

Student Insights & Opportunities

Student User Research: August 2012





Student Insights and Opportunities

Who We Talked To



Brennan

- Grade 7 at public middle school in NJ
- Owns a Kindle Fire and a Verizon Octane, uses the family iPad
- Tech savvy, knows how to get around the internet blocker
- Has tried some programming in XCode on his Mac



Alex

- Grade 7 at public middle school in NJ
- Owns a Samsung Slide and uses the family iPad
- Studies Latin so she can get good grades on her SAT's
- Jean's twin



Jean

- Grade 7 at public middle school in NJ
- Owns a Samsung Slide, uses family iPad, studies Latin
- Girls can only use iPad for 45 minutes each per night
- Alex's twin



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Who We Talked To



Ruslin

- Grade 7 at public middle school in NJ
- Owns an AT&T regular phone (texting only, no data)
- Uses the family iPad
- Likes to play online games with Michael



Michael

- Grade 7 at public middle school in NJ
- Owns a LG phone (texting only, no data)
- Owns a laptop, uses the family iPad
- Likes to play Xbox, Wii and online games with Ruslin



Jack

- Grade 6 at a Catholic school in CT
- No cell phone, owns an iPod touch, uses the family iPad
- Uses Twitter, plays Minecraft, watches YouTube
- Thinks technology taught & used in school is too old & basic



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Who We Talked To



Tim

- Grade 6 at a public middle school in NJ
- Owns a Samsung Smooth.
- Wants an iPod touch because his sister (Charlotte) has one
- Doesn't use the internet much, likes to play Xbox & Wii



Charlotte

- Starting grade 9 at an IT Academy charter school in NJ
- Owns HTC Thunderbolt because it was "best phone of 2011"
- Has a laptop, iPod touch and Nook tablet
- Tim's sister



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Kids will try to find ways around control mechanisms – and share it with others.

- Students found a way around the lock screen in two minutes using the Samsung app drawer
- Students focused on breaking the lock like it was a challenge
- Tim used the alarm to create a disruption that got through the lock



How might we make controls feel foolproof to teachers and students?

- ✳ “Zero response”: disable anything students can’t use
- ✳ Lock screen actually turns off screen or displays completely black screen
- ✳ Turning on Force Field could flash whole screen instead of small popup message



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Students' interaction with the tablet was shared and social.

- Friends show each other cool apps
- “Ooh! Twitter! Draw Something! Email! YouTube! Skype!”
- Students talked through the games together, sharing tips on how to beat levels
- Students were excited to show us Temple Run glitch that makes it possible to score “30 billion points”



How might we encourage students to explore and share while learning?

- ✳ More advanced student contribution: students can share all types of content (e.g. video, audio, eBook) not just text
- ✳ Chat stream
- ✳ Explorer badges
- ✳ ‘Share to Sundae’ option in the browser/other apps



The interactivity of the tablet introduces the element of play, at all times.

- Students posting silly, funny comments
- “What about people who spam?” “You could use this to troll the teacher” (Jack)
- “Students can have conversations between themselves – if they do that, teachers should give them -1 reputation points!” (Jack)
- After setting off alarm in lock screen: “Yay! I did something!” (Tim)
- “Oh cool! I can raise my hand!” (Charlotte)
- Pressing buttons: “Leave class, Join class... Leave, Join! Leave, Join!” Realizing this will annoy the teacher – “You should have a password to leave class” (Tim)
- “Eyes on Tablet” should have a cooler text effect, like a gradient (Jack)



How might we harness the excitement of interactivity in ways that aren't distracting?

- ✳ In session “focus mode” that removes navigation
- ✳ Highlight different buttons in context of a lesson
- ✳ Badges for necessary routine tasks like attendance and charging battery
- ✳ Student activities: use tablets as individual pieces of a whole image to find your partner, a group, matching tablet etc (using NFC when tablets touch)



Students want to be able to personalize the tablet (hardware and software)

- “Can you buy cases?” Can you get a bag for just the tablet?” (Alex + Jean)
- “Are there customized cases? You could switch colors to make designs.” (Michael)
- I would want to personalize it... if you’re going to be looking at it every day... you might want to change it.” (Charlotte)



How might we design the entire physical experience of Sundae?

- ✳ Hard case with tablet and real notepad, can snap photos of notes with tablet camera
- ✳ Bumper to guard against breaking
- ✳ Small keyboard attachment, stand that helps with typing
- ✳ Wireless charging
- ✳ Bags, cases, night light, accessories all oriented towards school.
- ✳ Outer skin which you can decorate with stickers.
- ✳ Customize software: Sundae ‘skin’, notebook covers, section backgrounds. Design your own.



Students want immediate feedback on their work.

- “I check my online grades immediately after a big test” (Charlotte)
- “Mr. (...) didn’t activate his Fusion page until October!” (Alex + Jean)
- “Some teachers... it takes them forever to put grades up. It’s really annoying.” (Charlotte)
- “I have [my own] app to keep track of grades.” (Brennan) “Wait! I want to write that down!” (Alex)



How might we allow students to get feedback from people other than their teacher?

- ✳ Seeing other students work, e.g. students grade each other's work, display examples of good work.
- ✳ Parents help with grades and feedback
- ✳ Class/school feedback forum



Students want proof that their grades are fair and accurate.

- “The teacher should be able to turn the internet off for tests.” (Brennan)
- Students want to see grade percentage for every test online
- Kids frustrated that teacher only uses 1 of 3 slots for grades online (Alex + Jean)
- “We figured out” that grades were awarded by which row you sat in (Brennan)
- In general, students don’t understand the grading system.
- “I think the teacher should be able to lock the app drawer.” (Jean)
- “You would have to make sure kids wouldn’t cheat... if they could get on the internet it would kind of defeat the purpose.”



How might we help students see where their grades come from?

- ✳️ Visually interactive grade breakdown of overview
- ✳️ Post answers afterwards e.g. in forum or grade sheet for each activity
- ✳️ Give students information on how they could have got a better grades
- ✳️ Show grade ‘balance’ over time (like Mint app)
- ✳️ Encourage teachers to provide grading rubric used
- ✳️ Prompt teacher to give feedback e.g. for students with low grade or who haven’t received much feedback



How might we make students feel confident that others aren't cheating?

- ✳ Internet traffic monitoring and internet access alarm
- ✳ Actually disable internet on device using software, Mobile Device Management, or even classroom router
- ✳ Log activity on tablets during tests
- ✳ Force Field: state or show animation of whole class going into force field, teacher can see your screen, etc.



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Students think that the tablet would make their school lives easier.

- Textbooks on the device: "That would be awesome... no more carrying books or paying for new ones." (Charlotte) "So much lighter.. don't need a backpack! (Tim)
- "So much easier to stay organized!" "A lot easier, a lot lighter" (1st Group)
- "It would be cool if you could do homework in the app." (Charlotte)
- "Everyone has an agenda for keeping track of assignments but I lost mine" (Jean)
- "If you lose your agenda, you're done for." (Charlotte)
- "Imagine just putting your iPad in a locker and just taking the iPad out—you wouldn't even need a locker!" (Alex + Jean)
- "I lose my homework paper at least once before I turn it in" (Charlotte)



How might we help students keep everything organized?

- ⌘ To-Do list, reminders, alarms. Countdown clock on To-Dos
- ⌘ Integrate Gmail, Gcalendar in Sundae.
- ⌘ Option to add class notifications & reminders with calendar.
- ⌘ Add personal & extra-curricular activities in calendar
- ⌘ Backup for when tablet is lost



Students care about the tech specs - performance, brand, etc.

- “How much memory does it have?” (Michael)
- “Can I have the Samsung?” (Brennan)
- “I have the Thunderbolt - supposedly it’s the best phone of 2011.” (Charlotte)
- Minecraft: “It runs on Java so it’s really slow... it’s only like 5 fps when other games are like 60 fps” (Jack)
- “How much will this app cost?”
- “Do most of your friends have an iSomething?” Everyone: “YES!”



How might we plan for the long term future of these devices?

- ✳ Same unboxing experience for second-hand tablets
- ✳ Give to one student for the lifetime of the tablet



Technology available in schools doesn't live up to students' expectations.

- The computer lab has “cheapie computers that are from like 1998.” (Jack)
- “I wish that they would put the books online.”
- “What’s the point of having Smart Boards if you’re not allowed to use them?” (Charlotte)
- “It’s not fair!” that teachers don’t use technology (Alex + Jean)
- “They have laptops in the back that never turn on, so we just end up going to the library.”
- “The internet board exploded and landed on my back.” (Michael)
- “IE is the slowest thing on earth... blocks Java and thinks Skype is a virus.” (Jack)
- “Our tech people are lazy.” (Jean) “No, they just have too much to do because everything is broken!” (Alex)
- Science teacher was the last to get a Smart Board- “Science teachers should be the first ones!”
- Smart Board license had expired when the teacher used it in class (Charlotte)



How might we help teachers use all classroom technology better?

- ❖ Integrate with Smart Board and other devices
- ❖ School ‘tech tips’ in Teacher’s news/notifications
- ❖ Discussion/chat/forum between Teachers
- ❖ Sundae ‘cheat sheet’ for Teachers
- ❖ Sundae intro/walk-through when first open app
- ❖ Tech interns to assist teachers for first week or so



Students notice when teachers are not tech savvy, and it can undermine their respect.

- “Our school has Smart Boards, but no one uses them. Most of our teachers have no idea what technology even is.” (Jack)
- Teachers use Nokia phones that are like “big old bricks. When you drop it there’s an earthquake.” (Tim)
- “My social studies teacher took a whole class to put something on it [Smart Board].” ... “Teachers should be taught how to use them” (Charlotte)
- “Teachers are afraid of breaking them [Smart Boards]” (Jack)
- Kids playing on 3DS and teacher said “Stop playing on your Gameboys!” ... Kids laughed because Gameboys “are big chunky things with AA batteries!” (Jack)
- “I used GIMP for an assignment and got a bad grade because the teacher thought it ‘looked Photo shopped’... that was the point” (Charlotte)
- “jpeg? Use .png! It has better quality and transparency. They call .gif files Gee-Eye-Effs.” (Jack)



How might we make the tablet useful to students even if their teacher doesn't embrace it?

- ❖ Automatic notebook setup to work for all sections, students can use without teacher input



Student Insights and Opportunities



Technology education in schools is too basic for students and they wish it was more applicable to the real world.

- “Teachers teach us the most basic stuff in the world.” (Jack)
- PowerPoint: “We learned in school but most people know how to use it ... it’s kind of a self explanatory program” (Charlotte)
- Students want to learn “how to use the cloud” and Photoshop/ GIMP (Charlotte)
- “I know a few HTMLs!” (Jack)
- “We were taught internet safety 3 times in one month...” (Charlotte)
- “Teachers are like, ‘I don’t know how to work it so you’re not gonna work it!’” (Jack)
- “We have Windows ‘98 in most of our classes. My friends and I know how to program kinda... so whatever... teaching us to do Excel is like... pointless.” (Jack)



How might we help students build the tech skills that are important to them?

- ✳ Give Teachers basic tech education
- ✳ External speakers come in for ‘tech talks’
- ✳ Allow students to suggest topics to learn and vote on them



How might we help teachers guide learning about technology they aren't knowledgeable about?

- ✳ Flipped classroom: students learn tech at home online, class is for presentations, suggestions, critique.
- ✳ Teacher teach use YouTube tech lessons to teach



Inputting information into the tablet needs to improve.

- “I typed ‘robot’ and ‘hobo’ came up.”
- Students tried to use audio input feature and autocorrect was consistently wrong
- Students struggled to copy and paste
- Students could only remember a couple words at a time when copying a sentence from an article and had to switch views 5-10 times
- Students had to set tablet down to type
- Audio recording a lecture was asked for by several students



How might we utilize the tablet’s strength for content consumption and address its weakness for content creation?

- ✿ Make Sundae more like a tablet app than a webpage
- ✿ Support a desktop experience for students
- ✿ Explore keyboard apps for text correction or typing with the thumbs
- ✿ Physical keyboard cover for tablet screen so students can feel the keys.



Online communities are a normal part of many students' lives.

- “A lot of kids have Facebook at school.” (1st group)
- Instagram: “Almost everyone at school has it!” (Michael)
- “I check Twitter for updates on Minecraft—the developer posts on Twitter.” (Jack)
- “I got my own Apple account because my mom changed the password and I couldn’t update my apps.” (Charlotte)
- Students check “news” sites SourceFeed and SchmoYoHo, and watch YouTube channel CrashCourse on History and Science (Jack, Charlotte)
- “Some of my internet friends are better than my real friends.” (Jack)



How might we prepare students to be good online citizens?

- ✳ Teach online/email etiquette e.g. don’t type in capitals



Students have access to all the same resources that teachers do!

- “You can usually just Google the answers”, “We use Google a lot!” (All)
- “Some teachers get stuff online, so you can just look up the URL.” (Brennan)
- “We found the map online with all the answers filled in” (Alex + Jean)



How might we deal with the accessibility of answers online?

- ✿ Test student's ability to understand information that they may have copied from elsewhere
- ✿ Test student's ability to find information on the internet e.g. for tests and research assignments



Teachers get reputations just like students do.

- “I love math because our teacher plays pranks on us” (Jack)
- The 5th grade teacher “only likes girls” (Jack)
- One teacher interfered with another’s discipline because she is known as being “too harsh”
- Favorite teacher: “In the last day of school she jumped on the desk and started dancing!” (Alex + Jean)
- “She shouldn’t be a teacher, she obviously doesn’t like children” (Charlotte)
- Teachers are awesome when ... “they go off topic” (1st Group)



How might we encourage teachers to do things that students like and find engaging?

- ✳ Student feedback/rating on teacher content or lesson



Lack of communication between teachers in managing student workload causes stress.

- “Teachers want you to get stressed by putting all the tests at the same time.”
- If we didn’t have five projects due at once, that would be good. (Charlotte)



How might we allow teachers to co-ordinate students' workload across classes?

- ✳️ Teachers have shared calendar showing all student tests/assignments



Every parent has different kinds of rules about technology use at home, but school is usually an exception.

- Not allowed to use laptop in bedroom (Charlotte)
- Tablet: parents would be ok with anything for school, but “my parents would go berserk if he [Tim] started playing angry birds all the time!” (Charlotte)
- “Wi-Fi goes off at 8 o'clock... it's kind of annoying because some of the apps I use are very dependent on Wi-Fi.” (Charlotte)
- 45 minute screen time limit (Alex + Jean)
- No rules, just “don't get a virus!” (Jack)
- Students look for free apps, get permission from parents to download



How might we support boundaries for at-home academic and non-academic tablet use?

- ✿ Parents have a tablet too
- ✿ Parents can set Force Field so games are not allowed during study time



Kids are aware of internet privacy and security issues, but they don't necessarily take them seriously.

- “Parents think that any kid that goes on Facebook will die.” (Charlotte + Tim)
- “I feel like my password is easy to hack” (Jack)
- Internet safety: “Don’t call yourself soccerdude98 because people will know you’re a guy, your favorite sport, and how old you are!” (Tim + Jack + Charlotte)
- “You need a password so that your little brother doesn’t get into it.” (Charlotte)



How might we keep the classroom environment safe from online threats?

- ✳ Walled garden blocking IM chat and social networks
- ✳ More “real world” privacy & security education