Two Years into WebCT:  
Perceptions of AUC Students

by

S. Al-Ayyat¹  
M. Bali²  
A. Ellozy²  
M. El-Koshairy¹  
M. Mansour¹  
W. Pappas²

¹ Academic Computing Services (ACS), The American University in Cairo (AUC)  
² Center for Learning and Teaching (CLT), The American University in Cairo (AUC)
# Table of Contents

Executive Summary .................................................................................................................. 3
Introduction ............................................................................................................................. 4
Methodology ............................................................................................................................ 5
Results ....................................................................................................................................... 6
  - Students find WebCT convenient to use ........................................................................ 6
  - Students want WebCT in future classes ....................................................................... 7
  - Students praise WebCT but… ......................................................................................... 8
  - Students would like to see more WebCT tools used but many faculty are not using them .......................................................................................................................... 10
  - Effect on learning? Students are neutral .................................................................. 12
Discussion ................................................................................................................................ 13
  - Learning and WebCT ................................................................................................. 13
  - Improving usability of WebCT for students ......................................................... 14
Recommendations .................................................................................................................... 14
Acknowledgments ...................................................................................................................... 14
References .................................................................................................................................. 14
Appendix One: Survey Questionnaire ................................................................................. 16
Appendix Two: Frequently Occurring Comments ............................................................ 19
Appendix Three: ACS’ Suggestions for Avoiding/Solving Technical Issues ...................... 20
Executive Summary

At the end of the 2003 spring semester, two years after implementing WebCT at AUC, a survey was conducted to a) evaluate the general disposition of the students towards WebCT, b) evaluate the extent to which WebCT tools are used and c) assess students’ perception of WebCT’s effect on their learning. An online survey addressing the objectives of this study was prepared jointly by ACS and CLT, and was given to the students through their WebCT accounts. An unexpected 1221 students responded.

The results showed that 68% of the students would like to see WebCT used in their future courses, and that the most frequently written comment was a call for instructors to use it more often.

Almost all WebCT tools were popular with a majority (74-93%) of students when instructors used them, but four of these tools, including lecture notes and the discussion tool, were not as widely used as the others. This may partly explain why, despite the strong overall disposition of students towards WebCT, a majority were neutral when asked if WebCT contributed to their learning.
**Introduction**

The use of Learning Management Systems (LMS) is becoming widespread in higher education around the world. LMSs, such as WebCT and Blackboard, contain tools that help faculty administer courses (such as grades tracking), manage class material (such as uploading lecture notes and submitting assignments online), and communicate with students (email, asynchronous discussions and synchronous chat tools).

LMSs can also be used to conduct a) fully online courses with no face-to-face component, b) blended/hybrid courses that have both online and face-to-face components, and c) web-facilitated courses that are essentially delivered face-to-face, but have a marginal online component (Allen & Seaman, 2003).

The American University in Cairo (AUC) started using WebCT in fall 2001. Faculty get training on how to use it either through Academic Computing Services (ACS), who also offer the technical support for WebCT, or through one-on-one assistance from the Center for Learning and Teaching’s (CLT) Student Technology Assistant (STA) Program. To date, WebCT is mostly used for web-facilitation and rarely in hybrid mode at AUC.

The objectives of this study were three-fold: a) to evaluate the general disposition of the students towards WebCT, b) to evaluate the extent to which WebCT tools are used and c) to assess students’ perception of WebCT’s effect on their learning.
Methodology

An online survey addressing the objectives of this study was prepared jointly by ACS and CLT, and was presented to students through their WebCT accounts.

A representative sample of 400 students was needed to ensure a 3% margin of error. The number of students chosen from each department/unit was proportional to the enrollment in the department/unit (see Table 1). Assuming a 50% response rate, 800 students were targeted. To this end, faculty support was sought in order to encourage student participation in the survey. This may partly explain the unexpected large number (1221) of responses received.

<table>
<thead>
<tr>
<th>Major</th>
<th>Needed</th>
<th>Targeted</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theatre/Art</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>English &amp; Comparative Literature</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Philosophy</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>History</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Accounting</td>
<td>10</td>
<td>20</td>
<td>49</td>
</tr>
<tr>
<td>Business Administration</td>
<td>25</td>
<td>50</td>
<td>170</td>
</tr>
<tr>
<td>Economics</td>
<td>25</td>
<td>50</td>
<td>74</td>
</tr>
<tr>
<td>Journalism &amp; Mass Communication</td>
<td>30</td>
<td>60</td>
<td>141</td>
</tr>
<tr>
<td>Political Science</td>
<td>35</td>
<td>70</td>
<td>77</td>
</tr>
<tr>
<td>Sociology, Anthropology, Psychology &amp; Egyptology</td>
<td>20</td>
<td>40</td>
<td>57</td>
</tr>
<tr>
<td>Science</td>
<td>20</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>Computer Science</td>
<td>25</td>
<td>50</td>
<td>107</td>
</tr>
<tr>
<td>Construction Engineering</td>
<td>15</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>25</td>
<td>50</td>
<td>21</td>
</tr>
<tr>
<td>Electronics Engineering</td>
<td>0</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Engineering</td>
<td>30</td>
<td>60</td>
<td>137</td>
</tr>
<tr>
<td>English Language Institute/ Writing Program</td>
<td>140</td>
<td>280</td>
<td>199</td>
</tr>
<tr>
<td>TEFL/TAFL(^1)</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
<td>90</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>400</strong></td>
<td><strong>800</strong></td>
<td><strong>1221</strong></td>
</tr>
</tbody>
</table>

\(^1\) TEFL/TAFL: Teaching English as a Foreign Language / Teaching Arabic as a Foreign Language Programs
Results

The survey consisted of twenty-one multiple choice questions and a space for comments. A listing of all the questions can be found in Appendix One.

- Students find WebCT convenient to use

Figure 1: Students Had Sufficient Resources to Access WebCT

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>35%</td>
</tr>
<tr>
<td>Agree</td>
<td>29%</td>
</tr>
<tr>
<td>Neutral</td>
<td>20%</td>
</tr>
<tr>
<td>Disagree</td>
<td>2%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1%</td>
</tr>
<tr>
<td>No Response</td>
<td>13%</td>
</tr>
<tr>
<td>N = 1221</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: How long did it take before students felt comfortable using WebCT?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few times</td>
<td>73%</td>
</tr>
<tr>
<td>Ample Time</td>
<td>11%</td>
</tr>
<tr>
<td>Still uncomfortable</td>
<td>6%</td>
</tr>
<tr>
<td>No Response</td>
<td>10%</td>
</tr>
<tr>
<td>N = 1221</td>
<td></td>
</tr>
</tbody>
</table>
Students want WebCT in future classes

In addition to the positive responses in Figure 3, the most frequently occurring comments were those calling for WebCT to be used by more instructors and/or in more courses. See Table 2 for some of the comments.

<table>
<thead>
<tr>
<th>Table 2: Sample of comments asking to use WebCT in more courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- “by making it available for all subjects”</td>
</tr>
<tr>
<td>- “make it accessible for ‘all’ courses”</td>
</tr>
<tr>
<td>- “It should be mandatory for all professors to use WebCT as part of their approach to teaching.”</td>
</tr>
<tr>
<td>- “…encouraging instructors to use more frequently…”</td>
</tr>
<tr>
<td>- “put more courses in it”</td>
</tr>
<tr>
<td>- “teach all instructors how to use it and force them to it. I mean make a must”</td>
</tr>
</tbody>
</table>
Students praised WebCT but…

There were 127 other positive student comments about WebCT (Table 3),

**Table 3 Sample of a range of positive comments on WebCT**

- “It’s pretty good the way it is”
- “I think it’s perfect and doesn’t need any improvement”
- “It’s as good as it gets. Nothing more is needed. Except a better web interface”
- “I think that WebCT does not need any improvement as it already supplies me with what I need”
- “I think it is already a good way for students to access courses. I would like WebCT to have links to…”
- “I like the simplicity of it :)”
- “Well, I think it is very useful and it has nothing to improve it is already good”
- “WebCT is efficient and I like it a lot”
- “I think it’s a very efficient way of communication. I don’t see how WebCT can be more improved”
- “It’s ok”
- “It has reached the utmost”
- “It’s perfect”
- “good job”

and only 18 negative comments calling for WebCT to be removed completely, or for it to be optional (Table 4)

**Table 4 Sample of a range of negative comments on WebCT**

- “remove it completely… I really don’t want to use it in the future, because it is boring, hard to use and wastes time.”
- “there should not be WebCT”
- “I think WebCT is a waste of time for people who are not into computers”
- “I am not a big fan of learning through a computer. I feel personal contact between the professor and students is the best way to go! WebCT could be used as a supplement but that means that the same information provided on WebCT should be provided in class”
- “I think that WebCT depends on how the professor uses it and how comfortable students are with it, in my opinion, I don’t like to use WebCT because I find it very impersonal”
Despite the many positive comments on WebCT, some of the students’ concerns addressed issues that were not covered in the survey (see Table 5).

Most of these were technical problems which could be summarized as follows:

1. Dial up problems – slow connection from home computers
2. WebCT server down
3. Difficulty in logging into WebCT
4. WebCT pages are blank after login
5. Download/upload file difficulty
6. File preview difficulty

<table>
<thead>
<tr>
<th>Table 5: Sample of technical complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td>- “make the access to it faster… it always freezes… especially if there are a lot of assignments due”</td>
</tr>
<tr>
<td>- “make sure the server’s never down”</td>
</tr>
<tr>
<td>- “some improvement in the maintenance should occur”</td>
</tr>
<tr>
<td>- “… make it work every day …”</td>
</tr>
<tr>
<td>- “make it applicable to office other than Microsoft XP”</td>
</tr>
</tbody>
</table>

It should be kept in mind that a majority of students accessed WebCT from home (Figure 4), which may explain some of the technical issues.

![Figure 4: Students Access WebCT from this location](image)
Other comments addressed aesthetics and interface, requesting WebCT to be more attractive. This issue should be solved with the upgrade of WebCT to version 4.1 in Spring 2004.

Table 6 Comments on interface/aesthetics

- “make it more animated”
- “try making it more user friendly”
- “improve the design of the website – it is so dull”
- “make it more colorful”
- “add more pictures”
- “It’s as good as it gets. Nothing more is needed. Except a better web interface”

- **Students would like to see more WebCT tools used but many faculty are not using them**

Students were asked to rate eight of WebCT’s tools, saying whether they liked/disliked them, or if this tool was not applicable. Figure 5 clearly shows that a majority of students (74%-93%) liked seven of the featured tools, when they had been used.
Table 7 shows a sample of student comments confirming this.

<table>
<thead>
<tr>
<th>Table 7 Sample of comments asking to use more features of WebCT or train instructors better</th>
</tr>
</thead>
<tbody>
<tr>
<td>- “Encourage instructors to use it more, when posting assignments, answers to assignments, old exams, practice quizzes, self correcting exams, post notes on it, and announcements…”</td>
</tr>
<tr>
<td>- “Have all teachers use it, and if they do, use it as much as possible”</td>
</tr>
<tr>
<td>- “More teachers should use WebCT’s full potential. The website has a great deal of potential, but some teachers do not exercise the tools available, this makes our course less enjoyable and more difficult”</td>
</tr>
<tr>
<td>- “All professors should participate by using the features in the WebCT to encourage students to be more responsive”</td>
</tr>
<tr>
<td>- “I think the professor’s willingness to use to WebCT and the full incorporation of it into the class room environment is essential.”</td>
</tr>
<tr>
<td>- “teach professors how to use it properly and effectively”</td>
</tr>
</tbody>
</table>

The only tool that was not very popular with students was the online quiz tool. Figure 6 shows that 53% of students said they prefer not to have exams and quizzes on WebCT.
### Effect on learning? Students are neutral

Students were asked if their in-class participation increased because of WebCT and whether it was an effective method of learning. The response was very close to a normal distribution (Figure 7).

![Figure 7: Participation Improved and Effective Method of Learning](image)

When asked if WebCT increased their interest in the courses taken, 47% were neutral, and only 26% either agreed or strongly agreed (see Figure 8).

![Figure 8: Due to the use of WebCT my interest in the course increased](image)
Discussion

The results show that students are comfortable using WebCT and would like to see it used more often. They are, however, neutral about its effect on their learning. Results also show that some of the WebCT tools that are popular with students are not widely used by faculty.

In the US, the National Survey of Information Technology states that faculty efforts to “integrate technology into instruction” remains the most significant IT challenge faced by American universities and colleges (Campus Computing 1999). More recent data shows that this is still a challenge today despite success in using IT for non-academic uses, such as administration and course registration (Ayers 2003).

- Learning and WebCT

According to Surry (1997), incorporating instructional technology into the classroom forces instructors to re-think “form, organization, sequence, and delivery of instruction”. So, if and when instructors start incorporating technology in instruction, it is expected that they would do so in a gradual manner. Also, faculty’s initial use of a learning management system appears to have more to do with class management than with pedagogy (Morgan, 2003).

Furr (2003) suggests that there are five stages towards what he calls “internet pedagogy”. The first of these is the use of technology for classroom management, followed by interactivity which includes online asynchronous discussions or chat. The third and fourth stages are digitizing texts and incorporating multimedia, while the final stage is what Furr calls “deep reading” which is achieved only after a foundation of the first four stages has been set. By putting as many resources as possible online for students to access at any time, and by allowing them to interact online, the instructor can reduce the amount of time spent lecturing, and allow more time for students to read deeply, reflect, discuss, and gradually construct their own knowledge.

If we are to use this model, our survey shows that, at present, our faculty are, for the most part, at the first stage (using classroom management tools) and part of the second one (using email). The asynchronous discussion tool is not used much, and other advanced features, although popular with students, are hardly used.

If, as has been argued, using WebCT (or other LMSs) to its full potential, students can “construct their own knowledge”, we should not expect, at this time, that student learning would be significantly affected. This is supported by our results: in spite of the strong overall positive response of students to WebCT, they are “neutral” when it comes to WebCT’s effect on their learning.
• Improving usability of WebCT for students

Solutions for some of the technical issues raised in the survey are readily available in WebCT version 4.1 that AUC plans to implement in 2004 spring semester. WebCT 4.1 interface is more organized, better structured, and more user-friendly to both faculty and students, thus addressing student comments on the interface. Faculty can also improve students’ experience with WebCT if they keep in mind the fact that many of them (see Figure 10) access WebCT from home, primarily via dialup connections. Accessibility problems can be reduced if faculty adhere to certain guidelines with respect to the materials they post, and take into consideration that file size increases download time for students. Also, to reduce incompatibilities, materials should be made available in a global file format such as PDF which would avoid problems caused by students not having the latest application versions.

Recommendations

• Encourage, train and support more faculty in the use of WebCT
• Help faculty explore all of WebCT’s tools with specific aim at encouraging student-centered learning and/or specific teaching strategies
• Continue assessing the effectiveness of WebCT on student learning

Acknowledgments

We would like to thank Dr. Ali Hadi (Statistician and Professor of Mathematics, AUC) for his invaluable help in guiding us with the statistics of the survey.

References


Appendix One  
Survey Questionnaire

Q1. I am a ..... student.  
6. Non-degree  7. Other

Q2. What is your major?

Q3. My Grade Point Average is…  
1. 4.00-3.50  2. 3.49-3.00  3. 2.99-2.00  4. Below 2.00

Q4. I am…  
1. Male  2. Female

Q5. I have used WebCT in…  
1. Zero Courses  2. 1-3 Courses  3. 4+ Courses

Q6. I got help on WebCT from (Multiple answers are allowed)  
1. My instructor  
2. ACS WebCT Support Staff  
3. Teaching Assistants  
4. WebCT Website Help  
5. In-Class Instructions  
6. Trial & Error  
7. Other Solutions

Q7. How long did it take before you felt comfortable using WebCT?  
1. I felt comfortable after accessing it only a few times  
2. It took an ample amount of access times before I felt comfortable  
3. I still don’t feel comfortable with using WebCT

Q8. Accessing the course for the first time was difficult  
1. Yes  2. No

Q9. If so what made it difficult?  
1. Figuring out WebCT internet address  
2. Figuring out my user id/password  
3. Figuring out the location of the course

Q10. I access WebCT from the following location (s)  
1. University Public Access Labs  
2. Home Computer  
3. Library

Q11. I access my WebCT courses  
1. Once a week  2. 2-4 times a week  3. 5+ times a week  4. Once a month
Q12. WebCT Features
1. I always check the General Announcement link in the “My WebCT” main page.
2. Under ‘Syllabus”, general course information was displayed
3. The instructor posts (course material, handouts, lecture notes etc…) on WebCT
4. the instructor posts Assignment online using the “Assignment” tool
5. I found the course Internet links useful
6. I communicate with other students and my instructor using mail, discussion, and/or chat tools.

a. Yes  b. No  c. Feature Not Used

Q13. I prefer having my exams/quizzes on WebCT
1. Yes  2. No

Q14. If yes, which type of exams/quizzes do you prefer? (Multiple answers are allowed)
1. Short Essays
2. Long Essays
3. Multiple Choice
4. True/False

Q15. I had sufficient computer resources (browser, word processing, etc.) to access WebCT

Q16. Due to the use of WebCT, my interest in the course(s) increased

Q17. Due to the use of WebCT, I was able to communicate with my instructor and other students more efficiently

Q18. Because of WebCT, my classroom participation was improved and it was an effective method of learning

Q19. Online access to the course lecture notes made me more engaged in my studies
6. Not Applicable

Q20. U would appreciate using online WebCT in my future classes

Q21. What I liked/disliked about WebCT is:
1. Announcements
2. Syllabus
3. Contacting the instructor and other students in the class
4. The discussions topics
5. Online quizzes
6. Convenience of lecture notes online
7. Convenience of assignments online
8. Grade access online
9. Image postings online
10. Online audio and/or video files

a. Like  b. Dislike  c. Not applicable

Q22. From your point of view, how to improve WebCT?
Appendix Two
Frequently Occurring Comments

- Request for more instructors to use it
- Praise
- Technical issues
- Instructors need to use more of its features/need more training
- Interface complaint

N = 1221
Appendix Three
ACS’ Suggestions for Avoiding/Solving Technical Issues

In order to overcome the above mentioned problems, students and faculty members must know the reason behind such difficulties.

1. **Dial up problems – Slow Connection from Home computers**
   It is a well known fact that Dial-up connection is usually slower in performance than connection over a LAN network. This might slow down accessing, downloading or viewing any page on the Internet including WebCT pages.

2. **WebCT Server Down**
   Several comments indicated that WebCT server is usually down. This is actually an incorrect statement, since WebCT server is never down unless stated or announced by the WebCT Administrators at ACS for maintenance or upgrade. Faculty and students should always check the announcement section on the MyWebCT main page of their accounts before they submit or request certain tasks during server maintenance.

3. **Difficulty in Logging on to WebCT**
   This problem is very common especially with new students. From their comments and from faculty feedback about students not able to log in, we found that most students mistype the WebCT address. We simplified the address so that no confusion occurs. The correct WebCT address is simply: webct.aucegypt.edu
   A common error that we noticed is that students sometimes type www before the above address which will give them a “Page Cannot Be Displayed” error. In addition, students and faculty members no longer need to type or memorize the old WebCT address: http://webct.aucegypt.edu:8900

4. **WebCT pages are blank after login**
   After successfully logging on to WebCT, sometimes the pages cannot be displayed or appear to be blank. If this problem occurs, this indicates that the browser version of the machine is not compatible with WebCT current version. For instructions on how to configure your browser check the following link:
   http://acs.aucegypt.edu/Learning/WebCT/Browser/browser.html

5. **Download/upload files difficulty**
   Students having this problem again work on home computers using dial-up. In this case, the problem is not only having slow network connection, but also trying to upload or download large file sizes. Large files especially in PDF format are usually very difficult to upload/download with a slow speed connection. Faculty members should be aware not to upload huge files that
would affect the performance of students working from home.

6. **File Preview Difficulty**

A common problem seen in the survey is that students cannot view some files uploaded by their instructors in WebCT. This could be due to several factors:

1. The machine doesn’t have the plug-in or software to open such applications.
2. The machine has the software but an incompatible version of it. For instance, professor working with Office XP and students are still using with Office 97.
3. Use of Large PDF files without optimization.

Aside from the technical issues, another type of problem faced could be categorized as a “know-How” problem and that is in using some WebCT tools like uploading assignment files using the assignment tool or attaching files using mail or discussion tools. These problems would be easily solved when students know exactly how to use such tools.

Of particular interest is the students’ request to enhance WebCT interface with more images and interactive tools to make the course more interesting. The ACS WebCT support team will enhance the WebCT interface with a new look in its new upgraded version WebCT 4.1 that will be installed by spring 2004. This new version will also solve some of the technical issues that were raised. As for the course design interface, faculty members need to think of new ways to enhance the course final look by incorporating new colors, images, and animated tools.