Furman University 2009 TechQual Survey Analysis:
Student, faculty, and staff perceptions of technology service quality

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Computing and Information Services
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Furman University 2009 TechQual Survey Analysis

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This report summarizes the results of the 2009 surveys of student, faculty and staff perceptions of information technology service quality at Furman University. These surveys used a web survey from the TechQual project\(^1\), and were conducted during the Fall 2009 semester. We surveyed students in October, and faculty/staff in November. This was Furman’s second use of the TechQual instrument. We measured improvements for most service level perceptions in 2009, and note some differences between student and faculty/staff perceptions. We also note changes in perceptions when compared to results from our 2008 TechQual surveys\(^2\). These survey results will help with future planning for technology services, especially planning for campus wireless and email services.

The TechQual survey instrument is based on the ServQual methodology used by similar surveys such as LibQual+\(^3\). Over 70 other institutions are involved with the TechQual project, and that number is growing. This year the TechQual project announced the ability to compare an institution’s results against other institutions grouped into Carnegie classifications. While this is an important step, we need to see more baccalaureate liberal arts institutions report their results before we can make meaningful comparisons.

We are pleased with the response rates for our 2009 TechQual surveys. We had an 18% response for students, and 40% overall for faculty and staff. Among full-time faculty, 43% completed the survey. This number was matched by 43% of full-time staff. While our student response rate was down from 25% in 2008, these response rates are still very good for web surveys.

### Service area ratings, questions, and suggestions

The 2009 TechQual survey asks respondents to rate 18 standard service areas (table 1.) The 18 services were organized into three groups of six services as follows:

- Connectivity and Access
- Technology and Technology Services, and
- The End User Experience

For each service area, respondents were asked to assign numeric ratings on a scale of 1 to 9. This allowed respondents to rate each service for:

- My minimum service level
- My desired service level
- Perceived service level at Furman University

In addition to these standard service areas, we added a custom service area to the 2009 ratings. Since email was not listed as one of the standard service areas, we asked respondents to also rate the campus email service as the survey’s final service area.

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1 See http://www.techqual.org
2 Furman 2008 TechQual Survey Analysis; available from http://www2.furman.edu/sites/CIS/about/Pages/Reports.aspx
3 See http://www.libqual.org
After the numeric ratings, we asked three open-ended questions. The first two were asked in 2008:

- In your opinion, how would you most like to see technology services improve at Furman University in the next 2 years?
- If you could suggest a single improvement for information technology at Furman University, what would it be?

After we experienced problems with the FirstClass email system in March and August, the President’s Council had us add a third open question to the 2009 TechQual surveys:

- Google offers universities an email service that provides individuals with more than seven gigabytes of personal storage. If Furman were to switch to using Google, you would keep your existing Furman email address, and use Google’s web mail (or a program like Microsoft Outlook) for your campus email. FirstClass would still be available for conferences (aka “databases”). This change would require you to make some adjustments for the transition; and, if the campus lost access to the Internet, you would not have email while the campus Internet connection was down. Given this information, do you think Furman University should move its campus email from FirstClass to Google?

In addition to these questions, if a respondent rated a perceived service level as below their minimum rating, they were prompted to provide a suggestion for improvement.

### Ratings gaps

As in 2008, no group rated a service as exceeding desired expectations. However, we learn much by examining services exceeding minimum expectations, as well as services not meeting minimums. For students, these four service areas most exceed minimum expectations:

- Opportunities to provide feedback regarding technology services at my university.
- Having technology within classrooms, or meeting areas, that enhances the presentation of information.
- Getting training or self-help resources that help me become more effective with technology services at my university.
- Participating in a university wide community of end users seeking to make the best use of technology resources.

The four services faculty and staff rated as most exceeding minimum expectations were:

- Participating in a university wide community of end users seeking to make the best use of technology resources.
- Opportunities to provide feedback regarding technology services at my university.
- Getting training or self-help resources that help me become more effective with technology services at my university.
- Support staff who are consistently courteous and ready to respond to my request for assistance with university provided technology services.

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4 This analysis excludes outlier responses. Outliers are ratings more than two standard deviations from the mean. This excludes the top 2.75% and bottom 2.75% of responses. Outliers are determined on a service-by-service basis.
The top four services rated by students were the same as in 2008, with only the order swapping for the third and fourth highest rated service. The 2009 faculty/staff survey had different services rated third and fourth highest than in 2008. We attribute this change to the **overall improvement in service level perceptions** reported on the 2009 faculty/staff survey.

With most services reporting improvements, the number of services not meeting minimum expectations declined. In 2008, students, faculty, and staff agreed on four services that did not meet their minimum expectations. In 2009, there was only one service that all groups identified as not meeting minimum service level expectations:

- Having a university network that is reliable, available and performs in an acceptable manner.

Students noted three other services as not meeting their minimum expectations in 2009:

- Having wireless network coverage in all the areas that are important to me as a faculty, student, or staff member
- Having adequate capacity (speed, bandwidth) when using the wireless network
- Getting timely resolution to problems I am experiencing with technology services at my university

Faculty and staff rated one additional service as not meeting expectations; students rated this service as adequate:

- Having an email system that meets my needs

**Relative desired ratings**

We can use the mean desired ranking to determine relative importance of various services to students, faculty and staff. Services with highest and lowest desired ratings tell much about our community’s expectations (table 2.) Looking at the highest rated desired items on the student and faculty/staff surveys, we see that **all groups rate the campus email system as the most important service.** This service rating, which was new for 2009, was slightly higher than network reliability (the most desired service for 2008.) All groups also rate timely problem resolution very high. As on the 2008 survey, students give higher priority to wireless coverage and wireless capacity. All groups continue to place lowest desired ratings on services for mobile devices.

**Additional ratings detail**

The survey results include detailed data to compare responses by attributes such as: class year, male versus female, and faculty versus staff. In 2008 we reported that faculty had a more negative perception of technology services. For 2008, faculty rated all but five services as below their minimum service level expectation (i.e., thirteen below minimum.) The University’s Academic Computing Committee suggested this was likely due to network problems encountered during the 2008 survey period. While we did note those network problems in the 2008 survey analysis, staff also encountered those same network problems and did not rate services nearly as harshly as faculty. Nevertheless, we are heartened to see that **faculty ratings for nearly all services improved.**
In 2009, the number of services faculty rated as below minimum expectation dropped to five:

- Having a university network that is reliable, available, and performs in an acceptable manner
- Having an email system that meets my needs
- Having wireless network coverage in all the areas that are important to me as a faculty, student, or staff member
- Having adequate capacity (speed, bandwidth) when using the wireless network
- Having adequate capacity (speed, bandwidth) when using the wired network

**Overall, the improvement in the ratings on the 2009 faculty/staff survey is remarkable.** When comparing perceived rating to minimum acceptable rating only one service on the faculty/staff survey had a decline in perceived rating compared to minimum. All other ratings showed some improvement in this key perception of service adequacy. That one service with a slight decline was:

- Having access to important university provided technology services from my mobile device

We again note that this particular service had the lowest desired rating on both the faculty/staff and student surveys (i.e., least important.) A list of services with ratings changes indicating notable improvements follows (see table 3.)

**Open-ended questions and suggestions**

To help further understand our campus perceptions of technology service quality, we separated staff and faculty responses, and looked for major themes among Furman students, faculty and staff. These themes were used to categorize the open responses and suggestions (see table 4.)

We also analyzed the responses to our open question related to using Google’s service for campus email.

Analyzing the open-ended responses and suggestions leads to a number of insights about campus technology services:

- It’s clear that students most want improved wireless services. Students continue to want wireless coverage in their rooms.
- Faculty and staff are growing increasingly unhappy with the FirstClass system for email.
- Just over half the faculty would prefer to switch to Google.
- Just over half of students would prefer to stay with FirstClass rather than move to Google.
- Lack of email storage is a concern.
- Perception of email as needing improvement is growing in all groups.
- Improving network reliability continues to be important to all.
- Improving the University’s web services continues to be important for faculty and staff; faculty especially want to see performance improvements for the WebAdvisor system.

Charts from our analysis of the open-ended responses and suggestions follow (charts 2-4.)
Conclusions

This was Furman’s second use of the TechQual survey, and we continued to learn more about our campus community. Certainly improving network reliability and increasing coverage of the campus wireless network continue to be a priority in technology planning. We were also pleased to see improved faculty perceptions of information technology service quality.

This year’s survey added questions asking about the future of Furman’s email. Google’s Apps for Education service (which includes gmail) is attractive for a large segment of our campus community. All campus groups rate e-mail as the most important campus information service. Dissatisfaction with FirstClass is growing. When we consider our ability to compete with off-campus offerings provided by Google, it may be time for the campus to think about switching email platforms, not in terms of “if”, but “when”.

The TechQual survey is an important tool for measuring technology service quality. It will also help measure progress toward several of the University’s information technology strategic initiatives. The survey results help us evaluate our priorities and make recommendations for budgeting and services. We look forward to continuing to use the TechQual survey to help us assess and improve Furman’s information technology services.

Furman University is among the early users of the TechQual survey. As this project progresses and adds more results from our peers, we will be better able to compare our results to other institutions. This is an important project for improving information services at Furman. We’re grateful for all the students, faculty, and staff who responded to the survey, and for the people who make the TechQual project possible.
Table 1 – Service areas measured by the 2009 TechQual survey

<table>
<thead>
<tr>
<th>Connectivity &amp; Access</th>
<th>Measures service quality of network access and the ability to access online services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Having adequate capacity (speed, bandwidth) when using the wired network</td>
</tr>
<tr>
<td>2)</td>
<td>Having adequate capacity (speed, bandwidth) when using the wireless network</td>
</tr>
<tr>
<td>3)</td>
<td>Having wireless network coverage in all the areas that are important to me as a faculty, student, or staff member</td>
</tr>
<tr>
<td>4)</td>
<td>Having a university network that is reliable, available, and performs in an acceptable manner</td>
</tr>
<tr>
<td>5)</td>
<td>Having access to important university provided technology services from my mobile device</td>
</tr>
<tr>
<td>6)</td>
<td>Having access to important university provided technology services from off campus when at home or traveling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technology &amp; Technology Services</th>
<th>Measures service quality of technology services such as software applications or classroom technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>7)</td>
<td>Having a university web site that provides timely and relevant information</td>
</tr>
<tr>
<td>8)</td>
<td>Having a sufficient number of online (i.e. web based) services that are helpful to me</td>
</tr>
<tr>
<td>9)</td>
<td>Having university information systems (finance, HR, student, library, or portal) that are easy to use and are helpful to me</td>
</tr>
<tr>
<td>10)</td>
<td>Access to timely and relevant information from university information systems (finance, HR, student, library, or portal) necessary to be successful in my role as a faculty, student, or staff</td>
</tr>
<tr>
<td>11)</td>
<td>Having online (i.e. web based) services that perform (or respond) in an acceptable manner</td>
</tr>
<tr>
<td>12)</td>
<td>Having technology within classrooms, or meeting areas, that enhances the presentation of information</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The End User Experience</th>
<th>Measures service quality of training, technology support, and the end user experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>13)</td>
<td>Getting training or self-help resources that help me become more effective with technology services at my university</td>
</tr>
<tr>
<td>14)</td>
<td>Support staff who are knowledgeable and can assist me with resolving problems experienced with technology services at my university</td>
</tr>
<tr>
<td>15)</td>
<td>Support staff who are consistently courteous and ready to respond to my request for assistance with university provided technology services</td>
</tr>
<tr>
<td>16)</td>
<td>Getting timely resolution to problems I am experiencing with technology services at my university</td>
</tr>
<tr>
<td>17)</td>
<td>Opportunities to provide feedback regarding technology services at my university</td>
</tr>
<tr>
<td>18)</td>
<td>Participating in a university wide community of end users seeking to make the best use of technology resources</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Custom service rating added for Furman University</th>
</tr>
</thead>
<tbody>
<tr>
<td>19)</td>
</tr>
</tbody>
</table>
Table 2 – Highest desired and lowest minimum service ratings
This table shows the services that our campus saw as most important (highest desired ratings), and least important (lowest desired ratings.)

Top four services with highest desired ratings for students (mean scores):
• 8.73 Having an email service that meets my needs
• 8.69 Having a university network that is reliable, available and performs in an acceptable manner
• 8.53 Having adequate capacity (speed, bandwidth) when using the wired network
• 8.45 Having wireless network coverage in all the areas that are important to me as a faculty, student, or staff member.

Top four services with highest desired ratings for faculty/staff
• 8.73 Having an email service that meets my needs
• 8.65 Having a university network that is reliable, available and performs in an acceptable manner
• 8.48 Getting timely resolution to problems I am experiencing with technology services at my university
• 8.45 Support staff who are consistently courteous and ready to respond to my request for assistance with university provided technology services

Four services with lowest desired ratings for students
• 6.41 Having access to important university provided technology services from my mobile device
• 7.11 Getting training or self-help resources that help me become more effective with technology services at my university
• 7.14 Participating in a university wide community of end users seeking to make the best use of technology resources
• 7.24 Opportunities to provide feedback regarding technology services at my university

Four services with lowest desired ratings for faculty/staff
• 6.91 Having access to important university provided technology services from my mobile device
• 6.98 Participating in a university wide community of end users seeking to make the best use of technology resources.
• 7.45 Opportunities to provide feedback regarding technology services at my university.
• 7.63 Getting training or self-help resources that help me become more effective with technology services at my university.
Table 3 – Notable changes to adequacy ratings - 2008 to 2009

“Adequacy” is the difference between the minimum acceptable service rating and perceived service level rating. In 2009 most services showed improvements in perceived service level when compared to minimum.

<table>
<thead>
<tr>
<th>2009 Adequacy</th>
<th>Increase from 2008</th>
<th>Service Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student service ratings with adequacy increase &gt; .25</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0.33)</td>
<td>0.41</td>
<td>Getting timely resolution to problems I am experiencing with technology services at my university</td>
</tr>
<tr>
<td>1.35</td>
<td>0.37</td>
<td>Opportunities to provide feedback regarding technology services at my university</td>
</tr>
<tr>
<td>0.92</td>
<td>0.34</td>
<td>Having a university web site that provides timely and relevant information</td>
</tr>
<tr>
<td>0.91</td>
<td>0.28</td>
<td>Having a sufficient number of online (i.e. web based) services that are helpful to me</td>
</tr>
<tr>
<td>1.02</td>
<td>0.28</td>
<td>Participating in a university wide community of end users seeking to make the best use of technology resources</td>
</tr>
<tr>
<td><strong>Faculty/staff service ratings with adequacy increase &gt; .25</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.79</td>
<td>0.68</td>
<td>Getting training or self-help resources that help me become more effective with technology services at my university</td>
</tr>
<tr>
<td>0.18</td>
<td>0.60</td>
<td>Having online (i.e. web based) services that perform (or respond) in an acceptable manner</td>
</tr>
<tr>
<td>0.37</td>
<td>0.55</td>
<td>Access to timely and relevant information from university information systems (finance, HR, student, library, or portal) necessary to be successful in my role as a faculty, student, or staff</td>
</tr>
<tr>
<td>0.24</td>
<td>0.53</td>
<td>Getting timely resolution to problems I am experiencing with technology services at my university</td>
</tr>
<tr>
<td>0.54</td>
<td>0.44</td>
<td>Support staff who are knowledgeable and can assist me with resolving problems experienced with technology services at my university</td>
</tr>
<tr>
<td>0.52</td>
<td>0.40</td>
<td>Having technology within classrooms, or meeting areas, that enhances the presentation of information</td>
</tr>
<tr>
<td>0.32</td>
<td>0.39</td>
<td>Having access to important university provided technology services from off campus when at home or traveling</td>
</tr>
<tr>
<td>1.06</td>
<td>0.35</td>
<td>Participating in a university wide community of end users seeking to make the best use of technology resources</td>
</tr>
<tr>
<td>(0.62)</td>
<td>0.34</td>
<td>Having a university network that is reliable, available, and performs in an acceptable manner</td>
</tr>
<tr>
<td>1.01</td>
<td>0.33</td>
<td>Opportunities to provide feedback regarding technology services at my university</td>
</tr>
<tr>
<td>0.67</td>
<td>0.31</td>
<td>Support staff who are consistently courteous and ready to respond to my request for assistance with university provided technology services</td>
</tr>
<tr>
<td>0.19</td>
<td>0.27</td>
<td>Having university information systems (finance, HR, student, library, or portal) that are easy to use and are helpful to me</td>
</tr>
</tbody>
</table>
Table 4 – Categories used to classify responses to open ended questions and suggestions

As in 2008, we used these themes to develop categories for open responses and suggestions:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class/Office</td>
<td>A statement regarding technology equipment for classrooms, labs, or offices.</td>
</tr>
<tr>
<td>Communications</td>
<td>Indicates a comment on the need for improved communications.</td>
</tr>
<tr>
<td>FirstClass</td>
<td>A comment on e-mail and/or the FirstClass groupware application.</td>
</tr>
<tr>
<td>Good</td>
<td>Indicates a positive response to an open-ended question or suggestion.</td>
</tr>
<tr>
<td>CIS Staffing</td>
<td>A comment regarding the help desk or other staffing matter.</td>
</tr>
<tr>
<td>Net-Reliability</td>
<td>A comment on the reliability of the wired network.</td>
</tr>
<tr>
<td>Net-Speed</td>
<td>A statement regarding the bandwidth or speed of the campus Internet connection.</td>
</tr>
<tr>
<td>Other</td>
<td>Any service not otherwise categorized.</td>
</tr>
<tr>
<td>Bradford/AV</td>
<td>A comment about required anti-virus software or network access control (new for 2009.)</td>
</tr>
<tr>
<td>Training</td>
<td>A response indicated the need for more training.</td>
</tr>
<tr>
<td>Web services</td>
<td>Any comment related to University web sites or information systems.</td>
</tr>
<tr>
<td>Wireless-Coverage</td>
<td>A request for additional locations for wireless networking.</td>
</tr>
<tr>
<td>Wireless-Reliability</td>
<td>A comment on the reliability of the existing wireless network.</td>
</tr>
</tbody>
</table>
Chart 1 – Radar charts

One of the ways the TechQual Project presents ratings results is via radar chart. These circular charts plot the mean ratings for minimum acceptable, desired, and perceived service levels; minimum acceptable ratings appear toward the center, and desired ratings toward the outer edge. Colors indicate relative service ratings as follows:

- **Green**: Perceived > Desired
- **Yellow**: Perceived < Desired
- **Blue**: Perceived > Minimum
- **Red**: Perceived < Minimum

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**Student service ratings 2009:**

![Radar Chart 2009](chart_image)

**Student service ratings 2008:**

![Radar Chart 2008](chart_image)
Faculty/Staff service ratings 2009:

Faculty/Staff service ratings 2008:
Chart 2 – Suggested single improvement for information technology

*If you could suggest a single improvement for information technology at Furman University, what would it be?*

**Students 2009 – one thing to improve**

**Students 2008 – one thing to improve**
Faculty – one thing to improve

2008

- Wireless-Reliability: 1%
- Class/Office: 8%
- Communication: 3%
- Web services: 12%
- Training: 7%
- Other: 6%
- Net-Speed: 4%
- Net-Reliability: 13%
- CIS-Staffing: 22%

FirstClass: 16%

2009

- Wireless-Reliability: 5%
- Class/Office: 2%
- Communication: 8%
- Web services: 18%
- Training: 2%
- Other: 8%
- Net-Speed: 0%
- Net-Reliability: 11%
- CIS-Staffing: 14%

FirstClass: 26%

Staff – one thing to improve

2008

- Class/Office: 3%
- Communications: 4%
- Wireless-Coverage: 3%
- Web services: 15%
- Training: 10%
- Other: 10%
- Net-Speed: 3%
- Net-Reliability: 18%
- CIS-Staffing: 16%

FirstClass: 9%

2009

- Wireless-Reliability: 1%
- Communication: 9%
- Web services: 13%
- Training: 13%
- Other: 5%
- Net-Speed: 2%
- Net-Reliability: 9%
- CIS-Staffing: 9%

FirstClass: 29%
Chart 3 – Should Furman switch email from FirstClass to Google?

Google offers universities an email service that provides individuals with more than seven gigabytes of personal storage. If Furman were to switch to using Google, you would keep your existing Furman email address, and use Google’s web mail (or a program like Microsoft Outlook) for your campus email. FirstClass would still be available for conferences (aka “databases”). This change would require you to make some adjustments for the transition; and, if the campus lost access to the Internet, you would not have email while the campus Internet connection was down. Given this information, do you think Furman University should move its campus email from FirstClass to Google?

**Students (342)**

- Yes: 40%
- No: 53%
- Neutral/Maybe: 7%

**Faculty (90)**

- Yes: 50%
- No: 28%
- Neutral/Maybe: 22%

**Staff (169)**

- Yes: 41%
- No: 35%
- Maybe: 24%
Chart 4 – Additional suggestions for improving technology services by category

Students 2008
- Communication: 3%
- FirstClass: 2%
- Class/Lab: 1%
- Wireless-Reliability: 10%
- Wireless-Coverage: 23%
- Web services: 11%
- Training: 4%
- Other: 7%
- Net-Speed: 8%
- Net-Reliability: 16%

Students 2009
- Communication: 5%
- FirstClass: 9%
- Class/Lab: 2%
- Wireless-Coverage: 18%
- Web services: 10%
- Bradford/AI: 4%
- Other: 6%
- Net-Speed: 6%
- Net-Reliability: 11%

Faculty 2008
- Wireless-Reliability: 6%
- FirstClass: 2%
- Class/Office: 9%
- Net-Speed: 5%
- Net-Reliability: 17%
- C&IS Staff: 18%

Faculty 2009
- Wireless-Coverage: 10%
- Class/Office: 4%
- Communication: 2%
- FirstClass: 21%
- Web services: 10%
- Bradford/AI: 4%
- Training: 2%
- Other: 2%
- Net-Speed: 6%
- Net-Reliability: 11%
- C&IS Staff: 17%

Staff 2008
- Wireless-Reliability: 1%
- FirstClass: 2%
- Class/Office: 1%
- Communications: 7%
- Web services: 19%
- Training: 6%
- Other: 12%
- Net-Speed: 4%
- Net-Reliability: 18%

Staff 2009
- Wireless-Coverage: 2%
- FirstClass: 20%
- Class/Office: 2%
- Communication: 6%
- Web services: 22%
- Training: 5%
- Other: 3%
- Net-Speed: 4%
- Net-Reliability: 12%