

Death of the VLE?: a challenge to a new orthodoxy

The VLE has become almost ubiquitous in both higher and further education, with the market becoming increasingly 'mature'. E-learning is a major plank in both national and institutional strategies. But, is the VLE delivering what is needed in a world where flexibility of learning is paramount, and the lifelong learner is becoming a reality? There are indications that rather than resulting in innovation, the use of VLEs has become fixed in an orthodoxy based on traditional educational approaches. The emergence of new services and tools on the web, developments in interoperability, and changing demands pose significant issues for institutions' e-learning strategy and policy. Whether the VLE can remain the core of e-learning activity needs to be considered.



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Introduction

The use of technology to support learning is dominated by the use of systems normally described as 'Virtual Learning Environments' (VLEs). But these systems are now hardly 'new technologies' and a whole range of new approaches to corporate systems, teaching and learning, and collation and sharing are emerging. Are VLEs being used to best effect? Are VLEs becoming a barrier to innovation rather than acting as an agent of change? Should institutions be planning their 'exit' strategies from them now?

This article will look at how our use of the VLE has come about and developed, and where the world of technology may be taking institutions in their support of learners.

What is a VLE?

In interests of gaining a 'consensus view' of this, the Wikipedia entry for the VLE was used:

A virtual learning environment (VLE) is a software system designed to facilitate teachers in the management of educational courses for their students, especially by helping teachers and learners with course administration. The system can often track the learners' progress, which can be monitored by both teachers and learners. While often thought of as

primarily tools for distance education, they are most often used to supplement the face-to-face classroom.¹

What does a VLE provide?

Typically, VLEs provide facilities for managing the learning experience, communicating the intended learning experience and facilitating tutors' and learners' involvement in that experience. The 'consensus view' suggests a VLE should contain management components for student registration and tracking, notice boards and administrative information such as locations, pre-/co-requisites, and getting help, as well as formal assessment procedures and facilities for the production of statistics for administration and quality control. The learning experience needs to be communicated via syllabi, complete course content or copies of visual aids/handouts, plus additional resources, links to resources in libraries and on the Internet. Easy authoring tools or standard office software used for authoring should be available to aid this. The learning experience is facilitated typically via self-assessment quizzes and communications tools such as e-mail, threaded discussions and chat rooms. To allow all of this, the systems should provide differential access

rights for instructors and students (roles). All the various functions and resources need to be capable of being hyperlinked together within a consistent interface.

VLE history and the state of the market

In response to the recent patent taken out by Blackboard, a history of VLEs has been developed on Wikipedia which shows how VLEs and related systems have developed over the years.²

This is a very detailed source of information but some points it raises are worth exploring further here. From the earliest Internet-based learning systems in the late 1970s, people started exploring the possibilities of the worldwide web as a means of supporting learning from around 1989. The earliest systems which satisfied the 'consensus view' of VLE elements began to appear in the period 1995 to 1997 and included systems such as WebCT and Lotus LearningSpace.

During this period, systems were developed which took a pedagogically focused view of e-learning. Several notable examples developed in the UK included Boddington (developed at Leeds University), Colloquia (developed at Bangor University) and COSE (developed by a team at Staffordshire University, of which I was leader). Systems like these were largely constructivist in their approaches, were learner-centric and used novel interfaces.

As things developed, along with the exponential uptake of the use of the web, it became clear that systems which had interfaces which looked like websites and were delivered via browsers were becoming the most successful. Interestingly, research conducted in 2001³ showed that 'ease of use' – especially by teaching staff – was the prime consideration in VLE selection. Respondents made great play of the need for an 'intuitive' interface, although it was noted at the time that:

However, the view has long been held that 'intuitive' in the context of interfaces actually equates to 'familiar' (Raskin, 1994⁴) and that all interfaces actually require be to learned.³

It was also noticeable that successful mainstream vendors adopted metaphors in their interfaces which reflected mainstream campus and classroom-based teaching, using words like 'classroom', 'grade-books', and even 'blackboard', along with

icons made from images drawn from mainstream practice.

The VLE market now shows all the signs of having become a 'mature' one, with many smaller systems having disappeared or been reduced to 'enthusiast' level, and multiple mergers and take-overs having taken place. Although there are still a good number of systems available, the market is overwhelmingly dominated by two products, one commercial (Blackboard) and one open source (Moodle).

Using VLEs

The 'early adopter' of the late 1990s largely cited reasons such as learner centeredness, pedagogic change, diversification, and coping with large numbers as reasons for getting involved. By the time of the survey conducted in 2001, leading reasons for selection were ease of use, cost, flexibility and, interestingly, level of use by other institutions.

By the time of the first JISC/UCISA 'MLE Landscape' survey in 2003⁵, the vast majority of institutions that responded were using a VLE and cited the drivers as:

- enhancing the quality of teaching and learning
- improving access to learning for students off campus
- widening participation/inclusiveness
- student expectations
- improving access for part-time students
- using technology to deliver e-learning.

By the time of the 2005 JISC eLearning 'Landscape Study' of UK HE and FE institutions, the consultation document sent for feedback on the results commented:

... the results also show two thirds of modules of study being web supplemented which would seem to indicate that the 'stuff your notes into your VLE' model is prevalent and increasing.⁶

It might be worth considering that, despite the reason normally given for the 'VLE as notes bank' approach – that it acts as an enabling strategy for getting staff involved in e-learning – might not this evidence indicate that an 'orthodoxy' in the use of VLEs has developed which, although popular with students for a variety of reasons, and indeed not without real value, shows that, if anything,

pedagogic innovation in the use of VLEs has slowed considerably?

The growth of the MLE

The term MLE (managed learning environment) is largely a UK one, and was first widely used around 1999.⁷ It has come to mean 'the whole range of information systems and processes of a college (including its VLE if it has one) that contribute directly, or indirectly, to learning and the management of that learning.'⁸ The same concept, with different names, has been espoused across the education world.

The response to this realization that the whole learning experience needed serving if e-learning was to progress led to an explosion of effort into joining up the systems and the addition of new features to VLEs.

This has taken a number of forms. Leading systems vendors have developed content repositories for the creation and management of resources, extensive assessment, grade-book and submission facilities and portfolio features, and have forged links with MIS (management information systems) vendors.

Alongside this, there has been considerable effort put into the development of specifications to facilitate the interoperation of systems involved in the learning experience, initially centered on the work of the IMS Global Learning Consortium⁹, and in the UK largely focused around the activities of JISC-CETIS¹⁰. In addition, both commercial and open-source developers have worked on enabling the 'bolting-on' of new features such as wikis, blogs, authoring tools, repositories, content management systems, and so forth.

One, less positive, emerging feature of all of this is that some vendors are increasingly producing VLEs which are in effect MLEs and replace the function of what many institutions would have had as separate systems, and that many institutions are tending to see the VLE as the 'centre of the e-learning universe' to which all other systems are attached.

This systems 'bloat' begs the question: *Is the VLE the right place for everything?* and runs contrary to the wider practice in the IT industry of moving away from 'one size fits all purposes' systems.

So, what *are* the essential features of a VLE? I have always thought, and argued¹¹ that, given the

fact that the VLEs are rarely pedagogically neutral^{12,13}, a single system is unlikely to meet the full range of pedagogic requirements, and that the prime role of a VLE is to communicate the intended learning activities to students. Institutions have many systems whose roles overlap with the modern 'bloated' VLE. MIS systems hold learner information, transcripts, course descriptions, syllabi, etc. There are an enormous number of communications and collaborative working tools; repository systems now exist which are aimed not just at the storage and discovery of learning objects but at their re-use and re-purposing and which can serve objects dynamically to other systems. Sophisticated systems to provide and manage assessment activities have been around for some time, as have e-resource and reading list systems in libraries. Portal systems aimed at providing individualized access to information and systems are increasingly common and, lastly, we are seeing the emergence of a number of sophisticated e-portfolio systems. Interoperation – the interconnection of systems as required – and integration – the establishment of connections between two systems to allow interworking in a 'bolt together' way are, I would suggest, subtly different.

The 'new' variables

Over the last few years, a number of factors have impinged on the education world which are highly relevant to the way VLEs and their roles might be viewed.

Firstly, the e-framework¹⁴, an initiative by the JISC and Australia's DEST, is important here. It aims to:

facilitate technical interoperability within and across education and research through improved strategic planning and implementation processes.

By focusing on a service-oriented approach to allow wide interoperation of systems, it is intended to:

maximise the flexibility and cost effectiveness with which IT systems can be deployed, in institutional contexts, nationally and internationally.

The work on the e-framework is strongly connected to the work on standards mentioned earlier. The importance of its approach is that it will allow, for example, an MIS system to serve

multiple learning systems (VLEs, e-portfolios, repositories) with registrations, or an individual to obtain access to similar information about themselves from systems at multiple organizations in a flexible way. This is very different from the 'bolt together' style of integration.

Another variable poses different challenges. Systems such as e-portfolios pose significant ethical and legal issues concerning the ownership of the information they contain.¹⁵ The information may be derived from (or even be contained in) multiple systems controlled by different organizations and possibly even the individual concerned. Different people and organizations will claim ownership of aspects of the information (the individual, an educational institution in the case of transcripts, individuals supplying references and testimonials, etc.), and, similarly, different individuals and organizations will seek access to the information in different forms and for different purposes.

The last variable to be considered here is 'Web 2.0'¹⁶. The prime concept here is 'the web as platform', where people make use of web-based applications as services and own their data rather than the application itself. The O'Reilly article referenced makes the following important point about designing services for the Web 2.0 world:

- *support lightweight programming models that allow for loosely coupled systems*
- *think syndication, not co-ordination.*
- *design for 'hackability' and remixability.*

From the view of the individual in education, the essence of Web 2 focuses on sharing and collaboration. The activities carried out using Web 2 tools and services such as Wikipedia, del.icio.us, MySpace, Google Docs and so forth are typically initiated by an individual learner or tutor and include informal learning activities as well as supporting formal learning. A critical aspect of such activity is that it is, almost entirely, outside institutional control. Attempts by institutions to restrict the use of Web 2 services and tools (using firewalls, for example) are likely to result in learners merely transferring their activities entirely outside the institution. Services such as YouTube, MySpace, and Wikipedia show that the web as a social space in all its forms is unstoppable.

Hence, the challenges to institutions focus around a number of questions:

- How do formal and informal learning relate?
- How is formal learning managed in this new world?
- Which Web 2 tools do institutions need to provide themselves?
- Is bolting Web 2 tools into a VLE the answer?

And, probably most importantly:

- What do institutions actually *need* to control?
- What *can* they control?

In educational terms, there has always been recognition that an 'osmosis' between formal and informal learning existed, but the changing web throws this into stark reality. For tutors, the important questions are:

- How can formal and informal learning be integrated?
- How can educators differentiate between them, and do they need to?
- How will tutors articulate their intended learning strategies?
- How will tutors access the learners' outputs?
- How will tutors cope with learners using *their* choice of tool?

Control and ownership

The world of 'e-framework', with systems interoperation in a flexible way both within and between organizations, and the world of Web 2.0, with its focus on the individual choosing and using their own tools and services, pose enormous challenges in terms of the degree of control that institutions have grown to expect over both the processes and activities that make up the learning experience and the systems, tools and services that enable it.

I should like to propose that institutions (and the services and departments that they comprise) need to consider their strategies and policies in the light of a 'spectrum of control' for processes, activities and the enabling systems and services, viewed alongside consideration of the 'initiation' of the activities and processes involved.

Verbs like *control*, *manage*, *facilitate*, *enable*, and *recognize/accept* apply to the degree of control an organization might wish to take, and typically

processes are initiated/owned at the institutional, departmental, tutor and learner levels.

By considering these aspects, organizations can review policy to ensure that it reflects the real needs of both the learner and institution without hampering the flexibility and responsiveness required.

Conclusion

Is the VLE dying? Clearly, it appears to be in robust good health when the current usage and size of market is considered, but there is a worrying trend towards bloated and monolithic systems with endless features being bolted onto them.

I would argue that, in the future, corporately initiated or owned processes will be best dealt with by interoperating 'suits our needs best' systems, and increasingly, student initiated processes will be done on the web using their choice of tool and services. Connecting these will be the major task.

The prime role of the VLE is likely to be in articulating the intended learning experience and, to some extent, managing it. Such a system will be much 'slimmer' than most current VLEs, and whether it will still be considered to be a VLE remains to be seen. Institutions need to be reconsidering their strategies and policies now, to be ready for the changes ahead.

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