Top 10 Things Tech Leaders Should Know about Today’s Students and Digital Learning

Speak Up 2014 Findings

Julie Evans
@JulieEvans_PT
CEO, Project Tomorrow
Project Tomorrow, a national education nonprofit organization

**Programs:**

- Research & evaluation studies
- STEM education programs
- Advocacy for digital learning

**Mission:** To ensure that today’s students are prepared to become tomorrow’s leaders, innovators and engaged citizens of the world.
Today’s Discussion:

- Introduction to Project Tomorrow and the Speak Up Research Project
- Countdown of “Top 10 Things” about students & digital learning
  - California findings from Speak Up 2014
- Invitation to participate in Speak Up 2015
- Your ideas/comments/questions
Something new in the air in schools today . . .
Key trends from our research:

• **Connecting digital learning with global skill development**
• **New classroom models gaining acceptance**
• **Criticality of connectivity – in school and at home**
• **Changing ideals for measuring outcomes and results**
• **New approaches to developing teacher capacity**
• **Evolving culture for professional development**

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Key trends from our research:

- Learning is a 24/7 enterprise for students
- Blurring of informal and formal arenas for learning
- Students as content producers not just consumers, especially in the arts
- Game-based learning is changing classroom dynamics
- Self-directed, collaborative learning is preferred
- Desire for greater personalization

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- Self-directed, collaborative learning is preferred
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Key finding from our research:

Students, educators and parents agree – we need a different kind of learning experience to prepare students for the future

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“Knowing it and seeing it are two different things.”

Suzanne Collins, Mockingjay
“Without data, you are just another person with an opinion …

Introducing the Speak Up data about students & digital learning to inform your district plans and opportunities
Speak Up National Research Project

Annual national research project

- Using online surveys + focus groups
- Surveys for: K-12 Students, Teachers, Parents, Administrators, Community Members
- Special: Pre-Service Teachers in Schools of Education
- Open for all K-12 schools and schools of education
- Schools, districts & colleges receive free report with their own data

Inform policies, plans & programs

- Local: your stakeholder data
- State: state level data
- Federal: national findings

4 million surveys since 2003

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Speak Up survey question themes

- Learning & Teaching with Technology
- College and career ready skills
- Students’ Career Interests in STEM
- Professional Development / Teacher Preparation
- Internet Safety / Data Privacy Issues
- Administrators’ Challenges / Bandwidth Capacity
- Emerging Technologies both in & out of the Classroom
  - Mobile Devices, Online Learning, Digital Content, E-texts
  - Educational Games, Social Media tools and applications
  - Flipped Classroom, Print to Digital, Online Assessments
- Designing the Ultimate School/Classroom

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Speak Up 2014 national participation: 521,846

K-12 Students 431,231
Teachers & Librarians 44,289
Parents (in English & Spanish) 35,337
School/District Administrators/Tech Leaders 4,324
Community Members 6,656

About the participating schools & districts
- 8,216 schools and 2,676 districts
- 30% urban / 40% rural / 30% suburban
- All 50 states + DC + Guam + DODEA schools
California total surveys in 2014: 75,524

K-12 Students 66,685

Teachers & Librarians 4,359

Parents (in English & Spanish) 3,296

School/District Administrators 437

Community Members 696

Top participating districts include:

Anaheim City, Merced Union High, Newport-Mesa Unified, Oceanside Elementary, Fullerton Elementary
Top 10 Things Tech Leaders Should Know about Today’s Students and Digital Learning
Views of your California students

1 2 3 4 5

6 7 8 9 10

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Top 10 Things Tech Leaders Should Know about Today’s Students and Digital Learning

1. Use of digital tools for learning
Current uses of technology

Four types of technology usage by students:

- **In school:**
  - teacher directed
  - student self – initiated

- **Out of school time:**
  - supporting schoolwork
  - supporting personal learning
### Students’ Use of Teacher-Facilitated Technology in the Classroom

<table>
<thead>
<tr>
<th>Digital Activity</th>
<th>CA Elementary School Grades 3-5</th>
<th>CA Middle School Grades 6-8</th>
<th>CA High School Grades 9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access class information through online portal</td>
<td>20%</td>
<td>58%</td>
<td>74%</td>
</tr>
<tr>
<td>Use Internet services (Dropbox, Google docs)</td>
<td>N/A</td>
<td>66%</td>
<td>68%</td>
</tr>
<tr>
<td>Take tests online</td>
<td>65%</td>
<td>58%</td>
<td>44%</td>
</tr>
<tr>
<td>Use online textbooks</td>
<td>13%</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>Watch teacher created videos</td>
<td>19%</td>
<td>26%</td>
<td>25%</td>
</tr>
</tbody>
</table>
Students’ use of digital tools and resources to self-direct learning, outside of the classroom

Such as:

Watching an **online video** to learn how to do something

Playing **online games** to learn about things that interest them

Using **online writing tools** to improve writing skills

Using **social media** to learn what others think
How are you using technology outside of school to learn new things or skills?

“I use technology outside of school mostly for academic activities. I play a game called total war which explains the battles/events of a country thousands of years ago. This helps me learn about history especially when were learning about Rome, Egypt, and any other country/civilization back then. I also use technology for websites like Aleks or Khan Academy or to research things I need to know for school work.”

Middle school student (CA)
Obstacles to tech use at school
CA Students: Obstacles to using technology at school

- Edu websites are blocked
- Too many rules
- Teachers limit tech use
- Internet is too slow
- Can't access social media
- Can't use my own mobile
- Can't text

Gr 9-12 vs Gr 6-8
Top 10 Things Tech Leaders Should Know about Today’s Students and Digital Learning

Social Media
Social media:
tools to connect, collaborate, create

**Instagram:**
55% of CA HS students
45% of CA MS students

**Twitter:**
37% of CA students in Gr 6-12

**Creating/watching videos:**
74% of CA students in Gr 6-8

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Massively multi-player online games (MMOG)
30% of boys in Gr 6-8 (national)

Facebook
32% of CA students in Gr 9-12
decrease of +41% since 2007
nationally
### Students and social media: tools to connect, collaborate, create

<table>
<thead>
<tr>
<th>Platform</th>
<th>“All the time”</th>
<th>“Never”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>12%</td>
<td>44%</td>
</tr>
<tr>
<td>Twitter</td>
<td>10%</td>
<td>63%</td>
</tr>
<tr>
<td>Snapchat</td>
<td>28%</td>
<td>37%</td>
</tr>
<tr>
<td>YouTube</td>
<td>44%</td>
<td>4%</td>
</tr>
</tbody>
</table>
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Game-based learning
### Who is playing games for learning?

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>2007</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-2 students</td>
<td>60%</td>
<td>73%***</td>
</tr>
<tr>
<td>Gr 3-5 students</td>
<td>47%</td>
<td>72%***</td>
</tr>
<tr>
<td>Gr 6-8 students</td>
<td>40%</td>
<td>55%***</td>
</tr>
<tr>
<td>Gr 9-12 students</td>
<td>23%</td>
<td>43%</td>
</tr>
</tbody>
</table>

*** no gender differentiation in frequency of game playing
What do CA students say are the benefits of playing educational games?

<table>
<thead>
<tr>
<th>Benefits of Games</th>
<th>K-2</th>
<th>Gr 3-5</th>
<th>Gr 6-8</th>
<th>Gr 9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helps me understand difficult learning concepts</td>
<td>61%</td>
<td>49%</td>
<td>60%</td>
<td>57%</td>
</tr>
<tr>
<td>School would be more fun</td>
<td>68%</td>
<td>42%</td>
<td>57%</td>
<td>47%</td>
</tr>
<tr>
<td>More interested in the learning</td>
<td>57%</td>
<td>42%</td>
<td>60%</td>
<td>58%</td>
</tr>
<tr>
<td>Learn more about a subject</td>
<td>56%</td>
<td>47%</td>
<td>49%</td>
<td>43%</td>
</tr>
</tbody>
</table>

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5 Mobile devices
California students’ personal access to mobile devices

- **Gr 9-12**
  - Digital Reader: 12%
  - Tablet: 35%
  - Laptop: 47%
  - Smartphone: 78%

- **Gr 6-8**
  - Digital Reader: 21%
  - Tablet: 58%
  - Laptop: 46%
  - Smartphone: 64%

- **Gr 3-5**
  - Digital Reader: 20%
  - Tablet: 61%
  - Laptop: 45%
  - Smartphone: 41%

- **Gr K-2**
  - Digital Reader: 24%
  - Tablet: 60%
  - Laptop: 44%
  - Smartphone: 34%

- **Categories**
  - Digital Reader
  - Tablet
  - Laptop
  - Smartphone

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56% of CA high school students say they use their smartphone to support learning while at school

- 46% use mobile apps for learning
- 45% take photos of assignments or text book pages
- 49% text classmates about schoolwork questions
- 18% text their teachers with questions also!
Importance of mobile device access

How important is it for every student to be able to use a mobile device in school to support schoolwork?

CA Gr 6-8 students 74%
CA Gr 9-12 students 69%
CA Principals 88%
CA District Administrators 83%
CA Tech Leaders 79%
Different tasks = different mobile devices
Different tools for different tasks

“What mobile device I use depends upon the task”

Read a book or articles?

Take notes in class?

Use social media?
Communicate w/peers & teacher?
Create/watch videos?

Create presentations?
Take online tests?
Write reports?

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Internet Connectivity

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**Home internet access**

Students in grades 6-8 nationwide:

<table>
<thead>
<tr>
<th>Type of access</th>
<th>Urban</th>
<th>Suburban</th>
<th>Rural</th>
<th>Title I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast, broadband access</td>
<td>50%</td>
<td>51%</td>
<td>45%</td>
<td>45%</td>
</tr>
<tr>
<td>Access through mobile device plan</td>
<td>43%</td>
<td>46%</td>
<td>44%</td>
<td>43%</td>
</tr>
<tr>
<td>No or slow access</td>
<td>14%</td>
<td>15%</td>
<td>17%</td>
<td>18%</td>
</tr>
</tbody>
</table>
Do we have a “homework gap?”

Homework gap is about more than at home Internet access:

- 1/3 of students say that they often have a problem doing digital or Internet-dependent homework
- Parents are making decisions about who has priority for limited home digital resources
- 69% of CA teachers say “digital equity” is holding them back with digital learning implementations
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Different classroom models
Blended learning

Definition:
- Part of the week in a tradition classroom
- Part of the week in online learning
- Student controls time, place, path, pace of learning

62% of CA students in grades 6-12 say this would be a good way for them to learn
**Blended learning**

**Definition:**
- Part of the week in a tradition classroom
- Part of the week in online learning
- Student controls time, place, path, pace of learning

62% of CA students in grades 6-12 say this would be a good way for them to learn

But only 10% of CA teachers have implemented blended learning in their classroom
If you had to take an online class … what subject would you like to take online?

What do CA middle school students say?
Online class in what subject?

CA middle school students say:

1. Math (47%)

2. Computer programming (43%)

3. Video production (42%)

4. Science (42%)

5. World/foreign languages (37%)
Policy discussion

Is it important for students to take an online class as a high school graduation requirement?

<table>
<thead>
<tr>
<th>CA Stakeholder group</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students – grades 6-8</td>
<td>44%</td>
</tr>
<tr>
<td>Students – grades 9-12</td>
<td>33%</td>
</tr>
<tr>
<td>Parents</td>
<td>49%</td>
</tr>
<tr>
<td>Principals</td>
<td>57%</td>
</tr>
</tbody>
</table>
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9 STEM Interests
CA students:
Are you interested in a career in a STEM field?

- Very interested: 32% boys, 20% girls
- Somewhat interested: 36% boys, 37% girls
- No opinion: 13% boys, 15% girls
- Not interested: 19% boys, 29% girls

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## CA students: How do you want to learn about STEM careers?

<table>
<thead>
<tr>
<th>What would support your career exploration of STEM fields?</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part time job or internship</td>
<td>73%</td>
<td>63%</td>
</tr>
<tr>
<td>Field trips to companies</td>
<td>70%</td>
<td>61%</td>
</tr>
<tr>
<td>CTE classes</td>
<td>69%</td>
<td>60%</td>
</tr>
<tr>
<td>College planning mentors</td>
<td>60%</td>
<td>47%</td>
</tr>
<tr>
<td>Career professional teach classes at school</td>
<td>59%</td>
<td>54%</td>
</tr>
<tr>
<td>Teachers with prior professional experience</td>
<td>55%</td>
<td>52%</td>
</tr>
<tr>
<td>Take a quiz to identify strengths</td>
<td>49%</td>
<td>39%</td>
</tr>
<tr>
<td>Mobile apps / websites about careers</td>
<td>43%</td>
<td>40%</td>
</tr>
<tr>
<td>Use tech/maker tools in class</td>
<td>24%</td>
<td>37%</td>
</tr>
<tr>
<td>Play digital games about careers</td>
<td>23%</td>
<td>33%</td>
</tr>
</tbody>
</table>

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Interest in taking a coding class?

<table>
<thead>
<tr>
<th>Yes, I am interested in learning how to code or program a computer</th>
<th>CA Girls</th>
<th>CA Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 3-5</td>
<td>64%</td>
<td>74%</td>
</tr>
<tr>
<td>Grades 6-8</td>
<td>52%</td>
<td>60%</td>
</tr>
<tr>
<td>Grades 9-12</td>
<td>44%</td>
<td>55%</td>
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</tbody>
</table>

Decreasing level of interest – sweet spot is elementary grades

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Top 10 Things Tech Leaders Should Know about Today’s Students and Digital Learning

Designing the Ultimate School for Today’s Learners
Favorite Speak Up Question: Superintendents & School Boards

“Imagine you are designing the ultimate school for today’s students, what technologies would have the greatest impact on learning?”
Do we have a shared vision around digital learning solutions?

- **Schoolwide Internet**
  - Principals: 85%
  - Teachers: 80%
  - Parents: 65%
  - Gr 6-8 students: 80%

- **Games**
  - Principals: 60%
  - Teachers: 60%
  - Parents: 40%
  - Gr 6-8 students: 60%

- **E-textbooks**
  - Principals: 70%
  - Teachers: 70%
  - Parents: 60%
  - Gr 6-8 students: 70%

- **Tablets**
  - Principals: 90%
  - Teachers: 85%
  - Parents: 80%
  - Gr 6-8 students: 80%

- **Online classes**
  - Principals: 30%
  - Teachers: 30%
  - Parents: 40%
  - Gr 6-8 students: 50%

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How the Speak Up data can help you

- Context for why digital
- “Customer” knowledge
- Input for plans, programs & PD
- Community buy-in
- Myth busting
Today’s Discussion:

- Introduction to Project Tomorrow and the Speak Up Research Project
- Countdown of “Top 10 Things” about students & digital learning
  - California findings from Speak Up 2014
- Invitation to participate in Speak Up 2015
- Your ideas/comments/questions
National Speak Up reports and infographics

Targeted and thematic reports
Digital learning trends
Mobile learning & social media
Games in the classroom
Blended learning outcomes

Presentations, podcasts and webinars

Services: consulting, workshops, evaluation and efficacy studies

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Participate in Speak Up!

All schools are invited to participate
Surveys open Oct 1 – Dec 18

Online surveys for:
- K-12 students – individual + group
- Parents – English and Spanish
- Teachers
- Librarians/Media Specialists
- School Site & District Administrators
- Technology Leaders
- Community Members

New this year special surveys for:
Science Teachers
Communications Officers

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**Why Speak Up?**

- Have a voice in policy decisions
- Get authentic feedback from your students, colleagues, stakeholders – use real data, not anecdotes or myths for your decisions
- Compare your stakeholders’ views with others – within district, county, state, nation
- No gotcha – all 100% confidential
- Let us do the work for you!
- No costs to schools, districts, states – use your $ to impact student learning instead
Win a free registration to CETPA 2016 +

dinner with me in Sacramento!

Let’s talk data!
Your thoughts, ideas, questions
Thank you for this discussion today!

For additional information about Speak Up please contact:

Julie Evans
jevans@tomorrow.org
949-609-4660 x15
Twitter: JulieEvans_PT and SpeakUpEd