Technology in Education

Research Report

Microsoft

Team 8
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Objective

To find the pain points of international students
who are studying in colleges and graduate schools
across the United States.

Hypotheses

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Before we started our research, we compiled a list of things we already know about our target users. They can be broadly classified into 2 categories.

Communication Problems

- International students struggle with communication among classmates and with teachers.
- Fast paced lectures make it difficult to take effective notes.
- Difficult readings and complex writing assignments take more time for international students.
- Classmates may try to finish sentences for their international peers because they speak at a slower pace.

Cultural Differences

- It takes time to adapt to the difference in culture and teaching format.
- Informal relationships with teachers take some getting used to.
- Expectations to participate in the classroom may be unfamiliar to them.
- Teachers cannot assume that international students have a broad knowledge of American history and cultural references.
- Skills learned in high schools abroad may not match those learned in the U.S. They may be far more advanced in some areas and less skilled in others.
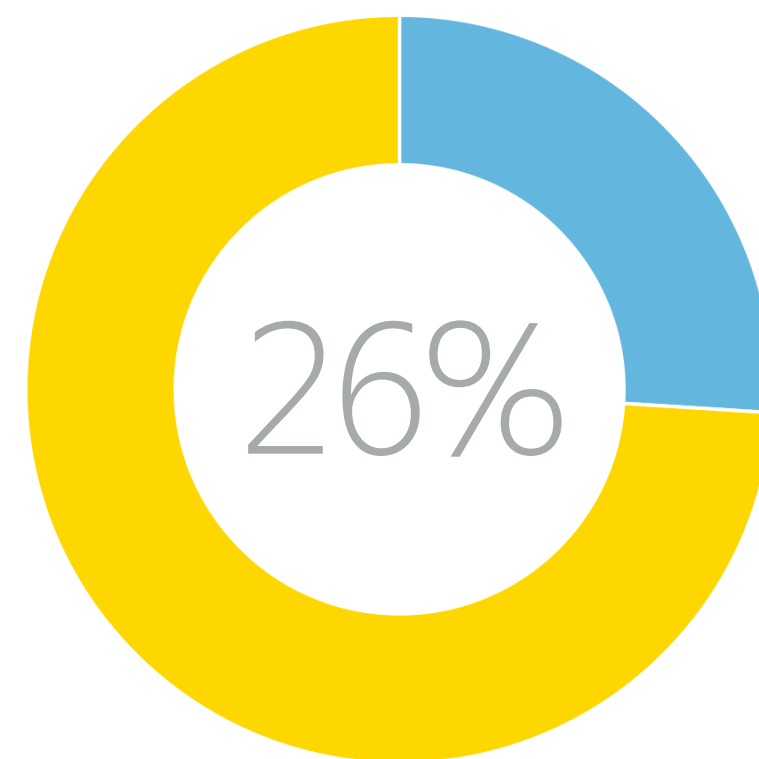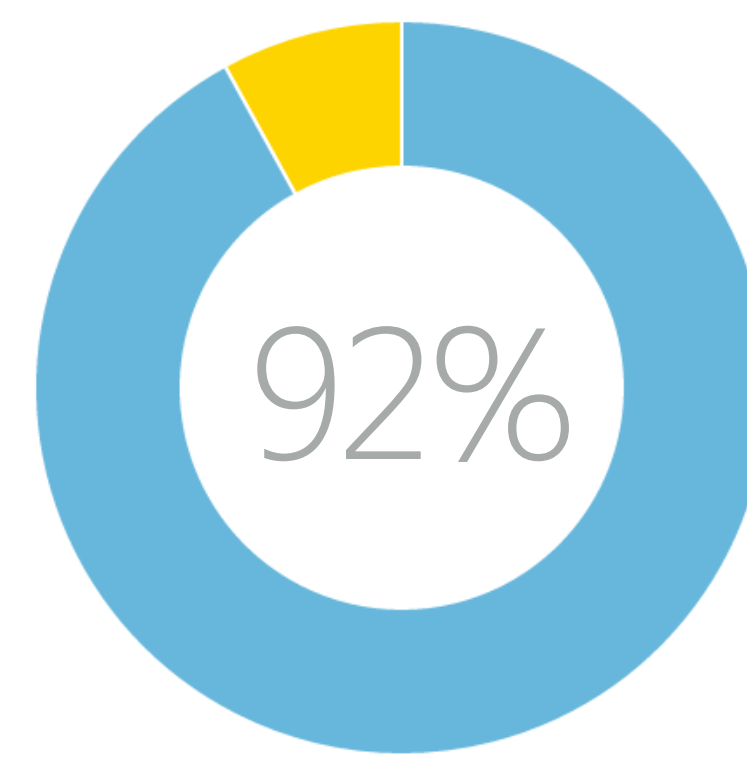
Method: Survey

To get a broader view of the role technology plays in student life, we sent out a survey to two undergraduate level courses and shared it on social media. We received 30 responses in total, ranging from college and graduate students to recent graduates.
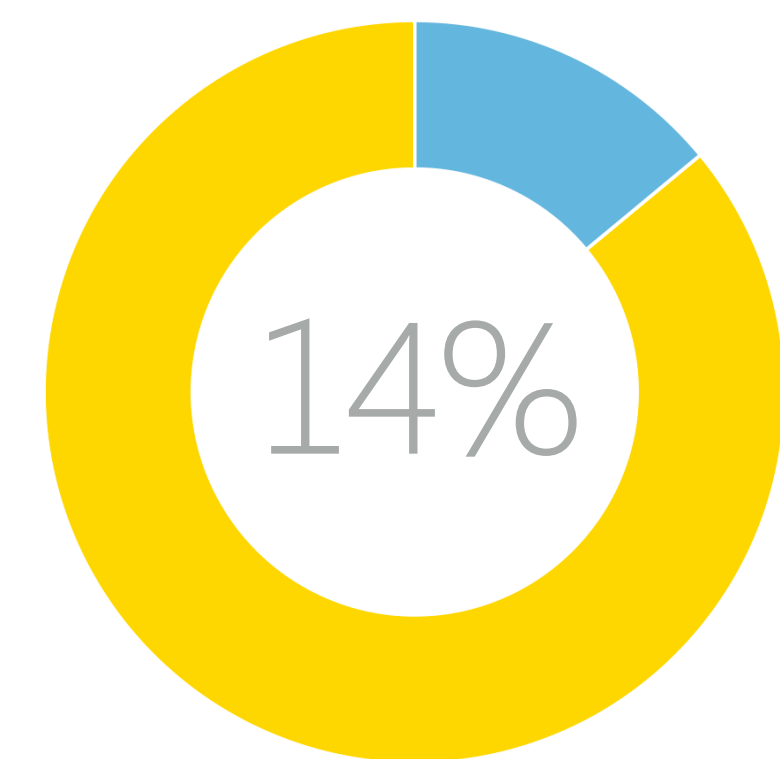
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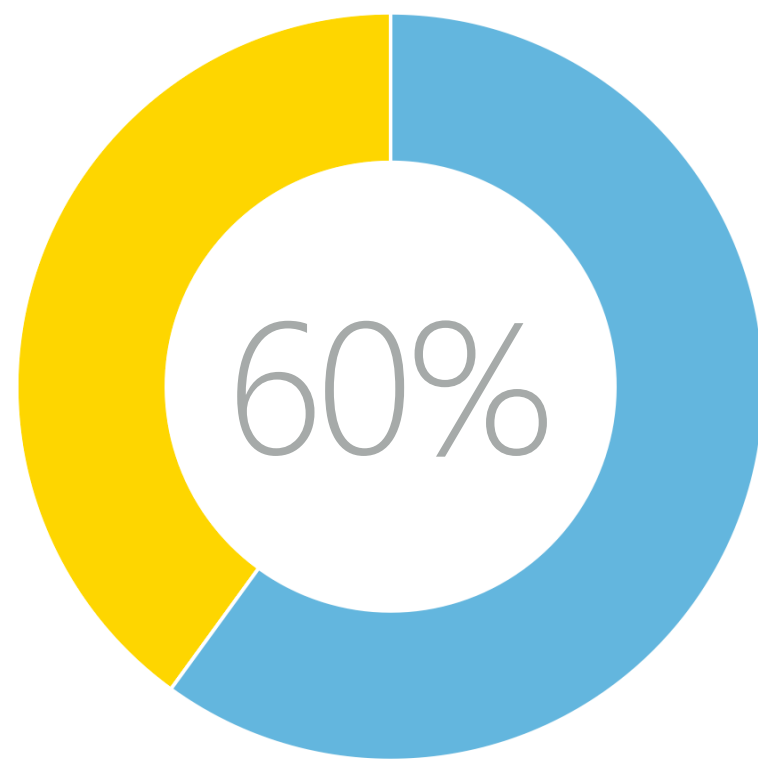
60% still use pen & paper to take notes in class.

26%

Only 26% would agree to use only university-provided devices in class.

92%

92% frequently use cloud services like Google Docs for collaboration.

14%

Only 14% use digital calendars to schedule group meetings.

Method: Survey

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In order to get more qualitative data, the survey also included some open ended questions.

Describe your ideal classroom.

"Small room (not lecture hall), desks arranged in semicircle, allowing for easy conversation and access to technology on board."

"Smaller room with few students, typing notes is faster so laptops for each student, projector setup for the teacher and maybe some kind of interactive collaborative surface that all could write or draw on to see visual connections in the materials."

What issues have you had with existing communication tools?

"Too many notifications, hard to send longer messages or show when a message is urgent."

"Often communicating between a group of both android and iPhone users tends to be an annoyance somehow. Either android users not receiving the messages, or something like that."

"You cannot force any to collaborate if they choose not to."

What other tools do you use to supplement your education?

"I think the use of videos have supplemented my education the most. It keeps my attention and they allow me to understand the concepts more quickly. Then, afterwards the professor discusses it and answers any questions. Humor is also incredibly effective."

"Online instructional materials like Lynda."

"I still use pen and paper when I want to study, the physical act of writing makes things stand out more."

Method: Focus Group

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We conducted a focus group of 25 students, centering around the topic of technology in education. It was semi-structured in nature; we asked students to discuss current technology used in classroom, group work, and communication.

"It's easier to take notes on my laptop because my handwriting is bad."

"Real-time collaboration is so easy with Skype and Google Docs."

"Technology has brought personal interaction down to a bare minimum."

"I get distracted when someone in front of me uses Facebook in class."

"If someone joins a meeting remotely, it's easy to forget their presence."

Method: Interview (1/6)

We conducted six interviews via telephone and email. We followed a semi-structured format for the interview, asking several "core" questions and letting the answers dictate the questions from there.

Tiffany Parker

M.S.W Social Work
Southeast Missouri State University

20 years teaching undergraduate level

"There's this expectation that you're available 24/7. They expect you to respond immediately and feel neglected if you don't."

"I've seen a decline in communication skills, especially in writing. Students use shorthand and instant messaging abbreviations in their assignments."

"I like the ability to access websites in the classroom. It allows for me to be more current and show things that are going on right now."

"I can't ask for the same type of critical thinking from my students that I used to."

"The education system is so technology driven now, there is a reliance on technology for basic skills, I'm not sure it's helpful. Students will have a paper that is technically right (spelling) but contextually wrong."

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Michael Parker
Ph.D. Social Work
Southeast Missouri State University

30+ years teaching and working in administration

"It's more of a philosophical argument for me. I think we use technology because it's there and force it to try and fit our situation. Universities, in particular, use technology just to remain competitive and because it's convenient."

"It's convenient for students, with online education, dropbox, online grading, powerpoints - that's the primary motivation behind it. I've found that technology in the classroom doesn't challenge students to think. The convenience factor has infringed on education."

"With international students there can be a language barrier. The spoken word is harder for them than the written word. They can read at their own pace and process at their own pace. Some of the coursework is challenging because of cultural differences (some classes like math and science aren't an issue) but courses like Social and Cultural Diversity are more difficult - topics like sexual orientation, gender equality, racial issues."

"Personally, I believe that overuse of technology is going to destroy education as we know it today; it doesn't allow them to think for themselves. They learn to become technicians and how to access information rather than really being "informed" individuals."

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Kris Baranovic

M.A. in English Language and Literature/Letters
Southeast Missouri State University

Instructional Designer
English Instructor

"Some of the most successful uses of technology are when professors embrace it. Instead of trying to get students off of their phones and computers they start using them for good in the classroom."

"Analytics are becoming super important right now. With the increased use of LMS, they are tracking and gathering a ton of behavioral data. The big question now is 'How do we take all of this data and make it digestible? How can the students take the data and see how they are performing in their classes? How can we advise students on what to do based on the data?' Maybe we can tell them that they suck at taking math courses online, so don't do it."

"In some situations the anonymity of the internet is a good thing. Students are able to be more honest with situations like peer-to-peer feedback."

"International students tend to be better students and work harder because they have to. International students that are newer to the idea of a more liberal educational system have some trouble with critical thinking and giving you their opinion on a topic. It takes a while for them to adjust."

"I've found that international students tend to be really good writers or reader but rarely both."

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Marcela Palaez
Studied Communications at Purdue University, Fashion Marketing at Parsons Fashion.

Entertainment and Lifestyle Intern at LaForce+Stevens

"Every time you left the country, you had to check in with International Students and Scholars. At Purdue, you had to physically go there and get this thing signed. But at Parsons it was more advanced, because it was three years later. So you just had to do this thing online. You didn't have to go anywhere physically."

"There isn't really any technologies for international students. I think it's only different if you don't speak English well. However, I don't think my experience was much different than a domestic students. We got more help with tutoring and advising."

"I had to pay an immigration lawyer to talk to him and figure things out, the school didn't help at all. I think schools should provide help with that because it's stressful and it's hard to figure out and we are students too and then we have to deal with that stuff that we don't understand."

"Skype is great because you can keep in touch with your parents and friends and see their faces. My brother went when there was no Skype and so he kept lots of photos around his room. Technology helped to make that easier. Also, I got in touch with my therapist via Skype."

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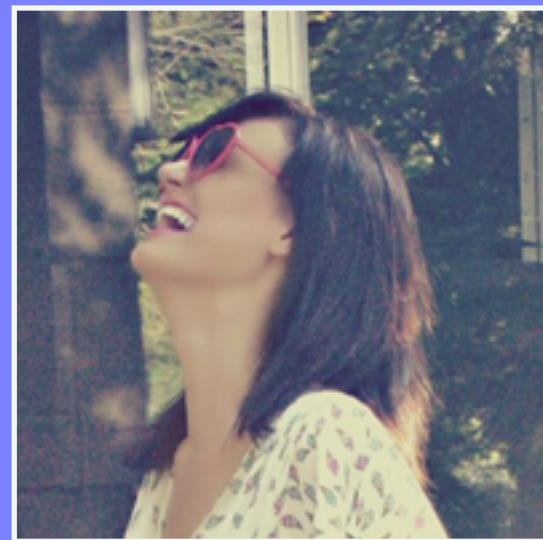
Kelsey Roadruck
Senior in Journalism
at Indiana University

"Technology is critical to my student life. I would have such a wealth of research or strong network of potential interviewees without the Internet and social media. As a student journalist, I conduct half - if not more - of my interviews via phone or email. And I haven't cracked a physical book for research in years. And for my informatics concentration, technology is all we talk about. Would informatics even be a degree option without technology?"

"I text my mom everyday all day and my dad texts me occasionally to check in. I've gone home a lot more on the weekends this year than I usually do. I think it's mostly from feeling guilty that I'll be moving 3,000 miles away in a few months. My siblings and I mostly use social media (Facebook and Twitter) to communicate."

"I don't delegate and I don't say 'no' to anything work or school-related. So, I stress out a lot. To resolve this, I've really started prioritizing a good night's sleep over staying up to finish something. I'm still not great at delegating, but I'm definitely getting better - especially since most of my schoolwork is team-based assignments."

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Eunbi (Amber) Lee

Bachelor of Arts in Psychology at Indiana University

International Student Ambassador at Indiana University

"I started studying in the US since I was 15 in Michigan. I definitely had a few struggling years with language and different culture. I ended up focusing on school rather than social life in high school, so I don't have many friends from high school."

"Technology plays a large part of our lives in a modern society. Canvas and OnCourse sites really help students better manage their courses."

"It was not so difficult [to adapt to the teaching format in the US] because I can easily adapt to new technology like many other young students. However I was still amazed by how high school had their online system for students to check their grades and do homework. I hoped that my high school in Korea had such a practical system."

Method: Literature Review

We conducted secondary research by reading articles to learn more about the technology that is available and used in education. Furthermore, we wanted to learn what has changed for education due to technology in the classroom. We gained many insights into the implications that technology has for students and teachers and how they are dealing with it and adapting to it individually and together.

In This Classroom, Knowledge Is Overrated
http://www.wired.com/2015/10/in-this-classroom-knowledge-is-overrated

The Tech Elite's Quest to Reinvent School in Its Own Image
http://www.wired.com/2015/10/salman-khan-academy-lab-school-reinventing-classrooms

Schoolkids Don't Just Need iPads. They Need Data Plans.
http://www.wired.com/2015/09/qualcomm-education-homework-gap

International Students in the classroom:
http://www.loyno.edu/cie/international-students-classroom
http://international.illinois.edu/faculty/docs/Supporting%20International%20Students-%20A%20guide%20for%20instructors.pdf
https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/alternatives-lecturing/group-work/implementing-group-work-classroom
http://www.crlt.umich.edu/internationalstudents

Research Synthesis

Using a mixture of qualitative and quantitative research methods, we gathered these insights:

- There's no technology designed specifically for international students.
- Technology for technology's sake is not good, it has to be invisible and seamless.
- Teachers and students like to be face to face in class and for discussions. They think that's the best learning experience.
- Critical thinking has been declining and we think that technology could be inhibiting that by not making people think for themselves.
- Students are comfortable using their own devices and don't like their access to be restricted by the university.
- Adding new apps or new technologies to existing mediums can make the experience more hectic.
- International students have to work harder to produce the same comprehension (when it comes to class readings, writings, and note taking) as domestic students.

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