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## **Whither WebCT? Progress in Course Management System (CMS) Adoption at a Small Undergraduate University**

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### **Abstract**

Mount Allison University is a small (2250 enrollment) primarily undergraduate university located in Sackville, New Brunswick, Canada. Mount Allison's reputation is based on excellence in teaching and learning as well as development of the whole student. Our reputation has also been helped by ten years of top rankings in Maclean's Magazine and by producing an impressive number of Rhodes Scholars per capita versus other institutions in The Commonwealth.

At Mount Allison, we have seen mixed results in the adoption of technology in teaching, and in institutional attitudes on its use. Some faculty members and teaching staff have done high-level work in implementing technology-based courses while others have been recalcitrant. There has been, in particular, a markedly slow adoption in the use of WebCT, a leading higher education course management system (CMS), at our school despite a strong support network in technology, infrastructure, and faculty development staff.

This report will address the challenges we face in promoting WebCT adoption at our institution. Our institutional progress in instructional technology will be charted against a timeline, measurement data will be provided where applicable and our plans for the future will be detailed. We will also include industry data that we have used to help form our direction on initiatives to support teaching and learning with technology at a small liberal arts institution.

This report will be of interest to institutions that are planning either new CMS implementations or expansions of existing programmes. The report will be of particular interest to attendees sharing these goals from small liberal arts institutions facing their endemic resource and political issues.

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## ***Whither WebCT? Progress in Course Management System (CMS) Adoption at a Small Undergraduate University***

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*“Progress requires order where there is change and change where there is order” - Alfred North Whitehead*

### ***Introduction***

Mount Allison University has built its reputation on excellence in undergraduate teaching and learning, and our faculty members have won coveted awards for this (e.g., Association of Atlantic Universities (AAU) Distinguished Teacher Award, 3M Teaching Award). Despite institutional momentum in teaching excellence, our adoption of *institutional* instructional technology solutions to aid teaching has been slow, specifically in the use of WebCT, a leading course management system (CMS). This has resulted in positive, but mainly localized progress in instructional technology adoption, or “random acts of progress” (Graves 1998), on our campus versus the more desirable “systemic progress” (ibid.).

This report provides a timeline of our institutional progress in instructional technology adoption at our institution from the standpoint of promoting WebCT use on campus. This effort will be further examined from the standpoint of how a single department might take leadership roles in instructional technology adoption with a focus on implementing or expanding a course management system (CMS) use on campus.

### ***Random Acts of Progress – A Brief History***

Despite the fact that progress in instructional technology has been made at our institution, these efforts have been only loosely connected from an *institutional* standpoint. Instructional technology initiatives are often launched by our Computing Services Department. Many of these efforts are handled by a single full time employee, the “Educational Technology Consultant”, a generalist who works with faculty and teaching staff on the use of technology in their teaching, providing training sessions on web authoring and WebCT use, and performing application and system administration tasks for our WebCT server.

Other progress in instructional technology at Mount Allison has been:

- The introduction and standardization of WebCT as a CMS.
- The establishment of a multimedia lab with bookable workstations for faculty and students.
- Continued training opportunities for faculty and staff in web authoring and WebCT.
- The increase in number of basic mediated classrooms (e.g., networked PCs, data projectors, VCRs).
- The establishment of The Purdy Crawford Teaching Centre, a teaching and learning with technology (TLT) centre.

Each of these items has been positive for instructional technology adoption on campus yet they have not necessarily worked together in strategic ways to promote instructional technology adoption. Institutional progress has, therefore, been somewhat “random” as summarized by the following timeline figure and table:



**Instructional Technology Timeline - Mount Allison University, 1996-2004**

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## **Instructional Technology Milestones**

<b>Year</b>	
1996	<p data-bbox="743 268 1404 300"><b>Educational Technology Consultant Position Created</b></p> <ul data-bbox="792 338 1404 436" style="list-style-type: none"> <li data-bbox="792 338 1404 436">• Computing Services Department creates a position to handle increasing faculty requests for assistance in instructional technology support.</li> </ul> <p data-bbox="743 474 1404 506"><b>Centre for Learning Technologies (CLT) Established</b></p> <ul data-bbox="792 543 1404 667" style="list-style-type: none"> <li data-bbox="792 543 1404 667">• A joint university/industry centre with a complement of nine staff members established in order to handle internal and external projects involving learning technologies.</li> </ul>
1997	<p data-bbox="743 741 1206 772"><b>Campus Multimedia Lab Established</b></p> <ul data-bbox="792 810 1317 877" style="list-style-type: none"> <li data-bbox="792 810 1317 877">• Bookable multimedia workstations made available for faculty and staff.</li> </ul>
1998	<p data-bbox="743 951 1263 982"><b>WebCT Demonstration Version Available</b></p> <ul data-bbox="792 1020 1393 1108" style="list-style-type: none"> <li data-bbox="792 1020 1393 1108">• Demonstration instance of WebCT made available for evaluation by faculty and teaching staff.</li> </ul>
1999	<p data-bbox="743 1182 1312 1213"><b>WebCT 3.5 Standard Edition Brought Online</b></p> <ul data-bbox="792 1251 1369 1350" style="list-style-type: none"> <li data-bbox="792 1251 1369 1350">• Installed and hosted locally on campus. Basic training sessions offered on its use held for faculty and staff.</li> </ul> <p data-bbox="743 1388 1044 1419"><b>TLT Centre Established</b></p> <ul data-bbox="792 1457 1409 1556" style="list-style-type: none"> <li data-bbox="792 1457 1409 1556">• The Purdy Crawford Teaching Centre, a teaching and learning with technology (TLT) centre, is established.</li> </ul>
2000	<p data-bbox="743 1623 1182 1654"><b>Expansion of Mediated Classrooms</b></p> <ul data-bbox="792 1692 1385 1791" style="list-style-type: none"> <li data-bbox="792 1692 1385 1791">• Number of basic mediated classrooms (e.g., networked PCs, data projector, VCR) increases significantly.</li> </ul>

2001	<p><b>Centre for Learning Technologies Closes</b></p> <ul style="list-style-type: none"> <li>• Centre closes, as it is unable to self-sustain financially.</li> </ul> <p><b>Faculty-Student Collaborative Project Funding</b></p> <ul style="list-style-type: none"> <li>• TLT begins funding of faculty-student collaborative projects employing various instructional technologies.</li> </ul>
2002-2003	<p><b>The WebCT “Dead Zone”</b></p> <ul style="list-style-type: none"> <li>• Server upgrades not performed, version remains at 3.6 Standard Edition.</li> <li>• Little new activity in WebCT. <b>Number of courses with a WebCT component is low and not increasing</b>, despite continued availability of training opportunities.</li> </ul>
2003	<p><b>WebCT 4.1 Campus Edition Implemented</b></p> <ul style="list-style-type: none"> <li>• Decision made to upgrade WebCT to version 4.1 Campus Edition and to continue licensing for three years.</li> <li>• WebCT 4.1 rolled out with full upgrade, migration and communications plan. Training session on new features in WebCT 4.1 offered at 2003 Fall semester teaching workshops.</li> </ul>

Table 1: Instructional Technology Milestones at Mount Allison University (1996-2003)

Our road to *institutional* progress in instructional technology will be a long one, and will necessarily involve constituents and groups outside of our department including senior administration. However, taking leadership in certain IT initiatives can lay the groundwork for institutional change, as observed by John McCreadie in a recent EDUCAUSE article. McCreadie indicates that departments should move ahead on certain strategic endeavours “even if your parent organization has no strategic plan or process” for the endeavour (McCreadie 2000) with the strong caveat that the other groups “need to be included and involved in a planning process for information technology that supports the essential values of the parent organization” (ibid.). We followed this advice closely when deciding to improve our WebCT support programme as one aspect of approaching progress in institutional instructional technology adoption.

## ***Problem Analysis – “The WebCT Dead Zone”***

Even though WebCT use is only one aspect of our instructional technology strategy at Mount Allison, evidence of a plateau in its adoption rate provided a data point for a potential lull in growth of technology-enhanced teaching on our campus.

We began to analyze our institution's results in instructional technology adoption by considering the experiences of other schools of our type in North America. We found a close match with Hollins University, a small liberal arts school in Roanoke, VA. Hollins reported that the main obstacles they were facing in technology adoption by their faculty were “‘lack of a clear vision', 'lack of leadership', 'lack of a critical mass', 'lack of incentive', and 'lack of faculty participation'” (Spodark 2003) exactly paralleling our current situation re: WebCT. We realize that there are limitations to what one department can do to mitigate these problems, but we have aimed to solve some of these within our reach and influence those who can help us with any remaining barriers, specifically senior administrators.

Additionally, a recent study from the EDUCAUSE Centre for Applied Research (ECAR) on why faculty tend to use or not use a CMS was considered. The study found that the top motivators for faculty adopting CMS use were to “solve a pedagogical problem or challenge”, “training from a campus technology centre” and “recommendations from peers” (Morgan 2003). The least motivating factors were “departmental or administrative pressure/persuasion” and “requests from students” (ibid.). All survey respondents indicated “their use of course management systems would grow if the software were easier to use and if training – for themselves and their students – were made available” (ibid.). This set of findings, along with another EDUCAUSE report indicating that “faculty provided with instructional technologies use them extensively” (Wilson 2003), served to reinforce our belief that we should continue frequent training sessions and attempt to establish a greater critical mass for WebCT use.

## ***Escaping “The Dead Zone”***

During 2003, we have made renewed efforts to spark the use of technology in teaching by bolstering our support for WebCT. Our effort can be summarized as follows:

### **Implement Newest Version of WebCT (WebCT 4.1 Campus Edition)**

Faculty dissatisfaction was noted during the use of the WebCT 3.6 Standard Edition product. For example, our Computer Science faculty refused to use the product as WebCT 3.6 would not support filenames that contained spaces or that were so-called “long filenames”. Many faculty members complained about the “unnecessarily complicated interface”, with the common (and quite justifiable) complaint: “Why does it take 8 clicks to get my syllabus online?”

The WebCT 4.1 Campus Edition product was chosen as it resolved these issues and provided new elements of support that are strategic to our campus from an IT perspective (for example, out-of-the-box integration with our LDAP authentication system, future integration possibilities with our Datatel student information system (SIS)). The product has also been subjected to a rigorous user interface (UI) redesign, providing better functionality to both the experienced and novice user. Authoring “wizards” have been added to help new users with common WebCT tasks and an embedded HTML editor allows faster content updates directly on the server.

In addition, we hoped to attract more users from our pure science departments with the functionality of the embedded WebCT equation editor available for designers and students. The equation editor also allows equations to be exported in a MathML format for use in other scientific applications.

### **Adopt New Approaches to Faculty Development**

In higher education technology management, the support of instructional technology for faculty and teaching staff is generally referred to as “faculty development”. Faculty development re: technology is a difficult service to offer via a computing services department as it is not, by definition, a historical competency of a computing services department. Yet this is where the responsibility often lies in higher education and it is one of increasing concern to IT Directors.

The issue of faculty development from an IT perspective is a growth issue in higher education as evidenced by the “Fourth Annual EDUCAUSE Survey” identifying current IT issues (Crawford et. al. 2003). Their survey found that faculty development from an IT perspective in 2003 has grown since 2002 in its “potential to become more significant” and from a CMS support point of view of “expenditure of most institutional resources” (most likely due to increases in licensing fees from WebCT and Blackboard). Also, relating to CMS support, the Campus Computing Project led by Kenneth Green has reported that “institutions increasingly identify CMSes as 'very important' in their institutional IT planning”, “approximately 75% of institutions have established a 'single product' standard for CMSes” and “approximately one-fifth of all college courses now use course management tools.” The same survey reports that “assisting faculty integrate technology into instruction” is the “single most important IT issue confronting their campuses.” (The Campus Computing Project, 2001).

We have adopted new approaches to faculty development based on the following tenets:

#### **Attempt to Win One Faculty Member at a Time**

At a school of our size, we will approach faculty development in a one-on-one or small cohort training scenario (cohorts of six or less for technology sessions). We have 140 full and part-time teachers, and we believe that this is a reasonable goal given the current critical mass of instructional technology use.

#### **Syllabus-based Approach to Introducing WebCT**

Past WebCT training sessions covered too many topics for one session. By focusing on small representative WebCT tasks (for example, using the “syllabus tool”) we can give faculty members a positive starting point with a useful functional element for students from which to build from.

#### **Develop WebCT Courses as Technology-Enhanced, not Standalone, Materials**

It is important that we encourage WebCT use as a complement, rather than a replacement, to classroom-based teaching in order to fit our institutional culture and protect our reputation in teaching and learning.



## **“Fill Potholes” Before “Building Skyscrapers”**

Some training sessions in WebCT use have demonstrated exemplary WebCT courses developed by faculty members. While motivating to some session attendees, this approach can be intimidating to newer users of the system or those with less background in computer use. Our approach will be to cast the net wider to focus on increasing a minimum standard (“road repair”) while creating exemplary courses (“skyscrapers”) where possible.

## **Improve Training Materials, Training Approach, and Supporting Materials**

Past training sessions attempted to cover too many aspects of the WebCT system. Also, training materials were not made available to attendees as documents, either in electronic or print formats.

We created new materials and changed our approach to focus on representative WebCT tasks (e.g. develop a WebCT syllabus) to address these problems. We have also developed these materials in such a way as to allow users to accomplish self-directed learning, a common adult learning style.

## **Reduce Length of Training Sessions**

Training sessions in the past were half-day sessions. Individual feedback indicated that this is too long, especially at critical junctures in the semester (start-of-term, end-of-term). We have reduced sessions to no more than 1.5h in length and consider the possibility of lunch-and-learn sessions.

## **Provide Excellence in Campus-based WebCT Support**

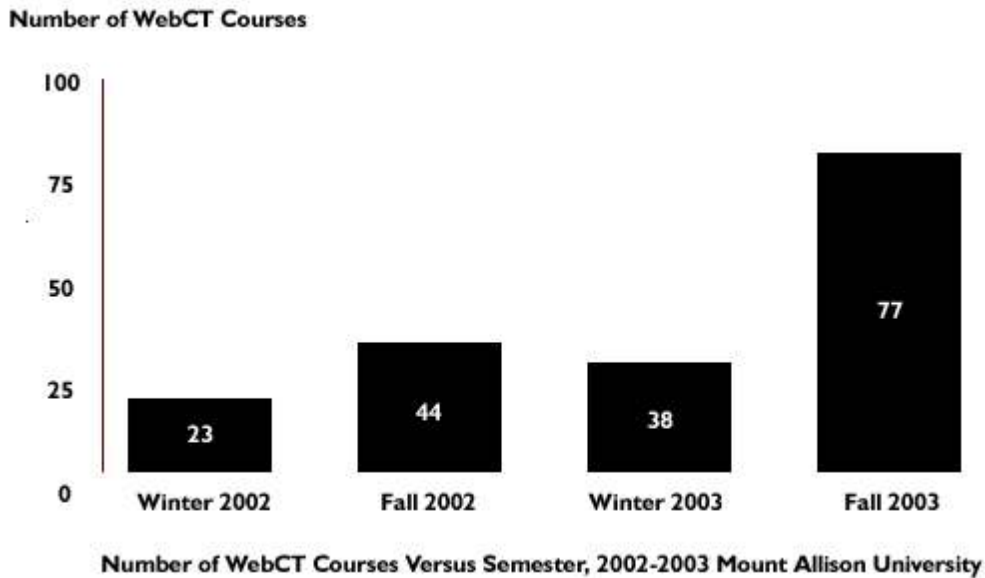
We have taken the issue of WebCT support very seriously, minimizing procedural problems in WebCT for course and enrollment management. We have set a goal of 24h to solve ANY WebCT issue that may be presented to our helpdesk and we have generally resolved WebCT issues during business hours in less than 2h and outside of business hours in less than 8h based on anecdotal evidence.

## ***Measurement***

It is our belief that our efforts in instructional technology support cannot be assessed without some degree of measurement. We have either implemented or plan to implement the measurement of the following basic aspects of our instructional technology support at Mount Allison.

## **Prevalence of WebCT Use**

We will measure departmental adoption of WebCT and approach those departments that are underrepresented on the server. We have already seen very encouraging results from our 2003 initiatives, as the number of WebCT courses being used has **increased 75% from the same point last year.**



*Figure 2: Number of WebCT Courses Versus Semester, 2002-2003 Mount Allison University*

### **Training Session Efficacy**

We have started soliciting a basic feedback from session attendees in order to help us tailor our approaches and training offerings to faculty.

### **Needs Analysis – Faculty Development**

We have been rolling out technical and training initiatives in instructional technology without formally asking faculty and teaching staff what it is that they would find most useful. We will attempt to perform this assessment with the assistance of our campus TLT centre.

### **Issue Resolution Times and Efficacy**

In future, as we develop more robust systems for tracking helpdesk issues (“tickets”), we will measure average times to resolution of WebCT issues and ensure that issues that are reported as being resolved “stay resolved”.

### ***Future Plans***

We intend to stay our present course with the following additions:

### **Continued Measurement**

We will need to continue our measurement of our WebCT deployment in order to proactively ensure continued financial support for the CMS and related initiatives.

## **Approach Incoming Faculty and Teaching Staff**

With incoming faculty and teaching staff comes a new opportunity to become involved with their new faculty orientation. We have added information to the “faculty handbook” on our support services re: instructional technology and intend to target new staff in such a way that they will wish to come to use our support services in instructional technology.

## **Blended Training Sessions**

We currently offer separate training sessions on WebCT and Dreamweaver and they are conducted by separate individuals. This creates an interesting problem where a faculty member could learn how to “create great web content” as well as “how to use WebCT” but not necessarily “how to create great web content and then put it in WebCT”. We hope to offer blended training sessions to encourage a systems approach to web content creation and publishing to our CMS.

## **Develop and Distribute Service-Level Agreement (SLA) for CMS Support**

It is unclear to faculty, staff, and students how we support WebCT and what the turnaround times are for representative tasks (e.g. course shell creation, account creation). Since our turnaround times are excellent, it is wise for us to advertise this through a basic service-level agreement (SLA).

## **Faculty Incentive**

There are currently no clearly defined incentives for tenure-track faculty to engage in use of or development of technology-enhanced learning materials. As a result, busy faculty members could be unwilling to sacrifice tenure-track activity (e.g. research, publications) to work on technology integration in their teaching. We are working with our administration to modify this.

## ***Conclusion***

As higher education technology professionals in small institutions, we are often placed in positions of effecting institutional change in environments of complicated politics and financial pressures. Although occasionally frustrating, it is perhaps better to view this as a positive aspect of life within the small institution as, given the right circumstances, we may be able to more readily effect institutional change than in larger institutions. By looking beyond our assigned roles, we can occasionally provide the leadership required to ensure that key initiatives happen and one such example is the area of faculty development.

Faculty development provides an interesting and novel challenge for us as technology professionals. This is because the requirements for success do not necessarily match our primary strengths that may have originally pushed us into the technical domain. The largest issues governing success or failure are cultural in nature. In a competition between “technical specifications” versus your institution's “faculty culture”, the “faculty culture” will always win, especially in the small institution. Victories realized in faculty development are often small ones. However, there is nothing wrong with the “chip-away” strategy of faculty development if your institution's business plan and timeline supports this.

Finally, we must think strategically in order to make institutional progress happen with limited resources and with limited influence in the institution. To influence larger initiatives, you need buy-in from senior administration. To obtain this you will have to understand what motivates these individuals and you must understand as much as possible about the institutions' goals and challenges

before presenting your ideas. Your message must be clear and devoid of “techno-speak”. The selected use of industry data and institutional data may be helpful in this regard, and *measurement* may just provide the momentum you need to succeed.

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