

# Lost in the Web 2.0 jungle

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## Abstract

*If we wish to cater for diverse needs then we need a diverse environment. Mainstream learning management systems impose structural, technical and organisational constraints that limit the ability of teachers to control them and, typically, constrain learners even more. Personal learning environments (PLEs), offer an alternative flexible and adaptable path. However, PLEs draw on resources and delivery platforms outside those controlled by the course team and LMS. It may become difficult to manage the learning process for both learner and teacher. This paper is a companion to Cultivating the Web 2.0 Jungle, by Bhattacharya and Dron, which proposes solutions to the problems raised here.*

## 1. Introduction

This paper is about what happens when we move outside the walled garden of institutional learning environments into the rapidly changing wilderness of Web 2.0 and, in particular, the personal learning environment (PLE). We will explore why it is worthwhile to make the change, and how that change may be positively harmful.

## 2. The problem with the LMS

Learning Management Systems (LMSs) have de-skilled the process of online course creation and management, but the costs are high. The components of the LMS are seldom best of breed, they embed implicit pedagogies that may not meet the diverse needs of learners and teachers [1], they embody a hierarchy of control that constrains the freedom of teachers [2], who in turn shape and determine what is possible for learners [3], and there is a trade-off between ease of use and control that may suit some, but not others.

## 3. The PLE alternative

To cater for diversity, the tutor and/or learner should have freedom to choose the technologies and

approaches that suit them best. One way to achieve this is through the use of PLEs using Web 2.0 technologies. PLEs are a collection of interoperating applications that together form an individual's learning environment [4]. A defining feature of Web 2.0 systems is their ease of use and their interoperability. Technologies such as RSS, SOAP, RDF and JSON make it possible for even the technologically challenged to create useful mashups combining content and/or services from multiple sources quickly and easily. A blog or wiki entry can be created within moments. Social interactions are simple through technologies such as instant messengers, email, IP telephony, wikis, blog comments/trackbacks and forums. Social networking sites make finding and sustaining relationships easy. Systems may be mashed up and re-purposed through other online systems or integrated with wallpaper, screensavers, email, desktop widgets and so on. There is a potentially limitless choice of technologies and approaches for learners and teachers, with great adaptability to changing circumstances and learning needs. For today's digital learner, who moves fluidly through the digital world without fear or trepidation, this is a limitless learning landscape.

## 4. The darker side of PLEs

**Technical problems:** Many technologies such as Skype or systems employing AJAX require bandwidth and computer capabilities that not all have. While some systems are open to the world, others are more closed and proprietary, allowing others to be integrated but not offering the interfaces for integration themselves.

**Clashing cultures:** The bottom-up, emergent and dynamically changing environment of the PLE sits uncomfortably with the top-down, controlled ethos of the traditional institution. Most universities and other higher education academies are natural hierarchies, with the learner at the bottom of the chain. Because structure influences behaviour, a system that is built on bottom-up control is thus likely to be highly constrained by the environment in which it resides, but its own dynamics will often clash with the hierarchy that surrounds it.

**Technophobia:** The tools and environments of Web 2.0 can be frightening and intimidating to the

technologically challenged. It is often hard for older teachers and learners to come to terms with the vast array of technologies available, most of which are in a perpetual state of beta release. Within the walled garden, help may be easily sought. Outside, help may be of very variable quality. Training and manuals may help, but the faster the rate of change, the less useful they will be.

**Loss of monitoring:** For tutors used to systems in which all relevant interactions are monitored, the bottom-up ethos that the PLE represents may be very foreign. It may be difficult or impossible to police interactions between students. No longer the guide on the side, the teacher is a bystander who merely catches glimpses of what the learners allow him or her to see.

**Loss of control:** Not only is it hard to monitor, it is hard to control. Services and tools may come and go and, outside the walled gardens of institutional networks, problems with technological failure, potential invasions of privacy, loss of data and changing interfaces are endemic. Systems that were free may start to charge for services. Systems that fulfilled a useful role may be modified to become useless or even harmful.

**Loss of history:** One benefit of the LMS is that content, processes and interactions may be held within the system but, when we step outside, we are in the hands of those that we cannot control and who may not keep the records we need to evaluate and reflect on the success or failure of our efforts. Even if good practice is captured, it may not transfer easily to the technologies of a year's time.

**Assessment woes:** The problem of history loss also affects the ability of tutors to assess work performed by students that may be presented using such systems, and it may be equally difficult to verify the consistency and fairness of such assessments by auditors. The matter becomes far more complex still if tutors intend to assess the process of interaction as well, much of which may be hidden.

**Overwhelming choice:** There is a fearsome choice of technologies and a wealth of content that is no longer so easily controlled and manipulated by the teacher. The Internet is a vast wilderness with small pockets of civilisation often competing and warring for cognitive space. In a system that is more controlled by the teacher, the teacher can act as a guide, but as we move to a more emergent and divergent landscape it becomes less and less practical to do so.

**Loss of trust:** Within the walled garden, the learner may rely upon the resources presented by the tutor and bank upon the accountability of monitored logins and verified users. Once outside that space, the wilderness contains sites that may reveal or misuse personal details, malicious crackers and hackers, uncredentialed

strangers and technologies of uncertain reliability or longevity.

**Inequalities:** If we encourage diversity by using and encouraging the use of multiple tools, there is a risk that those who use less capable tools will be disadvantaged compared with those who use better systems.

## 5. Conclusion

In complexity theory [5], the traditional LMS may be seen as an instance of the Stalinist regime, a system that has reached a stable state and which is unable to easily adapt. However, the constant change and jostling of technologies that characterise a PLE might easily fall into a Red Queen regime, always running to stay in the same place. Neither state is acceptable. To cater for changing and diverse learning needs in a changing world, we must aim for the edge of chaos, a state of dynamic stability where interesting things, including evolution, occur. To achieve this requires significant changes to the role of the teacher and the teaching process. This is the subject of the companion paper to this, *Cultivating the Web 2.0 jungle*.

## 6. References

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