



Reflecting on the implementation of the Virtual Learning Environments in Education across Europe



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Section One

INTRODUCTION

Section Two

VLE IMPLEMENTATION ACROSS EUROPE. CASE STUDIES

Over the past 10 years we have seen a rapid adoption of Virtual Learning Environments (VLEs) within mainstream, further and higher education. Institutions have increasingly turned to VLEs in order to optimise the time of teaching staff and to provide services for modern students, who use the Internet as a key tool for researching information, locating resources, communicating with peers and, increasingly, creating resources for themselves and others.

The term Learning Platform or Virtual Learning Environment (VLE) describes a broad range of ICT systems used to deliver and support learning. At the heart of any Learning Platform is the concept of a personalised online learning space for the students. This space should offer teachers and learners access to stored work, e-learning resources, communication tools and the facility to track progress.

This publication presents one aspect of the work of a European funded project 'Innovative Learning Platform for Vocational Education and Training' (VLEs4VET). The project, funded with support from the European Commission under the Lifelong Learning Programme, analyses Virtual Learning Environments in different educational institutions across Europe with a view to transferring experiences and knowledge into the Vocational Education and Training (VET) sector in Ireland. The project partners include: Fast Track into Information Technology (FIT Ltd.), City of Dublin Vocational Education Committee (CDVEC), Consorzio FOR.COM, Koning Willem I College and City College Norwich.

This publication combines reflections on VLE implementation by a number of educational institutions from

across Europe and by the Project Partners. The organisations described in the Case Studies were shortlisted during a European wide research study the outcome of which is a separate publication called: Virtual Learning Environments in Education – A European Study. The studies present multiple scenarios of VLE selection, development and implementation and prove also in terms of a VLE there is no one size fits all – each institution has to identify its own needs and restrictions and the subsequent parts of the document should help with this.

Overall, through this document we want to encourage a creative reflection on VLE selection which could then be transformed into an action plan and hopefully a successful implementation. This guide will be most relevant for institutions just setting out on the road to VLE selection, implementation and development and strives to be a useful tool in the decision making process.

Further Education College, United Kingdom

VLE selected	WebCT
Type of VLE	Closed / Proprietary
Use of VLE	More than 2 years
VLE hosting	External
Operating system	Microsoft Windows & Novell

Several systems were trialled in our organisation. WebCT was purchased as a new improved version with great promise; it looked good and had lots of useful features. The admin query system in the back end of the system is excellent and allows admin staff to do tasks quite simply. Moodle was also trialled but WebCT was a better package at the time. Our VLE is now ageing and uses some older technologies such as Java, this creates a problem for many users. Everyone had to sign on twice to enter our VLE, we now use single-sign-on which is a big improvement and everything seems integrated.

We have tried to implement improvements with an integrated community system which give us controls at different levels to give information to specific groups. We never managed to implement the solution, with problems that could not be fixed by our local IT support team or VLE provider.

Our training strategy very much revolves around the benefits the system brings to the student and teacher. The ILT team of 4 members trains staff to use the VLE and works with the advanced teaching practitioner team to provide support for the staff. We have open clinics and provide appointments when people require them and at

their own office or ours if required. This makes sure that all the components are working on the staffs own machine. A member of the team attends both the new staff induction and staff training programme, the advanced teaching practitioner team also promotes the ILT department and learning channel.

We are organising training sessions at least once a year on best pedagogical approaches for use with the VLE. For some teachers the VLE is a time saver and a place to put their resources so that the students get access to them; saves them time printing and providing hand-outs. There are also other teachers that fully embrace the system and will use the quiz tools, assessments and other interactive tools, to save time and enable perhaps not self-guided learning but learning that the student can do at the pace and when they like.

Further Education College, The Netherlands

VLE selected	Three Ships N@tschool
Type of VLE	Closed / Proprietary
Use of VLE	More than 2 years
VLE hosting	Internal
Operating system	Microsoft Windows

The VLE has been selected based on the following criteria:

- Portfolio
- Collaboration and individual study tracks (including assignments) in one environment
- Easy connections with basic school source database.

The user friendly feature was somewhat disappointing. Especially for those teachers with little computer experience, the user interface seemed to be too complex and confusing. This was a main obstacle for implementing the VLE. We are focusing on collaborating with our partner networks. There is a widespread user group in the Netherlands and there are possibilities for co-creation of features to improve Learning Platforms. We have also developed some useful templates for our teachers for instruction and assignments for using within the VLE as well as FAQ booklet regarding most common problems.

The VLE Platform was introduced to students and teachers through:

- Training functional application managers
- Demo's for teams
- Teacher team training
- Content development
- Trial with students
- Evaluation.

Additionally students have to use the portfolio feature in order to fulfil their study paths and goals. Most of the assignments are submitted through the VLE as well as drop box for students.

Our strategy for teachers' engagement is based on:

- Top down policy
- Institution wide formats
- Experience sharing teachers and functional application management on a regular basis.

All teachers are obliged to complete VLE user training. Every new employed teacher gets several introduction trainings including the use of the VLE (they can also rely

on colleagues and the (team-own) functional application manager). Every team has a part time assigned educational expert. The educational expert advises or mediates to dedicated experts in digital didactics and content development. For the nearest future the College will continue the use of a current VLE. We are now preparing for a next version, with flexible enrolment features (domain, department or specific training), which is also more flexible regarding logistics and customizing the learning paths of students. Because of the new Web 2.0 features, some retraining of staff and students will be necessary.

The VLE gives a structured base for digital educational content; it enables customizing, and re-using, also provides dedicated coaching possibilities. It is a solution to prevent problems with skipping lessons because of a teachers' availability. The VLE enables monitoring of learner activities and achievements through quick alerts trigger didactical or pedagogical intervention.

Our Advice for VLE implementation:

- Try to focus on your needs 2 years from now
- Make team visits to other institutions with VLE experience, maybe some job shadowing
- Have an open view on new developments like Web 2.0 and even Web 3.0.
- Consider Cloud Computing (keeping most technical problems outside your institute)
- Negotiate flexible SLA's
- Start with small pilots with willing teams but involve all others
- Implement from simple towards complexity (all at once overkills the new users).

Open University, Italy

VLE selected	Claroline
Type of VLE	Open Source
Use of VLE	More than 2 years
VLE hosting	Internal
Operating system	Microsoft Windows

A needs analysis has been conducted among organisation members prior to VLE implementation. Since we are an open, online university, several staff meetings were organised in order to conduct a more informed decision about the VLE and choose the Platform that will respond to the needs of teachers and students of the online university.

The VLE has been selected based on the following criteria:

- Good usability and accessibility
- Open source code
- Source code tidy and well structured in order to allow an easy customisation of the VLE and implementation of new tools
- VLE popularity that guarantees a large community of users which implies new releases, exchange of information and support through discussion forums.

In previous years the university experimented and tested various different Platforms, mostly proprietary VLEs with limited possibilities for customisation. Their features weren't suitable enough for all the target groups of an Open University. It has resulted in the decision to implement an open Platform Claroline. Initial implementation of any VLE requires time and experience. Minor, technical problems are usually very common and at the beginning of the implementation process we needed a certain amount of time to understand the entire Platform features, customise it to our needs and learn some useful tricks to enhance our teachers' motivation and engagement.

We are dedicated to regularly updating features of our VLE through our partner networks. It is much easier due to the fact that Claroline is a very popular Platform, which makes collaboration easier with various organisations through dedicated forums, wikis, etc. Our focus is also on developing innovative tools based on our VLE to enhance teaching and learning practice. Such tools include several pedagogical agents integrated within the Platform to simulate real teachers.

The VLE Platform was introduced to students through written and interactive guidelines as well as online demos. Teachers participated in training sessions organised 'face to face' as well as virtual meetings. Our strategy is to explain to our students the advantages of distance education and make sure that users will not feel isolated and lost while using the VLE. A compre-

hensive technical help desk is provided through social software, face to face meetings and telephone. Our strategy for staff training is 'just-in-time' – whenever a new tool or methodology is implemented.

Our current plan is to shift more towards Web 2.0 tools (social software) as this movement will ensure more interactivity between teachers and students.

We put a big emphasis on evaluation and encourage our students to provide us with feedback in order to improve the VLE in a technical and methodological way. At the end of each online course students are asked to complete an online questionnaire. Their feedback has been very useful in implementing changes and improving the Platform.

The choice of a VLE such as Claroline (open source, popular, with extendible architecture) has improved the quality of the teaching activities and has allowed us to take into consideration our target group needs.

Our Advice for VLE implementation:

- Consider only Open Source platforms
- Platform should be popular and multilingual
- Make sure that your staff will be comfortable with E-Learning applications such as software programming, e-pedagogy and graphic design.

Further Education College, The Netherlands

VLE selected	Blackboard
Type of VLE	Closed / Proprietary
Use of VLE	More than 2 years
VLE hosting	Internal
Operating system	Microsoft Windows

The VLE Platform in our organisation was selected based on the following criteria:

- Price and license
- Ease of use for students and teachers
- Functionality
- Did the VLE support standards?
- Is the vendor a stable and future proof organisation?

The VLE Platform was introduced to teachers initially in the form of pilot projects. Later in time and based on the results the target groups were increased in size. At the same time the VLE was introduced as the 'learning portal' to students. That has triggered the use of the VLE by students and faculty enormously, though for other reasons than only learning.

Our strategy for teachers and students motivation is as follows:

- VLE as a single point where you can find all information needed
- Provide faculty and students with other tools (non synchronous) that can support learning
- Make information available 24/7 and over more devices
- Try to do things easier and more effectively since classroom hours are limited.

Our plans in terms of the VLE in the future are as follows:

- Invest in training for faculty
- Define a policy for blended learning within the institution and make it strategic
- Make the VLE accessible for all possible devices.

Our Advice for VLE implementation:

- Invest in faculty by training teachers not only how to use the VLE as a tool, but how to use it within their education (e-didactics).
- Don't expect that your students are that well skilled in IT. They are in things they do daily, but they are as inexperienced with other tools as their teachers are. So invest in training students as well.
- Make sure you have a service organisation that can support faculty and students (also outside the official school hours).

Specialist Technology College, United Kingdom

VLE selected	UniServity
Type of VLE	Closed / Proprietary
Use of VLE	More than 2 years
VLE hosting	External
Operating system	Microsoft Windows

In 2002 College staff was introduced to the think.com VLE and a pilot project was organised in school in 2002-2003 to acquaint staff with VLE applications and uses. In 2003 the purchase of a VLE was written into our Specialist Technology bid. The bid highlighted using the VLE to enable access to learning resources out of school hours and also provide flexible teaching opportunities for parents and pupils. Staff were consulted over the applications they would use within a VLE to support learning. File sharing and forum use featured highly in this needs analysis. In 2003 a number of commercial VLE providers made a presentation to staff, before a system called Fronter was selected. In 2005 the government e-strategy called for a personalised online learning space to be available to pupils by 2008. In 2008 the school changed from Fronter to the UniServity VLE. This was a VLE that was adopted and supported by the local authority. An analysis of senior teacher needs suggested that the collaborative elements within the VLE - allowing our partner schools to communicate and work with us - were the most important needs of the school.

The school has a 5 year development plan for VLE use, supplemented by a more detailed series of annual plans. Pupil consultation took place through a series of pilot projects, investigating aspects of classroom use of the technology. Staff was consulted through a number of workshops and questionnaires.

The VLE has been selected based on the following criteria:

- How many schools in our local area were using the same VLE
- How easy is it to programme (what skills would staff require)
- What support was available from the VLE provider
- What support was available from our local authority
- Costs.

Staff was asked to identify barriers with using the learning Platform in school. The following areas were mentioned by staff:

- Access (classroom access to desktops so that pupils could use the VLE in lesson time);
- Skills training (how to set up a web page, programme a forum, create a wiki etc.);
- Pedagogy (how to use a VLE to support teaching; theories and models of use).

Accredited Awarding Organisation, United Kingdom

VLE selected	Drupal with some use of Moodle
Type of VLE	Open Source
Use of VLE	More than 2 years
VLE hosting	External
Operating system	Linux / Unix

The Needs Analysis was evidenced through a range of practical experience starting in year 2000 with the management of a virtual summer school on behalf of the New Horizons Virtual Education Action Zone. This involved direct work with teachers and learners. Beyond that one of the team has been commissioning editor for one of the most commercially successful revision sites in the UK, SAM Learning. We did no formal needs analysis; we used similar methods to Open Source development and disruptive innovations. Start small and release often involving users directly in the development process.

We developed several Action Plans mainly for the benefit of potential investors. In practice getting started and involving users in incremental improvement is more effective in a fast moving technological world. Formal plans rarely survive the first engagement with the users. Our strategy was to start with something low cost and useful and then builds more features prioritised on the demand from users. This is an on-going process. For example we started with Moodle because it was quick and low cost. We are now focused on Drupal because it is more flexible.

The VLE has been selected based on the following criteria:

- Flexibility to customise code and produce our own modules
- Open Source as we are committed to Open Source principles
- Scalable for global reach
- Significant global support and sustainable development
- Language translation support

We simply had to learn how the system worked from scratch bearing in mind the fact that the core code was in rapid development when we started and we were adapting the environment for a very specific purpose. We used Moodle and Drupal in parallel with feedback from users and decided that Drupal was better for the way we needed to adapt the environment. The code was better quality and the design cleaner. From a user point of view the main issue is in informing them of changes as development takes place and trying to keep the user interface consistent while constantly adding more functionality.

Our strategy for teachers' training and motivation is

to provide the National Vocational Qualification in ICT (ITQ) referenced to the European Qualification Framework as a desirable outcome for the learners and make it less than 50% of the cost of competitors' versions. Focus on Web Software and Collaborative Technologies so learning to use the system provides some of the credit towards an internationally recognised qualification. Design the qualifications to cover the statutory requirements of the UK National Curriculum so that teachers can use existing good practice making change manageable and reducing rather than adding to work loads. Provide much of the facilities for which VLE vendors are charging large amounts of money freely hosted as value added.

We focus on both sides of the VLE, the technical one as well as pedagogy. Both are important including the relationships between them e.g. in the system above to support peer and self-assessment and provision and review of evidence by the assessors. The technology is there to support assessment for learning, further the personalised learning agenda and to enable learners to become self-sufficient with tools that are freely and legally available from the internet. This in turn supports inclusion and creativity in other curriculum areas. The same methods can be used in any subject once the learners and assessors have the IT skills to support this way of working. That is the rationale for starting with qualifications in ICT.

We have noticed several changes due to the VLE implementation, including greater use of Open Source applications, use of Blogs to enable learners to communicate their work. The current facility for providing evidence is new and has yet to be started but it is designed to enable a fundamental shift to learners taking more responsibility for providing their evidence against transparent assessment criteria that they can understand. Teacher will be a manager of the learning process guiding the learner and explaining what they need to do to make best progress. The context for learning should be determined by the learner and what motivates them.

Co-educational Secondary School, United Kingdom

VLE selected	Viglen
Type of VLE	Closed / Proprietary
Use of VLE	More than 2 years
VLE hosting	Internal
Operating system	Microsoft Windows

Our initial Needs Analysis was simple: almost no ICT being used in the school. We therefore identified the need for Vision Building for all staff and major persuasion of Budget Holders and the Governors of the school.

Action Plan for the Platform implementation was developed:

1. Identify the existing ICT infrastructure,
2. Carefully identify the honest commitment of Senior Staff and Governors,
3. Clarify with Senior Staff all potential routes for financing a major initiative,
4. Invite tenders from up to 6 suppliers, narrowing list down to 3 significant competitors,
5. Communicate ICT vision to all teachers,
6. Measure a feeling of the staff's commitment, and then share this in an open meeting with parents and pupils,
7. On feedback from above, negotiate with vendors as to specifications which will meet anticipated needs.

The VLE was selected on the basis of all staff, pupils and parents having access to all appropriate files and software, at all times (24/7) and from anywhere within the campus or remotely in order to support all academic and administrative activities. Being a small school, it was felt that we could not afford permanent resident technical support. We therefore selected a vendor (Viglen) who was experienced in supplying and installing bespoke systems and providing the remote support and upgrades that a teacher with intermediate technical competency could manage. We are strongly of the conviction that once a system has been installed it should run apparently seamlessly. Any maintenance work should be done preferably during school holidays or weekends and with adequate warning. I have known teachers using the VLE at 2 a.m. in the morning! Good maintenance contracts, 2-4 hour call-outs on servers and 'mirrored' servers is essential.

Adoption is not only a 'whole school' issue but also one of involving all stakeholders. The Senior Leadership Team (SLT) MUST ensure that all lesson plans make reference to how and when ICT is used in every subject area. The SLT or the VLE manager should monitor and ensure that all resources are used efficiently, e. g.

that ICT Labs should not remain empty or that reference machines in classrooms do not remain unused. It is therefore the responsibility of the ICT leader to 'get alongside' staff and regularly discuss how ICT can be used in their subject. This requires vision and vibrant leadership. No teacher should feel 'left out' but that all staff has equally fair access and support. No pupil should feel that they don't have fair access or are 'elbowed out'. Parents should feel involved, particularly through Home Access schemes.

We have regularly established in schools 'Subject Representatives' who meet every month to discuss issues and also receive first level notice of new software etc. which is then cascaded down within their subject areas or departments. This has always been seen as a positive activity which ensures a fair distribution of sometimes limited resources. Updating VLE with new features has been an essential part of many teachers work. All aspects need to be steadily and gently upgraded, small step by small step so as not to cause total shock and rebellion!

In terms of Continuous Professional Development we focused on firstly, meeting teachers at their point of need - i. e. 'How can I help you make your work more enjoyable, more productive, saving time, better quality etc.' Secondly, understanding their approach to ICT. Some teachers accept advice, others ask for help, some respond only to competition, others respond when they understand that their tenure or professional credentials rely on a good competency report for ICT. Thirdly, good display of children's work from all subject areas, both on the VLE and physically around the campus. This soon encourages teachers not to get left out of the displays. A regular technique for getting teachers initially onto the VLE is to persuade SLT that all staff notices, school bulletins, registrations (attendance) etc. are performed on line. Ensure that at least one Departmental Meeting (usually for curriculum development and lesson planning) each month is reserved for staff training on ICT practice which will of necessity involve VLE familiarity. VLE training is not limited to only technical aspects of the Platform. We always describe ICT as the solution to pedagogies. It is this motivation which usually enables a hesitant or unwilling teacher to understand technical implications.

Vocational Education and Training College, Belgium

VLE selected	Smartschool
Type of VLE	Closed / Proprietary
Use of VLE	More than 2 years
VLE hosting	External
Operating system	Microsoft Windows

We have been trying to implement a VLE for a number of years using different strategies. In 2007 and 2008 we tried implementation with Dokeos System, however with no major success. In 2009 and 2010 we launched the use of online courses prepared for our students by the Job Centre. Within this process we have undertaken several steps:

STEP 1: ICT responsible and department heads talked to teachers about their needs / fears / expectations of a VLE.

STEP 2: Initial platforms were presented

STEP 3: A person responsible for training and in service training was in charge of implementation.

However the percentage adaptation of the VLE was still very low. In 2010 and 2011 we have developed new implementation strategy including:

- A new effort with a new launch of training courses on line through the Job Centre
- Starting a new on line VLE for the entire school - implementation plan
- Launch a project on producing on line photo-instruction sheets in co-operation with the Job Centre.

In each case we planned the implementation process in a format of a real project with project leader, project objectives, time line, check moments etc. We planned to start with the 'early adopters' group (teachers always eager to start something new) and then organise show moments that would tease others to join.

Our VLE was selected on the basis of the following criteria:

- Cost / student or teacher / year
- Reliable support and training by the provider
- Integration in a document sharing and communication system
- Integration in an online Student Follow Up system (from 2010 on)
- Integration with an online report sheet system (from Sept 2011 on)
- Username / password integration with the city wide

email system within 2 years after launch.

Within the VLE implementation we have encountered several problems and barriers:

- Budget
- Computer illiteracy of many teachers in a vocational
- The need to choose one system that would meet the needs of all secondary schools in the city
- Teachers have great problems in changing their teaching styles towards using a VLE
- Many vocational training groups (e.g. painters, car mechanics, forklift drivers, etc.) have no great need for using a VLE
- Many students have a low competence themselves by means of written communication
- Many of our students have no computer at home; we have 5 addresses for our school, it's impossible to build an open learning centre in every branch.
- It's difficult to motivate older teachers to take the step towards the use of a VLE.

In our opinion to successfully implement VLE Platform in the VET sector, organisation has to:

- Make a long term implementation plan and stick to it
- Use pilot projects
- Never attempt to implement a VLE suitable for university or college students (e.g. Blackboard, Dokeos, etc.) in a vocational training centre. This is planning for failure
- Look for content that adds something new to existing teaching materials.

It is important for us to regularly update features of our VLE Platform. There is a Smartschool Community on line where content can be shared and users can communicate. At the school group level there is also a self-help group organised by those responsible for educational ICT support in the different secondary schools in the city.

Teachers' motivation is essential. We learnt that the best way is to let successful and confident teachers to motivate the others.

Section Three

VLE IMPLEMENTATION- RECOMMENDATIONS

Effective implementation, development and ongoing use of educational technologies, such as VLEs, must not simply focus on the technology aspects but must take account of the human and organisational aspects of the institution. The influence of management, peers and students on teaching staff, and vice versa, is critical to the success of any implementation.

It is also important to realise that Implementing a VLE is not simply a short-term project of choosing and installing software and hardware capacity into an institution. It is a long-term shift in teaching and learning practices. It involves a large degree of change management in both academic and support staff and it requires long-term strategic thinking – to go beyond initial implementation and into the sustainable development and progression of the medium and the people involved in its usage.

Decide what you want to do before you start doing it

Selection of your VLE should be based around the educational approaches that your institution uses and the choice of a VLE should be based around the closest match to satisfying the educational goals of your institutional strategies.

Don't let "special interest" groups take over e.g. the IT department decides which VLE you should have based on their knowledge of systems and current staff skill sets. Your VLE should have a single coherent aim, to "act as a focus for the learning activities of the students and the management and facilitation of those learning facilities along with the provision of content and resources. The VLE is a tool for providing access to a distributed learning experience"¹ thus the student and

the learning outcomes should always remain the key focus.

Given the above proviso, there are a number of physical and institutional factors that must be assessed for successful implementation of your VLE.

1. Institutional buy-in
2. ICT readiness – infrastructure
3. ICT readiness – connectivity
4. ICT readiness – people
5. Sustainability

Institutional buy-in. An institution preparing to implement a VLE must have the full support of the senior management team. This should be backed up by guiding strategies and the VLE must provide recognisable strategic outcomes. Without this top-down support true integration of the VLE into institutional culture will not occur. Share this vision fully with all staff from the beginning. Involve staff in the development of the vision and build enthusiasm for the integration of a VLE to fulfil it. Develop an overarching action plan for the long-term development of the VLE and share this early. While enthusiasts in VLE usage have a profound effect in pushing from the bottom-up, in the majority of institutions these "champions" are likely to remain isolated cases without the "pull" from the top. The positive reinforcement (and reward) given by senior management to the use of a VLE will serve to marginalise those not using it and force a paradigm shift in behaviours.

ICT readiness – infrastructure. Does the institution have the physical infrastructure to support the use of a VLE? Without sufficient ICT equipment and access for all

staff and students the institutional implementation of a VLE is likely to fail. Conducting a rigorous review and needs analysis of your systems is essential before setting out on the road to physical implementation.

ICT readiness – connectivity. This is a purely physical factor. Any institution implementing a VLE must ensure that the physical network is capable of handling the increase in demand, both in and out of house, that will inevitably occur. Talk to other institutions, VLE providers and network experts about the level of connectivity that is warranted – and build for future sustainability; already many institutions are beginning to struggle as the use of high-bandwidth video and audio are making an impact.

ICT readiness – people. The teaching and support staff of an institution implementing a VLE must have a sufficient level of ICT skills to be able to engage with the system, or a development plan must be implemented to raise these skills to the required degree. It is recommended that a skills audit is carried out as early in the process as possible for existing staff and that the audit is made part of all new entrants initial assessment. This will identify the level of skill that each individual holds, allowing the institution to identify development requirements early. It is also recommended that a long-term programme of staff development focuses on raising all staff members to a minimum level of ICT readiness and that a second-stage development plan is implemented focused entirely on VLE skills development. Identifying "enthusiastic and knowledgeable champions" in each department has proved successful in many institutions for peer assisted learning and development.

Sustainability. The issue of sustainability is woven into the fabric of all the issues identified above. For the system itself – does it have the capacity to grow

with demand? Is there financial backing to allow for its development? For infrastructure and connectivity; is the institution future-proofing in its capital plans? Is redundancy and capacity built into its ICT resourcing? For people, are the long-term developmental resources available? Is Continuing Professional Development recognised as being at the core of teaching and learning development.

Question Everything

No single VLE will fit exactly your institutions requirements. Institutions may make sacrifices to perfection along the way or attempt to overcome these shortcomings in their own way, to a greater or lesser extent, depending on commitment to their goals. To get as close as possible to your desired system there are a number of questions you can put to your potential VLE systems. To address them you can use template from the Section 5 of this Booklet.

The first thing to do, when getting close to a decision on your chosen VLE is to get hands-on – can you see the system operating in similar institutions; can you go and see it in place and talk to peers and students who have experienced working with the system? Once satisfied you have to start examining the detail and making decisions.

The following table will help give you a guide and may serve as a useful tool in your decision making process. Note: the importance you apply to any particular issue will be based around the individual requirements and strategic direction of your institution.

¹Briefing paper 5: Pedagogy & Virtual Learning Environment evaluation & selection: <http://www.jisc.ac.uk/whatwedo/programmes/buildmlehefe/lifelonglearning/mlebriefingpack/5.aspx>



Section Four

THE FUTURE OF THE VLE

What is the future of the institutional VLE? While this guide is designed for institutions just setting out on the road to VLE implementation and development it is sensible for such institutions to stand on the shoulders of those who have been through the process and are at a stage when they are questioning “what comes next?”

The emergence of a vast array of “cloud-based” free (or paid) Web 2.0 systems has put a challenge to the institutional VLE. Students are often entering an institution with good first-hand experience of using tools such as the Google Suite (Google Docs, Gmail etc.), Evernote, Facebook etc.

These tools are well developed and ubiquitous. They allow students the opportunity to access and develop their learning resources across platforms, across institutions and anytime/anywhere. So why tie them down to an institutional platform that they may have no experience with and may not enjoy using in the same way? If it is true that, as we have previously stated, the core of the VLE is a personalised, student-centred learning space will we see the institutional VLE dying as we allow students the right to choose their own tools to conduct their online learning?

Probably not. While the best VLE systems do hold the student at the centre there are a great many institutional, pedagogical and governmental requirements that the institutional VLE fulfils that the cloud of cloud-based tools cannot yet replicate. Standardised assessments, learner management, class consistency, teacher training, reusable resources, quality control and ownership/backup issues all point towards the ongoing requirement for a central, internally controlled system.

What we will see occurring, and what we see already,

is that institutional VLEs will become semi-permeable – allowing the use and integration, where possible, of the best and most stable of these external tools but keeping the core learner management and assessment functions as part of the centralised system.

We may also see the rise of the “cloud VLE”. A VLE system that is hosted externally and that serves multiple institutions but one that connects to an internally situated LMS (Learner Management System). Tutors and students will be able to draw upon resources that are far greater than those hosted on an internal system as the cloud VLE can allow for reuse of resources from its gamut of user institutions. We may also find that different faculties or classes tap into different cloud-based VLE systems – thus the rise of specialised VLEs for different disciplines – whilst still retaining an internal management system.

The ongoing developments in society, economy, technology, etc. will also imply a more flexible dynamic labour market. In the near future few individuals will be likely to get a job for life; instead the workforce will have to cope with shorter, serial careers – sometimes in different sectors and often in roles that do not currently exist. The result of this will be that individuals will need to undertake retraining at various times in their lifetime (Life Long Learning).

We also have to consider the decreasing lifecycle of “gained knowledge” and the increasing amount of information and knowledge that is embedded in systems and objects that surround us. Just in time, dedicated for use and accessible.

Thus, there is a strong need to rethink the design and role of vocational education and training with regard to what is the generic base and ontology of a vocational

domain: this as a kernel for formal prior learning led by regular institutions. This prior learning should include the training and practice in effective, efficient, ethical accessing, selecting, evaluating and applying of temporarily needed information or knowledge.

Learners should gradually build their personal learning environments (PLEs) including social and professional, formal and informal tools, and resources for maintaining and developing competences. Learners will require the ability to tap into the services of educational institutes when needed but for the institutional resource and content to be able to fit into the learner’s PLE, not the other way round.

Learning institutions will need to jigsaw into prior vocational education and provide lifelong, flexible, on-demand support to the workers or jobseekers making use of their educational services.

The vocational learning paradigm shifts from formal, with few informal learning opportunities, to a formal basis followed with an ongoing mix of informal and formal learning.

When looking to the future of VLEs, it makes sense to incorporate this projected view of future learning needs, and especially the requirement of the user to personal control, portability, compatibility and accessibility in their lifelong relationship with formal vocational education.

Whatever happens, the VLE, in one form or another, is central to the development of teaching, learning and management in the modern educational institution. We wish you luck on your journey.

5. Organisation Check List

The table below may be useful when considering your overall choice and implementation plan around your institutions VLE. At its simplest, simply use it as a checklist. If you want to utilise it more thoroughly you can take each question given, note your response under "Answer", mark the issue as a positive or negative for the system under scrutiny and ascribe further action if required.

The "Weight" column should be used to mark down the

importance of each issue to your organisation. This may be different for every organisation and will be based on your strategic goals. Weight issues on a scale of 1 to 10, with 10 being the most important. As you move through the table this weighting process will allow you the chance to reflect on what is important to your organisation and what you want to get from your VLE implementation, it will also allow you to identify areas of importance that have unanswered issues attached. This scoring system may be a useful tool when comparing the relative merits of competing systems.

VLE system				
Issue	Answer	✓/x	Further action	Weight
HOSTING				
Will your organisation host or will hosting be external?				
If internal, do you have server of sufficient capability?				
If internal, do you have staff capable of running and maintaining server?				
If internal, do you have backups?				
If external, who will manage the contract?				
If external, how will access work?				
If external, what uptime is guaranteed?				
BANDWIDTH				
Does the institution have sufficient bandwidth for now and the future?				
IT EQUIPMENT				
Is there a minimum specification for PCs to run the VLE? Does the institution have equipment to handle this?				
Is there enough IT support for maintaining machines?				

VLE system				
Issue	Answer	✓/x	Further action	Weight
INSTITUTIONAL ADMINISTRATION				
Will the VLE be integrated with the MIS?				
Who will own this process and oversee its completion?				
How will user records be entered into the system?				
Who will enter these records?				
How will usernames and passwords work?				
How will these details be passed to staff and students?				
How will class groups be set up?				
Who will set up groups?				
SYSTEM ADMINISTRATION				
Who will be in charge of the system?				
Does the system allow levels of access and administrative rights?				
Who will develop content for the system?				
Who will keep the content updated?				
What reporting mechanisms are built into the system?				
Who will generate reports?				

VLE system				
Issue	Answer	✓/x	Further action	Weight
GROUP ADMINISTRATION				
Who will administer individual class groups?				
How will class groups be moderated?				
Who will create groups?				
CONTENT				
Who is responsible for content?				
What content does the system deliver initially and what must be created?				
Who will check quality of content?				
How easy is it to create content?				
Who owns staff or student created content?				
Is there a facility to add content from external sources?				
Is there a body of external sources creating and providing/selling content?				
Can content be shared from a central "library"?				
Is the system compatible with commonly used tools?				

VLE system				
Issue	Answer	✓/x	Further action	Weight
ASSESSMENT				
How does the system handle assessment?				
Is there a grade book feature?				
Can students submit work electronically?				
Can teachers administer assessments?				
Can assessments be passed to MIS?				
TRAINING				
How much training is required to use the system?				
Is there a training budget?				
Do you have in-house trainers or will you have to use externals?				
Is training available through the VLE?				



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