[Guest Post: 'The use and value of TEL toolkits: Designing for learning in a time of complexity'…by David Biggins & Debbie Holley](#)

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Our ongoing research shows that Technology Enhanced Learning (TEL) toolkits are becoming a key part of the TEL offerings in Universities; outlining the uses and purposes of different tools to enhance our student learning experiences. Extensive use is now made across the sector of the JISC **[digital-experience insights tool](#)**, now gaining international momentum, and a key 'go to' benchmarking national survey offering a snapshot of the digital experience of our students across the sector. The work of **[UCISA](#)** continues to offer analysis of issue of interest to the sector, and at policy level, the **[Office for Students](#)** (OfS) continues to promote measurement metrics through the **[HESA](#)** and **[LEO](#)** databases, and of course the National Student Survey (NSS). Thus with all these metrics, we can reassure ourselves, in the words of Peter Druker, the management guru that 'what get measured matters'.

However…. Drucker never actually said this. He drew upon a paper by Ridgway (1956) **[paper in 1956](#)**, entitled " Dysfunctional consequences of performance measurements ' and this is the quote:

"What gets measured gets managed — even when it's pointless to measure and manage it, and even if it harms the purpose of the organisation to do so".

Returning to our TEL toolkits and tools our students may use; our VLE suppliers can track, trace and analyse every click, download and keyboard stroke to inform us about our students' progress. Indeed, the students have 'completion bars' to show how much they have progressed, and intelligent agent deployment can enable us to congratulate, cajole and offer critical feedback to our students, as they work through the tasks we set them. Knowledge acquisition is, however, 'troublesome' according to Meyer and Land (2001), and students approach

threshold concepts to their learning at different times, making the march of digital knowledge acquisition a little more problematic than first anticipated. It is the underpinning pedagogy of our disciplines, that enables us to support our students as they 'learn how to learn', and we can best support them by using TEL tools, not as proxy for progress, but as a fluid, student-centred set of tools that enables a diverse cohort of students to find their pathway to study success.

Last year at ALT, we presented our work on hidden learning spaces, the result of surveying students on their use of the VLE. Our findings showed that while many students do access the VLE for core learning materials, 34% of respondents access core materials via peers. This may be attributable to student confidence in using the VLE (only 13% of our students reported the level of VLE usage as 'expert' whereas 66% reported expertise in internet use) and also to the generational characteristics that espouse a connectivist learning approach. The places our students choose to learn will not always be within the scope of our monitored systems and student learning does not progress along a linear path in line with a module's timetable. Vigotskys' notions of the Zone of Proximal Development (ZPD) offer a useful set of concepts regarding differential learning.

'because the actual developmental level defines functions that have already matured. The ZPD offer us a way exploring functions that will mature 'tomorrow' – Vygotsky defines these as 'buds or 'flowers' of development rather than 'fruits' of development...the prospective mental development – and this can offer us insights for education, as our learners are on a journey to acquiring the knowledge of their discipline.' (Debbie Holley and John Moran Doing Education Online: Learning from the Research Virtual Conference, Bournemouth University 17 July 2020)

The hidden learning space research warned again over-reliance on the analysis of VLE data and called for institutional and staff acceptance of the limitations of learning analytics data. In addition to a sceptical approach to learning analytics data, educators require a deep understanding of e-learning design, blending pedagogy and digital tools to encourage and promote self-managed learning, group learning, peer-to-peer learning and indeed, co-creation of knowledge, to inspire, encourage and support our learners. We need to remain mindful of the formal and informal spaces in which students learn, and offer credit and value to the life experiences they bring with them to our classrooms.

So yes, of course we need to support our students learning and offer intelligent ways forward with our TEL tools, but also appreciate that there are different pathways to success. The digital path better measured is not a proxy for student engagement, and the messages conveyed to the learners in our care need to be carefully constructed, with considerations for student mental health and wellbeing at the foreground as we automate our practices. The 'Student Minds' mental health Charity launched the **University Mental Health Charter** in summer 2020. In the guidance for designing learning for wellbeing, it recommends:

1. *Universities ensure that curriculum design, pedagogic practice and academic processes consider and seek to impact positively on the mental health and wellbeing of all students.*

With Covid-19 we know already student self-harm cases are rising across the sector and are all too aware of limitations in student access to high quality technology and fast internet connections. The National Union of Students (2020) 'Covid-19' pandemic survey identified twenty per cent of students struggling with access to online learning, with black, Asian and minority ethnic students, those from poorer backgrounds, care leavers, students with caring responsibilities and students with disabilities particularly impacted.

TEL toolkits have huge benefits to hard-pressed academics scaling up learning for online delivery in a hurry. The underpinning pedagogies need to have equal weighting and these need to be made explicit with best practice disciplinary research and evidence bases articulated. It falls to us, as we work in the pedagogy/technology overlapping and entwining spaces, to bring clarity and focus to learning design. Our students should not be overwhelmed, but supported and scaffolded by the technologies we deploy, as they learn, online, offline, in the workplace, in the community and spaces in between, on our devices, their devices and in ways that suit their complex lives.

Selected Reading:

Meyer, and Land, R (2001) Threshold Concepts and Troublesome Knowledge: Linkages to Ways of Thinking and Practising within the Disciplines **http://www.leeds.ac.uk/educol/documents/142206.pdf** [Accessed 4 August 2020]

National Union of Students, (2020). Coronavirus and Students Survey. April 2020. Available at **https://www.nusconnect.org.uk/resources/covid-19-and-students-survey-report** [Accessed 4 August 2020].

Ridgway, V.F., 1956. Dysfunctional consequences of performance measurements. *Administrative science quarterly*, *1*(2), pp.240-247. **https://www.jstor.org/stable/pdf/2390989.pdf?seq=1**

The Student Minds Mental Health Charter **https://www.studentminds.org.uk/charter.html** [Accessed 4 August 2020].

Vygotsky, L.S., 1980. *Mind in society: The development of higher psychological processes*. Harvard University Press.

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