Facts (and myths) about student perceptions and use of technology: the Queens College Technology Survey

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“I learn best in an interactive environment- so a professor who's just lecturing is hard enough for me... to have to take a class that is virtual and dependent on everybody's technology to be perfect and 'glitch-less' would be difficult and frustrating for me...”

- I am skeptical of new technologies and use them only when I have to.
- I prefer taking courses that use a limited amount of technology.

Female, 23 years old
“How about dumb classrooms instead of smart classrooms? I find that most of the time, we don't use the computers, and they tend to block my view.”

- I like new technologies and use them before most people I know.
- I prefer taking courses that use no technology.
- Male, 27 years old
Purpose of the survey

Project Title: Queens College Student Technology Survey

Principal Investigator: Michelle Fraboni, Dept. of Elementary & Early Childhood Education, 718-997-5324

This survey is part of a research project conducted through Queens College CUNY. If you decide to participate, Queens College requires that you give your signed consent.

Please read the basic explanation of the project provided below. If you decide to participate, you may sign this consent form electronically by clicking on the Agree button at the bottom of this page.

Nature and Purpose of the Project: We are interested in the kinds of technology Queens College students, like you, use in your personal and academic lives. This survey also contains questions about your experiences with technology in your classes, and your preferences when it comes to using technology as a learning tool. Your responses will help us design better learning environments for our students and develop specialized training opportunities for our faculty.

Procedures: Completing the survey will take approximately 10-20 minutes.

Potential Discomfort and Risks: There are no known risks for participating.

Potential Benefits: Future benefits to participants may include the increased availability of academic courses that offer more effective use of instructional technology.
Purpose of the survey

Ask students about:

1. Kinds of technology used in
   a. personal lives
   b. academic lives
2. Experiences with technology in classes
3. Preferences for technology as learning tool

Objectives:
Designing better learning environments
Offering better faculty development
What we already know

Not much: dearth of existing data on students and technology

- CUNY-wide student experience surveys: 16 questions, on practices but not preferences
- QC alumni surveys: 2 questions

Data from national surveys (ECAR, others): comparable?
Tech initiatives at QC

- ePortfolios
- Hybrids ~ Teach Online
- Blogging
- Lecture Capturing
- eBooks?

“Only through understanding what tools our students are bringing with them and how they are using these tools to navigate their own educational experiences will we discover paths toward efficient and effective innovation.” (ECAR, 2010, p. 26)
Who responded

- 1705 students enrolled at QC during spring 2010 (~8% of students registered)

Mean Age: 26
Range: 18-71

Grads
Undergrads
Freshmen
Sophomores
Juniors
Seniors

Arts & Humanities
Education
Math & Natural Sciences
Social Sciences
Undeclared

Female
Male

Undeclared

Mean Age: 26
Range: 18-71
Laptop Age

<table>
<thead>
<tr>
<th>Laptop Age</th>
<th>Number of respondents (Max = 1705)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>![Bar Chart]</td>
</tr>
<tr>
<td>1-2 years</td>
<td>![Bar Chart]</td>
</tr>
<tr>
<td>3-5 years</td>
<td>![Bar Chart]</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>![Bar Chart]</td>
</tr>
<tr>
<td>Don't own</td>
<td>![Bar Chart]</td>
</tr>
</tbody>
</table>

Desktop Age

- Less than 1 year: [Color Bar]
- 1-2 years: [Color Bar]
- 3-5 years: [Color Bar]
- More than 5 years: [Color Bar]
- Don't own: [Color Bar]

Computers

- Either laptop or desktop: 99%
- Both laptop & desktop: 57%
- Laptop < 1 yr old: 27%
- < 2 yrs old: 60%
- < 5 yrs old: 82%
Computers

Females
(N=1091)

Males
(N=614)
Computers

Undergrads (N=1386)

Grads (N=319)
Computers

Born in or after 1980
(N=1256 undergrads + 172 grads)

Born before 1980
(N=130 undergrads + 147 grads)
N=4 (0.2%) report owning no technogadgets (one writes: “none dammit”)

Smith (2010)
Access to the Internet from home

No connection
Dial-up modem
Cable modem
DSL
FIOS
Other broadband
Wireless
Mobile card
Neighbor's wireless
Not sure

93%
Access to the Internet

At QC

At Home

Elsewhere

- Never or no answer
- A few times per semester
- A few times per week
- Daily
Access to the Internet

Classroom (Wireless)

Lab

- Never or no answer
- A few times per semester
- A few times per week
- Daily
Gaming

- A contentious area...
  - But interesting because game design intrinsically stimulates motivation, and has cool possibilities for embedded assessment
- Nation-wide, gamers:
  - are older than you think: ~34
    49% ages 18-49; 26% >50
    25% <18; 20% boys<17
  - are mostly male, 60%, but 33% are women>18
  - have abundant access to gaming gadgetry, available in 67% of American households
Gaming

QC Gamers
- Youngest born in 1992
- Oldest born in 1941
- Mean age: 25 (sd: 7.2)
- 49% women

QC Non-Gamers
- Youngest born in 1992
- Oldest born in 1939
- Mean age: 26 (sd: 9.3)
- 78% women

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Art & Humanities
- Women: 30%
- Men: 70%

Education
- Women: 35%
- Men: 65%

Math & Natural Sciences
- Women: 25%
- Men: 75%

Social Sciences
- Women: 40%
- Men: 60%

Undeclared
- Women: 25%
- Men: 75%
Social networking

### Hours per week

- **< 1 hour**: 1 bar
- **1-7 hours**: 42% of bars
- **8-14 hours**: 1 bar
- **15-21 hours**: 1 bar
- **22-28 hours**: 1 bar
- **29-34 hours**: 1 bar
- **35-40 hours**: 1 bar
- **> 40 hours**: 1 bar

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### Don't use (~15%)

- **Facebook**: 1 bar
- **MySpace**: 1 bar
- **LinkedIn**: 1 bar
- **Other service**: 1 bar

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### Stay in touch with friends
- **Media sharing**: 1 bar
- **Communicate with classmates**: 1 bar
- **Events**: 1 bar
- **Learn about people not known**: 1 bar
- **Opinion sharing**: 1 bar
- **Special interest groups**: 1 bar
- **Professional networking**: 1 bar
- **Make new friends**: 1 bar
- **Get information for class**: 1 bar
- **Communicate with instructors**: 1 bar
- **Do writing assignments for class**: 1 bar
- **Dating**: 1 bar
- **Advertisements**: 1 bar
- **Other purpose**: 1 bar

- **Activities loosely related to academics**
Social networking

Percent of N=277

- Don't use: ~25%
- Facebook: 35%
- MySpace: 18%
- LinkedIn: 21%
- Other service: 0%
- Stay in touch with friends: 19%
- Media sharing: 14%
- Communicate with classmates: 26%
- Events: 16%
- Learn about people not known: 19%
- Opinion sharing: 14%
- Special interest groups: 19%
- Professional networking: 46%
- Make new friends: 19%
- Get information for class: 19%
- Communicate with instructors: 14%
- Do writing assignments for class: 14%
- Dating: 14%
- Advertisements: 14%
- Other purpose: 14%

Percent of N=1428

- Don't use: ~14%
- Facebook: 35%
- MySpace: 18%
- LinkedIn: 8%
- Other service: 0%
- Stay in touch with friends: 19%
- Media sharing: 14%
- Communicate with classmates: 46%
- Events: 19%
- Learn about people not known: 19%
- Opinion sharing: 19%
- Special interest groups: 19%
- Professional networking: 19%
- Make new friends: 19%
- Get information for class: 19%
- Communicate with instructors: 19%
- Do writing assignments for class: 19%
- Dating: 19%
- Advertisements: 19%
- Other purpose: 19%

Born before 1980

Born in or after 1980
How do students read e-books (if they do)?

Do you read e-books?

- Yes, with dedicated reader
- Yes, with another device

Don't know what an e-book is

No
E-book reading

**E-reader users**

- All
- Two thirds
- One third
- Less than one third

**Other e-book users**

- All
- Two thirds
- One third
- Less than one third

How much of your reading is e-books?

What kind(s) of reading do you do with e-books?
Sources of e-books

E-reader users

Other e-book users
Value of e-readers

E-reader users

Other e-book users
E-readers in the library?

Would you be interested in checking out e-book readers from the library?

No, but I'd check out e-books to read on my e-reader.
Tools

Math & Natural Sciences

Arts & Humanities

- Never
- Once per year
- Once per semester
- Monthly
- Weekly
- Several times per week
- Daily
What did they have to say?

Over 400 students left comments about

**Technical Issues (56%)** – included Internet, hardware and software, computer lab issues, printing resources, the library, college website, and email

**Course related comments (20%)** - included references to Blackboard, Online/Hybrid courses, and opinions about pedagogy
No surprise here...

“Please please please incorporate social networking into the classroom. Please please offer more hybrid and web enhanced classes. That would make life SOOOO much easier, and I will be able to withstand the temptation to leave an join one of those online colleges a lot more. :-)”

*I love new technologies and am among the first to experiment with and use them.*

*I prefer taking courses that use an extensive amount of technology.*

Female, 25 years old

“I wish more professors would involve more technology in all courses.”

*I love new technologies and am among the first to experiment with and use them.*

*I prefer taking courses that use an extensive amount of technology.*

Male, 23 years old
A few surprises

“Don't let technology destroy the teacher, student relationship. Especially with academic advisers and even within the Queens College staff....”

I am neutral about new technologies and use them when everyone else is using them

I prefer taking courses that use a limited amount of technology

Male, 19 years old

“more online classes please!!!!...”

I am skeptical of new technologies and use them only when I have to.

I prefer taking courses that use a limited amount of technology.

Female, 44 years old
And a few more...

“Technology may seem a great advance in the world, but real learning takes place in the classroom. No interactive high tech. tool will ever replace a good or even not so good professor.”

I am skeptical of new technologies and use them only when I have to.

I prefer taking courses that use a limited amount of technology.

Female, 21 years old

“Traditional face-to-face courses without excessive technology use would greatly improve social interaction and allow for possible long-term relationships and connections.”

I am skeptical of new technologies and use them only when I have to.

I prefer taking courses that use a limited amount of technology.

Male, 20 years old
Tech preferences

Attitude towards new technologies

Preference for amount of technology used in courses
Learning preferences

- Searching the Net
- Simulations, video games, online demos
- Websites, blogs, wikis
- Text-based conversations
- Podcasts, webcasts

Legend:
- Red: Don't like to learn this way
- Gray: Don't know
- Green: Like to learn this way
Taken e-course?

- Online:
  - No, and would NOT like to: 30%
  - No, but would LIKE to: 40%
  - Yes: 30%

- Hybrid:
  - No, and would NOT like to: 35%
  - No, but would LIKE to: 35%
  - Yes: 30%

- Web-Enhanced:
  - No, and would NOT like to: 20%
  - No, but would LIKE to: 40%
  - Yes: 40%
Taken e-courses?

- Fully online (N=222)
- Hybrid (N=269)
- Web Enhanced (N=729)
How do they compare to ECAR respondents?

<table>
<thead>
<tr>
<th></th>
<th>Queens College</th>
<th>ECAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Who?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1701</td>
<td>36,950</td>
</tr>
<tr>
<td><strong>UG</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>81.50%</td>
<td>100%</td>
</tr>
<tr>
<td>Sophomores</td>
<td>18%</td>
<td>34%</td>
</tr>
<tr>
<td>Juniors</td>
<td>20.30%</td>
<td></td>
</tr>
<tr>
<td>Seniors</td>
<td>31.90%</td>
<td>42%</td>
</tr>
<tr>
<td><strong>Grads</strong></td>
<td>18.50%</td>
<td></td>
</tr>
<tr>
<td><strong>Full time</strong></td>
<td>85.40%</td>
<td>85.90%</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>64.20%</td>
<td>62.50%</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td>35.80%</td>
<td>37.50%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-19</td>
<td>12.99%</td>
<td>33.80%</td>
</tr>
<tr>
<td>20-24</td>
<td>48.92%</td>
<td>43.90%</td>
</tr>
<tr>
<td>25-29</td>
<td>18.24%</td>
<td>85.00%</td>
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<tr>
<td>30-39</td>
<td>10.08%</td>
<td>6.80%</td>
</tr>
<tr>
<td>40-49</td>
<td>5.75%</td>
<td>4.80%</td>
</tr>
<tr>
<td>50 and over</td>
<td>3.65%</td>
<td>2.80%</td>
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<tr>
<td><strong>Majors</strong></td>
<td></td>
<td></td>
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<tr>
<td>Arts and Humanities</td>
<td>16%</td>
<td>15.70%</td>
</tr>
<tr>
<td>Math and Natural Sci</td>
<td>28%</td>
<td>22.70%</td>
</tr>
<tr>
<td>Education</td>
<td>12%</td>
<td>8.70%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>32%</td>
<td>32.10%</td>
</tr>
<tr>
<td>Undeclared</td>
<td>12%</td>
<td>6.50%</td>
</tr>
</tbody>
</table>
How do they compare to ECAR respondents?

<table>
<thead>
<tr>
<th></th>
<th>Queens College</th>
<th>ECAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Own computers</strong></td>
<td>99%</td>
<td>98%</td>
</tr>
<tr>
<td><strong>Tech preferences</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>love 'em!</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td>like 'em!</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>neutral</td>
<td>34%</td>
<td>49%</td>
</tr>
<tr>
<td>skeptical</td>
<td>14%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Tech preferences - M</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>love 'em!</td>
<td>24%</td>
<td>19%</td>
</tr>
<tr>
<td>like 'em!</td>
<td>31%</td>
<td>33%</td>
</tr>
<tr>
<td>neutral</td>
<td>34%</td>
<td>37%</td>
</tr>
<tr>
<td>skeptical</td>
<td>10%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Tech preferences - F</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>love em</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>like em</td>
<td>22%</td>
<td>20%</td>
</tr>
<tr>
<td>neutral</td>
<td>50%</td>
<td>57%</td>
</tr>
<tr>
<td>skeptical</td>
<td>16%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Amount of tech in courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extensive</td>
<td>18%</td>
<td>21%</td>
</tr>
<tr>
<td>Moderate</td>
<td>54%</td>
<td>58%</td>
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<tr>
<td>Limited</td>
<td>24%</td>
<td>15%</td>
</tr>
<tr>
<td>None</td>
<td>4%</td>
<td>2%</td>
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<tr>
<td><strong>Social Networking</strong></td>
<td></td>
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<tr>
<td>Social Networking and academics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicate with classmates about course-related topics</td>
<td>49%</td>
<td>50%</td>
</tr>
<tr>
<td>Communicate with instructors about course-related topics</td>
<td>6.50%</td>
<td>&lt;8%</td>
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</tbody>
</table>
Wordle of survey comments text (Fraboni, 2010)
Bonus Slides!
more about those 1698 respondents...

<table>
<thead>
<tr>
<th></th>
<th>Undergrads (N=1381)</th>
<th>Grads (N=317)</th>
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</thead>
<tbody>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
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</tr>
<tr>
<td>Part-time, on campus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time, off campus</td>
<td></td>
<td></td>
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<tr>
<td>Full-time, on campus</td>
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<tr>
<td>Full-time, off campus</td>
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<td></td>
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<tr>
<td><strong>Household</strong></td>
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<tr>
<td>On campus</td>
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<tr>
<td>Off campus, parents</td>
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<tr>
<td>Off campus, on own</td>
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<td></td>
</tr>
<tr>
<td>Off campus, roommates</td>
<td></td>
<td></td>
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<tr>
<td>Off campus, significant other</td>
<td></td>
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</tr>
<tr>
<td>Off campus, significant other and dependents</td>
<td></td>
<td></td>
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<tr>
<td>Off campus, single and dependents</td>
<td></td>
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<tr>
<td><strong>Commute</strong></td>
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<tr>
<td>On campus</td>
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<tr>
<td>Less than 15 minutes</td>
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<tr>
<td>Less than 30 minutes</td>
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<tr>
<td>Between 30 minutes and 1 hour</td>
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<td>Between 1 and 2 hours</td>
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<td></td>
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<tr>
<td>More than 2 hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
about the 1381 undergrads...

Number of undergraduates responding to survey by major (x-axis) plotted against majors for all undergraduates registered during fall 2009* (y-axis)

Same, but axes drawn using logarithmic scale (base 10)

Correlation: $r(60) = .720, p < .001$

*Data provided by Meg McAuliffe, QC Institutional Research