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A Computer-Assisted Legal Research and Writing Course

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A Computer-Assisted Legal
Research and Writing Course

In this paper, the authors describe and assess their experience with the use of WebCT (a computer program that facilitates the creation and management of courses using the Internet) in the Dalhousie Legal Research and Writing Program. They explain what WebCT is, why they decided to use it, and how they used it. They assess its inaugural use and conclude that, despite some difficulties, the pilot project was a success and WebCT can be a useful tool for other teachers of legal research and writing.

Les auteurs décrivent et évaluent leur expérience avec l'usage du WebCT (un logiciel qui facilite la création et la gestion de cours en utilisant l'Internet) dans le programme de rédaction et recherche juridique de la Faculté de droit de l'Université Dalhousie. Ils expliquent ce qu'est WebCT, pourquoi ils ont choisi de l'utiliser, et comment ils l'ont utilisé. Ils évaluent son usage inaugural et concluent que malgré quelques difficultés, le projet pilote était un succès et que WebCT pourrait servir comme un outil de valeur pour d'autres enseignants de rédaction et de recherche juridique.

Introduction

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Introduction

Dalhousie Law School was the first law school in Canada to offer a separate Legal Research and Writing (LRW) course as part of its core curriculum. Since its adoption at Dalhousie in the late 1950s, other law schools in the country have developed similar courses. Typically, these courses require students to perform library research and citation exercises, brief cases, and write memoranda that address legal issues arising from fictional scenarios.

Recently, Dalhousie professors Jocelyn Downie and Michael Deturbide decided to pilot another innovation in the teaching of LRW, i.e., to use WebCT¹ to deliver the LRW course. WebCT has been described as “a tool that facilitates the creation of sophisticated World Wide Web-based educational courses.”² While Web CT is being used extensively at universities across Canada and the United States,³ it has yet to be used in an LRW course.⁴

Through this paper, we seek to explain the rationale for the use of WebCT in the LRW course at Dalhousie. We also seek to critically review our use of WebCT. We explain what WebCT is, why we decided to use it, how we used it, and we assess its inaugural use. We conclude that, despite some difficulties, the pilot project was a success and WebCT can be a useful tool for teachers of LRW. We do all of this in the belief that others who teach LRW may benefit from our experience and may consider adopting WebCT (or a similar computer-based tool)⁵ in their LRW programs.

1. [Http://homebrew.cs.ubc.ca/webct/webct.html](http://homebrew.cs.ubc.ca/webct/webct.html).

2. Murray Goldberg, “Communication and Collaboration Tools in WebCT,” Proceedings of the Conference Enabling Network-Based Learning, May 28-30, 1997, Espoo, Finland. [Http://homebrew.cs.ubc.ca/webct/papers/enable/paper.html](http://homebrew.cs.ubc.ca/webct/papers/enable/paper.html).

3. WebCT has sold over 900 licenses in the last 14 months in about 30 countries. Licenses range in size from 1 to 1000 courses. Personal Communication from Murray Goldberg to Jocelyn Downie (18 November 1998).

4. 1998 Survey of all Canadian law school librarians conducted by Ann Morrison, Chief Librarian, Dalhousie University, Faculty of Law.

5. Other programs are available which have been similarly developed to create and facilitate use of on-line courses. Some of these are *Blackboard Course Info* [http://www.blackboard.net/ps_courseinfo.htm], *Web Course in a Box* [<http://www.madduck.com/wcinfo/wcb.html>], *WBT Systems* [<http://www.wbtsystems.com/>], *TopClass*, *ToolBook II* and *Learning Space* [<http://www.umanitoba.ca/ip/tools/courseware/tools.html>]. A number of comparative studies have been done on the various course site management systems and the Instructional Technology Program’s Faculty Internet Service Center at UC Berkeley review concluded that “most reviewers gave Web CT the highest marks for the quality of the company’s support services and for Web CT’s extensive range of features. Web CT was frequently shown to be a high quality product.” For further information on some of these studies see, [<http://www.umanitoba.ca/ip/tools/courseware/tools.html>] and <http://socrates.berkeley.edu:7521/...bct/NewToolsToHelpInstructors.html>.

I. *What is WebCT?*

WebCT is a computer program developed in the Department of Computer Science at the University of British Columbia. WebCT can be accessed through a web browser such as Netscape. There is no charge to download, install or create courses. However, there is a license fee when the courses are made available to the students. The level of technical expertise required of either the instructor developing the course or the students is minimal.⁶

WebCT facilitates the creation of courses using the Internet. It does this in three ways: 1) it guides the instructor through the creation and development of web-based aspects of the course; 2) it provides educational tools to facilitate learning and communication; and 3) it provides the instructor with administrative tools to manage the course. WebCT comes equipped with various features such as a bulletin board for posting notices to students, a realtime chat facility, a web-based email system, a course site indexing system, timed on-line quizzes, and password protection for the course site's web pages.⁷ The details of the specific tools used in the LRW course will be presented in the body of this article.

We chose to use WebCT for two reasons. First, with respect to legal education in general, we felt that law students needed more experience with computers and increased exposure to the Internet. Although Dalhousie Law School had provided instruction on searching commercial computer databases for several years, and continues to do so as part of the first year LRW course, the explosive growth of the Internet has made available many more resources for the legal researcher. It was felt that students needed to be made aware of and introduced to these essential Internet research resources at an early stage in their careers. WebCT was expected to contribute to achieving this goal as access to it was Internet-based.⁸ Second, with respect to LRW in particular, we thought that the use of WebCT could alleviate some of the problems associated with the traditional approach taken to the evaluation of legal citation skills.

When the course had been taught in the past, the legal citation component of LRW consisted of ten question sets drawn up from of a pool of 150 questions and distributed to ten groups of fifteen students each.

6. <http://homebrew.cs.ubc.ca/webct/intro/new.html>.

7. <http://homebrew.cs.ubc.ca/webct/intro/stud-tools.html>;

<http://socrates.berkeley.edu:7521/~bct/NewToolsToHelpInstructors.html>. For further information on papers related to WebCT, largely by Murray Goldberg, the faculty member in charge of the project to develop WebCT see, <http://homebrew.cs.ubc.ca/webct/papers/>.

8. A survey of the 1997-1998 first year class indicated that 70% of the student body had access to a computer and the Internet independent of the Faculty and University computing services. The Dalhousie Law School also maintains a computer lab with thirty 586 computers.

Students were required to prepare approximately forty citations for examples drawn from legislation, case law, and the legal literature. After receiving information on retrieving legal materials from the library collection, students prepared the citations, in either type- or hand-written form, in accordance with such recognized legal citation manuals as the *Canadian Uniform Guide to Legal Citation*.⁹ These assignments were then graded by one of the fifteen second or third year law student markers. For example, if a student were given a case name, he or she would be required to find the case in the library and provide the correct citation for that case. The marker would evaluate the accuracy and style of the citation by comparing its form with the form dictated by the citation manual. All subsequent assignments in the course were graded by faculty.

This process had at least four problems: 1) there was potential for inconsistency across different markers; 2) there was potential for human error in grading; 3) there was potential for collusion among students assigned the same question sets; and 4) grading the assignments consumed considerable human resources leaving fewer resources for teaching LRW skills.

We turned to WebCT in the hope that it would enable us to address these problems. First, we thought that the computer would check the students' submitted answers against a set of acceptable answers, thereby guaranteeing consistency in grading. Second, since a computer would be checking the citations, the potential for human error in grading seemed likely to be eliminated. Third, the computer would randomly generate question sets for each student. This, we thought, would decrease the potential for collusion as each student would be given a unique assignment.¹⁰ Finally, the computer would grade the assignments, thereby greatly reducing the consumption of human resources for grading and facilitating the reallocation of human resources within the LRW program.

II. Using WebCT

We met with a representative of Academic Computing Services at Dalhousie and were told about the different WebCT tools that could be used to develop a computer-assisted LRW course. We then experimented with a variety of these tools, finally settling on a subset of tools that we would use for the course. The tools we used are described below and are

9. McGill Law Journal, *Canadian Guide to Uniform Legal Citation*, 4th ed. (Toronto: Carswell, 1998).

10. Any given question might appear on more than one assignment, but no two assignments were likely to be identical.

discussed under the following headings: course information tools; communication tools; and evaluation tools.

First a website for the course was created. Basic information about the LRW Course was provided to students on this website. For example, the course syllabus, the class schedule, tutorial times, assignment deadlines, and reading requirements were posted on the website. WebCT provided templates which allowed for the inputting of such information on a pre-formatted screen.

One important communication tool was the course bulletin board, which allowed for the passing of information to students. Faculty were able to post bulletins to students and students could post bulletins of their own. This feature gave faculty the ability to communicate directly and efficiently with all students in the class. For example, if an error was discovered in a particular question on an assignment, students were notified of the error (and the correction) through the bulletin board.

Students were also able to e-mail instructors directly from the website. Thus, they could continue to work on the website without having to shift over to their university e-mail accounts.

Links to other websites were also available through the course website for students who wanted to find additional LRW information on the Internet. Three links were created for the LRW course: 1) the Dalhousie Law School homepage,¹¹ which contains links to federal and provincial statutes and regulations; 2) Queen's University Legal Research and Writing homepage,¹² which contains detailed educational material on legal citation, legal research and legal writing techniques and; 3) an LRW instructor's homepage through Columbia University,¹³ which contains information about American legal research and writing.

As previously mentioned, the most important reason for piloting WebCT for LRW was the need for consistent, accurate, and inexpensive evaluation of legal citation skills. WebCT provided the tools to generate, evaluate, and administer the citation assignment. Over the course of a summer, a database of questions and answers was generated. Fifteen categories of questions were created under such headings as "federal statutes," "case law," and "legal literature." For each category, ten questions were entered in one of two formats (multiple choice or short

11. Located at <http://www.dal.ca/law/weldonweb/index.html>.

12. Located at <http://qsilver.queensu.ca/law/lrm9899/research.html>.

13. The original link was to Michael Geist's LRW homepage located at <http://www.columbia.edu/~mag76>. However, this homepage is now located at <http://aix1.uottawa.ca/~geist/> and the American legal research and writing materials are now located at <http://lawschool.mtcibs.com/weblec/lrw/index.html>.

answer).¹⁴ Acceptable answers for all ten questions were also input. Two examples of questions and answers are provided below:

Example 1: Multiple Choice¹⁵

In the case of *R.* v. *Smith*¹ the court held that the defendant had been properly convicted in the lower court. They went on to hold that the sentence handed down was excessive and that it ought to be reduced.² Footnote 1 reads as follows: *R.* v. *Smith* (1990), 131 N.S.R. 21 (S.C.). Which citation for footnote 2 is correct?

1. *R.* v. *Smith* (1990), 131 N.S.R. 21 (S.C.).
2. *Smith*, *supra* note 1.
3. *Ibid.*
4. *Infra* note 1.

Example 2: Short Answer

Q: Give the correct citation for the *Gas Utilities Act*, printed in Chapter 182 of the 1989 Revised Statutes of Nova Scotia.

A: *The Gas Utilities Act*, R.S.N.S. 1989, c. 182.

The Gas Utilities Act, R.S.N.S. 1989, c.182.

The Gas Utilities Act, R.S.N.S. 1989, c. 182.

The Gas Utilities Act, R.S.N.S. 1989, c.182.¹⁶

In the Fall term, before the assignments became available to them on-line, students were given large-group classroom instruction on legal research and citation. The class was then divided into small groups of 10-15 students, and given two tutorials by upper year law students and graduate students. The first tutorial focused on researching and citing federal and provincial legislation and regulations and the second focused on researching and citing Canadian and English case law. Students were advised to consult the *Canadian Uniform Guide to Legal Citation*,¹⁷ their tutors, and the course instructors for further guidance with respect to citation. Students were also advised to log onto the course site and take a practice quiz. This enabled them to become familiar with the format and

14. Other formats were also available (paragraph, true/false, and matching), but they did not seem appropriate for our purposes.

15. In this example, readers will see asterisks where they would expect to see italics. Unfortunately, WebCT does not have the capacity to recognize italics or underlining. Asterisks (*) were therefore used at the beginning and end of a string of words that required underlining or italics.

16. Because spacing differences are permitted when citing legal materials and because commas and other punctuation marks could appear either before or after the asterisks indicating italics or underlining, we usually had to allow for several possible answers. For example, this question admitted of four answers, any one of which would be graded as correct by the computer.

17. *Supra* note 5.

process of a computer-generated and computer-graded assignment prior to the taking of the assignment for a grade.

On the official opening date, the assignments became available to students (prior to that date, students were, in effect, locked out of the assignment area of the website). Students logged onto the website at their own convenience and prompted the computer to generate a question set. Students could then either input the answers directly on the computer or download the question sets and work on a hard copy before inputting the answers. Also, students could save answers to their question sets, leave the website, and turn off the computer without losing any of the entered information. When students were ready to submit their answers for grading, they selected the "Save/Finish" button on the WebCT screen, and their answers were graded and the results were reported to them immediately by the computer. Their grades were also recorded immediately in the central administration area of the website. On the official closing date, access to the question sets was blocked. At that point, students could access feedback on their assignments in the form of a copy of their completed question sets along with correct answers to the questions they had been assigned.

The remainder of the assignments in the LRW program consisted of a search exercise, a case brief, and a legal memorandum. Although these assignments were not graded by the computer, they were generated through WebCT.

For the search exercise, the computer used the previously-populated database of questions to generate a list of legal materials for each student to find (for example, cases, statutes, regulations, and articles). Students then were required to find all of these materials, photocopy the first page of each, and submit the photocopied pages to the markers. For the case brief and the legal memorandum, the computer randomly assigned one question from a set of twenty to each student. The students then wrote case briefs and memoranda and submitted them for manual grading (as they had prior to the use of WebCT).

The student tracking feature of WebCT allowed us to monitor the number of viewers of a particular section of the website and thereby to determine how much students were using each on-line resource. For example, we could see how many students viewed the course description or downloaded the class schedule. WebCT also facilitated the tracking of student progress. Having entered a class list, we had the ability to monitor which students had started and/or finished each assignment, the dates of a student's first and last access of particular sections of the website, and the frequency of a student's access to particular sections of the website. WebCT also reported students' raw scores on the citation exercise and

gave us access to every student's question set as well as the answers submitted.

III. *Assessment of the Use of WebCT*

1. *Students' Assessment*

In March 1998 questionnaires were distributed to the first year class at Dalhousie Law School seeking feedback on the use of WebCT within the LRW course. Questions covered a variety of issues ranging from students' previous experience on the Internet to the ease with which information could be accessed through the website. Two of the most significant questions focused on the evaluation features of WebCT.

The first of these questions asked students how well they felt their grades reflected their knowledge and skills in legal citation. From the 150 students in the first year class, 104 responses were received. The results with regard to this question were as follows:

Very Reflective:	21	20.2%
Moderately Reflective:	43	41.3%
Moderately Unreflective:	16	15.4%
Very Unreflective:	12	11.5%
No Opinion:	9	8.7%
No response:	3	2.9%
Total:	104	100%

These results indicate that over 60% of the students who responded felt that the grade they received was an accurate reflection of their ability to properly cite legal materials.

The second of these questions asked students whether they would recommend that Dalhousie Law School use WebCT to evaluate students in the future. The results were as follows:

Yes:	64	61.5%
No:	23	22.1%
No Opinion:	14	13.5%
No Response:	3	2.9%
Total:	104	100%

Over 60% of the students who responded felt that Dalhousie Law School should continue to employ WebCT to evaluate students' legal citation skills.

Students were also given an opportunity to provide unstructured feedback on the use of WebCT in the LRW course. Although we received a number of positive comments, significant criticisms were also offered.

These criticisms fall into two categories: those related to WebCT itself; and those related to our use of WebCT.

Most of the concerns reported related to the physical limitations inherent in the system design. For example, as mentioned earlier, the program provided no means by which to italicize or underline words. The use of asterisks was viewed as a less than ideal solution. Many students also pointed out that the boxes into which answers were input were too small. That is, because of the box length (which was approximately two inches long and half an inch high), students were unable to view their citation at a glance once it was entered; only part of a citation could be viewed at once and students had to move the cursor from left to right through to the end of the citation to check it. Many students felt that they would have spotted errors if they had been able to view the entire citation at a glance.

Some students also commented on the inability of WebCT to indicate clearly the presence of spaces in an answer. That is, it was not easy to see whether one or two spaces had been entered. Students were graded on the basis of correct spacing, yet it was difficult for them to detect visually some typographical errors involving spaces.

Perhaps more of a suggestion than a criticism, many students urged us to program the Bulletin Board to come up as a default page each time a student logged onto the website.

We asked the WebCT authors to revise the program such that it could accommodate italics and underlining; find a way to indicate the presence of spaces; give us the ability to lengthen the answer box; and set the Bulletin Board as the default starting point. The response to our requests has been partly positive. The answer box has been redesigned to allow the students to see the full citation all at once. However, the problems relating to underlining, italics, and spacing persist.

Finally, many students complained that the computer-based evaluation process was too rigid; it was unforgiving of typographical and similar "small" errors, and no partial marks were awarded. Although WebCT does provide an option for awarding partial marks to students, we felt that this type of grading defeated one of the purposes of the exercise. For this course, we viewed the rigidity of evaluation through the WebCT program as a strength rather than a weakness; it compels meticulousness which is necessary for legal research and writing.

A number of students complained about errors in the central database of questions and answers. One of the goals for introducing WebCT into the LRW Course had been to eliminate human error (i.e., marking an answer correct when it was actually incorrect or *vice versa*). Unfortunately, this goal was not entirely realized. When the central database was

populated, a number of errors were made. For example, one possible answer in a set of possible answers was omitted or a typographical error was made when entering a possible answer. As a result of these initial inputting errors, some students were given no marks for correct answers. Fortunately, however, it was possible to correct these errors and to ensure that no students were ultimately unfairly penalized. That is, the answers stored in the central database were corrected as soon as the errors came to our attention and all assignments were automatically regraded.

2. Faculty and Student Administrator Assessment

At this point we can assess how well our use of WebCT met our goals and expectations. To reiterate, we turned to WebCT to guarantee consistency in grading, to remove the potential for human error in grading, to decrease the potential for collusion, and to reduce the consumption of human resources for grading. We were, in large part but not entirely, successful.

The first and the third objectives were clearly met. The grading was certainly consistent (all answers were held up to only one standard) and the potential for collusion was greatly reduced if not eliminated.

The second objective was also met, albeit less cleanly. The potential for human error in grading was removed. Unfortunately, as already explained, through the use of the computer, we eliminated one form of human error (missing student mistakes) but introduced another (central database entry mistakes). Fortunately, however, the latter was far easier to detect, correct, and prevent than the former and we therefore realized the more modest goal of reducing (as opposed to eliminating) human error.

The fourth objective was also met—the human resources consumed for grading the citation assignment were greatly reduced although not eliminated. The human resources used for grading were greatly reduced because the computer (rather than faculty members or student markers) graded the assignment. They were not eliminated, however, because human resources were used to establish and administer the computer-assisted grading. A student was hired during the summer to populate the database with questions and answers and a student administrator was hired on a very limited part-time basis to manage the system and deal with problems as they arose during the year. In the end, for the first year of implementation, the total resources used for the citation assignment were reduced and, in future years, now that the database has been populated and many of the human errors have been corrected, human resource use for the citation assignment will be further reduced.

It should be noted here that the introduction of WebCT was not intended or designed to reduce the total human resources dedicated to

LRW at Dalhousie. Rather, we hoped to reduce the resources needed for grading the citation assignment and reallocate those resources to increased tutoring for students. We also hoped to reallocate the resources of student markers from the citation assignment to the later assignments and thus reduce the use of faculty (who were traditionally charged with grading these assignments). These interrelated resource allocation goals were realized.

In the end, there is no denying that there were glitches in the implementation of our computer-assisted legal research and writing course. In particular, the human errors in populating the database and the program-based problems caused frustration (albeit no irreversible harm) for the students. However, we believe that many of the glitches have largely been resolved and fewer errors will occur as we become more familiar with WebCT's capabilities and limitations.

WebCT is a fair, effective, and efficient tool for LRW instruction and grading of significant portions of a LRW course. We will continue to use it at Dalhousie and we encourage others to adopt it for their LRW programs.