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Résumé de l'article

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Technical Evaluation Report

41. WebCT: a major shift of emphasis

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Abstract

The evaluation reports in this series usually feature several products at once. The current review, however, comes at a time when one of the most widely used (and expensive) online learning management systems is undergoing a major change in its marketing strategy and corporate focus. *WebCT* is currently evolving to a new version (*WebCT Vista*), with much attendant discussion by distance education (DE) users. The current review, as the others in this series, adds the DE student's perspective to this discussion. The review compares the existing *WebCT* Campus Edition with the new *WebCT Vista*, and examines some of the problems associated with the migration to *Vista* at the institutional level. A response to the report by the *WebCT* company is appended.

The *WebCT* Product

WebCT, or *World Wide Web Course Tools,* is was originally a Canadian product originally developed at the University of British Columbia in 1995, as part of a research project to study the impact of online learning on student outcomes, out of a desire to enhance and enrich the learning experience through new technologies. Today, it is used by 10 million students at over 2,500 universities and colleges in 80 countries, and is described as having "revolutionized the way people teach and learn" (UBC, 2004). In 1999, the *WebCT* interest merged with *Universal Learning Technologies* of Massachusetts, and has offices in Canada, the US, and Australia. In the process, the product's mission has expanded from serving purely educational purposes to providing "enterprise-wide" learning management solutions in all areas of e-learning and training. Today, the *WebCT Campus Edition (CE)* is claimed by its vendor to be a "global market-leading Course Management System (CMS)" (*WebCT* website, 2004). The *WebCT Vista Academic Enterprise* edition is the latest version. One *WebCT* user, the New Mexico State University, indicates (2003), that the company:

> ". . . is scheduled to discontinue support of its Campus Edition version in December 2006 leaving only the Vista edition of the course management system available and supported." (At that point, NMSU estimates that its annual licensing and running charges will rise from $40,000 to, in the first year of Vista operation, $650,800 US.) The estimated first year cost for a perpetual Vista license at New Mexico State University is $290,400. Additional costs would

include an Oracle license, system hardware, and setup time. The annual maintenance cost of the perpetual license will be approximately $48,400. Estimated total first year costs associated with the implementation of a WebCT Vista course management system at NMSU is $602,400.*"*

The system provides many tools for content creation and delivery within individual courses. The CE is designed to support single institution use with limited customization and branding capabilities. It is scalable and supports integration with campus portals based on JASIG's uPortal framework a variety of portals and other campus systems.

In seeking to compare the CE with the new *Vista*, however, the current evaluation team was unable to obtain unrestricted access despite attempting to do so via correspondence lasting several weeks ran into a problem of access. A previous report in the current series, by Fahy (Report #10), refers to "the right to pilot-test", and states that "Evaluators should have access to a choice of reference sites". Obtaining such access in order to evaluate *WebCT*, however, is evidently no simple matter. The company's online demos of the CE provide a very limited view of the product's capabilities. The user is led through a series of mini-tutorials which stress how easy it is to personalize, create, customize and evaluate student learning in CE. Due the highly directed nature of these demos, however, it is difficult to assess the product's general usability. A number of exemplary courses are made available on the product website, giving some insight into this from the student perspective, though not from that of the teacher/ course developer. More extensive student evaluation than this appears not to be facilitated, although the vendor does appear interested in enabling trials of the system by institutions formally interested in adopting it. This restricted accessibility made it difficult for the current team to evaluate the two *WebCT* products fully, and from the point of view of the six ASTD evaluation criteria used in previous reports in this series: cost, complexity, control, clarity, common technical framework, and features. The report presents a general comparison of the two product versions, therefore, based on online descriptions of them rather than on direct first-hand experience.

WebCT Campus Edition *versus* WebCT Vista

Features

According to the vendor, significant changes have been made in *Vista*, to improve the e-learning experience permitted by the CE. Improved tools in *Vista 3.0* enable the learner to:

- Use link annotations instead of just icons, providing added instructional information and guidance within a course interface

- Sign up for collaborative assignments by self-selecting a discussion or lab group based on the description of an assigned task

- Print or download entire learning modules for offline learning and archiving

Vista 3.0's improved teaching tools enable the instructor to:

- Personalize courses and customize grade books through the use of course templates

- Access a holistic overview of student participation in discussion groups and assign a grade to the grade book from within the discussion forum

- Grade by question (horizontal grading), grade anonymously, and provides at-a-glance access to gradable item statistics

- Uses an extended PeopleLinks program to give instructors access to student performance reports at any level within/across an institution.

In terms of improved administrative tools, *Vista 3.0*:

- Allows student activity reports to be rolled up and viewed at any level within/across an organization

- Enables institutions to access and export data such as student tracking, template and enrolment

Vista contains a text chat-room feature and a whiteboard, but no in-built capability for online audio/ video chat or conferencing. The product can be combined with additional licenses for *Elluminate* and *Wimba* for these capabilities. In addition to messaging, grade access, course content pages, discussion threads, and synchronous discussion rooms, *WebCT* offers whiteboards for synchronous worksheets. Course materials, discussions and email are searchable and can be spell-checked. Discussion postings can contain HTML and URLs. File attachments can be attached to postings, and a text editor enables the creation of mathematic equations. Learners have their own personal file for storing course information, can attach notes to course pages, can be assigned to subgroups according to pre-selected criteria, and can create shared online folders.

Vista also provides course and curriculum creators with an integrated courseware creation system with sharing capacity over the entire institutional, *Vista*-accessible network, and the possibility of storing original, personal, changeable copies of course material for individual users. With user-friendly interfaces, a what-you-see-is-what-you-get (WYSIWYG) editor, and the potential to draw on all learning objects in the repertoire (including CDROM, archived material and OSS content), creators can assemble paced courses with automatic entries for each graded stage of a course, and can track overall and individual student performance within it.

Its enhanced administrative tools appear to be one of *Vista's* most notable developments. The *Vista Enterprise Learning* brochure (2004) sees a role for data collection and analysis in the "improvement of learning outcomes":

> [A]dministrators can analyze how learning tool usage varies in fully online courses vs. technology-enhanced or hybrid courses, or which instructional activities are correlated with higher student retention rates. With the *WebCT Vista PowerSight Kit*, institutions can access a whole new set of data about students' learning interactions. Analyzing this data can improve the understanding of student behavior and ultimately improve learning outcomes (n. p.).

One is forced to assume, based on the lack of *Vista* demos at this stage, that the overall look-and-feel is similar in the two product versions.

Cost

Vista 3.0 is the fullest *WebCT* edition to date and also the most expensive. There is a major cost difference between CE and *Vista* in terms of the institutional licensing and system requirements.

CE is less costly, for it uses the *Berkeley Fast Flat File System. Vista,* on the other hand, uses the expensive Oracle application server. In 2005, *Vista* will also be available on the SQL server. According to Young (2002), CE pricing has risen steadily and can range from $7,000 to $30,000 US, depending on student enrolment and licensing options; but the cost of operating *Vista* is in the "six figures". The CE license is based on an annual subscription available in two forms: Institution or Focus. The Institution license is determined by number of full-time students in the institution, while the Focus license is limited to a maximum number of users, generally 3000 (EduTools, 2004). *Vista* also has two types of licensing.

1. The traditional package installed on a server platform may be licensed. Although the product's website contains no actual cost figures, it seemed that the price varies according to the number of institutions, student depends on the number of users and courses offered via the platform. A consortium of institutions may try to join together to run a single *Vista* database, but the *WebCT* company customizes its licensing agreement in working with the institutional customers individually, and will nevertheless charge a license fee to each institution.

2. Under a hosting license, the *WebCT* company will host the course site. The user institution is responsible for course creation, implementation, and maintenance, but is not required to deal with the software administration. The hosting price is also dependent on the number of users and courses.

In addition to the license for the *WebCT* platform, additional hardware and software may be needed in order to run it; and getting set up with all the licensing and infrastructure can cost in the hundreds of thousands of dollars. A *Windows 2000* server (with Service Pack 2) is required, or a *Unix* platform (e.g., *Red Hat Enterprise Linux*, or *Sun SPARC Solaris* 8 or 9). Licenses for the *Oracle* database and backup software are also required. Multiple high-end servers are required in order to course availability 'up-time'. In addition, a support staff with the specific skills for planning, implementing and running *WebCT* courses is needed. Migration from one version of *WebCT* to another is not only costly, but can evidently be time-consuming. Upgrading from the now outdated Standard Edition (SE) to *Vista* is at least a two-step process, requiring an initial upgrade to CE (McQueen and Fleck, 2003). After moving all of its clients from the SE to the CE, *WebCT* is now seeking to migrate all of its existing clients to *Vista*. Once in *Vista*, courses may have to be modified as content may not be useable once uploaded and unzipped. On the server side, depending on the size of the site, the number of course offered, the number of users, and the number of times they sign on per day, a high-bandwidth connection is needed. On the user side, a good 56k dial-up connection is considered adequate for downloading the GUI interface of the program, though an ISDN or cable modem high-speed connection is no doubt preferable. Aside from having an up-to-date computer, there is no further cost to the user. *Vista* is a Web-based program, so it can be viewed on any of the popular browsers. The more memory available in the work station, however, the better.

Complexity

As with other integrated course management products, there are so many tools in *WebCT Vista* that a major support effort is required to teach instructors how to use it. The *WebCT* company provides its own user training certificate programme. It is feasible that an institution might regard the costs of running such a complex training program as being be better spent on hiring Web designers and other specialists to create a customized in-house solution, which only adds new tools as the teachers and students require them.

Control

Institutions using *WebCT* are naturally responsible for their own security systems, including firewalls and encryption for password login and backup. User access can be managed through passwords assuring privacy, with varying degrees of access granted to different types of users: faculty, student, and administrator. Administrators can allow users to personalize their password, and instructors can control who has access and who regains access to, e.g., discussion groups and whiteboards. Once in the system, users can personalize the display screen, and instructors can set up courses in order to allow students to progress through the course at their pace and according to their abilities, as defined, for example, by self-assessment activities. Instructors can also make exceptions within a course to allow students to gain access to other areas of the course. User logins can be encrypted with Secure Sockets Layer (SSL) or Private Communications Technology (PCT). Users may be prompted to activate their own encryption certificates, and they may need to customize the settings of their personal firewall and anti-virus software in order for their systems to allow them to access the software. To deal with reliability issues in some browsers (e.g., downloads of .pdf files from secure webpages), institutions can choose to run *Vista* with hybrid encryption. This permits a normal login for regular content pages, and a high-security login for handling sensitive information. Browser pop-up blockers may need to be disabled when using *Vista's* discussion postings, quiz windows and download links.

Clarity

The *WebCT* display screens are clear and easily navigated. Earlier issues of font size have been overcome in the *Vista* version. Its homepage presents an overview of courses, notices, and calendar events, and gives access to messaging. Viewing video in *Windows Media Player* format, and or *PowerPoint 2002* presentations within the system can be problematic in the *Windows* version (University of Alberta, 2004).

Common Technical Framework

The *Vista* system currently requires *Oracle 9i RDBMS 9.2.0.3* (Standard or Enterprise) or *Oracle 9iFS CMSDK 9.0.3.2* (EduTools, 2004). Hardware requirements ultimately depend on how large the course site is allowed to grow. The suggested minimum hardware requirements for the database servers are 4x750 MHz or equivalent CPUs for a *Solaris* installation, or Dual PIII-1266 CPU for a *Windows 2000* server or *Linux* installation), 4 GB RAM, 4 GB disk space for *Oracle* software, and 3x18 GB SCSI drives for *Oracle* data. The system does not run on Apple-driven equipment. The minimal browser requirements are *Internet Explorer 5.x*, or *Netscape 6.2*. The vendor offers a number of support services on a pay-by-use basis. These include installation help, and administrative and monitoring tools.

Conclusions

WebCT Vista is a fully-featured, complex, and highly expensive learning management system requiring sophisticated institutional support. It has become tailored for large educational and training institutions with huge budgets, and the costs to an institution currently using the *Standard* or *Campus Edition* are likely to rise sharply by 2007, as *Vista* totally replaces these versions. Meanwhile, the technical problems of migrating from one system to the other appear to be considerable. The *WebCT* vendor is apparently making an effort to incorporate user feedback into the system, and such feedback may permit the development of "better practices." There is a

serious difficulty in obtaining access to the system in order to evaluate it as a casual observer, however. It proved difficult for the current student evaluation team to gain access to a trial version of the software, even after contacts with various company representatives over a 4-week period; and the team gained the impression that the vendor's communications are geared for marketing and sales at the institutional rather than the individual level. This is unfortunate, considering the system's massive cost, the need for student feedback in its selection, and the underlying principle of accessibility on which successful distance education is based. With so many comparable open source softwares emerging for course management, containing more varied features than *WebCT*, one has to wonder: how long can such costly proprietary products survive? In the case of *WebCT*, the short answer to this is - possibly two years. If, as has been suggested, the vendor will no longer support earlier versions than *Vista* after 2006, it will either gather massive upgrade payments from many of its clients in the interim, or will lose them altogether to the new OSS systems. So is this *WebCT*'s last attempt to make large amounts of money in the face of the growing OSS challenge, its "last hurrah?"

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N.B. Owing to the speed with which Web addresses are changed, the online references cited in this report may be outdated. They can be checked at the Athabasca University software evaluation website: http://cde.athabascau.ca/softeval/. Italicised product names in this report can be assumed to be registered trademarks.

JPB, Series Editor, Technical Evaluation Reports

Appendix

A Response to Technical Evaluation Report # 41
WebCT: a major shift of emphasis

WebCT Vista and *Campus Edition* are competitively priced in the market place. The various products and license offerings including *Campus Edition, Vista Core* and *Vista Enterprise* are specifically tailored to meet the needs of institutions of all sizes - not just "large educational and training institutions with huge budgets." *WebCT Standard Edition* has not been available since 2003. *WebCT Campus Edition* version 6.0 will be released in spring 2005, and will continue to meet the needs of our Campus Edition customers for years to come.

WebCT has been extremely flexible in developing pricing models to meet the needs of our customers. Pricing has remained flat for *Vista* since its release in 2002. Campus Edition increases have ranged from 7 percent - 10 percent per year, and *WebCT* offers customers the option of multi-year contracts that lock in prices over the contract period.

WebCT has ALWAYS incorporated the feedback of our customers into the product. There are several very active *WebCT* Advisory Boards who provide us with specifically this type of input, as well as a suggestion box at the website, and input through all of the *WebCT* representatives who regularly visit our customers' campuses.

WebCT is financially sound and strong and certainly not in the throes of its "last hurrah."

Dr. D. J. Volchuk
Director, WebCT User Community Relations
December, 13, 2004.

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