

Suggestions for choosing a VLE

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Structure of inventory of virtual learning environments

Introduction

In the framework of the Velvitt project, an inventory was carried out of the four VLEs (Virtual Learning Environments) used within the participating institutions. The background to this survey is the fact that more and more educational institutions wish to use e-learning, and are actually getting down to work with a distance learning platform.

The objective of this survey is to find an answer to the following questions:

- § What are the possibilities and limitations of the various virtual learning environments?
- § What virtual learning environments are suitable in given situations?

The results of this inventory can be used by educational institutions wishing to make a choice from the existing virtual learning environments.

The document consists of an introductory chapter in which the structure of the inventory is described, a chapter describing the results and a chapter in which a number of conclusions and recommendations are made.

Finally: **“The best VLE is the VLE that suits you best!”**

Question

In order to be able to compare different learning environments, a list was prepared of specific questions and statements relating to developers, managers, lecturers and students.

The evaluation aspects can be broken down into five broad categories. These relate to:

- § the educational vision;
 - s primary objective;
 - s target group.
- § the didactic functions;
 - s cooperation possibilities;
 - s communication forms;
 - s coaching and support possibilities;
 - s test and question systems;
 - s possibilities for managing competences and skills;
 - s possibilities for adding content.
- § the organisation of education;
 - s portfolio;
 - s student monitoring system.
- § the functional structure;
 - s interface;
 - s ease of use.
- § the technical infrastructure;
 - s data interchange;
 - s methods for adding content;
 - s standards;
 - s etc.

In this document, emphasis is placed on the first three of these categories. In selecting a virtual learning environment, the first aspects the institution looks into are the areas of application and functions. The functional structure and the technical infrastructure generally are only considered at a later stage by the institutions.

Selection of virtual learning environments

The virtual learning environments used at present by the participants were inventorised in the Velvitt project. The table below shows the institutions and the accompanying virtual learning environments.

Virtual learning environment	Educational institution
WebCT	Tampere Polytechnic – Finland
Blackboard v6	University of Huddersfield – United Kingdom Budapest Polytechnic – Hungary Dunaujvaros Polytechnic – Hungary
N@Tschool v8	Fontys PTH – The Netherlands
Moodle	Tampere Polytechnic – Finland

Selection of virtual learning environment

The table below is a summary of the most important results of the survey. The results are broken down according to categories. For a detailed overview of the results, you are referred to the document 'Summary results matrices depth test.doc'.

virtual learning environment				
	WebCT	Blackboard v6	N@Tschool v8	Moodle
Educational vision:				
Primary objective	Making and offering online courses	Establishing tailor-made education (VLE has course management facilities)	Self-study and cooperation in groups, accessible via Internet	Making Internet-based courses
Target group	Groups of students	Groups of students	Groups of students	Groups of students
Didactic functions:				
Cooperation possibilities:				
Working in subgroups	+	+	+	+
Communication forms:				
Whiteboard	Yes	Yes	Yes, in new version	Yes
Chat	Yes	Yes	Yes	Yes
Video communication	No	No	Yes, in new version	No
Discussion forum	Yes	Yes	Yes	Yes
E-mail between VLE users	Yes	Yes	Yes	No
E-mail between VLE users and external users	No	Yes	No	No
Coaching and support possibilities	No specific facilities for process supervision	No specific facilities for process supervision	Contains a separate supervision module	Contains a separate supervision module

Virtual learning environment				
	WebCT	Blackboard v6	N@Tschool v8	Moodle
Test and question systems	Yes, commonly-used question forms can be included	Yes, different question types can also be used	Yes, the VLE offers both open and closed test modules	Yes, different question types can also be used
Possibilities for managing competences and skills	No	No	Yes, there is an extensive competence instrument. The whole system is linked to the portfolio.	No
Possibilities for adding content	All types of content	Teaching material in all normal formats, but also the use of multimedia material (text, photographs, audio, video)	All types of content	All types of content
Organisation of education:				
Portfolio	No, no specific portfolio function. It is possible to make a presentation area, to be used as a portfolio	No, no portfolio facility present	Yes, there is a portfolio facility present	No, no portfolio facility present
Student monitoring system	Yes, there is a 'track students' function	Yes, there is an online grade list available	Yes, the study results available to the lecturer are registered	Yes, the lecturer can monitor all activities of the students on one page

Conclusions and recommendations

In this chapter, the criteria for selecting a VLE are described, followed by a summary of the inventorised virtual learning environments.

Considerations when selecting a VLE

First of all, the definition of a VLE. This can be described as: the technical facilities (hardware, software and telecommunication infrastructure) that facilitate interaction between:

- § the process of learning;
- § the communication necessary for learning and
- § the organisation of learning.

A VLE which supports a flexible learning environment must offer the three following main functions:

- § Teaching material / test section;
- § Communication / cooperation section;
- § Organisation / registration section.

Before a teaching institution selects a VLE, a number of considerations must be made, namely:

- § What types of VLE are available on the market?
- § What is the user situation?
- § What requirements are imposed on the VLE?

VLE types

VLEs can be broken down into integrated VLEs and non-integrated VLEs. A characteristic of the first group is that the interaction is facilitated between the three key functions, whilst a non-integrated VLE only supports a particular aspect of the process of e-learning.

In many cases, the VLEs combine the three main functions using fixed components. There are also VLEs in which users can connect together the required components. The VLEs with fixed components generally assume distance learning at study/course level. The platforms that assume separate components are generally based on institution level.

User situation

At organisational level, broadly speaking, there are three user situations, namely:

- § Distance learning as a supplement to existing possibilities.
- § Distance learning as a replacement for part of the curriculum.
- § Distance learning as the dominant teaching form.

VLE requirements

To test the usability of a VLE in all these components, it is valuable to take account of the wishes and requirements of various users.

Training institutions will also have to take account of following considerations when selecting a VLE:

- § The intention of use of a distance learning platform.
- § The readiness for the use of a distance learning platform?
- § The flexibility and openness of the platform.
- § The costs (consisting of fixed and variable costs).

Summary of the VLEs inventorised

WebCT

WebCT is a learning environment focused on making and distributing online courses, and as a result is extremely suitable for any form of support for contract education. Facilities such as a portfolio and possibilities for managing competences and skills are not available within this VLE.

Flexibility in determining the order of learning tasks (teaching material, assignments, forums, tests) is very successful within WebCT. Within this VLE, it is also possible at any point to make a forum for discussion and/or exchange.

Using a standard browser, this VLE can be used by any user. If an institution is looking for a VLE that can be deployed reasonably rapidly, WebCT is a very good option.

Blackboard v6

The Learning System in Blackboard is ideal for deployment for institution-wide implementation. In addition, it is also possible to opt for the 'Learning Basic System', if broad implementation is not (yet) relevant. The latter system offers fewer functions, but in many cases is still perfectly usable.

It is therefore possible to switch from system to system. In addition, the system can be extended with additional functions, such as Building Blocks. These Building Blocks are software applications from other suppliers that can represent a welcome addition to the virtual learning environment.

One disadvantage is that Blackboard is relatively complex for inexperienced users, due to the multitude of improved possibilities. For people who are already conversant with the VLE, however, it is certainly an enriching experience.

Using a standard browser, this VLE can be used by all users. All standard formats of file (content) can be used in the VLE. Content management takes place within a course. There is also no content management system or a portfolio, in Blackboard.

N@Tschool v8

If use, management and exchangeability of content are extremely important, alongside the organisation of groups of students linked to study programmes, this virtual learning environment is eminently suitable.

This virtual learning environment offers extensive possibilities for its users. Within N@Tschool, students can work through digital material in the form of study routes (combining a number of study routes results in a study programme). They are also able to make tests and work (together) on projects.

One disadvantage of N@Tschool is that establishing and commissioning all possibilities and functions takes a long implementation period.

The operation of this VLE is very similar to Windows. To gain access to all possible functions, on one occasion only, software must be installed on the user PC. If only a standard browser is used, it is possible to work with this system, but not all functions are available.

Moodle

Moodle is a Learning Management System that can be used for managing course subject matter. Users are registered, and course participants' details are registered, whilst the system carefully selects the courses from a catalogue. Using Moodle, assessments can also be carried out online.

The possibility of multiple suppliers adding course information to and removing it from the system is a very strong point of Moodle. Moodle offers no facilities for a portfolio system, for example.

Finally, Moodle can be easily accessed by all users, via a standard browser.

Resources

The information sources consulted are:

Internet pages

<http://www.excelo.nl/marktmonitor/start.htm>

http://www.onderwijs.solin.nl/index.php?id=149&no_cache=1

<http://moodle.org/doc/?lang=nl>

Other information sources

Completed lists of questions and statements by participants in Velvitt project (see document 'Summary results matrices depth test.doc').

Joke Drost

Reference work: 'Selecting a virtual learning environment', recommendation
2003, CINOP