifference and laissez-faire attitude of students engaged in film-making.' The activity, undertaken immediately prior to the students' 'live' summative feedback from the teacher, involved the students' written appraisal of their own work against the original brief for the task and their identification of aspects needing development. This was followed by a digitally-recorded focus group, allowing the students to reflect upon their self-assessment experience. Such qualitative data provided David with two key findings: to appraise without knowing what action to take constitutes a barrier to student engagement with their feedback; 'being able to maintain a distance from and perspective of their work' helps students to assume personal responsibility for what they do.

Huge investment in technology in the higher education sector has not necessarily produced the transformative effect on teaching, learning and assessment that might have been expected. Continuous professional development (CPD) must not be a 'one-size-fits-all' approach, according to Timos Almpanis and Martin Compton, the authors of a very cogent rationale for CPD emphasise, not upon the technological functions of tools and virtual learning environments (VLEs), but upon individualised and needs-focused applications that really do transform pedagogy. With their background in and experience of offering formal technology training for academics, Timos and Martin are convinced that user-friendly, 'quick win', cloud-based apps are the way forward – they have been 'using, testing, collecting and disseminating these tools for several years.' Furthermore, they advocate a shift away from the culture of having CPD 'done' to staff and for staff themselves to have ownership of the materials used. In a nutshell, the message here is that such institutional platforms as VLEs may still serve as a foundation, but fitter-for-purpose cloud tools may well encourage staff to

be much more committed to and convinced by technology-enhanced learning strategies overall.

Online courses come under the scrutiny of Scott Malcolm Goudie, the author of an opinion piece which weighs up the advantages of acquiring quick and easy evidence of continuing professional development (CPD) against the concomitant failure of the courses themselves to stimulate real learning. Easy-to-guess or simple-to-deduce answers to multiple-choice questions that render unnecessary any pre-assessment study of online learning materials may achieve a comfortable CPD box-tick, but can hardly be said to confirm the competence and credibility of individuals or their professions. Personal experience and careful reference to the associated literature lead Scott to conclude that online CPD courses must be meaningful: 'failure assessments' – prior to release of learning materials – to highlight gaps in knowledge and understanding; problem-based learning that requires study of the materials to achieve answers and solutions; improved design of these courses to make them pedagogically sound; accreditation of the courses according to proven impact on professional development; massive open online courses (MOOCs) to facilitate real-time group CPD sessions. The article ends with the hope that new technologies will help with course design and encourage more constructive responses from learners.

In our digitally-connected age, says Nicky Garsten, the author of lively argument which emphasises the importance of face-to-face communication, we should not neglect students' verbal skills. Though tech-savvy students may prefer to communicate by messaging or email and though they must certainly have excellent digital capabilities to be employable, this opinion piece points out that employers really do want graduates to be able to talk well. Nicky outlines some key ways of countering students' reticence: just being aware that speaking in seminars may be stressful for some students; arranging seating to enhance a group's visual and verbal interactions; consistently and explicitly demonstrating in seminars that students' views, uncertainties and personal knowledge are all valued; making student/staff one-to-one consultations welcoming and supportive. The piece ends with one clear message: staff should be mindful of the importance of developing in students **all** forms of communication – digital, written and verbal.

A case study offers an overview of the experience of 'designing a serious game for a large inter-disciplinary course at the London School of Economics and Political Science.' The intention was that the game should enhance student engagement on a course with a mixed-ability cohort. The authors of this paper, Sarah Jane Leach, Geraldine Foley, Jose Javier Olivas Osuna, and Aggie Molnar, set the scene and offer the pedagogical rationale, before outlining the game itself, the design process and the challenges. The meticulous evaluation process included observation of a significant proportion of the game-playing sessions (there was considerable variation and tutor interpretation of the rules!) and the acquisition of qualitative data from both students and staff. Overall, there are some fascinating insights here into the benefits and challenges of deploying game-based learning, especially on such a large scale. The authors conclude that more time for training the staff to practise the running of the game and the managing of the post-game activity would enhance what was a generally well-received exercise.

The STEEPLE (seven environments in which organisations must function – Socio-cultural, Technological, Economic, Ecological, Political, Legal and Ethical) model is usually deployed

Editor's Introduction

in business organisations' strategic decision-making, but an article in this issue of *Compass* describes its helpful application to course design for the PGCert HE in a University of Greenwich partner institution in Trinidad and Tobago. Peter Colin Kelly explains how each of the STEEPLE environments relates to the process of curricular design; though not a course-design model itself, STEEPLE can be very useful in supporting those models which are, in order to make courses and modules flexible and responsive to the demands and expectations of society and the working world in which students will be employed.

I hope you enjoy reading through the articles, opinion pieces and case studies in this special edition as much as we have enjoyed putting this issue together.

Danielle Tran
Editor