

Web Based Course Platforms: Evaluation Report

1 Introduction

When the first call for projects of the SVC was launched in 1999, four course platforms were recommended by the SVC for the development of online courses: Ariadne, LearningSpace, TopClass and WebCT¹. This was a quite reasonable choice, because they all differed considerably in many of their characteristics and therefore covered a broad range of applications. In most cases, these platforms were installed and maintained locally by universities participating in SVC projects, either at the project or department level, or by university computing services.

However, experience has shown that modern course platforms require a great deal of effort to install, maintain, and adapt to course specific needs. They also require professional support and training. Finally, their use (license and maintenance costs) is expensive.

Therefore, in anticipation of the SVC consolidation programme, it was suggested that SVC projects would be better served if the Swiss Virtual Campus could provide one or several “national” course platforms, that would be installed and maintained centrally (since no single platform can satisfy all needs, offering two to three platforms with different characteristics would seem like a reasonable solution). These platforms would be made available to SVC projects and others e-learning projects at Swiss institutions of higher education.

The Edutech group was given the mandate of evaluating various course platforms and making recommendations to the SVC. The evaluation process and its results are presented below.

2 The Evaluation Process

In September 2002, a “Request for Information” (RFI) was sent to selected platform producers: the Ariadne Association, Blackboard, IBM (LearningSpace platform), IMC (Clix), Qualilearning/Luvit, Time4You (IBT Server), TWI (GlobalTeach) and WebCT.

The criteria used to preselect the above products were the following:

- the platform is widely accepted and used by higher education institutions;
- the platform is used in a SVC project;
- the platform made it into the short-lists of the evaluations of Baumgartner or Schulmeister²;
- the Edutech group had positive experiences with the platform, or heard positive comments about it from others.

After reviewing the answers to the RFI³, the Edutech group decided to proceed with a detailed evaluation of the following platforms: Blackboard, Clix, IBT-Server, Qualilearning/Luvit, Globalteach, and WebCT.

¹ Since this was only a recommendation, SVC projects were free to use any other platform or none at all.

² P. Baumgartner, H. Häfele, K. Maier-Häfele, *Auswahl von Lernplattformen*, StudienVerlag, 2002.
R. Schulmeister, *Lernplattformen für das virtuelle Lernen*, Oldenbourg Verlag, 2002.

For its evaluation, Edutech thoroughly tested each platform (without relying only on white papers and other information supplied by software vendors). Contacts were also established with platforms producers (especially for technical aspects) and users of the evaluated platforms.

3 Results

As expected, a single “best” platform does not exist. The evaluation shows that every product does have its specific strengths, where it outdoes most of its competitors, whereas it is lacking in other aspects. A direct comparison is therefore nearly impossible. However, an interesting result is that the products can be naturally divided into two main classes: those who are simple to use, and those who are more flexible and extensible.

Easy to use platforms are the optimal choice for course designers who need to be able to efficiently create courses with just basic knowledge of web technology. No programming or advanced web-authoring skills are required. We estimate that a novice course designer would be able to use the main functions of such a platform after a four hour introductory training. They do have the drawback that it is more difficult or even impossible to integrate ambitious interactive and dynamic learning content into the platform.

Extensible platforms, on the other hand, can be customized and adapted in terms of presentation and functionality. They have a fully accessible and documented programming interface, they allow the addition of new functionality to the server and they give full layout and navigation control to the course designers. However, they require highly skilled course designers with knowledge and experience in programming, web data standards and communication protocols. A minimum of four weeks of introductory training should be allocated for an IT-specialist to get along with such a platform.

The next sections summarize the strengths and weaknesses of the evaluated products. The evaluation results can be viewed in full detail at <http://www.edutech.ch/edutech/tools/ev2.php>

3.1 Easy to Use Platforms

Platform	strengths	weaknesses
Blackboard ML Blackboard Inc, USA	<ul style="list-style-type: none"> • Clean, easy-to-use interface • Powerful “virtual classroom” tool • Good possibilities for interoperating with other systems (e.g. students and administrative information systems) • Building blocks programme for extending the system • Good documentation 	<ul style="list-style-type: none"> • Limited customizability of look and feel • No internal resource or file manager • Frame based display: no bookmarking of individual course pages.
Clix 5.0 imc AG, Germany	<ul style="list-style-type: none"> • large palette of tools • good support for external content • syllabus/learning plan with branching options 	<ul style="list-style-type: none"> • usability problems: no font scaling, no bookmarks, • creating a course is a complex process

³ Others factors also played a role on whether a platform would be evaluated in detail. One platform producer, for instance, said that a new version of his platform would come out in spring, which didn't fit with the SVC calendar (the platform release has now been postponed until June).

	<ul style="list-style-type: none"> powerful (but complex!) rights management system “Mandanten” concept (one installation for several units with their own courses). 	<ul style="list-style-type: none"> only “flat” internal content (no folders or hierarchical structure) no ftp or WebDAV support. no search function in contents (only in descriptions of elements) limited support for eLearning specifications
WebCT Vista WebCT Inc, USA	<ul style="list-style-type: none"> appealing look-and-feel easy to use for admins, designers, tutors and students powerful communication tools numerous powerful student tools: i.e. search tool, context sensitive help efficient file handling due to integrated file manager with WebDAV support numerous flexible authentication models supported large institutions and consortia can hierarchically organize groups, courses, sections etc. good documentation 	<ul style="list-style-type: none"> usability issues: can't copy-paste URLs, no browser bookmarks, browser's 'back' and 'reload' button don't work less severe usability issues: incomplete font scaling, difficult printing limited SDK - limited extensibility. End users can't program custom 'components' or custom quizz types. limited layout control incomplete or missing support for IMS-QTI, IMS-CP and SCORM not backwards compatible with WebCT 3.x (missing tools: no compile, english interface language only)
QualiLearning / Luvit 3.5 Qualilearning, Switzerland / Luvit AB, Sweden	<ul style="list-style-type: none"> Nice menu based interface (but non-standard!) Some interesting didactical functions: feedback on each document, completed status for documents Powerful rights systems (students can for instance be allowed to place documents in the course navigation tree) Good statistics on course usage Support for some e-learning specifications (IMS CP and QTI, AICC). 	<ul style="list-style-type: none"> No font scaling Frame based display and lack of browser toolbars give rise to usability problems, e.g. no bookmarking is possible. No WebDAV or ftp support for file upload No search function Problems with zip archives: paths, style sheets Limited online support (no knowledge base or newsgroups) Limited system extensibility

3.2 Extensible Platforms

Platform	strength	weakness
Globalteach TWI AG, Biel, Switzerland	<ul style="list-style-type: none"> excellent support for SCORM 1.1 and 1.2 including SCORM debugger efficient and flexible customization possibilities extensible framework with various documented APIs complete technical documentation good contact to geographically close developers in Switzerland 	<ul style="list-style-type: none"> Severe drawback: authoring tool (content upload, quizz management, ...) is a Windows application (no Mac/Unix versions) Administration tool is a Windows application (no Mac/Unix versions) Server runs on MS .net infrastructure only
IBT Server 6.1 Time4You AG,	<ul style="list-style-type: none"> full XML/XSL support support for SCORM compliant 	<ul style="list-style-type: none"> many features are only available through

Germany	<p>learning modules</p> <ul style="list-style-type: none"> • API to all important server functions (http/JavaScript and/or JSP programming interfaces) -> toolkit approach • the entire system (layout, functionalities) can be fully customized • server runs on all operating systems with Java Virtual Machine • good multi-language support • clean and modern technical design • modular architecture • runs on all modern browsers 	<p>programming</p> <ul style="list-style-type: none"> • difficult to use for course designers - non-intuitive user interface • system cannot really be used out-of-the-box • running/customizing the server requires skilled and experienced staff (XML, XSL, JSP, HTML, JavaScript and IBT-architecture knowledge) • complex system, difficult to get used to it • small user base in universities
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4 Recommendations and Next Steps

Based on the evaluation results, Edutech makes the following recommendations:

1) Acquire a 2 years license for WebCT Vista now

WebCT has a large user base in Swiss higher education institutions. The redesigned Vista version allows to set up a large scale infrastructure. The modern application server architecture has the potential to serve thousands of students at an arbitrary number of institutions. Although its functional extensibility is limited, it is well accepted in development projects like the SVC due to its ease of use, efficient content authoring and large number of didactically useful tools.

Edutech suggests to set up a server until summer (fall) '03 and make it then available for projects of the SVC and other Swiss higher education institutions. Since the planned license would include a limited number of seats, it would be necessary to define rules specifying which projects can use the server.

2) Take a decision for an extensible platform later this year

None of the evaluated extensible platforms is fully convincing. However, considerable developments have been announced for Globalteach and IBT-Server, which should be available in summer. Also, further platforms should be considered and evaluated, that could not be taken into account until now: IBM/Lotus Learning Space, OLAT, Oracle iLearn and possibly others (e.g. open-source platforms).

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