Purpose

The ongoing evaluation of technology-enhanced credit courses, making use of the course management tool, MyGateway, documents the experiences of two key stakeholder groups: enrolled students and teaching faculty. The questions and subsequent analyses here identify essential support strategies for faculty who use technology to improve learning experiences for students. Objectives include:

- Documentation of improvements in UMSL students' computing capabilities and sophistication,
- Documentation of the use of MyGateway by students in FS 2009 and SP 2010¹, and,
- Demonstration of indicators of optimal teaching and learning interactions between and among faculty and students.

Methodology

The FS 2009 and SP 2010 Student MyGateway/ITS Lab Surveys (see, appendix 1) were available to all enrolled students at UM-St. Louis via the MyGateway course management system. All students logging on to the system had access to a survey link. Additionally, students were notified of the survey's availability via campus email. The evaluation period ran from November 18 through December 21, 2009 for the fall survey and April 19, 2010-May 18, 2010 for the spring semester. Completed surveys numbered 404 for the FS 2009 survey and 1032 for SP 2010 (approximately 8.3% of all students logging on to MyGateway during SP10 [12,394]).² This report also presents data from the WS 2006, WS 2007, and WS 2008, SP 2009 surveys for comparison, along with long-term trend analysis dating back to the WS 2002 survey.

Table 1: Respondent's Course of Study (Q1)

<table>
<thead>
<tr>
<th>Respondent's Course of Study</th>
<th>WS06</th>
<th>WS07</th>
<th>WS08</th>
<th>SP09</th>
<th>FS09</th>
<th>SP10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Sciences</td>
<td>31.30%</td>
<td>31.30%</td>
<td>30.40%</td>
<td>28.90%</td>
<td>33.70%</td>
<td>31.40%</td>
</tr>
<tr>
<td>Business Administration</td>
<td>21%</td>
<td>25.40%</td>
<td>19.50%</td>
<td>20.60%</td>
<td>16.30%</td>
<td>23.40%</td>
</tr>
<tr>
<td>Education</td>
<td>16.40%</td>
<td>14.30%</td>
<td>17.10%</td>
<td>17.60%</td>
<td>15.80%</td>
<td>13.20%</td>
</tr>
<tr>
<td>Graduate School</td>
<td>12.70%</td>
<td>13.00%</td>
<td>15.20%</td>
<td>12.30%</td>
<td>11.90%</td>
<td>11.50%</td>
</tr>
<tr>
<td>Nursing</td>
<td>7.60%</td>
<td>3.50%</td>
<td>3.50%</td>
<td>9.10%</td>
<td>6.20%</td>
<td>7.30%</td>
</tr>
<tr>
<td>Optometry</td>
<td>0.90%</td>
<td>0.80%</td>
<td>0.30%</td>
<td>0.50%</td>
<td>1.00%</td>
<td>0.80%</td>
</tr>
<tr>
<td>Fine Arts and Communications</td>
<td>5.10%</td>
<td>6.60%</td>
<td>6.60%</td>
<td>6.90%</td>
<td>6.40%</td>
<td>5.20%</td>
</tr>
<tr>
<td>Other</td>
<td>4.90%</td>
<td>4.80%</td>
<td>5.40%</td>
<td>3.90%</td>
<td>7.40%</td>
<td>6.90%</td>
</tr>
<tr>
<td>Total</td>
<td>99.9%</td>
<td>99.7%</td>
<td>98.0%</td>
<td>99.8%</td>
<td>98.7%</td>
<td>99.7%</td>
</tr>
</tbody>
</table>

¹ The designation for the spring semester changed from “WS” to “SP” in 2009.

² See, [https://sso.umsl.edu/perl/umsl/stats_main.pl](https://sso.umsl.edu/perl/umsl/stats_main.pl). These semester reports ceased following Spring 2009. Logon data for Spring 2010 was reconstructed based on existing MyGateway data logs. Data from Fall 2009 was not available at the time this report was written.
This distribution of students across the various academic units of the university, although not a random or representative sample of the student population, does come close to representing the distribution of student activity in MyGateway (see figure 1), with two exceptions—graduate students are over-represented in the sample and Fine Arts and Communication students are under-represented.

An additional factor to be taken into account in reviewing the data presented in this report is the steady increase in use of MyGateway over the past ten years (figure 3, below).

Figure 2: Active courses and instructors in MyGateway FS 2000-SP 2010

- c: change in how active courses are counted, including “hidden” or combined sections.
- d: change in the counting of active instructors—eliminating double counts and non-active course instructors.
- e: ss09 and fs09 data is not available, sp10 data reflects change in how active courses are counted and an elimination of courses no-longer active.
Questions in the MyGateway Student Survey focused on:
- Computing and Internet access
- Engagement in learning activities in MyGateway courses
- Student satisfaction with courses using MyGateway
- Communication between students, and between students and teachers

Computers and Access for Students

Students were asked to indicate the primary computer access and capabilities they had available. Primary Access Location, types of Computer, Primary Access Location, and Type of Internet Connection are the three tables that follow.

Primary Internet Access Location (Q2)

Table 2: Primary location for accessing the Internet for educational purposes

<table>
<thead>
<tr>
<th>Primary location for accessing the Internet for educational purposes</th>
<th>WS06</th>
<th>WS07</th>
<th>WS08</th>
<th>SP09</th>
<th>FS09</th>
<th>SP10</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Home</td>
<td>56.7%</td>
<td>61.2%</td>
<td>61.0%</td>
<td>65.4%</td>
<td>64.9%</td>
<td>62.0%</td>
</tr>
<tr>
<td>On Campus (labs, library, MSC, and/or classrooms)</td>
<td>27.6%</td>
<td>25.3%</td>
<td>26.5%</td>
<td>23.3%</td>
<td>26.5%</td>
<td>29.4%</td>
</tr>
<tr>
<td>At Work</td>
<td>8.7%</td>
<td>6.7%</td>
<td>6.3%</td>
<td>5.4%</td>
<td>3.7%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Student Housing (Dorms, Meadows, Honors College)</td>
<td>6.4%</td>
<td>6.2%</td>
<td>5.0%</td>
<td>4.2%</td>
<td>3.0%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Other</td>
<td>0.7%</td>
<td>0.4%</td>
<td>0.7%</td>
<td>1.5%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

Nearly thirty percent (29.4% in SP10) of students list “On Campus” as their primary location for accessing the internet for educational purposes. The trend prior to SP10 was for increased home and work—the percentage increasing steadily over the preceding four years and is indicative of a broader trend towards mobile and off-campus access. For SP2010, reported at home use dropped by nearly 3% and on campus access increase by approximately the same amount. This may reflect increasing use of wireless access on campus and an overall surge in mobile computing (see figures 4 and 5, below).
Type of Off-Campus Internet Connection (Q4)

Students were asked specifics about the type of Internet connection they access from off-campus: dial-up telephone via modem, dial up with DSL, cable modem, or other. Broadband access continues to grow. Only 4.9% of the respondents reported “dial-up modem” use, and most of these users have broadband access at some location—99.8% of the sample have broadband access at home or work.

Table 3: Off-Campus Internet Access (multiple responses possible)

<table>
<thead>
<tr>
<th>Off-Campus Access</th>
<th>WS06</th>
<th>WS07</th>
<th>WS08</th>
<th>SP09</th>
<th>FS09*</th>
<th>SP10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>55.7%</td>
<td>62.3%</td>
</tr>
<tr>
<td>Dial-up modem</td>
<td>19%</td>
<td>10.9%</td>
<td>6.5%</td>
<td>4.9%</td>
<td>3.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>DSL/Cable Modem</td>
<td>68.6%</td>
<td>74.9%</td>
<td>87.9%</td>
<td>90.2%</td>
<td>59.9%</td>
<td>55.6%</td>
</tr>
<tr>
<td>Work LAN</td>
<td>8.1%</td>
<td>4.0%</td>
<td>9.4%</td>
<td>9.6%</td>
<td>6.9%</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

*“Wireless” was added as an option starting with the FS09 survey.*
Mobile/wireless access has become the norm with nearly two-thirds of students reporting wireless, off-campus access and nearly 90% reporting use of a laptop or netbook (an additionally 27% report “smart phone” use). This in line with national trends reported by the Pew Internet and American Life Project, which charts 60% of Americans making use of wireless internet access via a laptop or smart phone (up from 51% in 2009).

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Figure 5: In your life, do you make use of any of the following wireless computing technology? (Q5)

Average Percentage of Students Reporting Use, AY 2009-2010
(N: 1436)

Comparisons between students and faculty access show little difference between faculty and student internet access. Faculty narrowed the "broadband gap" in WS08, but students appear to be outpacing faculty in wireless access. In SP 2010, only 42% of faculty report wireless access off-campus. In any case, with virtually 100% of students reporting broadband access at home or work and nearly 80% of faculty also reporting off-campus broadband access (along with wireless) students and teachers at UMSL are 21st Century Netizens.4

Use of Information Technology Services (Q4)

Students were asked about their use of various ITS facilities in this year’s survey. Computer labs and wireless Internet access stand out as the most important services used by students. We are tracking a steady increase in the use of wireless internet access on campus. The steady rise in student use of wireless services parallels that of the faculty, though student use of wireless comes across much higher than faculty--faculty members were not asked about on-campus wireless access. It is clear, however, that mobile computing is the central way in which both students and faculty work.

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4 The specifics of faculty use can be found in the faculty survey analysis located at: http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html. This report draws upon the analyses and trends documented in these reports. UM-St. Louis ceased providing dial-up internet access in June 2007.
Table 4: Information technology services used (multiple responses possible)

<table>
<thead>
<tr>
<th>Information Technology services have you used within the past semester</th>
<th>WS06</th>
<th>WS07</th>
<th>WS08</th>
<th>SP09</th>
<th>FS09</th>
<th>SP10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Labs</td>
<td>79.4%</td>
<td>82.1%</td>
<td>79.3%</td>
<td>79.7%</td>
<td>81.7%</td>
<td>79.9%</td>
</tr>
<tr>
<td>Laptop check-out at TJ Library and/or Barnes Library</td>
<td>4.2%</td>
<td>4.4%</td>
<td>2.8%</td>
<td>4.2%</td>
<td>2.7%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Wireless Internet Access (<a href="http://www.umsl.edu/technology/wireless">www.umsl.edu/technology/wireless</a>)</td>
<td>25.1%</td>
<td>31.9%</td>
<td>36.4%</td>
<td>44.9%</td>
<td>41.8%</td>
<td>45.4%</td>
</tr>
<tr>
<td>Downloaded the free download of Norton Anti-Virus</td>
<td>12.2%</td>
<td>10.5%</td>
<td>0.5%</td>
<td>10.8%</td>
<td>6.9%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Online Student Technology Guide</td>
<td>10.4%</td>
<td>9.6%</td>
<td>8.2%</td>
<td>7.6%</td>
<td>8.2%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Instructional Computing Short Courses</td>
<td>4%</td>
<td>4.7%</td>
<td>4.3%</td>
<td>3.2%</td>
<td>2.5%</td>
<td>3.4%</td>
</tr>
<tr>
<td>None</td>
<td>13.8%</td>
<td>11.7%</td>
<td>11.0%</td>
<td>10.0%</td>
<td>8.9%</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

Figure 6: IT Services Used WS06-SP10

MyGateway Experiences

Students answered a series of questions concerning their use of MyGateway in their classes. Time spent online, usefulness of features, learning, communication and satisfaction with MyGateway were the discrete areas.

Course Work and MyGateway

Students were asked about the time they spent online working on their courses comparing the work among classes using MyGateway frequently and those minimally, or not at all. Again, just over half (55.5%) of the students indicated that they “work more” in courses that use MyGateway as compared to courses that don’t use it or use it to a limited extent (SP10).
Table 5: Working in Courses Using MyGateway (Q7)

<table>
<thead>
<tr>
<th></th>
<th>WS06</th>
<th>WS07</th>
<th>WS08</th>
<th>SP09</th>
<th>FS09</th>
<th>SP10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Much more</td>
<td>23.8%</td>
<td>17.0%</td>
<td>26.7%</td>
<td>29.9%</td>
<td>23.02%</td>
<td>26.84%</td>
</tr>
<tr>
<td>Somewhat more</td>
<td>31.8%</td>
<td>31.0%</td>
<td>26.7%</td>
<td>25.7%</td>
<td>30.45%</td>
<td>28.68%</td>
</tr>
<tr>
<td>About the same</td>
<td>36.2%</td>
<td>38.3%</td>
<td>38.8%</td>
<td>36.8%</td>
<td>39.11%</td>
<td>37.21%</td>
</tr>
<tr>
<td>Somewhat less</td>
<td>6.1%</td>
<td>6.5%</td>
<td>4.0%</td>
<td>4.4%</td>
<td>4.95%</td>
<td>4.17%</td>
</tr>
<tr>
<td>Much less</td>
<td>2.1%</td>
<td>1.8%</td>
<td>1.1%</td>
<td>2.0%</td>
<td>1.8%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Figure 7: Do you think you work more or less in classes that use MyGateway, compared to classes that don’t use it, or use it to a limited extent? WS 2006-SP 2010

Useful Features of MyGateway (Q21)

The most useful feature of the system, listed by 86.6% of the students, was the availability of documents related to coursework. This has been the case since WS 2008. This feature now slightly outranks the communication utilities in MyGateway, specifically class email and instructor announcements (82.6.0% for SP10) and access to the grades (80.6% for SP10). Over the past 8 years, MyGateway has become the primary means through which many (if not most) students receive basic information about their classes and the campus. Also of note, the use of online quizzes, exams, and tests was ranked among the top four features by 52.2% of the students.

Also of note, student appreciation of most features has either increased or remained stable over the past four years. Especially interesting is the increase in perceived usefulness of multimedia resources (24.2%), Wimba Live Classroom (13%), wikis and blogs (8.5%) for SP10. This may be part of the societal trend for use of multimedia and interactive software, and/or stimulated by increasing use of such interactive features by faculty.
Table 6: MyGateway Features Found Most Useful (multiple responses possible)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Announcements and email</td>
<td>86.6%</td>
<td>88.4%</td>
<td>87.9%</td>
<td>87%</td>
<td>86.1%</td>
<td>82.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade Book</td>
<td>83.3%</td>
<td>83.6%</td>
<td>82.9%</td>
<td>83.3%</td>
<td>84.4%</td>
<td>80.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Documents</td>
<td>81.4%</td>
<td>81.5%</td>
<td>90.2%</td>
<td>91.4%</td>
<td>89.6%</td>
<td>86.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online quizzes, exams and tests</td>
<td>54.4%</td>
<td>54.0%</td>
<td>52%</td>
<td>55.4%</td>
<td>56.4%</td>
<td>52.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion Forums</td>
<td>37.7%</td>
<td>28.7%</td>
<td>30.8%</td>
<td>29.7%</td>
<td>29.7%</td>
<td>31.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calendar and Tasks</td>
<td>22.9%</td>
<td>23.1%</td>
<td>23%</td>
<td>21.6%</td>
<td>22.0%</td>
<td>20.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multimedia resources</td>
<td>20.1%</td>
<td>21%</td>
<td>22.8</td>
<td>26.2%</td>
<td>27.0%</td>
<td>24.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groups</td>
<td>15.4%</td>
<td>17.2%</td>
<td>13.7%</td>
<td>16.7%</td>
<td>17.1%</td>
<td>16.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wimba Live Classroom (real-time internet and audio connection, and class presentation recording)</td>
<td>10.2%</td>
<td>7.4%</td>
<td>8.5%</td>
<td>12.7%</td>
<td>16.1%</td>
<td>13.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chat and the virtual classroom</td>
<td>9%</td>
<td>7.7%</td>
<td>7.0%</td>
<td>6.6%</td>
<td>7.9%</td>
<td>7.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio tools (voice boards, voice emails, voice direct)*</td>
<td>4.4%</td>
<td>6.3%</td>
<td>4.7%</td>
<td>5.6%</td>
<td>6.2%</td>
<td>4.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wikis and Blogs (team sites and journals)*</td>
<td>3.2%</td>
<td>4.3%</td>
<td>4.6%</td>
<td>11.0%</td>
<td>9.9%</td>
<td>8.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pronto (text chat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.2%</td>
<td>4.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 8: Which of the following features of MyGateway do you find most useful? (multiple responses possible) WS06-SP10
Learning, Communication, and Satisfaction with MyGateway (Q8-20)

Students ranked the following statements on a seven-point Likert scale (1: strongly agree, 4: neutral, 7: strongly disagree). **For all questions** (except question 10: “Using MyGateway for my course work makes it more likely for me to work in face-to-face groups.”), the **mean scores indicate perceptions of increased interactions and learning outcomes**: the response on question 10 indicated that face-to-face group work is comparable between MyGateway and non-MyGateway courses.

**Table 7: Communicating, Learning, and Satisfaction with MyGateway WS06-SP10**

(1: strongly agree, 4: neutral, 7: strongly disagree)

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean Score WS06</th>
<th>Mean Score FS06</th>
<th>Mean Score WS07</th>
<th>Mean Score FS07</th>
<th>Mean Score WS08</th>
<th>Mean Score FS08</th>
<th>Mean Score WS09</th>
<th>Mean Score FS09</th>
<th>Mean Score SP10</th>
<th>Mean WS06-SP10</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Communicate with other students.</td>
<td>2.61</td>
<td>2.7</td>
<td>2.64</td>
<td>2.48</td>
<td>2.48</td>
<td>2.6</td>
<td>2.75</td>
<td>2.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Work in online groups.</td>
<td>3.25</td>
<td>3.54</td>
<td>3.35</td>
<td>3.28</td>
<td>3.29</td>
<td>3.41</td>
<td>3.36</td>
<td>3.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. More likely for me to work in face-to-face groups.</td>
<td>4.16</td>
<td>4.23</td>
<td>4.09</td>
<td>4.11</td>
<td>4.02</td>
<td>4.16</td>
<td>4</td>
<td>4.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. More likely that I spend additional time studying.</td>
<td>3.3</td>
<td>3.38</td>
<td>3.24</td>
<td>3.24</td>
<td>3.18</td>
<td>3.28</td>
<td>3.3</td>
<td>3.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Communicate with my instructor.</td>
<td>2.21</td>
<td>2.25</td>
<td>2.23</td>
<td>2.12</td>
<td>2.03</td>
<td>2.2</td>
<td>2.26</td>
<td>2.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. MGW helps me do better (learn more).</td>
<td>2.63</td>
<td>2.91</td>
<td>2.83</td>
<td>2.65</td>
<td>2.63</td>
<td>2.66</td>
<td>2.78</td>
<td>2.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Satisfied with courses because of MGW.</td>
<td>2.55</td>
<td>2.83</td>
<td>2.75</td>
<td>2.56</td>
<td>2.53</td>
<td>2.63</td>
<td>2.68</td>
<td>2.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Accessing Grades in MGW helps me stay engaged.</td>
<td>1.71</td>
<td>1.83</td>
<td>1.84</td>
<td>1.76</td>
<td>1.8</td>
<td>1.81</td>
<td>1.88</td>
<td>1.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Online discussions/think more about the course.</td>
<td>2.9</td>
<td>3.2</td>
<td>3.08</td>
<td>2.95</td>
<td>3.04</td>
<td>2.82</td>
<td>3.05</td>
<td>2.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Complete course assignments.</td>
<td>2.62</td>
<td>2.97</td>
<td>2.86</td>
<td>2.69</td>
<td>2.76</td>
<td>2.78</td>
<td>2.74</td>
<td>2.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Use MGW in all my courses.</td>
<td>1.93</td>
<td>2.05</td>
<td>2.15</td>
<td>2.02</td>
<td>2.07</td>
<td>2.1</td>
<td>2.22</td>
<td>2.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Take another course at UMSL because it uses MyGateway.</td>
<td>2.96</td>
<td>3.35</td>
<td>3.29</td>
<td>3.25</td>
<td>3.2</td>
<td>3.35</td>
<td>3.23</td>
<td>3.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Complete my degree at UMSL because of MGW.</td>
<td>3.2</td>
<td>3.46</td>
<td>3.4</td>
<td>3.28</td>
<td>3.26</td>
<td>3.26</td>
<td>3.19</td>
<td>3.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Most significantly (and supported by previous studies\(^5\)), “Being able to access course grades via MyGateway helps me stay engaged with my course work” (Q15); “I would like to have MyGateway used in all my courses” (Q18); and “Using MyGateway for my course work makes it more likely for me to communicate with my instructor” (Q12); rank as being most significant to the students responding to the survey.

\(^5\) See previous survey analyses at: http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html
Figure 10: Distribution of responses for “communication” questions (SP10, N: 1032)

Note. The communication question (Q10) dealing with likelihood of working in face-to-face
groups shows the most neutral response (at 4 on the 7-point scale).

Figure 11: Distribution of responses for “learning” questions (SP10, N: 1032)

Note: Question 15, stating access to grades keeps student engaged, was most universally
supported by those responding (over 88.2% agreeing).
The data presented above indicate that use of MyGateway results in higher estimates of learning activity, higher degrees of satisfaction, more student/teacher communication, more student/student communication, and a perception of increased learning outcomes. Table 7 (page 10) and figure 14 (following page) present mean score data on student perceptions concerning communication, learning and satisfaction over seven instances of the survey (WS 2006-SP 2010). **Overall trends, while somewhat variable, document long-term stability in the tendency for students to view MyGateway as a key component of their learning experience and an increasingly positive perception of the utility of MyGateway by students**
Extending our look further back to the early surveys of students (WS02-WS05) we can discern significant long-term trends in increasing satisfaction and acceptance of MyGateway. Although these earlier surveys were structured somewhat differently than the current surveys, most of the Likert scale questions have remained the same over the years. Figure 15, (below) graphically reveals the steady increase in positive student perceptions of increased learning, communication, and overall satisfaction with the educational experience attributed to the use of the MyGateway course management system. Interestingly, as use continues to increase, positive perceptions increase as well. This documents conclusions reached in the early years of use, students like using MyGateway in their courses and the more MyGateway is used (consistently and appropriately)\(^6\)

\(^6\) See previous survey analyses at: http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html
Written Comments (Q34)

Eighty students (54) provided written comments on the fall 2009 survey (13.4% of all respondents). Of these, 15 responses (27.8% of those providing written comments and 3.7% of all respondents) related to MyGateway, Email, and/or other online tools integrated into the course management system (such as Wimba and the Online Testing Center). For SP 2010, 111 students provided written comments (10.8% of all respondents) and 41 related to MyGateway and online learning (36.9% of those providing written comments, 4% of all survey respondents).

The following categories (drawn from previous surveys responses and from analysis of current responses) characterize the benefits and problems student report. The data presented is a combination of FS09 and SP10 responses. The number of responses indicated in the tables below total more than 56, since many responses contain two or more specific comments.

Notable are the positive statements endorsing MyGateway as a convenient tool for communicating, checking grades, referring to documents, and generally keeping in touch with course and campus by our students. Negative experiences are more commonly focused on how MyGateway is used, or not, by our faculty. New to this iteration of the survey are student interest in more online course offerings and additional features being added to MyGateway, as well as a concern with overuse of online resources.
Figure 15: Benefits of using MyGateway, FS09-SP10 Combined

% of all respondents commenting (N: 56)

Table 8: Benefits of Using MyGateway FS09-SP10 Combined

<table>
<thead>
<tr>
<th>Benefits</th>
<th>FS09</th>
<th>SP10</th>
<th>Total</th>
<th>% of all respondents commenting (N: 56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally positive (“MyGateway is great!”)</td>
<td>7</td>
<td>5</td>
<td>12</td>
<td>21.4%</td>
</tr>
<tr>
<td>Communication (email, discussion boards, announcements, Wimba)</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>8.9%</td>
</tr>
<tr>
<td>Convenience, Accessibility, and Reliability</td>
<td>8</td>
<td>6</td>
<td>14</td>
<td>25.0%</td>
</tr>
<tr>
<td>Viewing and tracking grades</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>7.1%</td>
</tr>
<tr>
<td>Accessing Documents and Assignments</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>16.1%</td>
</tr>
<tr>
<td>Organization features (personal and course-related)</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>8.9%</td>
</tr>
<tr>
<td>Enhances Campus Connection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In their own words:

*** I think My Gateway does keep you engaged in the course but it helps if the instructors are timely in submitting grades. I like all of the advantages offered in My Gateway, especially when teaching staff make use of them.

I am not sure how I would do in courses without MyGateway. I access it everyday during the semester. Assignments, grades, announcements, communication with other students and instructors...it is invaluable. I feel more connected to UMSL and my classes because I can have access to important information whenever I need to. As a 37 year old college student, this is the first time I have had immediate access to my classes without physically being in the actual class. I made it on the dean's list last semester and MyGateway played a major role in that accomplishment.

I really liked being able to check announcements from my instructors and being able to download/print course documents as well as view entire videos that time did not permit in the class room. Hence, all of those options and being able to contact my instructors made life a lot easier.

My gateway is so convinent especially since I have a career. The computer lab is great but it cost too much just for a daily pass to park on the lot.

My gateway is a very helpful tool for students to keep up to date with their grades for each of their classes, and keep engaged in each of their classes throughout the semester and school year! I think it is a great tool for any college or university!

I wish all of my teachers really used mygateway

I just like how mygateway helps you to stay current and involved. Everything is tied together nicely. Overall, i would say that i am a fan - for sure. But, sometimes the system is running slow or kinky and that's a drag - naturally - but such things are bound to happen from time to time, i understand.

I really like MyGateway it helps me stay in touch well with the instructor, counselor, and my classmates. I also like being able to turn my assignments in through MyGateway and being able to check my grades really helps as well.
Figure 16: Problems associated with using MyGateway FS09-SP10 Combined

% of all respondents commenting (N: 56)

- MyGateway not used by instructors (32.1%)
- MyGateway used inconsistently (8.9%)
- Email problems (8.9%)
- Mandate use of grade book/require instructors to use MGW (7.1%)
- Navigation problems (8.9%)
- Login and technical difficulties (3.6%)
- Need instruction on use (14.3%)
- Instructors use as substitute for teaching (3.6%)
- Need more online course options (1.8%)
Table 9: Problems Associated with using MyGateway FS08-SP09 Combined

<table>
<thead>
<tr>
<th>Problems</th>
<th>FS09</th>
<th>SP10</th>
<th>Total</th>
<th>% of all respondents commenting (N: 56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MyGateway not used by instructors</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>7.1%</td>
</tr>
<tr>
<td>MyGateway used inconsistently</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>8.9%</td>
</tr>
<tr>
<td>Email problems</td>
<td>1</td>
<td>17</td>
<td>18</td>
<td>32.1%</td>
</tr>
<tr>
<td>Mandate use of grade book/require instructors to use MGW</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1.8%</td>
</tr>
<tr>
<td>Navigation problems</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>3.6%</td>
</tr>
<tr>
<td>Login and technical difficulties</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>14.3%</td>
</tr>
<tr>
<td>Need instruction on use</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3.6%</td>
</tr>
<tr>
<td>Instructors use as substitute for teaching</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>8.9%</td>
</tr>
<tr>
<td>Need more online course options</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>8.9%</td>
</tr>
<tr>
<td>MGW needs more features</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>3.6%</td>
</tr>
<tr>
<td>Instructors use too much/prefer face-to-face</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

The majority of problems associated with MyGateway had to do with the way the system is used (or not used), rather than with the course management system itself. Students continue to be frustrated by the inconsistent use of MyGateway from instructor to instructor, and by the resistance of their instructors to use the system at all. Additionally, for the FS 2009 and SP 2010 survey a limited number of comments focused on the need for more online courses and additional features being added to the MyGateway system. Contrary to this expression, we also find student concern for overuse of technology being detailed in written comments.

In their own words:

*I HATE, HATE, HATE the new e-mail system!*

*I do not like the microsoft email system. I realize there are benefits of moving to microsoft, but I do not use MyGateway as much anymore. In fact, spreading student resources over different programs is a barrier or reason NOT to use MyGateway. I liked being able to login into one website where I could access announcements, email, grades, etc. Now, it is a hassle to use multiple websites with multiple login's and passwords. Teachers still do not utilize MyGateway enough. I feel, at a minimum, teachers should post grades and assignments on MyGateway. Other teachers do a fine job using MyGateway who include notes, syllabus, links, as well as grades and announcements.*

*I think the decision to implement an email system change mid semester was a stroke of sure lunacy and has caused nothing but headaches and problems for everyone. Firstly because by turning off the forwarding of our old email accounts to try to get us to use the new addresses more was an insipid move that just causes further annoyance for everyone due to the fact that the mygateway classroom shells still send all emails sent through the class rosters to our old accounts instead of the new livemail. This has resulted in increased hassle and frustration because instead of our class emails going directly to our home addresses they sit in the inbox and teachers send emails that students don't receive because they're checking the "new and
improved email system" that doesn't actually get used for anything. Likewise instructors checking their livemail don't receive any of the mail being sent by students due to this farse of an improvement. This should have been done at the beginning of the semester or over the summer when the bugs could have been worked out before midterms rather than between spring break and finals. Thank you for excelling at dropping the ball.

I think it was a mistake to separate umsl email and mygateway. I used to go into mygateway several times a day while checking email and now I go into mygateway a few times a week. Thanks.I would like all instructors to at least use the Gateway for announcements, documents and grades.

One instructor does not use my gateway at all, except to post grades. This is of considerable detriment to the success of the class. She has canceled class three times, and not posted it or sent out e-mail. She has also assigned homework randomly without posting the fact or the homework on my gateway. Yet, she makes an outline of each chapter that we are to fill in for our notes and copies it for everyone. This seems a considerable waste of resources when other instructors can not make copies at all. Others are just the opposite and even post their notes on my gateway. It seems that at a minimum at least all policies for a class should be required to be in writing somehow, either handed out in the syllabus, or on my gateway. The instructor does neither.

I really am not a fan of everything being done solely through the internet because it makes it difficult to communicate with the school during the Summer when I move back home so I would prefer to not have to always find internet access to look up every little thing that I need. It would be nice if the employees at UMSL (and many other schools) could tell you more than "Oh, you will have to go online".This generation of students EXPECTS technology to be used/intertwined with school. I find mygateway to be extremely helpful and I access it at least once a day. There are a TON of great tools and resources that I use frequently. It is well supported by IT and I haven't encountered any technical issues.

Mygateway is an underutilized and over controlled tool and is failing to add benefit or value to courses. I would propose that if a student could open a discussion page, or set up a group page, INSTEAD of the professor always having to control opening discussion and assigning groups that cannot be altered (except by the professor)the usefulness of the Mygateway system would be improved and the use would increase. I find a majority of professors are less that capable of using the functions within Mygateway and the result is that my gateway appears to be an inferior product and no student wants to invest the effort into learning the system which is substandard to operating systems that are available anywhere at anytime and intuitive to use. Overall Mygateway is a waste of a resource. If my professors did not feel the pressure to put something - ANYTHING - up on mygateway to force us to go to that resource for assignments then I would not bother to log in at all. OVERHAUL NEEDED and add a spell check PLEASE!

I abhor mygateway. The only reason I use it is to check my grades or download papers I am required to read. It depersonalizes everything and does not contribute to my learning at all.
Conclusions

Faculty and students at UM-St. Louis for the most part have incorporated MyGateway into the learning process. The use of MyGateway continues to change how students and instructors define their respective roles in the classroom, and online learning components offered via MyGateway continue to exert an increasingly positive influence on students’ perceptions.

Students persist in requesting most or all MyGateway features be used in all their courses. Depending on the subject matter, integrating more of the MyGateway components would help increase instructor-student interaction and increased interaction among students, according to this and all previous student surveys.

Another recurring theme is the inconsistent use of MyGateway. Students continue to voice their frustrations about the variety of ways MyGateway is used across the campus for the past several years. They continue to advocate mandates for its use and standards for types and placement of documents. Training opportunities for specific technology resources should be increased and better publicized to faculty, staff, and students.

MyGateway has been described as an instructional tool, not only helping keep students engaged throughout their courses, but actually serving as a source for building student engagement. The use of the online grade book, announcements, and course documents have been identified as the tools students most appreciate and expect.

Faculty members have also expressed their expectations for students. Respondents in the faculty MyGateway survey report increased expectations of students’ responsibility for learning and of participating actively in online discussions. Both faculty and students indicate that MyGateway promotes increased communication. Workshops for faculty should focus on instructional considerations such as these, and promote course design that makes the most of available technologies.

Additional finding that point to areas of developing interest:

Wireless and Mobile Computing: The steady rise in wireless services by students parallels that of the faculty (although student use of wireless technology appears to be much higher than faculty, faculty members were not asked about on-campus wireless access). It is clear, however, that with 45.4% of students reporting use of the campus wireless servers, 62% using wireless internet access off-campus, and with over 27% reporting use of “smart phones,” that mobile computing is a central feature of the ways in which students, as well as faculty, work. Online and “blended” course development clearly needs to consider this dramatic trend.

Interactive and Multimedia Programming: Especially interesting is the relative consistency for AY 2009 and 2010 in perceived usefulness of multimedia resources (24.2% for SP10), Wimba Live Classroom (13% for SP10), wikis and blogs (8.5% down a bit in SP10). This may be part of the societal trend for use of multimedia and interactive software, and/or stimulated by increasing

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7 These comments are modest updates to conclusions drawn from previous MyGateway student surveys. See previous survey analyses at: http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html

8 See the FS 2009-SP 2010 Faculty MyGateway and TEC Classroom Survey analysis at: http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html
use of such interactive features by faculty. In any case, such dynamic and interactive utilities are again important to consider as part of course development. The "net generation" appears to have arrived at the University of Missouri-St. Louis.

**Implications for the Institution**

The data from the current MyGateway survey lend support to the conclusions reached in the survey analysis of 2001, 2002, 2003, 2005, 2006, 2007, 2008, 2009, and 2010: **the more students are exposed to MyGateway, the higher their estimation of its positive effects, and the more likely they are to continue their education at UM-St. Louis.** Use of MyGateway results in:

- Increased reports of learning activities (student engagement)
- Higher levels of student satisfaction with their courses
- More Student communication with their instructors
- More communication between students
- Higher levels of perceived learning outcomes

Student perceptions, attitudes, and behaviors documented in this survey, and the consistency of these findings over the past seven years, highlight MyGateway’s contribution to the strategic campus goals of:

- Recruitment
- Retention
- Student engagement
- Community building

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10 See the FS 2009-SP 2010 Faculty MyGateway and TEC Classroom Survey analysis at: [http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html](http://www.umsl.edu/technology/mgwhelp/mgwinfo/mgwinfo.html)
Appendix 1:

MyGateway Student Survey Spring 2010

1. What is your course of study?
   1. Arts and Sciences
   2. Business Administration
   3. Education
   4. Graduate School
   5. Nursing
   6. Optometry
   7. Fine Arts and Communications
   8. Other

2. What is your primary location for accessing the Internet for educational purposes? (mark only one)
   A. On Campus (labs, library, MSC, and/or classrooms)
   B. Student Housing(Dorms, Meadows, Honors College)
   C. At Home
   D. At Work
   E. Other

3. Which Information Technology services have you used within the past semester? (Check all that apply)
   A. Computer Labs
   B. Laptop check-out at TJ Library
   C. Wireless Internet Access (www.umsl.edu/technology/wireless)
   D. Downloaded the free download of Symantec Anti-Virus
   E. Online Student Technology Guide (www.umsl.edu/stg)
   F. Instructional Computing Short Course (www.umsl.edu/training)
   G. None
   H. Other: Please specify

4. If you connect to the Internet from off-campus, what type of Internet connection do you use? (Please choose all that apply)?
1. Dial-up modem
2. DSL/Cable/U-verse
3. Work LAN

5. In your life, do you make use of any of the following wireless computing technology? (Check all that apply)
   1. Cell Phone
   2. Laptop
   3. Netbook
   4. Internet via a smart phone
   5. iTouch
   6. None of the above

6. Do you think you work more or less in classes that use MyGateway, compared to classes that don't use it, or use it to a limited extent?
   1. Much more
   2. Somewhat more
   3. About the same
   4. Somewhat less
   5. Much less

7. To what extent did technology help you accomplish the learning goals in your course?
   1. distraction
   2. somewhat of a distraction
   3. neutral (helped some, not others)
   4. helpful
   5. essential

MyGateway Experiences: Please answer questions 8-21 concerning the use of MyGateway in your classes here at UM-St. Louis. If you did not have classes that used MyGateway, click here to go to questions concerning your experiences with Instructional Computing Computer Labs.

7 point Likert Scale and Does Not Apply

8. Using MyGateway for my course work makes me more likely to communicate with other students taking this course.

9. Using MyGateway for my course work makes me more likely to work in online groups

10. Using MyGateway for my course work makes it more likely for me to work in face-to-face groups.

11. Using MyGateway for my course work makes it more likely that I spend additional time studying.
12. Using MyGateway for my course work makes it more likely for me to communicate with my instructor.

13. Using MyGateway for my course work helps me do better (learn more).

14. I am very satisfied with the courses I take because they use MyGateway.

15. Being able to access course grades via MyGateway helps me stay engaged with my course work.

16. The online discussions (text and/or audio) in MyGateway make me think more about the course topics.

17. Using MyGateway makes it more likely for me to complete course assignments.

18. I would like to have MyGateway used in all my courses.

19. I am more likely to take another course at UMSL because of MyGateway.

20. I am more likely to complete my degree at UMSL because of the advantages of using MyGateway in my courses.

21. Which of the following features of MyGateway do you find most useful (check all that apply)?

   A. Announcements and email
   B. Discussion Forums
   C. Groups
   D. Course Documents, syllabus, lecture notes
   E. Multimedia resources (movies, images, and sounds)
   F. Online quizzes, exams and tests
   G. Grade Book
   H. Calendar and Tasks
   I. Chat and the virtual classroom
   J. Wimba Live Classroom (real-time internet and audio connection, and class presentation recording)
   K. Wikis and Blogs (team sites and journals)
   L. Wimba Audio tools (voice boards, voice emails, voice direct)
   M. Pronto
Instructional Computing - Computer Lab Experiences

If you used any of the Instructional Computing Computer Labs, please answer questions 22-75. If not, click here to go to question 76.

22. Please select the lab location you used the most during this semester. The location you choose will be referred to as the primary lab in later questions.

   1. SSB 103 (Main Computing Lab)
   2. SSB 452 (Social Sciences Lab)
   3. SSB 227
   4. SSB 409 (Writing Lab)
   5. SSB 425 (Math Lab)
   6. BH 232 (Benton Hall Lab)
   7. TJ 316 (Thomas Jefferson Library Research Commons)
   8. WEB 100 (Ward E. Barnes Library Research Commons, South Campus)
   9. TLC (E. Desmond Lee Technology and Learning Center, South Campus)
  10. Math TLC (UC050)
  11. Fine Arts 220
  12. CCB 316 (MathCS Lab)
  13. Music 105
  14. Clark 400 (Foreign Language Lab)
  15. MSC Chatroom
  16. Honors 308

For questions 23-42, indicate the number of times over the past semester you did the following:

Never 1-5 times 6-10 times More than 10 times

23. Use the internet to conduct research for course assignments

24. Use the internet for self instruction (e.g., online tutorials)

25. Use the internet to locate resources for course assignments (e.g., lesson plans, quiz generators, puzzle makers, or reference materials)

26. Use the internet for non course related activities (games, videos, social networking)

27. Send email to instructors or students

28. Use word processing, etc

29. Create spreadsheets to make tables or analyze data

30. Conduct statistical data analysis

31. Create multimedia presentations

32. Develop concept maps (e.g., using Inspiration)
33. Use subject specific software of Internet modules (e.g., Math Tutor, Social Studies Timeline)

34. Develop web pages

35. Create a video, DVD or CD

36. Use a digital still or video camera

37. Scan photos and documents

38. Use online discussions

39. Look up grades online

40. Use or develop creative videos, Blogs, Wikis or Podcasting

41. Seek help from lab/staff assistants

42. Visit the lab with a group to study or work on assignments, projects, etc.?

43. Which statement(s) describes your knowledge of the workshops/Short Courses and help sheets? (check all that apply):

   1. I am aware of workshops/Short Courses (e.g., Excel, Photoshop, Electronic Portfolio, digital camera), but have NOT participated in them.
   2. I have participated in technology workshops/Short Courses.
   3. The technology workshops/Short Courses are beneficial.
   4. I am aware of technical help sheets (either paper copy or electronic versions).
   5. I know where to find the help sheets
   6. The help sheets are beneficial
   7. I am aware of the online technology base Knowledge@UMSL

44. Which statement(s) describe your reason for using the primary lab? (Mark ALL that apply):

   1. There is access to unique hardware(e.g. video editing, printers, scanners) I don't have off-campus.
   2. There is access to color printing
   3. It is convenient to use the lab when I'm on campus.
   4. There is internet access.
   5. There is wireless Internet access.
   6. Other: please specify

7 point likert scale and Does Not Apply

45. The lab/staff assistants in the computer lab was courteous, helpful, and positive.

46. The lab/staff assistants in the computer lab helped answer my computer questions.

47. The lab was clean and well organized.
48. My overall experience was positive in the campus computer labs.

49. Did you have a negative experience while using the primary lab?
   Yes  No

50. If you had a negative experience, please describe it here:

51. Describe your most positive experience while using the primary lab.

52. What can be done to improve the primary lab?

Please rate your agreement with the following statements about the primary lab. Please choose the appropriate response for each item:

5 point likert and Does Not Apply

53. The noise level does not distract me.

54. The printing services are adequate.

55. I would prefer to view my class work electronically, instead of in hard copy.

56. I would prefer to turn in assignments electronically.

57. I would support a print quota system, to reduce printing costs.

58. I would support IC labs taking additional steps to be more environmentally friendly.

59. The hours of operation are sufficient.

60. There is adequate access to computers to meet my educational needs.

61. There is adequate access to technical training.

62. The staff is helpful.

63. The staff is knowledgeable about technology.

64. Access to the lab helped me complete my assignments on time.

65. Using the lab this semester contributed to effectively integrating technology in my course assignments.

66. Using the lab this semester contributed to my meeting the learning goals of my course(s).

67. Using the lab this semester contributed to my acquiring new technology skills (regardless of the goals of my course(s)).

68. Using the lab this semester contributed to my sense of being part of the campus community.
69. How did you learn technology skills required to complete your course work? Please choose only one of the following:

1. I taught myself the technology skills required.
2. My peers taught me the technology skills required.
3. My current instructor taught me the technology skills required for the course.
4. I took a credit course at UMSL which taught me the skills I needed.
5. I took a non credit short course at UMSL which taught me the skills I needed.
6. Other (please specify)

70. What computer platform(s) do you use in the computer labs? (Check all that apply)

1. Windows
2. Macintosh OS
3. Unix

What is your skill level in using the following computer technologies and applications?

A. Poor
B. Fair
D. Good
D. Very Good
E. Excellent
F. Do not use

71. Spreadsheets (Excel, etc.)

72. Presentation software (PowerPoint, Inspiration, etc.)

73. Graphics software (Photoshop, Flash, etc.)

74. Video/audio software (Director, iMovie, etc.)

75. Online library resources

76. Computer maintenance (downloading software updates, installing additional memory, organizing files, etc.)

77. Course management system (MyGateway)

78. If UMSL were to contact you, what form of communication would be your first choice?

1. Instant messaging
2. E-mail
3. Text messaging
4. MyGateway
5. Paper mail
6. No preference

79. Please select any method you use to answer your questions regarding UMSL's computer resources available to all students? (Mark ALL that apply)

1. Student Online Technology Guide (www.umsl.edu/stg)
2. Student Technology Guide (printed version)
3. Technology Support Center (Lucas Hall 211 ext. 6034)
4. Ask a friend
5. Ask a lab/staff assistant
6. IC Website
7. Knowledge@UMSL

80. Additional Comments:

Bibliography


