



Does IT have a crystal ball?

Jill Beckman

Assistant Director of Desktop Services Boston University IT Help Center

Mike Javorsky

Client Support Specialist Boston University IT Help Center



Before we begin...

Before you read through the rest of these notes, we want to emphasize that the survey results you'll be seeing represent only a cross-section of the BU community, and nothing more. For that reason, care should be taken not to see these findings as generalizable onto any population from another institution or for people at large.

While we'd be intrigued to see how other groups respond to these survey questions and are actively looking for possible opportunities to poll additional people, for the purposes of this slide deck, the only conclusions we're attempting to draw apply to, at most, the Boston University community.

the beginnings of an idea

So, how did we come up with this crystal ball idea, anyway?



As a member of HDI's Desktop Support Advisory board, Jill started noticing a trend both regarding topics discussed on the board and at HDI's 2014 conference, as well as strong interest in her experience at Boston University, specifically, because of its academic environment. (See above.)

We asked ourselves: **Do** folks working in education have a preview on new technology? Perhaps we should try and find out!

The differences and similarities between academic vs. company support was discussed enough that it seemed useful to pursue. Are there trends we can identify and pass along to our peers?



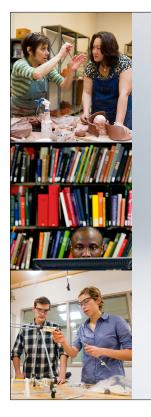
But why BU? BU is very diverse and its community therefore seems like a good place to look for emerging trends.

The Carnegie Classification $^{\text{TM}}$ has been the leading framework for recognizing and describing institutional diversity in U.S. higher education for the past four decades.

RU/VH = very high research activity
Offer a full range of baccalaureate programs
Are committed to graduate education through the doctorate
Give high priority to research
Award 50 or more doctoral degrees each year
Receive annually \$40 million or more in federal support

Of the 125 classified schools in MA, only 6 qualify for R1: Boston University, Brandeis University, Harvard University, Massachusetts Institute of Technology, Tufts University, University of Massachusetts Amherst

Of the 4,634 schools that are ranked, only 108 are RU/VH (2.3 %) http://carnegieclassifications.iu.edu/



College of Fine Arts

"The embodiment of creative expression..."

-Music, Theatre, and Visual Arts

School of Social Work

"Committed to education that furthers social and economic justice in the urban environment."

- —Graduate-only school
- —Has online program

College of Engineering

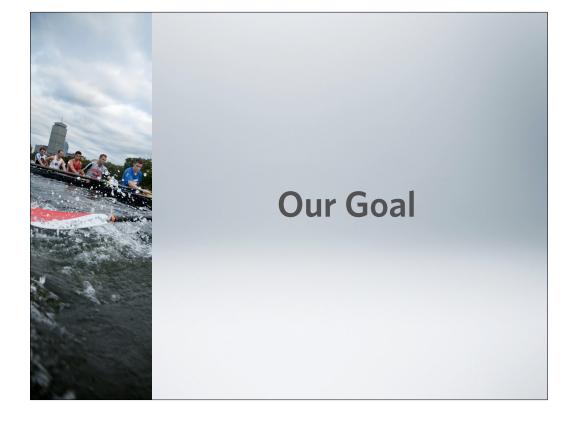
"Educates the technology leaders of tomorrow while pushing the boundaries of innovation that improves society..."

We made a strong effort to target specific cross sections of our community to ensure we got different viewpoints. Here are some of the diverse schools featured in our survey.

Scanning through our data, we found students with majors in Hospitality, Neuroscience, Economics, and more!

Photo credit:

Danielle Sauvé, left, advises Yoon Jeong Kim (GRS'13) on her piece in Ceramics I at CFA. Photo by Cydney Scott



This first survey and session was intentionally exploratory.

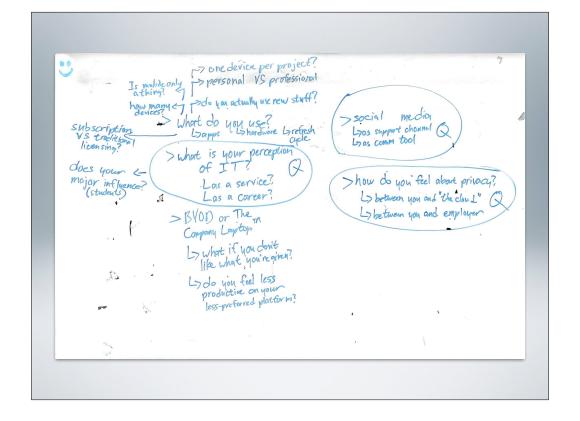
We tried to begin to answer the crystal ball question and also address common themes that seemed to be regularly popping up. We want to know from you:

- what's interesting?
- worth continuing to explore?
- give us your feedback!!

While we think the data is interesting, in some ways the most fascinating part of this became the questions that were raised by the trends we identified.

about the survey

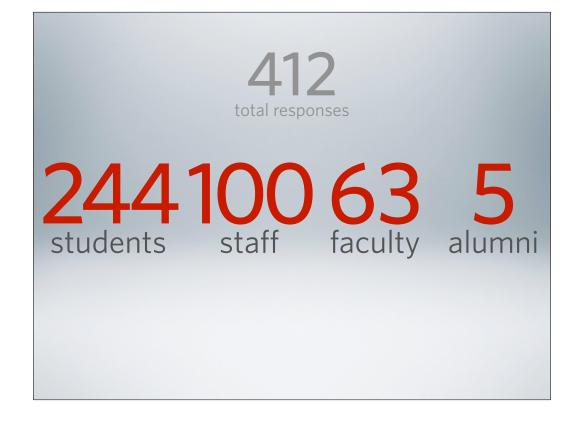
The following slides focus on defining the survey population...



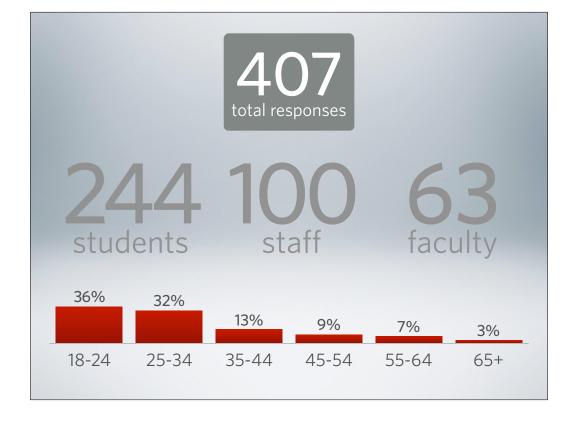
...and give you a little background on what it looks like when Jill and Mike go brainstorming.



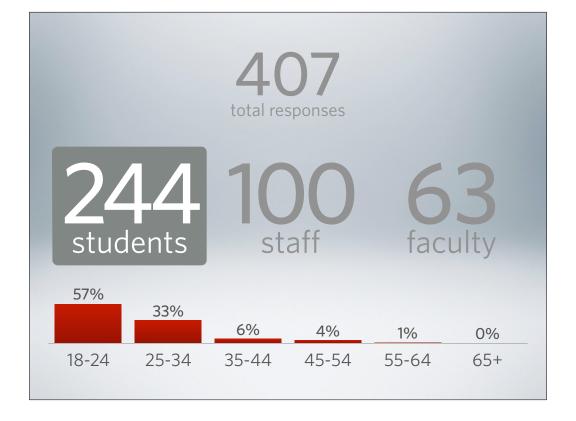
412 total responses include faculty, staff, and students



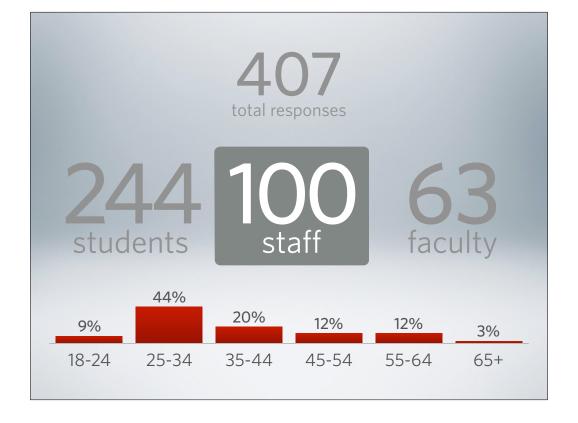
These numbers indicate the split amongst these self-identified groups. Due to the small number of alumni respondents, that group is not separately analyzed in the rest of the presentation, but is included in the "everyone" numbers.



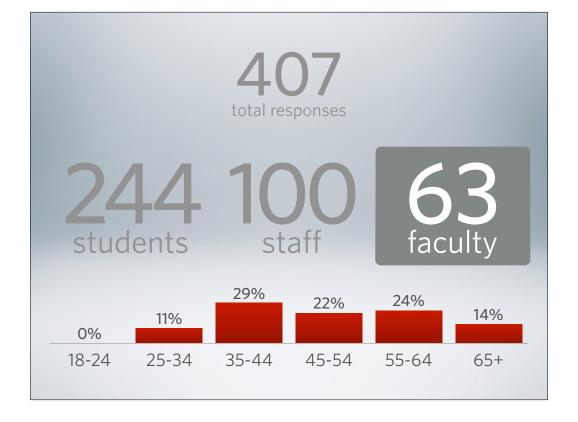
age spread for entire sample (less alumni)



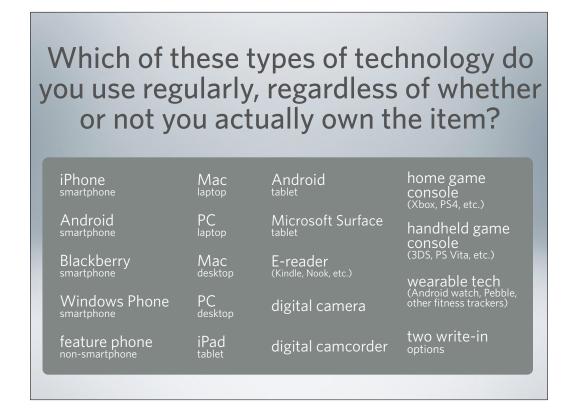
age spread for students



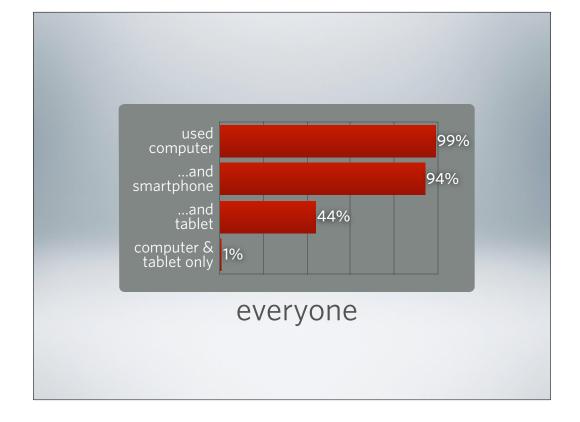
age spread for staff



age spread for faculty



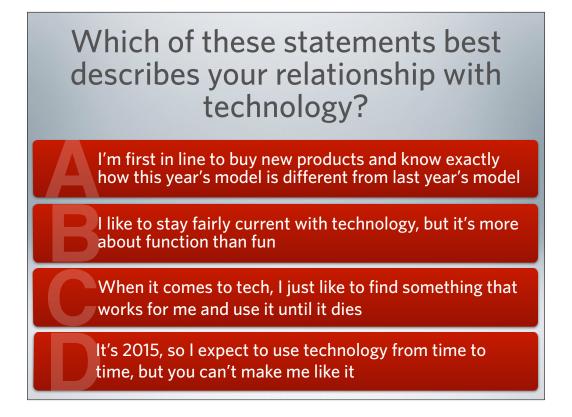
Survey respondents were asked to check boxes for each device in regular use. Note that we did not ask about device *ownership,* specifically because it introduces issues of finance that we wanted to avoid for purposes of this survey. We did not provide detailed analyses of patterns from this question in the presentation, but the data has been retained and we'd be glad to discuss it further or look for correlations if you have suggestions.



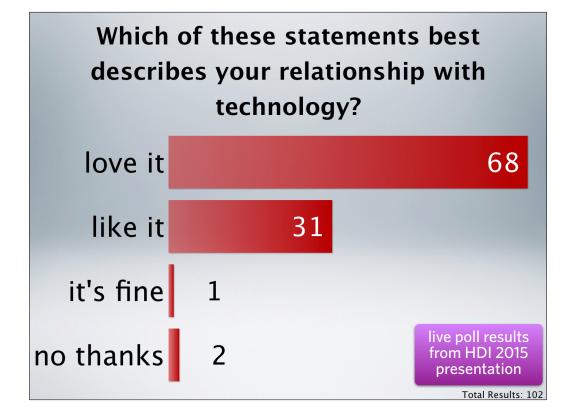
This was the one analysis we did from our captured data related to which devices survey respondents regularly used. For clarity, 99% reported computer use, 94% reported *both* computer and smartphone, 44% reported computer/smartphone/tablet use in combination, and only 1% reported computer and tablet use without smartphone

Which of these statements best describes your relationship with technology?

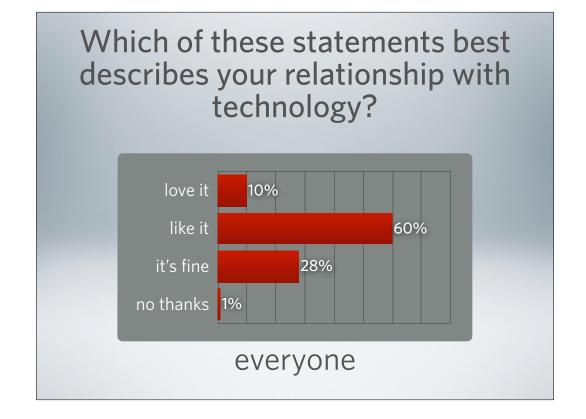
This question was intended to be mostly demographic, though we had not yet looked for correlations between this and other data points before the presentation.



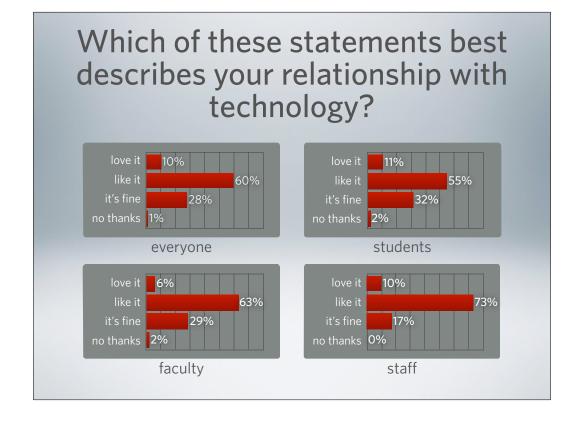
These answers were intended to map to fairly specific user profiles, though clearly defining groups was a challenge.



Results from live poll at HDI 2015 presentation



As shown, few people who took the survey indicated that they truly disliked technology.



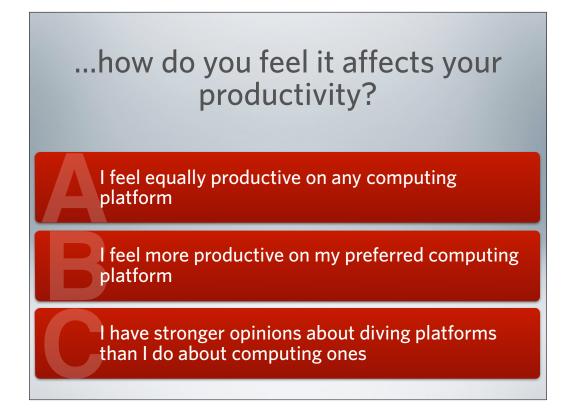
Notice how in this one question, BU students and faculty were more similar while staff broke rank in showing more favorable responses, especially in the "like it" category.

Questions & Results

In life, some of us are Macs, some of us are PC's, and a few of us are even some kind of Linux.

When work or school presents a situation where you have to use a computer platform that's not your preference, how do you feel it affects your productivity?

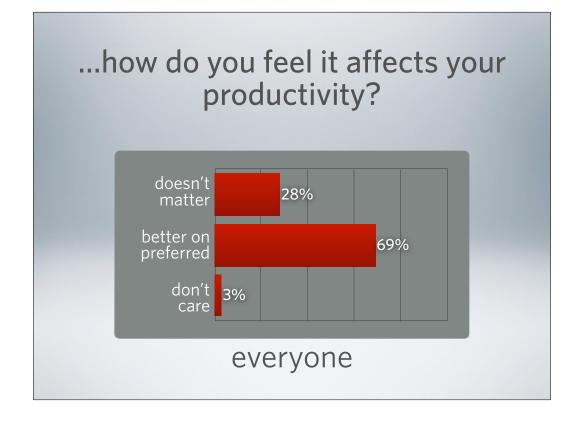
The goal of this question was to analyze not the functional reality of how platform choice affects productivity, but rather how people *felt* it affected them.



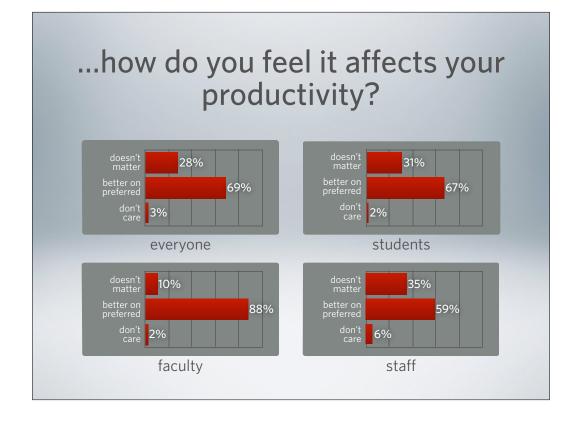
The joking "C" answer was used in part to maintain a relaxed tone for the survey, but also to indicate a more-than-passive opinion that respondents did not feel platform affected productivity.



Results from live poll at HDI 2015 presentation



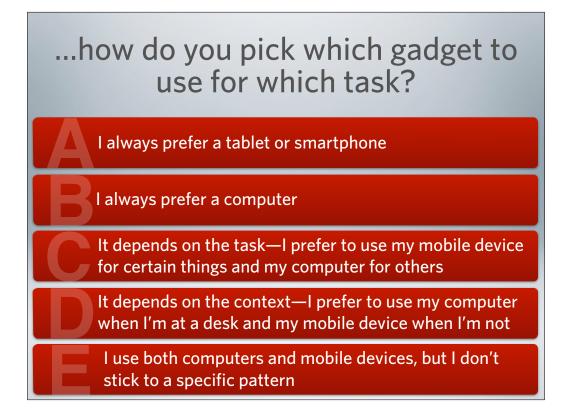
As one might expect, BU survey participants felt more productive on their preferred platform.



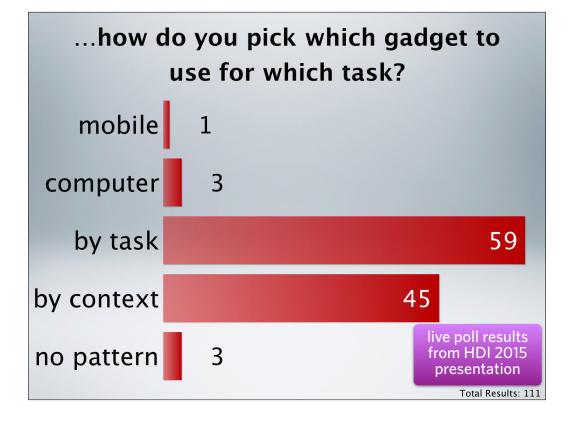
In a trend that continued through most other question, BU students and staff responded similarly, though faculty expressed much stronger feelings of productivity on their preferred platform. Remember that the faculty skewed older than other groups, so age may also be a factor.

With so many apps and services available on computers as well as mobile devices like tablets and smartphones, how do you pick which gadget to use for which task?

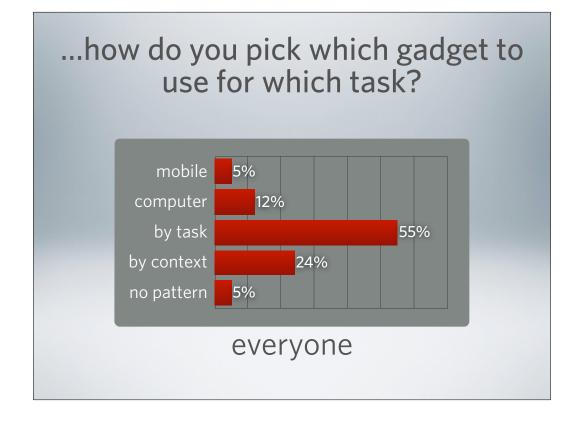
This question asked respondents again about feel rather than numeric reality, but geared toward testing the idea that people may prefer one device over another for a specific reason, not just because those other devices exist as options.



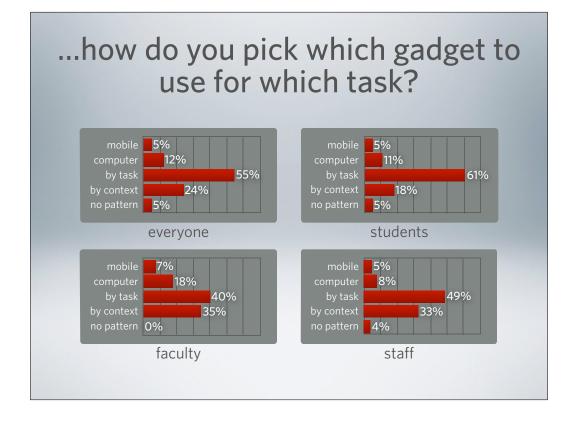
We were careful here to try to provide at least the most common usage scenarios in our answers. Each of these still maps to a fairly wide range of usage patterns, though, and could possibly be split down further.



Results from live poll at HDI 2015 presentation



Though all responses did have at least some representation, we found it particularly interesting that 75% of respondents reported one of the strategic answers, implying a feeling that there is a "right" tool for the job, basing that on either what you're working with or where you're working with it.



Most interesting to us in this breakout was the student group's strong preference for task-oriented device choice relative to the other groups.

What are your top three most-used smartphone/tablet apps?

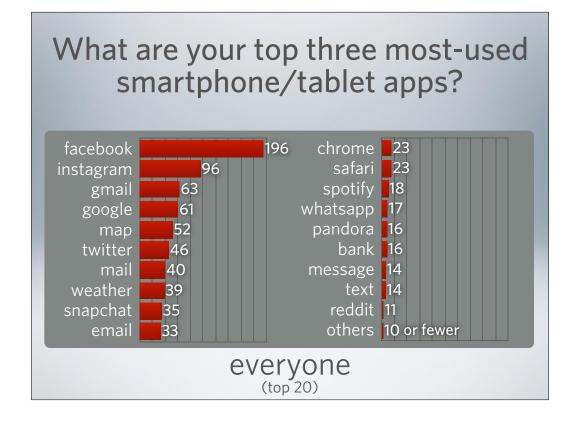
This question was originally intended as literally targeting popular apps, but ended up being almost more valuable as a validator of other questions.



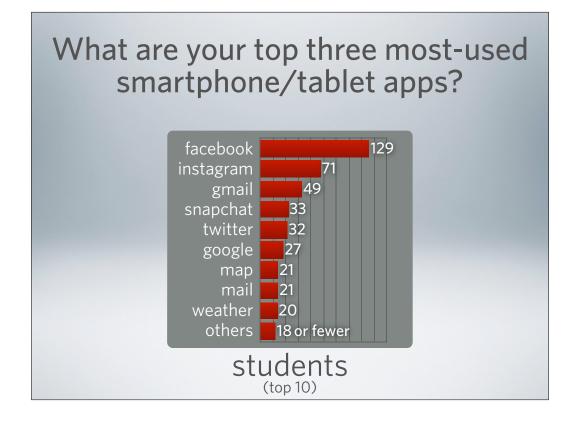
Results from live poll at HDI 2015 presentation



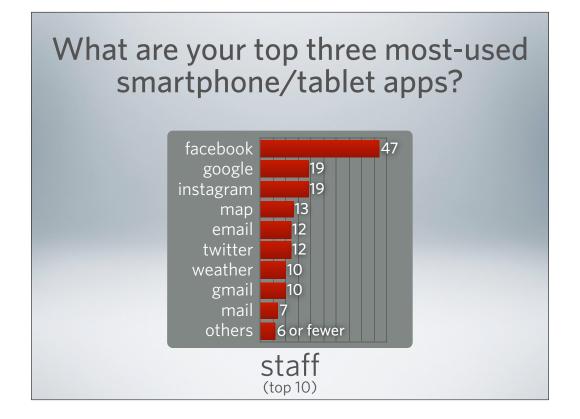
Yes, this is to scale, and yes, Facebook was really that popular. Note, however, that aside from a few standouts, lots of the less-popular choices were similarly represented—strong agreement on a few popular apps, then lots of fragmentation.



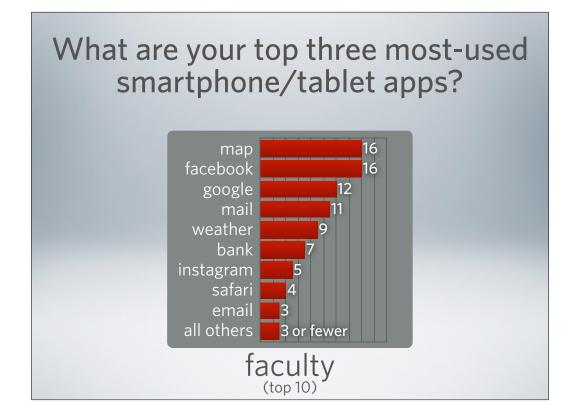
Looking at the same data more numerically, notice the similar themes in the top app choices (gmail/mail/email all present, but essentially the same type of usage, for example). Notice also that before breaking the top 20 responses, we've already reached the point of fragmentation where *every* other represented app had fewer than 10 instances of repetition.



In looking at the individual groups, notice again, very similar themes/usages in the terms, with slight shifts hinting at usage priorities within the group.



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How often do you use your smartphone for the following activities?

This question has a similar bent to the most-used apps question, but targeted activities over apps. Admittedly, we had not specifically set the two questions up to validate one another, but were pleased to see that in fact they did.

| w often do for the | you use following | your sm g activiti | artphoes? |
|--|------------------------------|------------------------------|---------------------|
| (Click and drag each activity iten does not matter.) | ns at the left into the boxe | s at the right. The order of | items in a category |
| Items Make phone calls | All the time | Frequently | |
| Read email | | | |
| Reply to email | | | |
| Visit websites | | | |
| Work with documents | | | |
| Text / message / chat | | | |
| Play games | | | |
| Interact on social media | Sometimes | Rarely/Never | |
| Listen to music | | | |
| Tethering (sharing your phone's data connection with a laptop or other device) | | | |
| | | | |
| | | | |

This question was not live-polled, though the screenshot shows exactly how it appeared for respondents to the original survey.

| | for the follo | wing | gact | iviti | es? | |
|----|-------------------------|--------|------------|-----------|--------------|---|
| | _ | always | frequently | sometimes | rarely/never | |
| | make phone calls | 198 | 116 | 64 | 11 | |
| | read email | 276 | 75 | 24 | 9 | |
| | reply to email | 172 | 114 | 73 | 25 | |
| | visit websites | 195 | 111 | 67 | 13 | |
| | work with documents | 53 | 33 | 104 | 188 | |
| | text/message/chat | 322 | 47 | 9 | 7 | - |
| | play games | 42 | 58 | 125 | 145 | - |
| ir | nteract on social media | 168 | 93 | 57 | 57 | |
| | listen to music | 144 | 109 | 68 | 51 | |
| | tethering | 19 | 20 | 80 | 249 | |

Numbers shown are raw counts of how many times respondents selected each frequency for a given activity. Darkest red denotes the post popular answer for each activity, lightening in order of rank.

| How often do you use your smartphone for the following activities? | | | | | | | | | |
|--|-----|-----|-----|-----|--|--|--|--|--|
| | +4 | +3 | +2 | +1 | | | | | |
| make phone calls | 198 | 116 | 64 | 11 | | | | | |
| read email | 276 | 75 | 24 | 9 | | | | | |
| reply to email | 172 | 114 | 73 | 25 | | | | | |
| visit websites | 195 | 111 | 67 | 13 | | | | | |
| work with documents | 53 | 33 | 104 | 188 | | | | | |
| text/message/chat | 322 | 47 | 9 | 7 | | | | | |
| play games | 42 | 58 | 125 | 145 | | | | | |
| interact on social media | 168 | 93 | 57 | 57 | | | | | |
| listen to music | 144 | 109 | 68 | 51 | | | | | |
| tethering | 19 | 20 | 80 | 249 | | | | | |
| everyone | | | | | | | | | |

In order to distill the raw numbers down to a more comparable single score, we used a simple average, weighting each category as shown above.

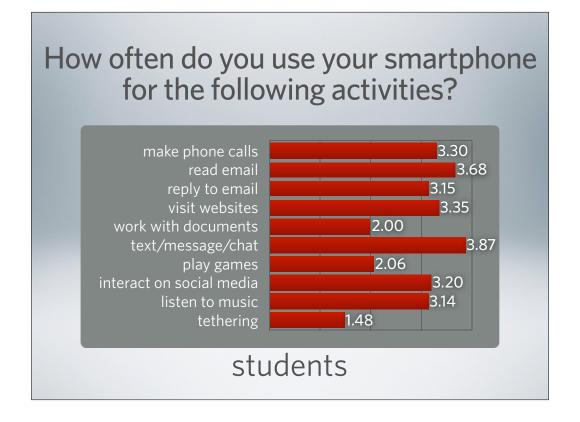
Note that since respondents were asked to answer for a minimum of five activities, some categories show more responses than others. The averages shown on the next slide were figured using the point values above divided over total responses for each activity.



Keep in mind that with this scoring, the lowest possible score would be 1 (rarely/never) and the highest would be 4 (all the time), so 2.5 is actually the midpoint.



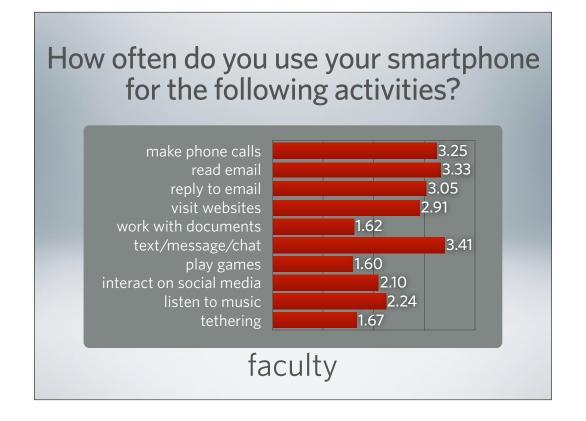
This slide shows one interpretation of the scores from the previous slide by splitting categories as indicated. From top to bottom, the activities are shown in ranked order.



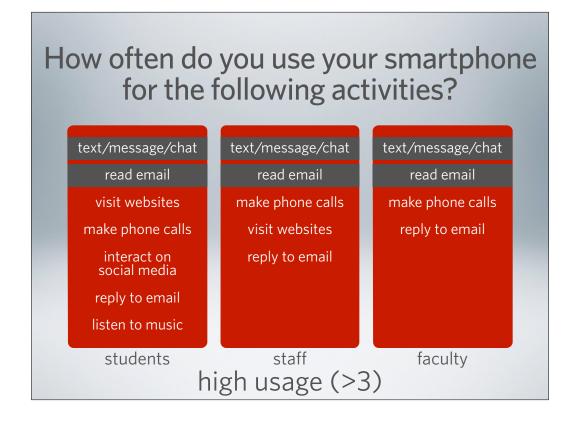
Notice that compared to the full survey sample, the student response pattern kept the same shape with slightly higher overall scores, implying a tendency toward more frequent smartphone use in almost all of the activities.



The staff group landed very close to the "everyone" response pattern with slight shifts in a few categories.

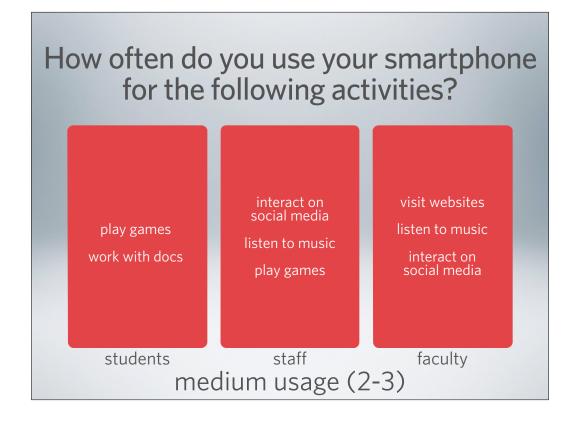


As a counter point to students showing higher overall usage frequency for most activities, faculty showed lower frequency in most activities, but still for the most part retained the same general pattern.

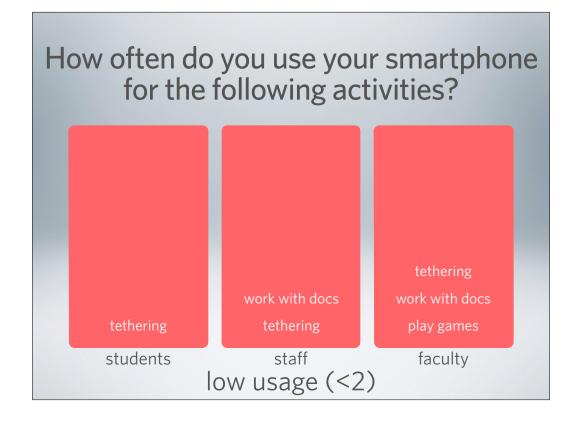


Returning to a ranked list, now comparing across groups, students were more likely to report high usage in more activities. Notice, though, that the top two activities were agreed upon by all groups, and though the order shifts a bit, we tend to find the same activities in areas of the rankings across all three groups.

The next two slides show the other sections of the list, and it may be helpful to flip back and forth between them to observe the patterns. Across all three slides, rank order for each group is maintained.



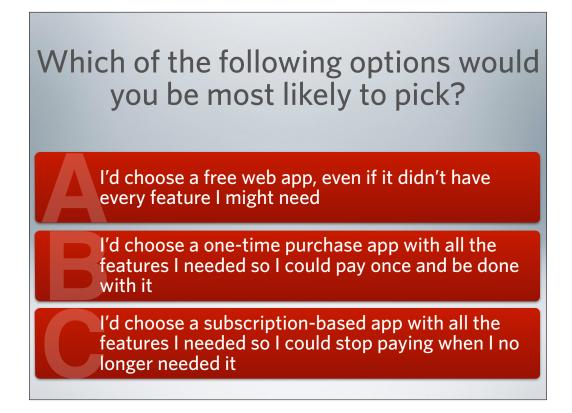
Again, note that taking the list as a whole, each activity ended up in a similar chunk of the overall list, and those that crossed the line between list divisions often still moved by only one or two ranks.



Again, note that taking the list as a whole, each activity ended up in a similar chunk of the overall list, and those that crossed the line between list divisions often still moved by only one or two ranks.

Imagine that you needed to obtain software for a project involving word processing, spreadsheets, and presentations. Which of the following options would you be most likely to pick?

You might guess that this question somewhat derived from the common "Office 365 vs. Google Apps" decision that many of us struggle with. Adobe Creative Cloud is another new subscription model that many are grappling with.



However, another reason this question made the cut is that we had a lot of discussions about what students are willing to invest in with regards to technology.

Also note that we did our best to use generic concepts in order to mitigate any strong opinions regarding the vendors themselves. We were hoping to tease out people's feelings about the different purchasing models while separating their feelings about Microsoft or Google as a company. You can guess, of course, which choice aligns most closely with each company's strategy, but there are other options out there.



Results from live poll at HDI 2015 presentation

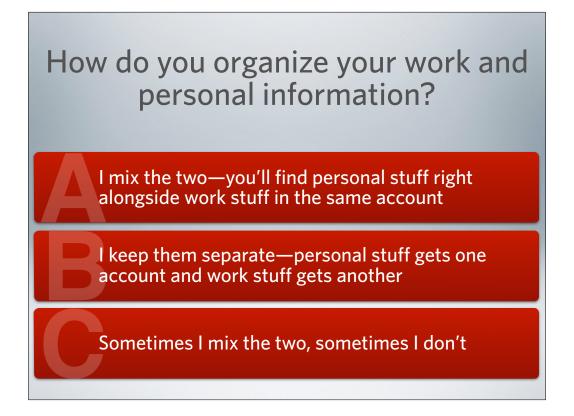


Looking at the data, you can see that subscription lags way behind the other choices. It's interesting that no one seems to think twice about paying for a Netflix subscription, but it generally isn't considered (at least not yet) a desirable option for software amongst BU respondents.



We often use similar tech tools in our personal lives as well as in our work, be it professional or academic. Sometimes, though, the line between those two categories can be blurry. How do you organize your work and personal information?

On the surface, this question seems to be a privacy question, but that was not our primary driver for keeping it in the survey.



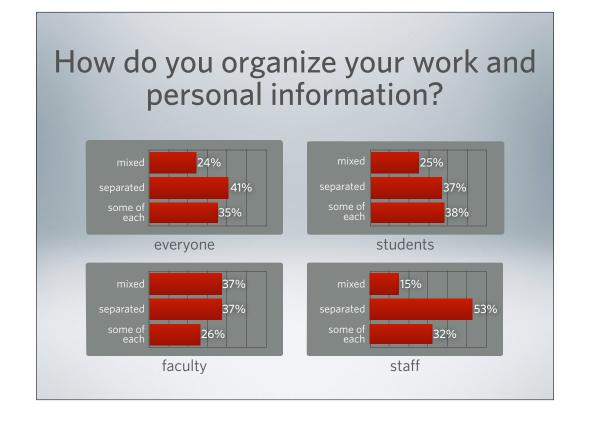
Rather, this question started as a discussion about whether or not people tend to adopt different technology to cater to connect with the different people in their lives or adapt to certain situations. If you keep things separate, you might be using multiple devices, accounts, or apps to adapt to the different roles you play, while if you mix your information together, it could be an indicator that you prefer less "things." Do students keep in touch with their families one way while communicating with professors another way?

We also thought what students were doing, specifically, might be interesting as we consider that they will be going into the workforce soon. Does this dictate what devices you give them, or influence your decision on BYOD? Even if you give them a device will they simply do everything possible to use their own?



Results from live poll at HDI 2015 presentation





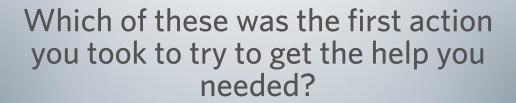


BU Results: The fact that many people are mixing data though, as they are students, confirms what we already know is a growing challenge as IT staff – raising awareness about where your data is, and teaching folks entering the workforce that are used to many devices, cloud computing, and putting all of their stuff in one place what company data might require segregation for compliance reasons.

This might be an interesting question to delve into the next time around, to ask "why?" Mike and Jill gave this presentation to the New England Local HDI Chapter, and when this question came up everyone at the table almost unanimously reached into their pockets and put their two different phones on the table. While not (entirely) meant to be a privacy question, anecdotally it does seem like the wish to separate is driven primarily by privacy.

Think back to the last time you dealt with a technology problem or question. Which of these was the first action you took to try to get the help you needed?

This question originated as a discussion about whether people still expect and value IT support, and also, as one discusses the idea of Level 0 (self-service), whether anyone actually goes to a directed site vs. just "Googling" it.

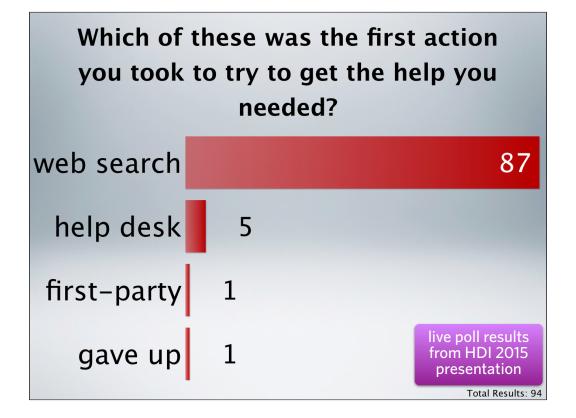


I used a web search to find the info I needed for myself

I contacted the Help Desk or my tech support person to ask for help

I used the support offerings from the company that makes the product I was using

I gave up and moved on to something else



Results from live poll at HDI 2015 presentation



Most BU respondents picked that they used a web search to find the info they needed.

This is not surprising, but if this trend holds in other environments, it does make one think that internal documentation and KB articles might not be doing people any good if they aren't hitting a search engine.



Have you ever considered a career in tech support, be it working with people or maintaining servers and infrastructure?

This question was asked only of survey participants that self-identified as students. There has been a lot of discussion lately about how it is more and more difficult to fill open positions with qualified candidates, so we thought it would be interesting to see who was considering IT as a career.

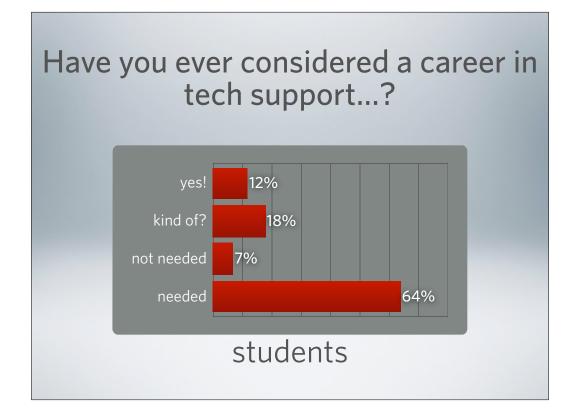
Have you ever considered a career in tech support...?

Yes! I love helping people and bending servers to my will

Kind of? I'd like to work in tech, but support wouldn't be my ideal way to do it

Not really. I actually wonder if we'll even need tech support people in the future

I'm not cut out for it, but I appreciate working with skilled support staff when I need help



Only 8 students answered definitely yes to this question.

Aside from handling basic tech support issues, what are your biggest challenges or concerns about using technology?



Results from live poll at HDI 2015 presentation



The most interesting thing about this data is how security and privacy are so prevalent in the answers. We intentionally did not ask questions that highlighted security and privacy (with only one question slightly touching the topic), because it seemed like it could spiral into a topic in and of itself. But both the survey participants and the folks at HDI expressed this as a big concern.









...what are your biggest challenges or concerns about using technology?

"The constant need for upgrades and changes. I do a lot on Quicken and recently moved from 2007 to 2015. I have to relearn the entire program."

"...all of our technology and program usage seem to rely on a functioning Internet connection. Its dependence on this factor is somewhat worrisome."

"The thing I tend to have the most problems with is cloud storage. I often find that it doesn't really work like I think it will."

Some interesting quotes.

Conclusion & Discussion

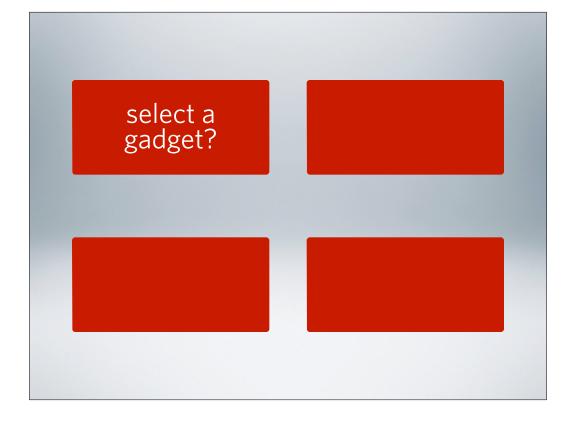
so all this adds up to what?

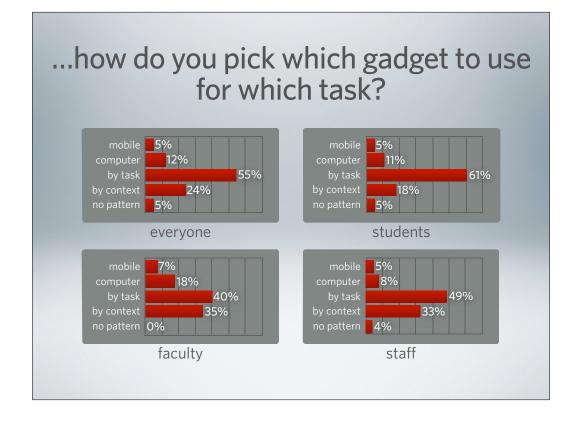
We identified four major trends amongst respondents, even across our smaller sample size, that seem worth exploring further.

We also felt our data is a step towards confirming the value of desktop support and IT in general.

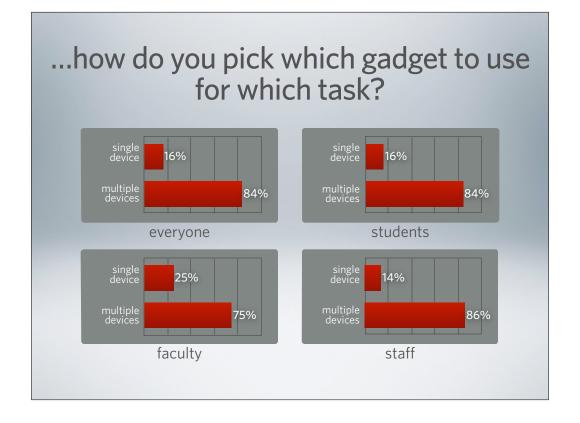
Finally, we noticed that BU students and staff aligned more closely in almost every area. Upon some reflection, we believe this is because staff take classes in our environment just like students (taking advantage of tuition remission.) While many folks that say "students" probably instinctively mean "young people" what we found is there was not much difference between the undergrad and grad age bands. Instead, perhaps being a "student" is more about the process of learning new things than your age.

If we come back next year, we plan to add a question to participants that identify as "staff" about whether they are currently enrolled in classes.



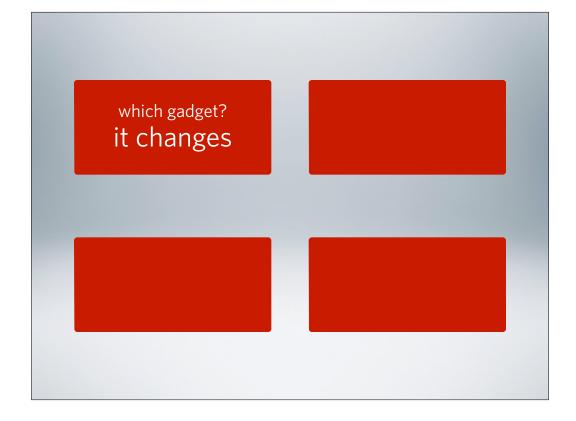


If BU students **do** give us a crystal ball, it looks like we are becoming more task driven. One might extrapolate that we are becoming used to having multiple devices and tools, and now expect to be able to pick the best device for the job.

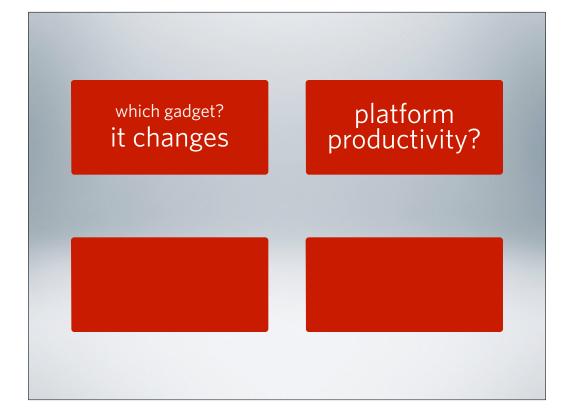


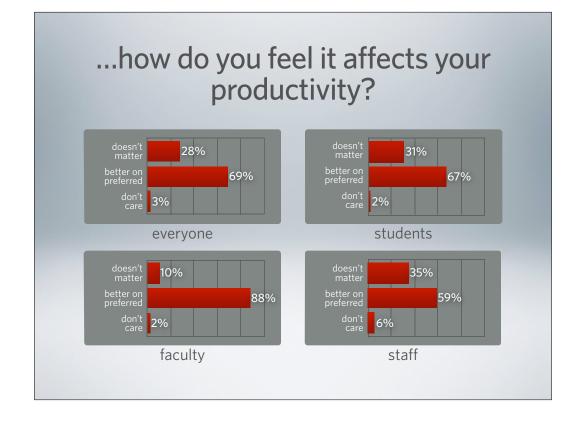
If you combine the answers into two categories — the answers that indicate one only uses a single device vs. the answers that indicate multiple devices are regularly used – you can see respondents heavily lean towards choosing between devices as opposed to sticking with just one thing.

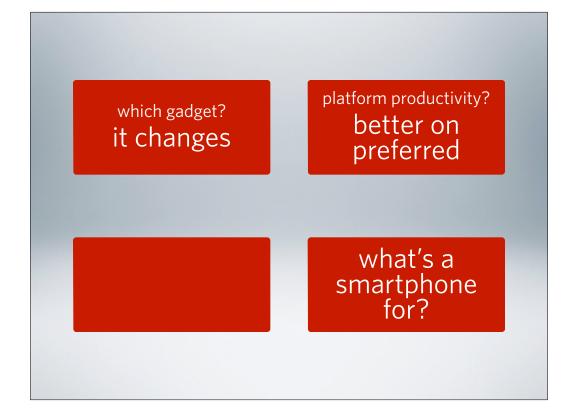
The difference is that students appear to be more task driven while staff, and then faculty, drift toward being more split between task and context.



Trend #1: At BU, survey participants used various factors to choose which gadget to use for a task, but usually they do choose between multiple.



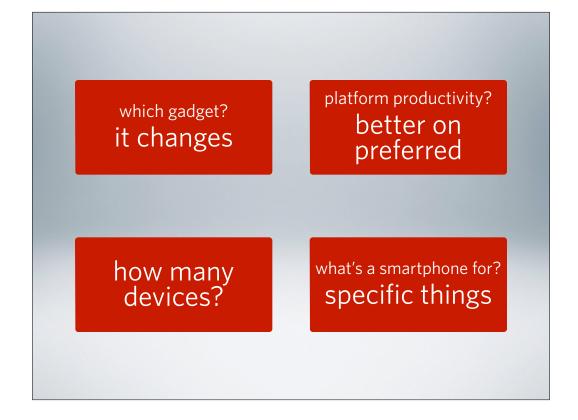




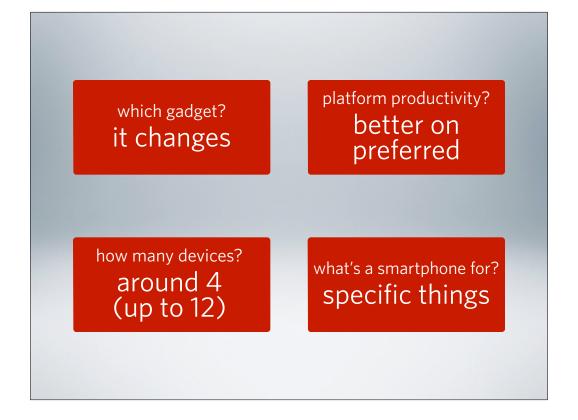
Trend #2: At BU, survey participants felt more productive on their preferred platform. Interestingly, the most flexible folks in this area were staff, followed by students, and then faculty.



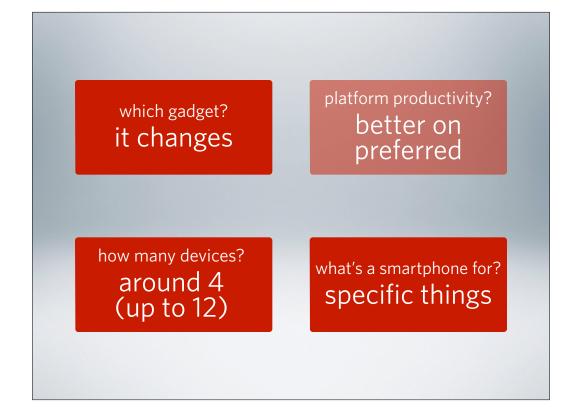




Trend #3: At BU, survey participants felt strongly that certain tasks were done a smartphone, while others were not. **If** we have a crystal ball, students were the most opinionated about what smartphone was for (picking "always or never" more frequently.)



Trend #4: At BU, survey participants regularly used an average of 4 devices, and sometimes when up to 12. While we specifically did not ask about ownership, because we wanted to know how BU staff and faculty were using assets given to them by the University, most people likely chose devices that they "owned" and it's somewhat safe to assume that most survey participants not only regularly use more than one gadget, but own multiple as well.

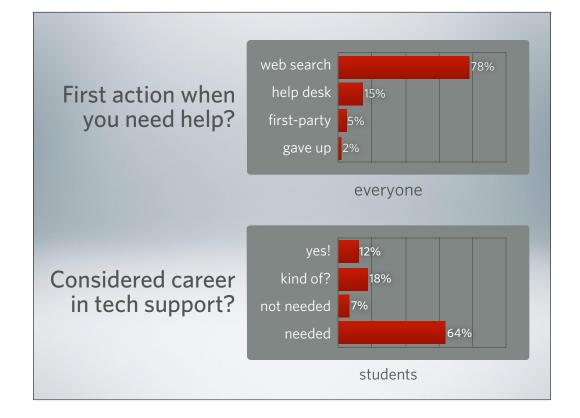


So....do we have a crystal ball? We'll continue to gather data, but what we've found so far is that

- 1) overall people find the data interesting and worth pursuing further.
- 2) to truly answer that question, we need some data from a non-academic environment, to see if the same or different trends emerge.

BUT, we do feel that we see enough of a difference in the answers between students & staff (those taking classes) and faculty (those giving classes) which make us think it's possible there's a "yes" in there.

While overall, everyone agreed on all of these trends, in three of the four categories students & staff were driving them, and much more passionate about their answers.



One other thing we've heard is "no one uses IT anymore" or "IT is going away." If we flip back to the two questions that try and address this, at first they may seem contradictory.

Why might this be?

- 1. People might be sensitive to the fact that this survey was coming from their IT staff. :)
- 2. Most folks are tech savvy enough to search as a first step, but escalate next.
- 3. The wording of "question or problem" caused people to answer differently, and will do different things when they have an issue vs. a "how do I?" question.

It seems like people still appreciate their IT support; they are just savvy enough to search for the quick answers first. Additionally, if people feel more productive on their preferred devices, and want to use the right tool for the job, having IT available to help people available through to help navigate the myriad of choices might be a sound investment to make your school or company more productive and efficient. Are the days of locking down IT to cut costs and making it easier to manage over? Should they be?

...is IT important?

"My dad is [an IT Manager], so when I come across things I don't know, I give him a quick call..."

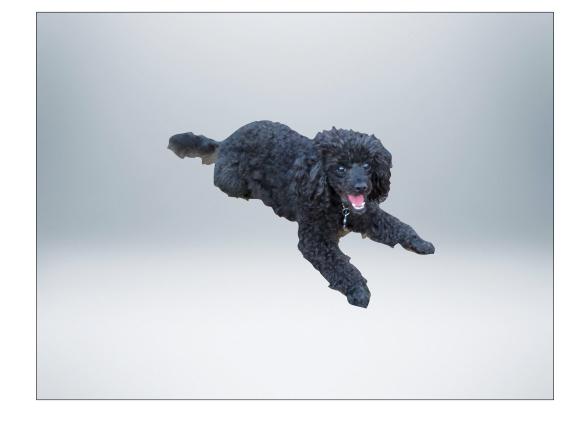
"...I feel like I'm supposed to know how to use technology really well because of my age but I would generally rather complete assignments on paper..."

"I don't currently have a huge desire to learn more. If I don't know how to do or use something, I call my dad for help."

We also received a few quotes where students indicated that they go to their parents for technology help. This, combined with the fact that very few students surveyed were interested in IT as a career, seems to indicate that the concerns we have about finding new talent might be true. More data from other environments would be needed, but the trend at BU seems to be that while students are using and choosing more devices, they aren't necessarily interested in learning about them in depth and troubleshooting their own issues.

tools we used





Shoutout for moral support from Jill's dog, Molly. Please send fan mail to jillb@bu.edu!

let's discuss

If you want to talk more, email us:

jillb@bu.edu javorsky@bu.edu

subject: Crystal Ball

Thanks for listening!

(...and please complete an evaluation form. We're suckers for good data.)

