Building institutional cultures of innovation in technology enhanced learning: UCISA findings on current challenges and developments in UK higher education

Jenkins, M., Walker, R. & Voce, J.

Building institutional cultures of innovation in technology enhanced learning: UCISA findings on current challenges and developments in UK higher education

Martin Jenkins
Coventry University
United Kingdom

Richard Walker
University of York
United Kingdom

Julie Voce
City, University of London
United Kingdom

This paper discusses recent developments in technology enhanced learning (TEL) across the UK higher education (HE) sector and considers the extent to which innovative practices have been able to flourish. In the context of an increasingly competitive marketplace for student recruitment, we explore the tension that HE institutions are now facing between establishing consistency in course provision as a way of satisfying student expectations, whilst at the same time encouraging academic staff to experiment and innovate with learning technologies, with the accompanying risks that this may present to the reception of learning methods.

Keywords: innovation; technology enhanced learning; institutional culture

Introduction

Transformational learning outcomes are commonly associated with the use of digital technologies in learning activities, but to what extent is this vision being realised within higher education? Whilst there has been strong investment in TEL services and tools across the UK HE sector in recent years, the evidence suggests that there has not yet been a major impact on academic practices (Price & Kirkwood, 2014; Selwyn, 2014; Walker, Jenkins & Voce, 2017). Drawing on the data from the most recent Universities and Colleges Information Systems Association (UCISA) TEL surveys (https://www.ucisa.ac.uk/bestpractice/surveys/tel/tel), this paper considers the progress that has been made by UK HE institutions in promoting creative uses of technology and the factors influencing changes in academic practice.

The UCISA Surveys

The UCISA TEL surveys have been monitoring the management and implementation of technology-enhanced learning across the UK HE sector since 2001. The surveys have been completed by institutional heads of e-learning with responsibility for the delivery of learning and teaching services and have served a dual purpose in tracking longitudinal perspective of technology-enhanced learning (TEL) developments across the sector, whilst at the same time capturing new trends and developments. The survey tool contains 60 questions, which include multiple choice, Likert scale and free text answers, and covers a range of topics such as drivers and enablers for TEL, strategies influencing TEL adoption, tools, evaluation of TEL, support for TEL and future challenges. Questions have been refined or developed over time in conjunction with the TEL community to ensure new trends are captured, whilst still ensuring that longitudinal analysis is possible to enable the identification of transformative practice over time. The most recent survey report (Walker et al., 2018) represents the ninth survey in the series. The survey will be complemented by a set of case studies that draw out details on how institutions are supporting and developing academic practice and provide examples of how themes emerging from the survey are being addressed in specific contexts (https://www.ucisa.ac.uk/bestpractice/surveys/tel/tel).

Each survey has taken place within a particular national context, with the 2018 survey tracking TEL developments within an increasingly competitive marketplace for student recruitment. We have observed how institutional decision-making has focused on the role of educational technology in supporting standings in ranking schemes such as the Teaching Excellence Framework (TEF) (http://www.hefce.ac.uk/lt/tef/) which awards institutions a gold, silver or bronze rating, based on evidence derived from student progression metrics, student satisfaction instruments such as the UK National Students Survey, and graduate-level employment outcomes. Given this context of TEF and university league tables, how can higher education institutions create cultures of innovation in the use of TEL tools, encouraging academic staff to experiment (and perhaps fail) whilst at the same time ensuring consistency in baseline provision to students?

Looking back at sector guidance over the years, the revised e-learning strategy from the Higher Education Funding Council for England (HEFCE, 2009) has encouraged institutions to focus on three types of interventions for TEL to support the development of innovative practices: efficiency, enhancement and transformation. Flavin and Quintero (2017) have proposed an alignment of these three types to Christensen's theory of disruptive innovation, such that innovation can be sustaining or disruptive. Innovation is therefore defined in this paper as having two aspects, namely: (i) *efficiency and enhancement*, whereby existing processes and systems are either improved or become more efficient through cost or time saving developments; and (ii) *transformation*, whereby innovation introduces new systems or processes that radically change the ways that things are done and potentially disrupting the status quo.

Transformative change might come in a variety of forms, such as through the development of new design methods that reverse traditional instructor-learner roles, engaging students in knowledge creation activities, or through novel approaches such as immersive learning or the use of student-led analytics, which may provoke major changes in the way that students learn (Ferguson et al., 2017). Using the UCISA survey data as a frame of reference, we will discuss how far the sector has come in relation to these dimensions of efficiency & enhancement and transformation through the use of TEL tools and services.

Establishing a baseline - ensuring efficiency and enhancement

The HEPI report (Davies, Mullan and Feldman, 2017) reported that almost all UK HE institutions now provide a baseline of TEL provision, which has provided a degree of efficiency in the management and support of student learning. Fig 1 reveals the top five TEL services that institutions have invested in to support their course delivery. The key development since the 2016 survey has been the rapid 'top-down' deployment of lecture capture tools across the sector, which are included for the first time in the list of top-five TEL tools deployed by UK HE institutions.
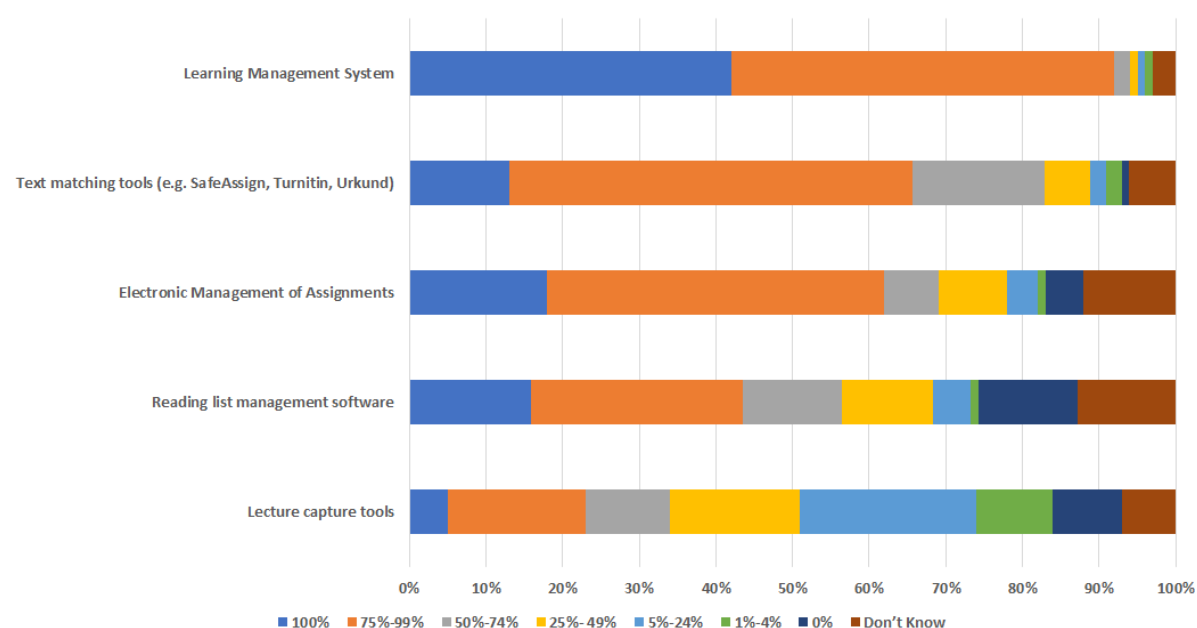

Figure 1: Percentage of institutional courses using TEL tools within the UK HE sector
Source: 2018 UCISA Technology Enhanced Learning Survey (Walker et al., 2018)

Our findings show that this baseline provision is constantly under review; since 2012 the data has indicated that around half of institutions have reviewed a major TEL system in the past two years. In 2018, 47% institutions reported that they had undertaken a review with the majority focusing on their Learning Management System (LMS). Outcomes of these reviews have included decisions to move to alternative vendor solutions, as well as to enhance current systems through upgrades or migration to outsourced hosting provision.

One way of ensuring a baseline use of TEL whilst incrementally enhancing staff pedagogic practices has been through the introduction of usage policies, primarily aimed at the LMS. In 2018, 58% institutions reported having a minimum requirements policy for the LMS. The UCISA TEL Case Studies (UCISA, 2016) highlighted consistency of student experience as a key driver for institutions in the production of these policies. Institutions

2

such as Aberystwyth University and Edge Hill University indeed have reported that they have provided their staff with guidelines on how to develop an enhanced LMS module site presence 'beyond the baseline', although it is unclear what impact this guidance has actually had on lecturers' online instructional practice to date.

Are we transforming academic practice?

What impact has this investment in TEL tools and services had on pedagogic practices and student learning? Has the establishment of baseline provision led to transformative changes? The 2018 findings do not suggest that much has changed in this respect, with blended learning delivery focusing on the *provision of lecture notes and supplementary resources* to students still representing the most commonly supported activity; 73% of respondents indicated that this mode is offered extensively across their institution. In contrast, only 18% of institutions reported that the design of their courses actually required students to engage in active learning online (e.g. through active participation in collaborative or assessed tasks).

Moreover, there appears to be little progress in the evaluation of TEL practices at institutional and departmental levels to explore the impact of technology usage on the student learning experience. Only 43% of institutions had conducted evaluations, and those that did tended to focus more on levels of satisfaction with TEL services by tracking the take-up and usage of TEL tools, rather than on the contribution of TEL services to student learning – no doubt with a view to securing higher NSS ratings which in turn contribute to TEF metrics. The evaluation of impact of TEL on pedagogic practices attracts even less attention, with only 21 instructions engaged at all in this activity. The 2018 data shows that where evaluations are taking place, they are largely being undertaken as part of a general review of TEL services, rather than as a review of teaching methods supporting innovative practices.

However, in cases where evaluations have focused on the digital capabilities of staff, the evidence points to varying levels of technology adoption beyond the minimum requirements of LMS usage with limited skills and confidence levels, as captured in the following free-text commentaries from survey respondents on outcomes from their own institutional studies:

> "..the academic staff survey revealed that basic technology is used widely across the University but there is significant scope to use/adopt 'added value' tools and services."

> "(LMS) is central to the delivery of all modules but some aspects of delivery need further support – e.g. support for more interactive resources, general learning design approaches particularly in relation to fully online delivery."

This is further reflected in the 2018 survey results which have flagged a lack of academic staff knowledge as one of the top five barriers to the development of TEL.

Creating an environment for innovation

So how can we develop an environment for more transformative innovation through the use of TEL? Since 2003 the UCISA survey has reported on the influence of institutional strategies on the development of TEL, with Teaching, Learning and Assessment strategies being the most prevalent. The 2018 report indicates that 34% of institutions retain specific TEL or e-Learning strategies. Whilst strategies may be seen as an important way of influencing the development of TEL within HE institutions, Flavin and Quintero (2017) have reported that the majority of TEL strategies focus on innovation in the form of enhancement and efficiencies rather than transformative innovation.

Thanaraj and Williams (2016) highlight instead the importance of ensuring that academics feel encouraged to experiment with their teaching, and advocate a "bubbling-up" of innovation in conjunction with a more institutional approach which ensures efficiencies of scale. The 2018 survey data on barriers to TEL development highlights the role of institutional and departmental/school leadership in establishing the right culture for academic buy-in to technology adoption and experimentation. However, there is a need to ensure that there is adequate support to support both enhancements and transformation (Gunn, 2010). The 2018 data suggests that the scope to embed and develop TEL practices is linked to the availability of technology enhanced learning support staff at an institutional and local level, and this once again tops the list of encouraging factors identified by respondents. The availability of support can be seen to address academic staff know-how, time and resourcing levels, which represent three of the leading barriers to TEL development that have been identified by survey respondents over the years, as illustrated in Figure 2. The lack of stability in central TEL support

3

provision in this respect is a concern, with 80% of institutions having changed their provision in the last two years and 38% of institutions indicating that they have undergone a restructure or reorganisation.
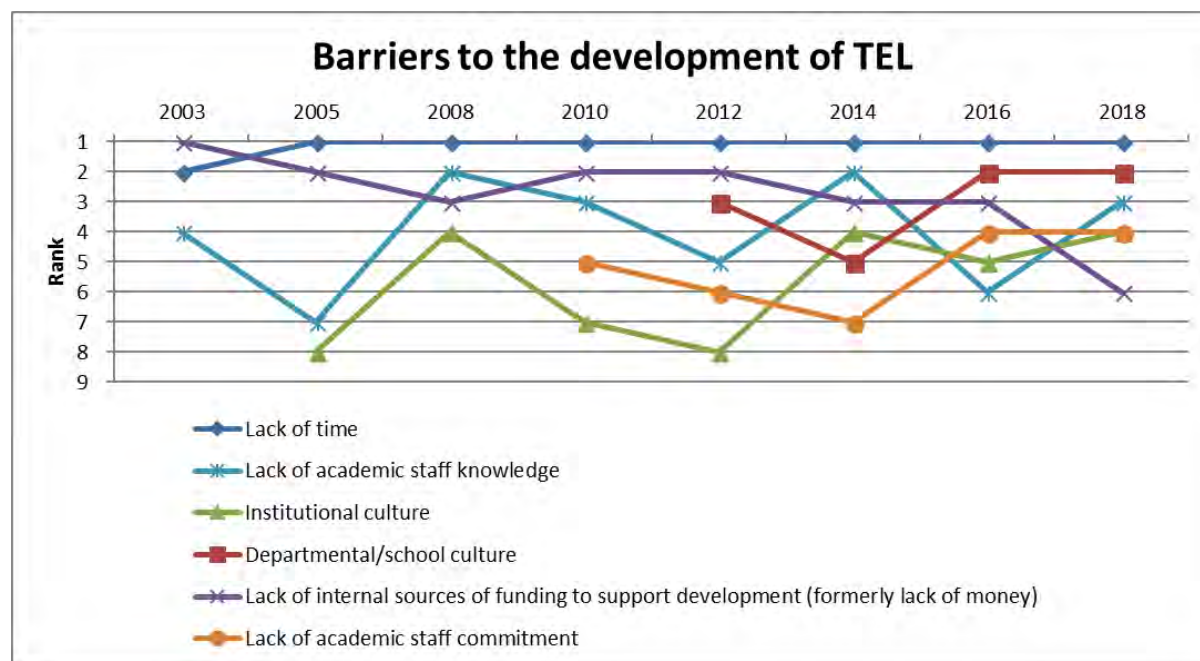

Figure 2 - Graph showing the barriers to the development of TEL from 2003-2018

Setting the vision for digital education, through appropriate strategies and providing the right level of resources, support and incentives to trial new approaches to course delivery are all facets of leadership which we believe are key to innovation with TEL. This leadership approach is neatly summed up in the following survey response on the factors behind the TEL activity 'above the institutional norm' by one school within an institution:

> "The school has a clear vision for digital education and the resources to enable TEL – a dedicated budget and two learning technologists in house."

Illustrations of effective institutional approaches to innovation that we have observed across the sector therefore combine both resourcing and pedagogic vision as dimensions of technology adoption and include student partnership schemes such as those promoting the use of student technology ambassadors and student video production team (Jisc, 2015; LSE, 2016; Walker, 2017). Conversely where there has been limited support from senior management and a lack of learning technology assistance, the UCISA survey feedback shows that it is much harder to shift the academic culture towards greater experimentation with TEL, as captured in the following comment:

> 'Cultural (sic) is at Departmental level, resulting in lack of engagement and hence output of TEL usage.'

Conclusion

Our findings underscore the importance of strategic leadership in fostering TEL developments, and align with the conclusions of Bates (1992) who observed that '*technological decisions need to be preceded by policy and educational decisions*'.

Using Flavin and Quintero (2018) as a frame of reference to interpret developments, the UCISA data reveals that institutional investment in TEL over recent years appears to have been directed towards efficiency and enhancement improvements, with a keen focus on meeting student expectations and ensuring high satisfaction levels with TEL services. This approach appears to have had a negligible impact on academic practice, beyond ensuring staff conformity to baseline standards of technology usage. As Selwyn (2014:9) observes, '*many of the fundamental elements of traditional learning and teaching have been neither transformed nor ruined by the waves of digital technologies*'. In Selwyn's estimation the rollout of TEL services has followed a technologically deterministic model, without serious critique as to how technology is actually being used in

4

practice. The UCISA survey data supports this analysis to some degree, illustrating the lack of institutional scrutiny on TEL services and their impact through evaluation studies, with a clear gap between provision of services and understanding of their use.

We conclude that for transformative change in academic practice to take root, institutions will need to address this gap, outlining a compelling vision for the use of TEL tools in support of student learning. At the same time they should be encouraging academics to experiment and critically engage with TEL tools and services as part of a proactive and sustainable strategy for effective TEL usage in course delivery. This evidence-based approach would mark a significant departure from the current reactive stance that institutions are following, which in our estimation appears to be short-term in focus - prioritising the rapid rollout of services to satisfy the expectations and perceived needs of students.

References

Bates, A.W. (1992). Technology for distance education, in Tait, A. (Ed.), *Key Issues in Open Learning*, Longman, Harlow, 241-65.

Davies, S., Mullan, J., & Feldman, P. (2017). Rebooting learning for the digital age: What next for technology-enhanced higher education? (Report No. 93.) Oxford: Higher Education Policy Institute. http://www.hepi.ac.uk/wp-content/uploads/2017/02/Hepi_Rebooting-learning-for-the-digital-age-Report-93-20_01_17Web.pdf

Ferguson, R., Barzilai, S., Ben-Zvi, D., Chinn, C.A., Herodotou, C., Hod, Y., Kali, Y., Kukulska-Hulme, A., Kupermintz, H., McAndrew, P., Rienties, B., Sagy, O., Scanlon, E., Sharples, M., Weller, M., & Whitelock, D. (2017). *Innovating Pedagogy 2017: Open University Innovation Report 6.* Milton Keynes: The Open University, UK. http://www.open.ac.uk/blogs/innovating/

Flavin, M., & Quintero, V. (2018). UK Higher Education Institutions' technology-enhanced learning strategies from the perspective of Disruptive Innovation. *Research in Learning Technology*, *26*. DOI: 10.25304/rlt.v26.1987

Gunn, C. (2010). Sustainability factors for e-learning initiatives. *Research in Learning Technology, 18(2).* https://journal.alt.ac.uk/index.php/rlt/article/view/879

HEFCE (2009). Enhancing learning and teaching through the use of technology: a revised approach to HEFCE's strategy for e-learning. http://dera.ioe.ac.uk/140/1/09_12.pdf [Viewed 11 Jul 2018]

Jisc (2015). Developing successful student-staff partnerships. Supporting you to work with students to develop your institution's digital environment and create engaging learning experiences. *Jisc Guide*. https://www.jisc.ac.uk/guides/developing-successful-student-staff-partnerships [viewed 11 Jul 2018]

LSE (2016). *Students as Producers @ LSE.* http://lti.lse.ac.uk/students-as-producers-lse/ [Viewed 11 Jul 2018]

Price, L., & Kirkwood, A. T. (2014). Using technology for teaching and learning in higher education: A critical review of the role of evidence in informing practice. *Higher Education Research & Development*, 33 (3), 549-564.

Selwyn, N. (2014). *Distrusting educational technology: critical questions for changing times*, Routledge: New York

Thanaraj, A., & Williams, S. (2016). Supporting the Adoption of Technology Enhanced Learning by Academics at Universities. *Journal of Teaching and Learning with Technology*, *5*(1), 59–86. https://doi.org/10.14434/jotlt.v5n1.18985

UCISA (2016). 2016 Survey of Technology Enhanced Learning: case studies. Oxford: Universities and Colleges Information Systems Association (UCISA). https://www.ucisa.ac.uk/-/media/files/publications/case_studies/tel%20survey%202016_case%20studies_07nov16.ashx?la=en [Viewed 11 Jul 2018]

Walker, R. (2017). Learner empowerment through student partnership and co-creation strategies: Reflections on Day 1 of ALT-C. https://elearningyork.wordpress.com/2017/09/07/learner-empowerment-through-student-partnership-and-co-creation-strategies-reflections-on-day-1-of-alt-c/ [viewed 11 Jul 2018]

Walker, R., Jenkins, M. & Voce, J. (2017). The rhetoric and reality of technology-enhanced learning developments in UK higher education: reflections on recent UCISA research findings (2012–2016), *Interactive Learning Environments*, DOI: 10.1080/10494820.2017.1419497

Walker, R., Voce, J., Jenkins, M., Strawbridge, F., Barrand, M., Hollinshead, L., Craik, A., Latif, F., Sherman, S., Brown, V. and Smith, N. (2018). 2018 Survey of Technology Enhanced Learning for Higher Education in the UK. Oxford: Universities and Colleges Information Systems Association (UCISA) https://www.ucisa.ac.uk/bestpractice/surveys/tel/tel