Furman University 2008 TechQual Survey Analysis

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This report summarizes the results of the 2008 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 2008 semester. We surveyed students over three weeks in October, and faculty/staff over the first three weeks of November. We need to note that during the survey period Furman had some significant problems with its (now previous) Internet service provider. These problems likely influenced results. Even with the common network problems, it is interesting to note the differences and similarities in perceptions among various segments of our campus community. The survey results will help with future planning for technology services.

This was Furman’s first use of the TechQual instrument. The TechQual survey instrument is based on the ServQual methodology used by similar surveys such as LibQual\(^+\)\(^2\). Over 40 other institutions have used the TechQual survey, and that number is growing. In the future we hope to be able to compare Furman’s results with similar institutions.

We are pleased with the response rates for our TechQual surveys. We had a 25% response for students, and 41% overall for faculty and staff. Among full-time faculty, 44% completed the survey. This number was matched by 44% of full-time staff. These response rates are very good for web surveys, and are some of the best response rates reported on a TechQual survey.

Service area ratings, questions, and suggestions

The 2008 TechQual survey asks respondents to rate 18 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

After the numeric ratings, we added two open-ended questions:

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

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\(^1\) See http://www.techqual.org
\(^2\) See http://www.libqual.org
In addition, if a survey respondent indicated that a perceived service level was below their minimum level, they were prompted to provide a suggestion to improve that service.

**Ratings gaps**

Neither the students nor the faculty/staff survey rated any technology service areas as exceeding desired expectations. It is interesting to compare the services that groups rated as having most exceeded minimum expectations, as well as services not meeting minimum expectations.³

For students, the four service areas rated as most exceeding minimum expectations were:

- Having technology within classrooms, or meeting areas, that enhances the presentation of information.
- 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.
- Participating in a university wide community of end users seeking to make the best use of technology resources.

The top four service areas faculty and staff rated as most exceeding minimums 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.
- Having access to important university provided services from my mobile device.
- Having a sufficient number of online (i.e., web based) services that are helpful to me.

There is clearly some overlap among these groups’ perceptions; all of the services mentioned above were rated as above minimum for both the student and faculty/staff surveys.

Like the similarities we see with services most exceeding minimum expectations, there is some agreement on services not meeting minimum expectations. Students, as well as faculty and staff, noted the following services as needing improvement:

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

In addition to the four service areas students noted as needing improvement, the faculty/staff survey showed these additional services needing improvement:

³ This analysis excludes outlier responses. Outliers are service ratings that are more than two standard deviations from the mean response. This excludes the top 2.75% and bottom 2.75% of responses. Outliers are determined on a service by service basis.
• Having online (i.e., web-based) services that perform (or respond) in an acceptable manner.
• 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.
• Having university information systems (finance, HR, student, library, or portal) that are easy to use and are helpful to me.
• Having a university web site that provides timely and relevant information.

Three of the four areas that both the student and faculty/staff surveys report as not meeting expectations are in the “Connectivity and Access” section of the survey. This may be attributed to network problems at the time of the survey. The faculty/staff survey also rated four services as deficient in the “Technology and Technology Services” section of the survey. Clearly, faculty and staff perceive these service areas need improvement; and, fortunately, these areas are being addressed with the University’s current strategic plan.

Relative desired ratings
We can use the mean desired ranking to determine relative importance of the 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 network reliability is the highest rated service for all. All groups also rate timely resolutions to problems as very high. However, faculty and staff place a higher priority on services in the “end user experience” category higher; students give higher priority to wireless coverage and network speed. Students, faculty, and staff all place the least priority on services for mobile devices.

We note that many of the services with the lowest desired ratings also appear on our list of services that most exceed minimum expectations. With the exception of high ratings for classroom technology and number of online services, this finding suggests that Furman may provide better support for some technology services that our community values less.

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. While we can see some variations within students by class year, the most striking difference is between faculty and staff responses. When we look simply at faculty responses, the number of service areas rated as below minimum rises dramatically. Furman faculty rated just five services above minimum expectations. (table 3.) The only services that staff rated below minimum (in agreement with faculty) were:

• Having a university network that is reliable, available, and performs in an acceptable manner.
• Having online (i.e. web based) services that perform (or respond) in an acceptable manner.

We found the faculty’s more negative perceptions of technology service quality surprising. We have asked the University’s Academic Computing Committee to help us further study the ratings, and detailed open-ended responses, for faculty perceptions of technology service quality.
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. We used these themes to develop twelve main categories for such responses:

- Class/Office – statement regarding technology equipment for classrooms, labs, or offices.
- Communications – indicates a comment on the need for improved communications.
- FirstClass – a comment on e-mail and/or the FirstClass groupware application.
- Good – indicates a positive response to an open-ended question or suggestion.
- C&IS Staffing – a comment regarding the help desk or other staffing matter.
- Net-Reliability – a comment on the reliability of the wired network.
- Net-Speed – regarding the bandwidth or speed of the campus Internet connection.
- Other – any service not otherwise categorized.
- Training – response indicated the need for more training.
- Web services – any comment related to University web sites or information systems.
- Wireless-Coverage – requesting additional locations for wireless networking.
- Wireless-Reliability – a comment on the reliability of the existing wireless network.

It’s clear that students most want improved wireless services. In particular, the current wireless plan of providing wireless coverage in public areas of residence halls is not meeting student expectations; student indicate they want wireless coverage in their rooms. Additional observations from the comments include:

- Improving network reliability is important to all.
- Faculty and staff suggest improving/changing the FirstClass system more than students.
- Improved training opportunities is most important to staff.
- Both faculty and staff commented more on C&IS staffing than students.
- Improving the University’s web services is more important to faculty and staff.
- Faculty commented more on classroom and office equipment than other groups.

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

Conclusions
This was Furman’s first use of the TechQual survey, and we learned quite a bit. Certainly improving network reliability and increasing coverage of the campus wireless network need to be a priority in technology planning. We also need to do more work to understand, and improve, faculty perceptions of information technology service quality.

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. We were able to use the preliminary results from the TechQual survey to help with our 2009-2010 budget requests. We look forward to comparing the 2008 results with 2009.

Furman University is among the early users of the TechQual survey. As this project progresses over time, it will be interesting to compare not only our internal results, but also benchmark our results with other similar institution using the TechQual survey. 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 2008 TechQual survey

Connectivity & Access
Measures service quality of network access and the ability to access online services

1) Having adequate capacity (speed, bandwidth) when using the wired network
2) Having adequate capacity (speed, bandwidth) when using the wireless network
3) Having wireless network coverage in all the areas that are important to me as a faculty, student, or staff member
4) Having a university network that is reliable, available, and performs in an acceptable manner
5) Having access to important university provided technology services from my mobile device
6) Having access to important university provided technology services from off campus when at home or traveling

Technology & Technology Services
Measures service quality of technology services such as software applications or classroom technology

7) Having a university web site that provides timely and relevant information
8) Having a sufficient number of online (i.e. web based) services that are helpful to me
9) Having university information systems (finance, HR, student, library, or portal) that are easy to use and are helpful to me
10) 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
11) Having online (i.e. web based) services that perform (or respond) in an acceptable manner
12) Having technology within classrooms, or meeting areas, that enhances the presentation of information

The End User Experience
Measures service quality of training, technology support, and the end user experience

13) Getting training or self-help resources that help me become more effective with technology services at my university
14) Support staff who are knowledgeable and can assist me with resolving problems experienced with technology services at my university
15) Support staff who are consistently courteous and ready to respond to my request for assistance with university provided technology services
16) Getting timely resolution to problems I am experiencing with technology services at my university
17) Opportunities to provide feedback regarding technology services at my university
18) Participating in a university wide community of end users seeking to make the best use of technology resources
Table 2 – Highest and lowest desired service ratings

Top four highest desired rating for students (mean scores):

• 8.68 Having a university network that is reliable, available and performs in an acceptable manner
• 8.54 Getting timely resolution to problems I am experiencing with technology services at my university
• 8.51 Having adequate capacity (speed, bandwidth) when using the wired network
• 8.50 Having wireless network coverage in all the areas that are important to me as a faculty, student, or staff member.

Top four highest desired ratings for faculty/staff

• 8.65 Having a university network that is reliable, available and performs in an acceptable manner
• 8.50 Support staff who are consistently courteous and ready to respond to my request for assistance with university provided technology services
• 8.50 Getting timely resolution to problems I am experiencing with technology services at my university
• 8.45 Support staff who are knowledgeable and can assist me with resolving problems experienced with technology services at my university

Lowest four desired service ratings for students

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

Lowest four desired ratings for faculty/staff

• 6.65 Having access to important university provided technology services from my mobile device
• 6.90 Participating in a university wide community of end users seeking to make the best use of technology resources.
• 7.28 Opportunities to provide feedback regarding technology services at my university.
• 7.68 Getting training or self-help resources that help me become more effective with technology services at my university.

Table 3 – Services faculty rated as exceeding minimum expectations

• Having access to important university provided technology services from my mobile device.
• Having a university web site that provides timely and relevant information.
• Getting training or self-help resources that help me become more effective with technology services at my university.
• Opportunities to provide feedback regarding technology services at my university.
• Participating in a university wide community of end users seeking to make the best use of technology resources.
Chart 1 – Radar charts

One of the ways the TechQual Project presents ratings results is via radar chart. These circular charts plots the mean ratings for minimum, desired, and perceived service levels; minimum ratings at the center and maximum on the outer edge. Chart colors indicate relative service ratings as follows:

<table>
<thead>
<tr>
<th>Chart Color</th>
<th>Rating Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Perceived &gt; Desired</td>
</tr>
<tr>
<td>Yellow</td>
<td>Perceived &lt; Desired</td>
</tr>
<tr>
<td>Blue</td>
<td>Perceived &gt; Minimum</td>
</tr>
<tr>
<td>Red</td>
<td>Perceived &lt; Minimum</td>
</tr>
</tbody>
</table>

Student service ratings:

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

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

**Students: One Thing to Improve IT**

- Wireless-Coverage: 39%
- Wireless-Reliability: 14%
- Net-Speed: 6%
- Net-Reliability: 16%
- Web services: 4%
- Training: 7%
- Other: 6%
- FirstClass: 2%
- C&IS-Staffing: 5%
- Class/Office: 1%
- Communications: 2%

**Faculty: One Thing to Improve IT**

- Wireless-Coverage: 5%
- Wireless-Reliability: 1%
- Class/Office: 8%
- Web services: 7%
- Training: 7%
- Other: 6%
- Net-Speed: 5%
- Net-Reliability: 14%
- C&IS-Staffing: 23%

**Staff: One Thing to Improve IT**

- Wireless-Coverage: 3%
- Class/Office: 8%
- Communications: 3%
- FirstClass: 17%
- Training: 10%
- Other: 10%
- Net-Speed: 3%
- Net-Reliability: 18%
- C&IS-Staffing: 16%
- Good: 5%

Chart 3 – Suggestions for improving technology services in the next 2 years

2. *In your opinion, how would you most like to see technology services improve at Furman University in the next 2 years?*

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**Students: Improve In the Next 2 Years for IT**

- Wireless-Coverage: 33%
- Net-Speed: 11%
- Net-Reliability: 12%
- Good: 8%
- FirstClass: 5%
- Class/Office: 4%
- Web services: 3%
- Training: 2%
- Other: 12%

**Faculty: Improve In the Next 2 Years for IT**

- Wireless-Coverage: 22%
- Net-Speed: 11%
- Net-Reliability: 14%
- Good: 8%
- FirstClass: 5%
- Class/Office: 4%
- Web services: 3%
- Training: 2%
- Other: 12%

**Staff: Improve In the Next 2 Years for IT**

- Wireless-Coverage: 22%
- Net-Speed: 11%
- Net-Reliability: 14%
- Good: 8%
- FirstClass: 5%
- Class/Office: 4%
- Web services: 3%
- Training: 2%
- Other: 12%
Chart 4: Additional suggestions for improving technology services

Summary of respondent suggestions for areas perceived as below minimum expectations:

Student Suggestions Categorized

Faculty Suggestions Categorized

Staff Suggestions Categorized