When a prop becomes a hurdle: effectively scaffolding the level 4 learning experience

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This longitudinal case study evaluated year on year learning enhancements on a level 4 module in a Business School over a period of approximately 11 years. The core teaching team, somewhat unusually, remained the same during this time, facilitating deep ongoing reflection of the effectiveness of the modules' teaching and learning strategy. The subject context of the module was statistics, however, the lessons learnt in terms of identifying and supporting threshold moments in a learning unit can readily be generalised to other contexts. The work recognised the context of mass higher education, in particular the established body of work which reflected on students' transition to undergraduate level study (Yorke 2008, Kift et al 2010), what is means to learn in the digital age (Sharpe 2010) and the discourse that frames our understanding of e-learners (Haythornthwaite 2013).

The presenters creatively rose to the challenge of supporting, leading and delivering a core module for Business programmes with over 500 students, running in several locations, both in the UK and overseas. The demands associated with engaging and motivating both a large group of students and a team of teaching and support staff were not to be underestimated. The students are diverse in terms of age, ethnicity, gender and previous educational background. As non-mathematics specialists, they often lack confidence in their abilities and are typically dismayed to discover that they need to do a statistics module in their first year; hence they can be a reluctant audience.

The university introduced a new learning system en-mass in 2003 and the team in question were early adopters. However, the innovation in this study was their biggest test of the system to investigate if features could truly be integrated to support and enhance learning. The advances in educational technology at the start of the millennium led to a tendency across the sector to either test none, or all tools; arguably both extremes were an unhelpful distraction to learning. The development and integration of online learning capabilities on this module was planned with purpose and the innovations continuously and rigorously evaluated via an action research approach. Data arising from routine module evaluation processes, enhanced by questionnaires and focus groups with both staff and students, was interrogated to critically evaluate the impact of technological innovations. This iterative reflective cycle empowered the team to determine which technologies supported breadth of study, and which helped students engage and cope with threshold concepts and technical aspects of the module. Students faced with a plethora of unstructured online supporting activity tended to engage with little of it. This challenge of information overload has been echoed in the recent Higher Education Academy publication on technology enhanced flexible pedagogies (Gordon 2014). Consequently, the team learnt to selectively choose tools proven to support students at each stage in their learning and remove those perceived to be more disruptive or of adding little value. This has led to a learning experience with clear signposts that supported everyone's progress.

Critically appraising what technology to use when and for what purpose provided an added lens through which to appraise the face-to-face delivery aspects of the module. The use of technology did not, and was never intended to, replace face-to-face delivery but it did create new opportunities, enabling greater freedom for the teaching team and students to focus on motivation and the development of critical thinking skills in scheduled classes. Hence, the technology became an integral, rather than bolted on, enhancement to scaffold student learning (Vygotsky, 1978). Consequently, a structured, effective blended learning solution developed underpinned by an informed awareness of what aspects of the scaffolding were crucial at each stage. Levels of engagement and pass rates on the module significantly improved and increasing numbers of

students progressed to study further statistics modules. Furthermore, colleagues on higher level business modules that required statistical knowledge reported that students were better prepared for quantitative aspects of studies in their programmes.

Whilst the core topics of study changed little over time, the teaching and learning strategy radically transformed to not only effectively embed technological opportunities but to also prepare and support students to navigate within the blended learning environment. As such, it viewed the learner situated at a centre of a network of both resources and learners. During introductory weeks, the teaching and learning strategy was planned to navigate students within a space largely contained within the virtual learning environment and face-to-face delivery sessions. The course then opened up with the expectation of self-direction and self-selection of resources increasing as learners progressed (Raine and Wellman 2012).

An element crucial to this study was the changing relationship between academic staff and support services. Academic developers with learning technology expertise were no longer peripheral on-call colleagues sought after when ideas where hatched or things failed. They became part of the core team, expected to understand in detail the curriculum and issues, and to work creatively, in collaboration with, not for, the team to achieve a successful outcome. As a result, this case study makes an interesting contribution to the changing nature of team teaching in Higher Education (Minett-Smith 2012)

The work makes a contribution to the ongoing discourse shaping understanding around e-learners and the digital literacies required of e-learners and educators to enable effective communities of learners in the digital university (Haythornthwaite 2013). Consequently, the study has an important productive place in the discourse relating to supporting students to develop as effective participants in a community of learners connected through technology. Furthermore, it demonstrates how technology can be used to create opportunities of choice for students in their learning and hence inform the development of flexible pedagogies (Gordon 2014).

References

GORDON, N., 2014. *Flexible Pedagogies: technology enhanced learning.*
http://www.heacademy.ac.uk/resources/detail/flexible-
learning/flexiblepedagogies/tech_enhanced_learning/main_report (Accessed May 25th 2014)

HAYTHORNTHWAITE C., 2013. *Emergent practices for literacy, e-learners, and the digital university.* Literacy in the Digital University, Routledge.

KIFT, S. M., NELSON, K. J., & CLARKE, J. A., 2010. *Transition pedagogy: a third generation approach to FYE: a case study of policy and practice for the higher education sector*. The International Journal of the First Year in Higher Education, 1(1), pp. 1-20.

MINETT-SMITH, C., 2012. *A Critical Exploration of Team Teaching in Middlesex University Business School.* Unpublished thesis.

RAINIE, L,. & WELLMAN, B., 2012. *Networked: The New Social Opening System.* Cambridge, MA: MIT Press.

SHARPE, R., BEETHAM, H., & DEFREITAS, S., 2010 (Eds) *Rethinking learning for the digital age: how learners shape their experiences*. Routledge Falmer, London.

VYGOTSKY, L. S., 1978. *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

YORKE, M. & LONGDEN, B., 2008. *The first-year experience of higher education in the UK: Final Report*. UK: HEA.

http://jisctechdis.ac.uk/assets/documents/archive/FYEFinalReport.pdf (Accessed June 11th 2014)