

The objects of e-learning: Rethinking implementation, or not learning from the history of technology

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Abstract

The implementation of learning technology systems in universities tends to be associated with perennial debates about e-learning effectiveness. These debates are phrased in a variety of ways, such as a gap between policy and practice, or outcomes and expectations, or as a mismatch between institutional technology systems and the emergence of Web 2.0. Such characterisations derive from a legacy of huge investment in e-learning systems and strategies that herald great promise for elusive outcomes, attended by a record of compromise and breakdown. This paper draws on this legacy to reflect critically on the pervasive deployment of learning technology systems in universities that has emerged from the brief but vexed history of e-learning, focusing on the arrangements for implementation of a new learning management system in one university. I argue that although this instance of implementation was successful in achieving its purposes, it nevertheless embedded aspects of historical human-technology interactions that reproduced troublesome effects for institutional e-learning. I draw on actor-network theory (ANT) concepts to examine the nonhuman participants of implementation, in particular the “objects” that are the focus of implementation: how these objects entail networks and relations that act prior to and at a distance from the implementation, how they are enacted in technologies and processes of institutional change, and their consequences for teaching and learning practices. Implementation, in this instance, did not fit with an understanding of the LMS as a single object. Rather it involved the enactment of the LMS in multiple forms: as a technological system requiring constant testing and reporting, as a vehicle for organisational change in the form of subject migration and staff adoption, and as a site for situated practices of e-learning. The implications of the study are that where an institution-wide technology is implemented as a singular entity, with a single narrative, there are potential consequences for teaching and learning practices. Understanding organisational change involving e-learning means reappraising the objects that merit such attention and resources, and approaching them as materialised effects of multiple and extensive social and technological relations. I propose that early intervention in the assembly of such objects, at the outset of their implementation, is critical to the construction of a learning-centred e-learning environment.

Keywords

e-learning, actor network theory, implementation, enactment, learning management system

Introduction

This paper investigates an instance of organisational change associated with the implementation of a new university learning management system (LMS, equivalent to a VLE). While the implementation project was completed successfully, an unintended outcome was a constrained form of institutional e-learning: it re-established a platform for transmissive approaches to learning, and despite its open-source nature, the new e-learning system demonstrably failed to connect institutional teaching and learning to potential innovative practices enabled by the Web 2.0 environment of the Internet.

The actual practices of e-learning in universities are in large part accommodated by institutional learning technology systems, supports and associated professional and academic development. This alliance between practices and technologies, however, reflects an ambiguity in many universities. The emergence of Web 2.0 and social media have provided new possibilities for e-learning approaches that tend to co-exist uneasily with the existing institutional learning technology systems, and challenge institutional approaches to technology implementation that derive from a corporate information technology industry (Selwyn, 2007). Indeed, the terms “radical” and “revolutionary” are plentiful in association with learning and Web 2.0 (McLoughlin & Lee, 2008). Reflecting on the potential of Web 2.0 as a “new epistemic learning space”, Eijkman (210) argues:

this shift towards a radically altered, “postmodernist,” epistemic architecture of participation will transform the way in which educators and their students create and manage the production, dissemination, and validation of knowledge. (p. 343)

There is, however, a stark contrast between the radical possibilities of the participatory culture of Web 2.0, and the actual instantiations of institutionally supported e-learning environments currently in place in many universities that establish a closed system, or “walled garden”.

My intention in this paper is to draw attention to the active role of the technological “objects” of e-learning, in the sense that these are not only technologies, but also the objects of focus for institutional investment, resources and support. How these e-learning systems are implemented, that is, organised, resourced, maintained, and promoted, affords them a proactive role in shaping e-learning practices, one that, I will argue, is masked by their presumed role as technological support and background presence. I draw on perspectives from actor network theory (ANT) (Latour, 1987, 2005; Law, 2004) which treats objects and phenomena not as things in themselves, but as a “continuously generated effect of the webs of relations within which they are located” (Law, 2009, p. 141). An object, from this perspective, is made up, or is an effect of the interests and relations from which it is assembled (Law, 2002). By commencing with one such object that was introduced and implemented as a new university-wide learning management system, I investigate how institutional arrangements for e-learning are assembled and stabilised, and in particular the role of what is referred to by Selwyn (2007) as the “non-technological issues” (p. 93) of information and communication technology (ICT) deployment in universities. My interest is in recognising the active role of background technologies in embedding a troublesome legacy of e-learning, and in potential ways to reconfigure “implementation”.

The brief history of e-learning

The progress of online education during its short history was the subject of reflection by Andrew Feenberg, one of its pioneers, who asked “Whither Educational Technology?” in 1999, and envisaged the possibility of a gloomy future from the uses to which the rhetoric of new media and technology were put:

Perhaps this is what is most at stake in our present debates about the computer's role in shaping the future of higher education: in making plans for the use of our new media, do we threaten to delegitimize faculty's control of the educational process?

The persistence of the troublesome accommodation between technologies and practice in e-learning is captured about a decade later by Blin and Munro (2008), who comment that despite the investment in LMS:

... there is little evidence of significant impact on teaching practices and current implementations are accused of being focused on improving administration and replicating behaviourist, content-driven models (p. 475).

The literature on e-learning reflects such vexed issues from its early stages, and the concerns of early researchers about the development of online education in universities (Cuban 2003; Romiszowski 2004; Hamilton & Feenberg 2005) are still debated in e-learning literature. These issues are variously phrased as: the gap between policy and practice in e-learning (Gunn 2011; Conole 2008); the difficulty of integrating and bottom-up initiatives with strategic, top-down approaches to e-learning (Price & Oliver 2007; Russell 2009; Uys 2010; Marshall, 2010; Gunn, 2011); and recurring issues about e-learning effectiveness (Goodyear & Ellis, 2008; Stepanyan et al., 2010). Given the legacy of “massive” investment in technology implementation in universities, their poor return on investment, their history of failure, breakdown and ongoing maintenance, raises questions of why the implementation of learning technologies continues to be so troublesome.

The recurring issues for e-learning: its effectiveness for student learning; the tensions and contradictions between institutional, technological and educational interests, are intensified with the emerging technologies of social media, producing “tensions and contradictions between institutions and web 2.0 practices” (Ryberg, 2008, p. 664) that are difficult to resolve. This sociality is not a good fit for the tradition of e-learning research that studies the impact of technological interventions, since this approach attempts to avoid the complexity of practice and messy reality of actual contexts of learning by contriving measures of technologies as interventions on a pre-existing state of affairs (Price & Oliver, 2007). Goodyear & Ellis (2008) refer to the need to shift away from “simplistic comparisons” (p. 41), and Selwyn (2010) calls for a rejection of “means-end” thinking: “thinking that starts from a given end and then strives to find the means of accomplishment” (p. 68). So perhaps

the real issue for e-learning concerns the questions we are asking: rather than pre-supposing the end effects of a technology, we can enquire into what arrangements are put in place during a technology implementation, and what type of e-learning is thereby enabled?

The literature on e-learning points to a field that is dynamic and innovative, but also in flux and still unresolved, a global project that is co-evolving with the innovations of the Web and Internet, particularly through social software (Dalsgaard, 2006). Feenberg's concern can be linked to standard institutional approaches to e-learning systems that parallel other system installations in universities: student information and administrative systems that are dedicated to managing risk, interoperability and database reporting. This unresolved state of e-learning has been traced by critics such as Feenberg and Cuban to the history of technology, in patterns of technological change favouring automation or top-down implementation that still persist, and suggests the need for an appraisal of e-learning that opens up an alternative to the traditional, planned organisational approaches. The ANT perspective allows a closer look at the artefacts and technologies that are so central to such projects.

Reappraising technological objects

Research in higher education and e-learning tends to retain a traditionally human-centred focus, mainly investigating issues concerning the impact of technologies on teaching staff and students, and the integration of technologies into institutional teaching and learning (Price & Oliver, 2007). ANT is part of a shift away from human-centred and social assumptions about entities such as learning (Fenwick, 2010, p. 104; Creanor & Walker, 2010) to an understanding of the world through its relations and enactments. Indeed, Law (2009) proposes that “nothing has reality or form outside the enactment of those relations.” (p. 141). ANT rejects the traditional Durkheimian sociological view that behind social ties there is a “hidden presence” of structuring forces. Rather, it favours socio-material relations and associations between actors, such that people and objects do not have significance inherently through their own attributes, but through their relations to each other in a heterogeneous assemblage or network¹ of human and non-human actors, in which human actors are not privileged over nonhuman ones.

The ANT approach, therefore, offers not so much an explanatory theory, but methods for understanding “messy practices” from empirically grounded cases, and providing descriptions, and “telling interesting stories about, and interfering in, those relations” (Law, 2009). ANT is a radical break from the implicit dualism of approaches in which technologies are viewed as separate from their interpretations of them (Jones et al., 2006). Latour (2005) opposes an ontological separation between materiality and meaning, and is concerned not with what objects and texts *mean* but what they *do*.

The implementation of a technology system is normally considered through the frames of organisational change and project management, both of which are planned processes that draw on histories of institutional practice that extend globally. In practice, however, learning technologies manifest a messy reality. They are designed for multiple institutional purposes and users, they perform some activities and not others, they must serve many masters, and they are scaled from individual to large institutional applications. ANT shifts the focus of study away from human intentions or objects in themselves, and offers a means to understand an e-learning project through the formation of particular sets of relations rather than others. This view of a technology implementation sees agency less as residing with plans and managers, but as delegated and assigned to an assemblage of people, technologies, policies and procedures that are ordered and aligned, with great effort and resources, to become a stabilised network.

The later ANT literature accounts for objects as complex entities (Law, 2002, 2004; Law & Singleton, 2005). First, objects are not things in themselves, ready to hand, nor are they limited to physical volumes in Euclidean space. Rather, objects can be abstract, elusive, messy, and encompass things that are hard to get a grip on, for instance, objects of study, such as diseases, that were accessed through interview and observation (Law & Singleton, 2005). It follows that objects cannot be known about adequately in a common sense manner.

This paper draws on three ANT concepts in order to follow particular objects in the assembly of the network that became institutional e-learning. In brief, these concepts are: that objects exist in networks, they are enacted into reality, and they imply absent realities. In their paper “Object Lessons”, Law & Singleton (2005) describe these concepts as: *network objects* or “immutable mobiles” (Latour, 1987), that is, objects that circulate in

¹ The term “network” is used in this paper in the ANT sense, as an “assemblage” of social and technological elements, a use that predates the Internet (Latour, 2005, p. 8)

relational networks across contexts; objects that are *enacted* in multiple practices and into reality, rather than different perspectives on a single pre-existing object; and objects as absent presences, in which “the present object implies realities that are *necessarily* absent” (Law & Singleton, 2005, p, 342) . These concepts will be used to make visible points of controversy and ambivalence (Fenwick, 2011) that point to choices not made and paths not followed that would form an alternative e-learning.

Network objects

Law & Singleton (2005) suggest an object is not visible except as a network of relations (p. 336). Network objects are durable and hold their shape, maintaining a network of associations as they move around across contexts and time periods. These “immutable mobiles”, are described by Latour (1978) as “objects which have the properties of being *mobile* but also *immutable*, *presentable*, *readable* and *combinable* with one another” (p. 26, emphasis in original).”

Law (2002) describes materialities and objects as “enactments of strategic logics” (p. 92) that produce entities or actors that include artefacts, people, technologies, organisations, texts, discourses, ideas and actions. In actor network theory, Latour (1999) aims to describe these enactments as *effects* of actions across networks of the human and nonhuman: actions that produce “a series of *transformations* – translations” (p. 15). Network objects can be physical, discursive and technological, and they generate stable, if precarious, networks. Examples cited in literature are: maps, accountancy, a curriculum guide, text-books, global enterprises (American Express, McDonalds, Sony), codes, newspapers, discourses in the shape of policies and mission statements, and databases. Latour (1999) offers the example of a speed bump, which “is ultimately not made of matter; it is full of engineers and chancellors and lawmakers, commingling their wills and their storylines with those of gravel, concrete, paint, and standard calculations.” (p. 190). Such objects are not seen as distinct and separate, but as “elements have no significance except in relation to their neighbours, or the structure of the system as a whole.” (Law, 2000, p. 4). Network objects also have effects, and Malcolm & Zukas (2009) describe a workload model that does more than record, but categorises, compares and orders the world, “they are powerful technologies which mediate subsequent actions” (p. 502). Thus, a physical entity such as Portuguese vessel is a durable enough object to establish the relations that will build a network of Empire. Also, abstract entities such as diseases or organisational change processes are visible through a network of relations.

Enactment of objects

Abstract objects, particularly those that circulate normatively in organisations and professional contexts, may reflect a gap or mismatch with the actual practices associated with them. Mol (2002) explored practices in health centres, in particular how diseases, understood as a singular objects, were diagnosed and treated in different ways in different locations in ways that were not congruent with each other. Mol argued that to explain these differences perspectively, as multiple perspectives or interpretations of a single object was not an adequate way to account for this incongruence. This “problem of difference” was better approached by understanding diseases as objects that are *enacted* in multiple practices, rather than being separate from them and having one pre-existing reality. These multiple enactments entail distinct realities in different locations, with different implications for treatment (p. 346).

Mol contrasts her approach with that of Goffman’s (1959) *The Presentation of Self in Everyday Life*, in which the presentation of the self is a “mere performance” (2002, p. 35) with an authentic identity or self hidden behind the presentation. For Mol, a category such as an identity need not be considered as inherent, hidden or stable, but performed and enacted in practice, in different “versions” of the self. The implications are that objects and identities are contingent on performances in which multiple realities are “enacted into being” (Law & Singleton, 2005, p. 334), enactments that may be different, incongruent or contradictory. This approach to objects entails a radical shift from views of objects as constructed as prior realities, to one in which objects are enactments or performances that are assembled in practices to produce a localised reality. It follows that objects may be enacted differently in different contexts, multiple, intersecting and ambiguous, yet be treated as singular entities.

Absent presences

As network objects become visible through their connections and relations in a more or less stable network, questions arise: what remains outside a description of a network object? What becomes deferred, sidelined, postponed or made invisible in such accounts? The messy practices, necessary arrangements and routines of

everyday work may escape connection with visible network objects and lapse into an otherness, or a “manifest absence” (Law, 2004, p. 84).

Early ANT studies readings were criticised for emphasising primary actors, replicating their perspective and determining network boundaries that ignore less prominent or “important” entities. Fenwick (2011) noted the potential for a colonising effect of a network reading that can be problematic in “presuming to offer any single account of events” (p. 10). A consequence of a description of a stable actor-network is the issue of what is *not* accounted for. Not everything in practice can be brought to presence, and the presence of an object entails realities that may be “othered”. Drawing on notions such as Derrida’s *différance*, Law & Singleton follow the logic of this argument to conclude that such an object “is a pattern of presences and absences” (2005, p. 342), characterised as inconstant, discontinuous, “fire objects” (p. 344). Law & Singleton use the metaphor of fire to integrate “other” elements. In their example of the object “alcoholic liver disease” in a general medical practice, they list related and dependent absent presences: poverty, unemployment, and violence (p. 346). A different set of absent presences arise in other locations such as the hospital or the substance abuse centre. Hence, they argue, the difficulty in managing the disease.

Of particular interest in a study of technology implementation are the potential manifest absences that derive from legacies of information technology industries or organisational management, where embedded procedures, discourses and terminology are brought to intended projects. Law (2004) describes manifest absence as forms “that are *independent* and *prior* to an observer; definite in shape or form; and also singular (there is only one reality)” (p. 145, italics in original). In such instances, objects can embody histories, be established over long periods and across vast distances as immutable mobiles that entail extensive resources, both financial and discursive. Nespor (2011) takes ANT into “extended time frames” (p. 1) in describing a process of organisational change in education. Networks extend in space and time: “to stabilize themselves, actor networks draw on relatively more stabilized (which usually means more extensive or ‘global’) circuits for materials, money, or discursive resources” (p. 10). He identifies networks from the information technology industry, university and government systems, disciplines that are associated with global networks.

Where technology implementations occur locally in a university, the networks that come into effect are not confined to the institution, but extend through global networks of practice (teaching and learning, higher education management), corporations (software companies), and various networks of university funding. Nespor also points out that networks can be antagonistic (2011, p. 11), by introducing strong ties and new categories that exercise control over organisational decisions with consequences for local practices.

Implementation as a migration story

The implementation of a university-wide LMS was an opportunity to observe an organisational change process that aimed to go beyond installing a new technology system, to prepare academics for its use and reprise the university’s foundation for e-learning. The replacement of the LMS was accomplished as a resourced project over a limited duration, and the implementation is visible as a set of artefacts of the project: meeting agendas and minutes, technical data and reports, communications to university staff, and observation notes and interviews with participants. These documents provide evidence and traces of decisions, strategies, and the issues that arose during the implementation. As one participant in the project, I had partial access and an overview of the implementation as a member of the Project Reference Group. In these preliminary investigations, a sample of the artefacts can be grouped according to functions:

- Project brief and decision: *LMS Evaluation* (report on alternative LMS), *Moodle Project Plan* (by vendor)
- Project communication: Notifications and publicity via the website for the *LMS Replacement Project* (eg. *Content Migration*, *Getting Ready Checklist*).
- Project monitoring and reporting via *Reference Group* meeting notes: Technical performance reports through *Project Status Dashboard* (logs of technical issues, staff requests for “enhancements”); Change management reports including decisions on LMS configuration, LMS roles and terminology, user statistics.
- Training and Staff support: Moodle Training reports, Training program of workshops, demonstrations, staff Moodle Mentors, *QuickGuides*, short videos, drop-in centre and help desk for staff and students, reports on workshop participation.

To make sense of the implementation through its documentation, one of the artefacts itself offers a project timeline that orders the project’s functions and milestones, as shown in adapted form in Figure 1.

April 2010	Aug	Sept	Oct	Nov- Jan	Feb	Mar 2011
Evaluation of options Decision to change LMS announced	Project starts	Subject (unit) content migration			LMS goes live	Project close
	Train the Trainer	<i>Moodle Basics</i> Workshop (3 hours) Development of training resources. Support			<i>Moodle Basics</i> & Advanced Training	
	Project Reference Group meetings (fortnightly)					Final meeting
	Website	Communication to all staff (periodic)				Semester 1

Figure 1: LMS Replacement Project timeline

The announcement of a change in LMS was prompted by the “end of life” of the existing platform. Subsequently, an evaluation of alternatives for a new LMS resolved in favour of Moodle as the option that offered the best fit and responsiveness for the university’s context of multicampus teaching arrangements and large student cohorts. The *LMS Replacement Project* was established as a 6 month project with the goals of installation and external hosting of the LMS, the smooth migration of all e-learning subjects (units of study), and preparation of staff in readiness for Semester 1. Thus implementation was framed as a minimal organisational change process, or “interoperable change” (Marshall, 2010, p. 180) that would not be disruptive of other structures nor implement transformative change. Accordingly, project leaders encouraged Faculties to postpone their plans for curriculum review. By Semester 1 in March 2011, 1300 subjects were successfully migrated to the new Moodle LMS, and 48% of academic staff completed *Moodle Basics* training.

This tightly defined project timeline circumscribed the change process within a concentrated period of activity to accomplish precise project goals. During the project, the LMS was configured through a series of minute choices and decisions guided by the Reference Group, which included representatives from Faculties, organisational units and external consultants, and advised on decisions concerning LMS configuration, support, interface, and the training program. Issues of concern were listed each meeting on a *Dashboard* report, from which decisions were made on which Moodle functions to enable or disable, and requests made for “enhancements” or plug-ins were listed and prioritised (for example rubrics, question banks, or the arrangement of the interface). This progressive arrangement of elements and connections reflected a series of decisions that could have been otherwise. Two examples: a new set of LMS “roles” were defined as *Subject, Lecturer, Designer, Tutor, Student, Audit student* in order to match the university’s teaching and learning terminology (replacing the previous *Course, Instructor, Assistant*); and the training program set out the minimum introductory *Moodle Basics* workshop in order to maximise staff adoption. Despite the goal of a minimal change process for staff, the scale of the migration (2600 subjects over 2011 for 30,000 students over 5 campuses), indicated an intensive undertaking requiring considerable resources.

Ramifications of success

As a digital object, the LMS is de-centred and distributed, connecting people, subjects and systems across time and space, producing instances or performances of subjects in a multitude of settings. Yet it remains bounded, durable and established a clear presence in the university. During the implementation, the LMS was established as “a key intermediary” (Fenwick, 2011, p. 7) for e-learning at the university, in the sense that the LMS became “an actor that can translate thinking and behaviour—in the form of an ‘immutable mobile’” (p. 7). That is, it became a network object that was assigned a primary role in shaping the relations of e-learning, and maintaining these relations as it moved across locations and contexts. This was accomplished through a meticulous process of making a series of minute social and technological connections that were negotiated and agreed upon during the configuration of the LMS: these included selecting functions, setting conditions for its deployment and interoperability, and embedding the terminology of its use. The Reference Group was a key site where stakeholders from within and outside the university *composed* the LMS as an instantiation of e-learning. Yet, while the implementation project was a success, the issue remained as to what kind of e-learning was put in place.

The relatively smooth resolution of the project confirmed the LMS as a matter that was settled, established as a singular object identified as a key component of e-learning at the university. However, the people, resources and effort required for the implementation was carried over in the ongoing demand for maintenance and support: the load testing and fixes, the demand for more new connections with other systems: the “enhancements” and plug-ins requested from teaching staff and educational designers, all continued beyond the implementation, indicating

that the uses for which the LMS was deployed were not uniform across the university. In fact, the disparate institutional actors that came together to compose the LMS still remained in negotiation, with the LMS tenuously held in place.

Implementation, therefore, was more than a technical process, and the project artefacts suggest that the LMS was an object that was enacted in multiple forms: one as a technological system requiring constant testing and reporting, and another as a vehicle or object for organisational change in the form of subject migration and staff adoption. These enactments worked in concert, one focussed on technology, the other on people and organisation, each with their own discourse and goals. The Dashboard representation made visible the planned approach of ICT project management, presenting activities as goals, milestones and timely deliverables, and framing the possible manoeuvres in Reference Group discussions within the delimitations of time, scope and resource, the classic project management “triple constraint”.

A third enactment of the LMS can be found in the interactions arising from the situated practices of e-learning. These practices are diverse, disparate and include local adaptations of pedagogical approaches. During the implementation, pedagogical practices were not organised into a unified voice, despite the presence of academics who could represent them on the Reference Group. This absent presence is apparent in Reference Group artefacts, with issues of pedagogy defaulting to the use of LMS tool-based applications, and their fit within the training program. The lack of coherence between enactments of the LMS, that is, between its centralised institutionalised versions and its situated practices, meant that pedagogical issues that warranted a deliberative response were less likely to be articulated or recognised.

This outlier status of e-learning practices in this project arose at the outset. As with other technology system implementations, this project built on established prior network objects already legitimised through global circulation: the planned approaches of IT project management, and the ready to hand discourse of technology as a tool for an instrumental outcome, both network objects that draw on a vast and authoritative history. The implementation artefacts reflected these prior networks as a manifest absence, as conceptual common sense, such that their presence passed unremarked; it was therefore difficult to establish links between the new LMS and incipient teaching practices, or start conversations about innovative e-learning strategies involving learning communities or Web 2.0. Local practices in e-learning, therefore, were more likely to assume the status of maverick innovations, weakly aligned to the LMS, and therefore unsupported, unscalable and unsustainable.

Studies of learning technologies rarely extend to the global and historical dimensions of digital technology (exceptions are Cuban, 2003; Nespors, 2011). In this instance, the prevailing enactments of the LMS reprised the history of e-learning by emphasising a “centralization” process (Selwyn, 2007, p. 90), viewing learning as conduct that was visible and measurable, rather than complex, local, and unpredictable, a process Law (2002) referred to as “a politics dressed up as functionality” (p. 102). Not learning from this history of technology means implementing troublesome effects and elusive outcomes, in addition to an LMS.

Conclusion

This paper raises an issue that is inherent in the ubiquitous deployment of learning technology systems in universities, and ANT methods can investigate the processes that make visible or occlude particular expressions of institutional e-learning. In this paper, I examined a case of implementation that drew on prior networks to assemble an LMS as a stabilised object that was enacted in multiple ways: as a technological system (installation), as an organisational change process (migration), and as situated practices. I also posited absent presences that arose during implementation: how the LMS was sedimented as an overarching, institutionally supported approach to e-learning that displaced or deferred local and emerging pedagogical practices.

Not all uses of an LMS fit with an understanding of a single object: there is the risk that certain terminologies and discourses threaten to make that object too messy, and consequently become ruled out of scope. This is a ramification of implementing an LMS as a singular entity, with a single narrative: that an particular enactment of the LMS, as pedagogical practices, is relegated to as someone else’s business. This outcome compromises e-learning effectiveness, and recalls Feenberg’s historical concern about who should control the educational process, or to put it another way, whether learning is critical to the rationale for an institutional LMS?

Jones (2008) noted the reluctance of universities to “take down the walls around institutional provision of the learning infrastructure” (p. 673). As practice-oriented approaches build their own networks that extend and circulate, they are beginning to challenge the colonisation of e-learning by centralised LMS enactments. This

case prompts a reappraisal of the term “implementation” that challenges its historical framing as functionality, and calls for an alternative to the default installation of the LMS as a “walled garden” for the containment of e-learning. This alternative requires early intervention that extends the domain of implementation, to encompass practices that themselves draw on prior networks of constructivist learning, including social networking, user-generated content, authentic learning and personalised learning.

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