Book Review

Flavin, M. (2017) *Disruptive Technology Enhanced Learning: The use and misuse of digital technologies in higher education.* Palgrave Macmillan

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'We need more disruptive behaviour', is not the final action call most academics will be hoping for from a title promising to outline the use and misuse of digital technologies in higher education.

However, on reaching this final sentence, teaching staff will likely recognise themselves as part of this disruptive revolution; for what's being suggested is not necessarily a teaching-level change, but a greater recognition by those planning university-wide IT strategies that the use of digital technology is not something that can or should be contained as a one-size fits all model.

The term disruptive needs to be explained, because it's not used in the way most people are familiar with. Here it refers to 'disruptive technology' as coined by Harvard Business Professor, Clayton Christensen in his 1997 book, The Innovator's Dilemma. These are technologies which become well-used because they're cheaper, simpler, smaller and more convenient, which means they may end up threatening and even dislodging an established market leader. For example, the smartphone can be thought of as disruptive in challenging laptop and desktop computers as a means of accessing the internet.

Author, Michael Flavin, Head of Curriculum Innovation at King's College, London, takes Christensen's theory and uses it as a framework for understanding technologies used by students and lecturers to support their work, but which weren't developed with this use in mind. Specifically, he identifies internet search engine, Google; online encyclopaedia, Wikipedia; social media technologies such as Facebook and YouTube; Bring Your Own Device (BYOD), and Massive Open Online Courses as coming under a broad umbrella of disruptive technologies.

Flavin also incorporates activity theory (Vygotsky 1930, Leontiev 1978 and Engeström 1987) to analyse the impact of these disruptive technologies on both learning and teaching in higher education, not distinguishing between the two. He then applies community of practice theory, derived from the work of Lave and Wenger (1991) to contextualise the use of disruptive technologies, identifying a tension between formal use as understood at an institutional level and what is happening on the ground. Flavin uses this research to argue for a better understanding of how both students and lecturers use technologies in practice, to practice technology enhanced learning more effectively.

The book, part of the Digital Education and Learning Series, explores the pedagogical potential and realities of digital technologies in a refreshing and practical way, that also provides the strong evidence-base required for making decisions at an institution level.

In five concise chapters Flavin outlines his theory of why universities can and do engage constructively with disruptive technologies for learning and teaching. The first, a theoretical chapter, summarises Christensen's work and argues, technology enhanced learning in higher education to date has been misdirected because it focused more on technologies than on practice with technologies.

Chapter Two argues, 'the purpose a technology attains is determined by practice rather than design and that the core, defining criteria of disruptive technologies are a useful means of analysing and anticipating the take up of technologies'.

Chapter Three focuses on activity theory analysis, recognising a tension between institutions who see disruptive sources as a challenge to be managed, and their students and teaching staff who frequently opt to use these technologies.

Chapter four identifies activity at the periphery of a learning community as significant to innovation. However, Flavin suggests it is common practice for these communities to be ignored when developing wider university IT strategies, which he argues usually focus on making existing practice more efficient and supporting the status quo, rather than rethinking practice.

Chapter five recognises that fighting the use of disruptive innovation is futile, and to continue to do so may lead to investment in underused institutional technologies. Hence the final call to embrace the use of non-institutional technologies to accomplish educational goals.

It is in the choice of some of the disruptive technologies that the argument weakens. Wikipedia for example, is demonstrated to be used by more than 80% of students and staff, but this doesn't necessarily mean they are using it instead of verifying facts in other, more reliable ways. The question of how still needs to be addressed, as well as asking why there is an urge to frown on the use of some so-called disruptive technologies rather than recognising their use within a different context.

The attraction of simplicity, ease of use and convenience raises many questions. We need to ask is technology use analogous to serving a processed ready-meal or fast-food takeaway over a home cooked meal; or is it simply buying pre-chopped veg to save preparation time, while ensuring the nutritional content is just as strong?

Indeed, the book raises many more questions than it answers. This is to be applauded because in an age of rapid technological development, opening discussion in a constructive evidence-based way is more important than hailing definitive answers for a strategic way forward. What arises most clearly is the need for universities to reflect on their use of technology in a ground-up, practical way that opens discussion across all members of the university as a means of informing technological investment. It calls for greater communication at all levels, but also greater freedom for staff and students to find technology that works for them. It is only by allowing this scope for individual choice and exploration that we open the possibility for digital technology to not only enhance our pedagogy but reimagine it.

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