# When "Innovation" is Exploitation: Data Ethics, Data Harms, and Why We Need to Demand Data Justice

Presentation prepared for *Summer Institute of A Black Education Network* Stanford, CA June 17th, 2019


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Associate Professor of Education

San José State University*

*Note: Views presented within this presentation do not necessarily represent the official position of the Lurie College of Education or SJSU

*Are we really* ***humanizing robots?***

*While we're* ***de-humanizing people?***



# Research Lens

## Educational Psychology

Past published research focused on evaluation of violence and bullying prevention programs, social-emotional learning, and interpersonal school climates, to support and promote student health and well-being

# Shift in perspective of analyses




… from micro to macro
… from sandbox to society
… from playground to policy

*Bullying Definition Image screenshot from: Anti-Bullying Alliance definition of bullying video (Youtube)* [www.anti-bullying.org.uk](http://www.anti-bullying.org.uk)

## *"Innovation" in the age of Big Data*

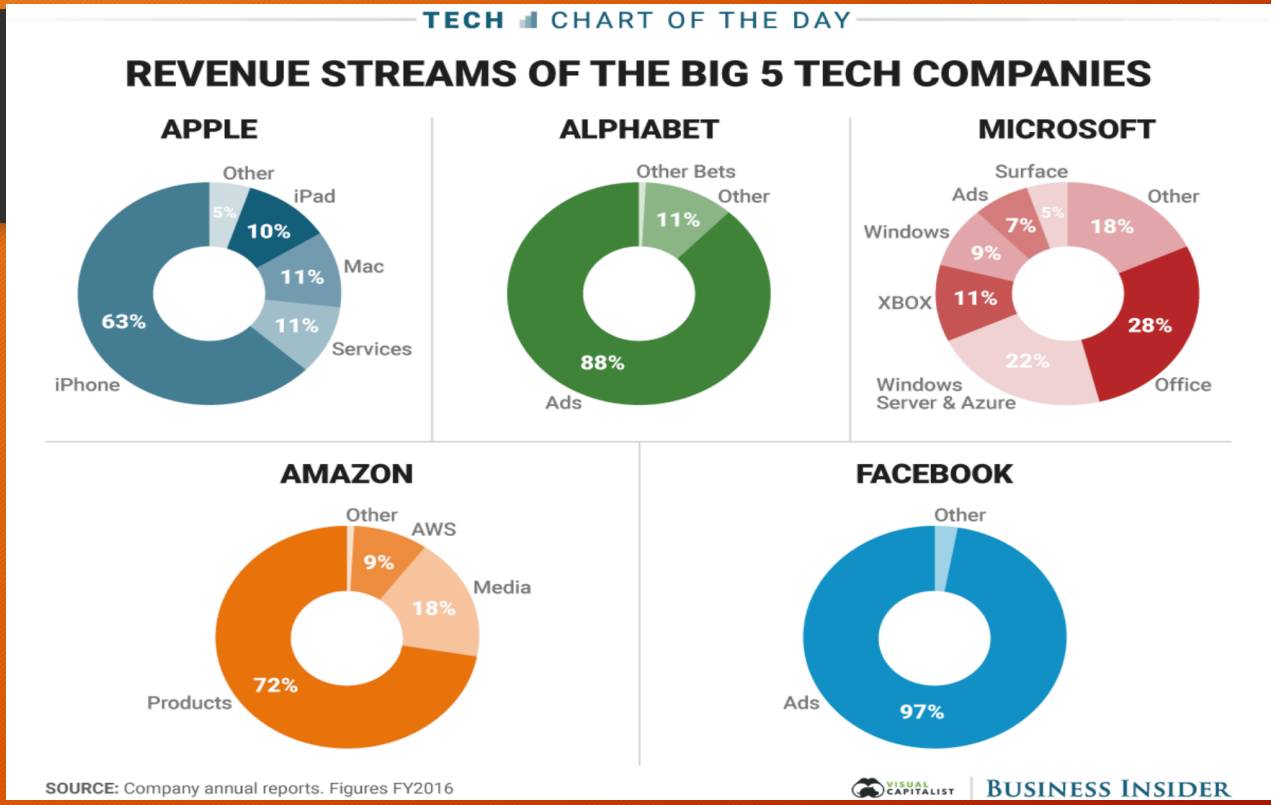
*"**Information** is the new gold – it's the new oil. It's like diamonds. It's worth trillions of dollars – and if you control that, you control wealth – you control power…"*

- Peter Ludlow, Killswitch Documentary

# The Big Five

**Totaling $3.0 Trillion**

Apple
Alphabet (Google)
Amazon
Facebook
Microsoft




https://techcrunch.com/2017/07/19/techs-5-biggest-players-now-worth-3-trillion/

# Three areas of focus

- What new technologies are at the core of concerns from parents, students, and privacy/civil rights activists?
  - *EdTech software, Learning Management Systems, SEL metrics, "Online Preschool", Virtual Reality*
- What new "innovative" funding structures are paving the way for untested technologies to (attempt to) measure "impact"?
  - *Social Impact Bonds, "Pay For Success" programs, "impact investing"*
- What are *Blockchain Digital Identity Systems* and why are privacy, security, and civil rights activists concerned about their use in education?

# Ask yourself if the marketing matches the reality…

# What is “Interoperability”?

# interoperability noun

in·ter·op·er·a·bil·i·ty | \ ˌin-tər-ˌä-p(ə-)rə-ˈbi-lə-tē \

## Definition of *interoperability*

**:** ability of a system (such as a weapons system) to work with or use the parts or equipment of another system

PowerSchool
Powering Brighter Futures

Solutions K-12 Impact Community Resources Company

Support Sign in

Contact Sales

WEBINAR

# Interoperability: Taking a Whole Child Approach to Improving Student Achievement

## Watch this on-demand webinar:




Having "less data" isn't a thing. Every school year, each student and each teacher bring more data and more applications to the table. And you have to figure out how to integrate it all — securely.

But integration means more than just handling data. Integrated data provides more meaningful information, which enables educators to power student growth.

Join Sean Casey, Manager of Strategic Partnerships at Ed-Fi Alliance, in a webinar to discuss the link

**View this on-demand webinar now**

First Name

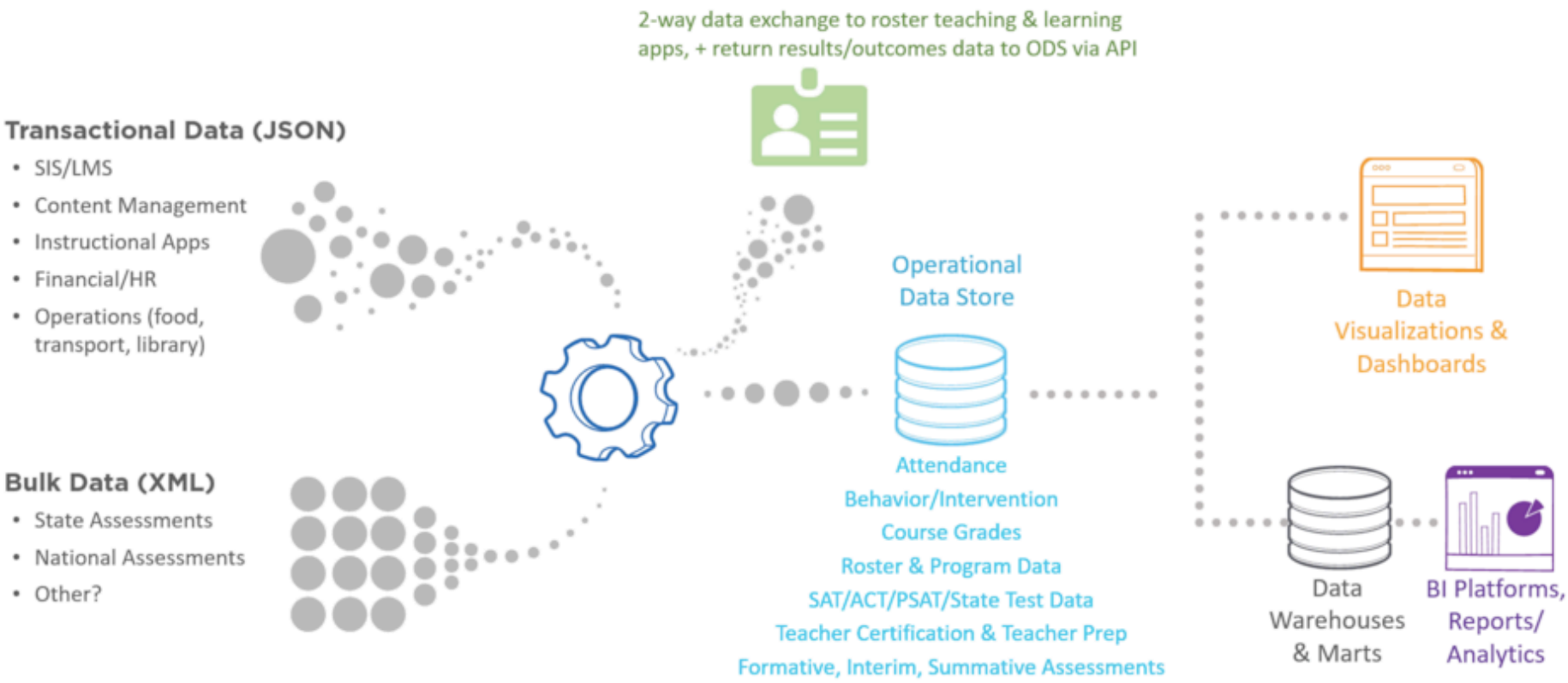
Last Name

Looking for more info on our solutions?

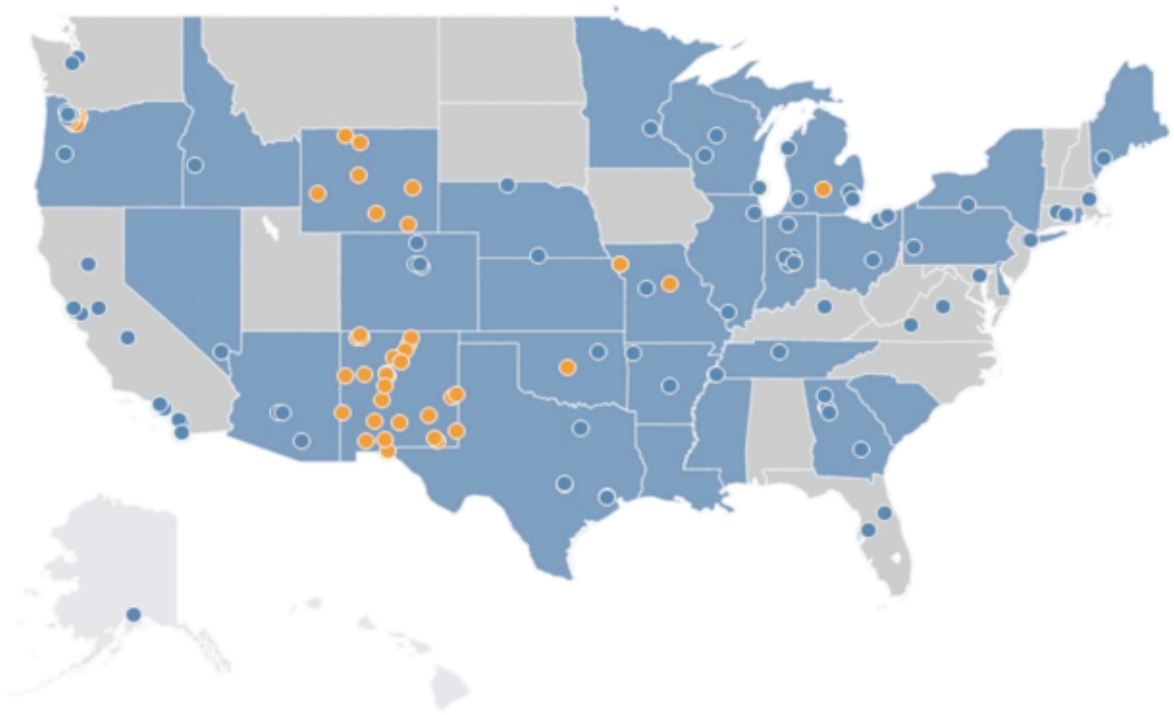
Chat with Sales

https://www.powerschool.com/webinar-replay/interoperability-taking-a-whole-child-approach-to-improving-student-achievement/

# How Interoperable Data Flows in a Learning Environment



# Where is the Ed-Fi Community Addressing Interoperability?



**30.8M** (61%)
students

**1.9M** (62%)
teachers

**30** (59%)
states (+DC)

**11.5K** (69%)
districts

**237**
licensed vendors

Total students in US: 50.0M
Total teachers in US: 3.0M

https://www.powerschool.com/webinar-replay/interoperability-taking-a-whole-child-approach-to-improving-student-achievement/

**TECHNOLOGY** | EDUCATION DISRUPTED

# The Silicon Valley Billionaires Remaking America's Schools

点击查看本文中文版

By NATASHA SINGER JUNE 6, 2017

699



Illustrations by Koren Shadmi

https://www.nytimes.com/2017/06/06/technology/tech-billionaires-education-zuckerberg-facebook-hastings.html





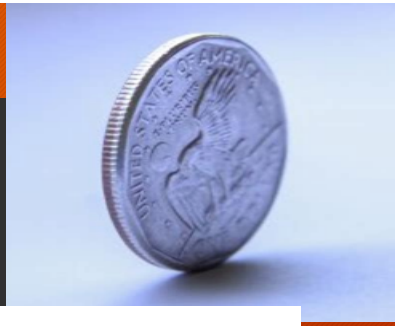
http://www.commercialfreechildhood.org/action/tell-fisher-price-no-ipad-bouncy-seats-infants

Will bouncy seat logic be used to push early learning apps and online preschool for very young children?

*"Since there isn't [yet] research to prove harm from these new products… they must be safe!"*



# Continuing Themes of Power and Harm
# EdTech + School Privatization: Two Sides of The Same Coin



EDUCATION FEATURE DECEMBER 5, 2011 ISSUE

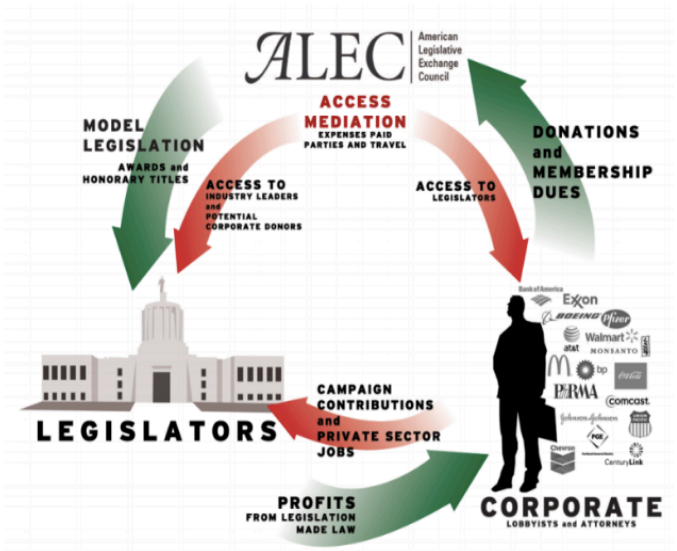
## How Online Learning Companies Bought America's Schools

*Under the banner of high-tech progress, corporate lobbyists have rammed through legislation privatizing K-12 education across the country.*

*By Lee Fang*

NOVEMBER 16, 2011

https://www.thenation.com/article/how-online-learning-companies-bought-americas-schools/

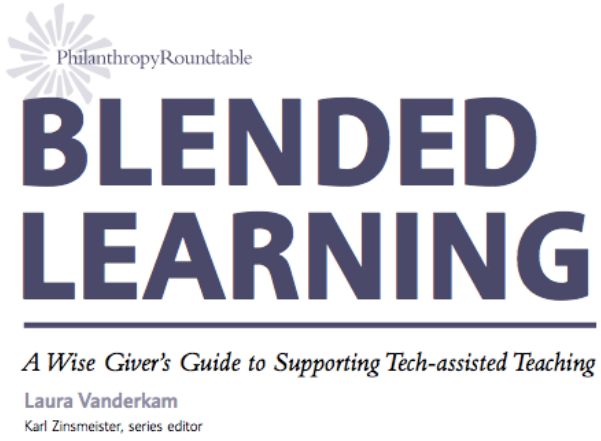



https://eduresearcher.com/2017/02/05/alec_devos
https://www.prwatch.org/news/2016/03/13054/cashing-kids-172-alec-education-bills-2015

## Student concerns shared at NAACP Task Force Hearing on Charter Schools in New Orleans (2017)

*"…we shared how we face two hour commutes to and from school, **are forced to experiment with digital learning with systems** like Odyssey, are punished for having the wrong color sweater, or how we worry about being able to attend a school that will give us the education we need."…*

https://eduresearcher.com/2017/04/29/nola-charter/




Philanthropy Roundtable (formerly chaired by B. DeVos) published 150 page philanthropic guidebook for givers. Clearly acknowledges ***lack of research*** **yet** outlines dozens of strategies to continue to push BL into schools.

## Bottleneck 1: A Lack of Research

While blended-learning proponents can point to some initially good test scores, there is little solid data published in peer-reviewed journals. "Honestly, it's so early on, no one knows what works and doesn't work," says Diane Tavenner, leader of Summit Public Schools. "Indeed," notes Scott Benson, who directs blended-learning grants at the Bill & Melinda Gates Foundation, "part of me is really nervous—that the dialogue and enthusiasm is outpacing the results."

http://www.philanthropyroundtable.org/file_uploads/Blended_Learning_Guidebook.pdf

**Report includes heavy representation of charter school case studies of software adoptions (focusing on primarily low-income Black and Latino children). Content analyses reveal zero mention of health, safety, or developmental concerns. Only mention of "health" is of the *"Slow uptake of technology in healthcare and education"***

# American Revolution 2.0

## How Education Innovation is Going to Revitalize America and Transform the U.S. Economy

332 page document published by Global Silicon Valley Asset Management

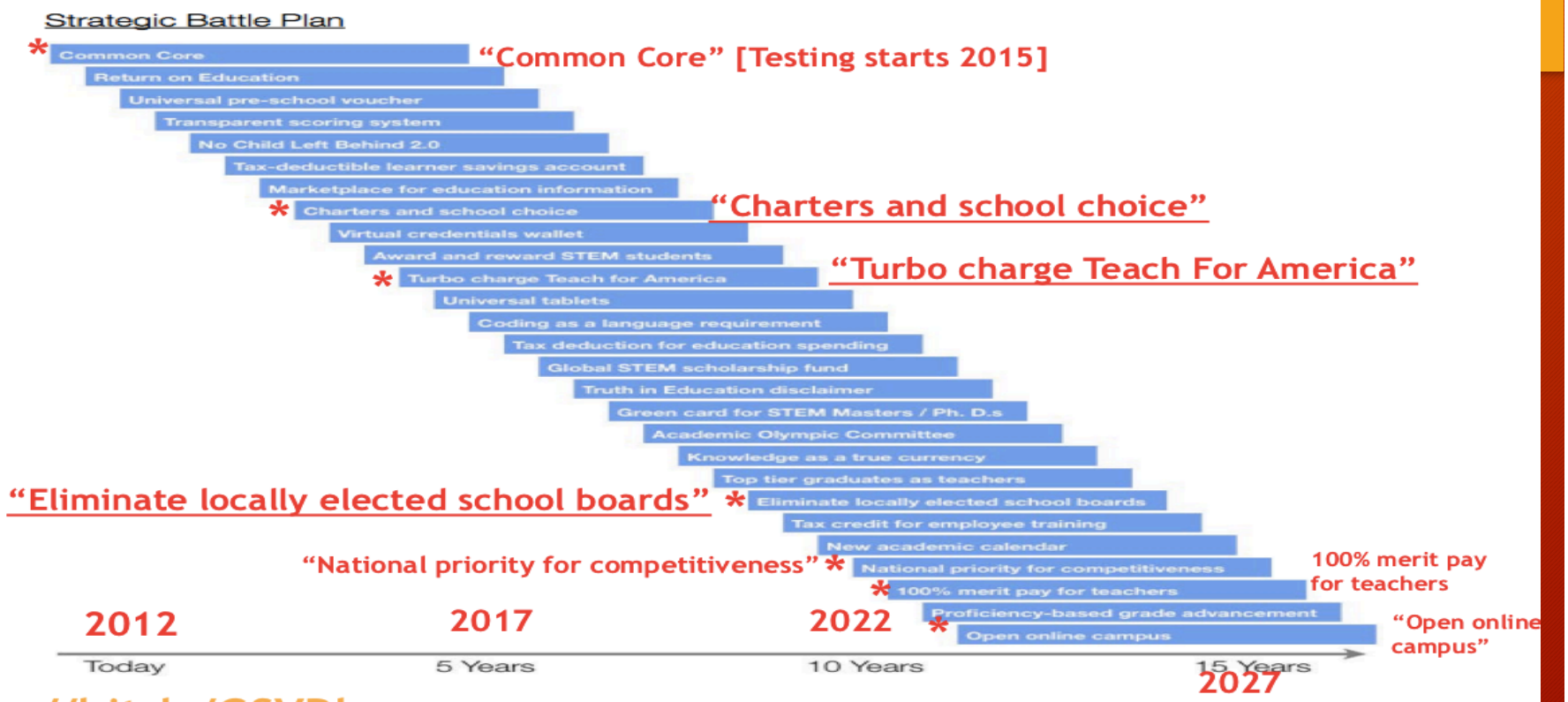
Content analysis and keyword searches for “safety” and “health” reveal **0% of document addressing any concerns about health, safety, or developmental impacts of extended technology use.**

**http://asugsvsummit.com/files/American_Revolution_2.0.pdf**
**Also accessible here:** http://GSVPlan
For more on “GSV” Global Silicon Valley, see: http://gsvam.com

Companies by Themes



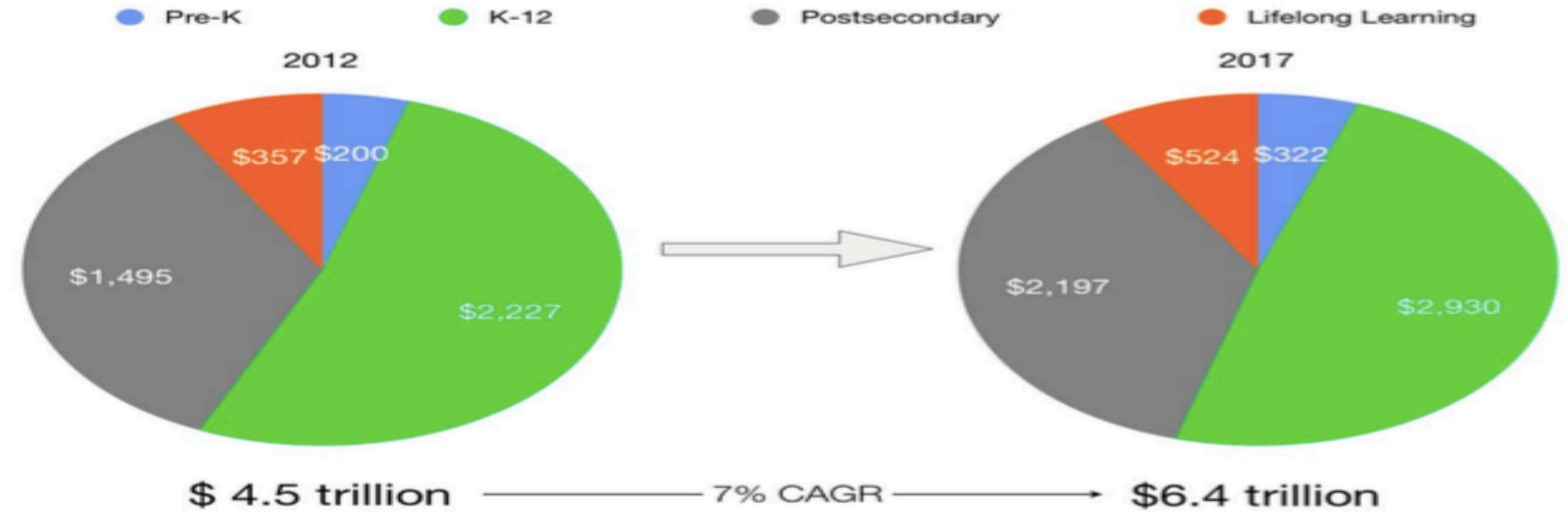
# Global Silicon Valley "Strategic Battle Plan"




http://bit.ly/GSVPlan (p. 292)

Size of Global Education Market, 2012 and 2017[59]

*(in billions)*

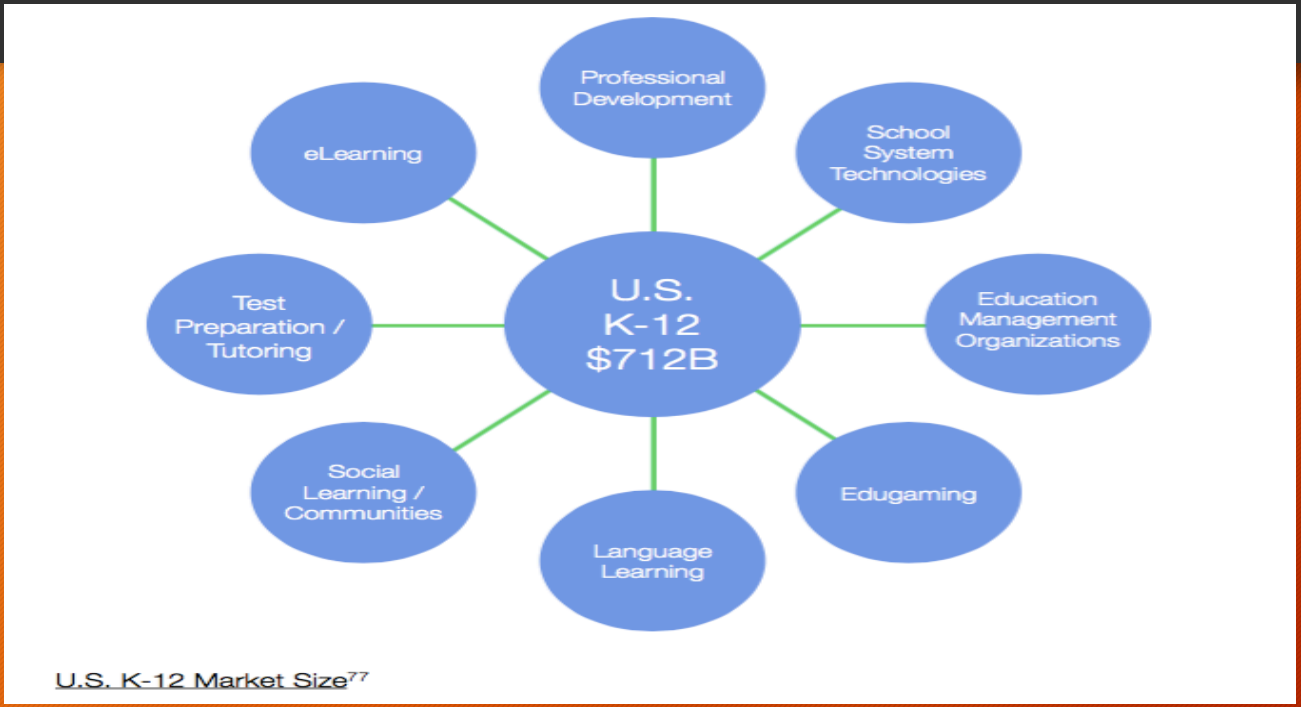



A simple snapshot shows healthy growth amongst the four traditional segments of Pre-K, K-12, Postsecondary and Lifelong Learning, with Pre-K actually having the strongest projected growth. To put this into context, given the $200 billion size of the global Pre-K market, 10% growth provides $20 billion of market opportunity in the next 12 months and $122 billion in the next 5 years.

American Revolution 2.0: How Education Innovation Is Going to Revitalize America and Transform the U.S. Economy, *Global Silicon Valley Asset Management*, p. 177 http://bit.ly/GSVPlan

# U.S. K-12 Education Market estimated to be ~$712 Billion

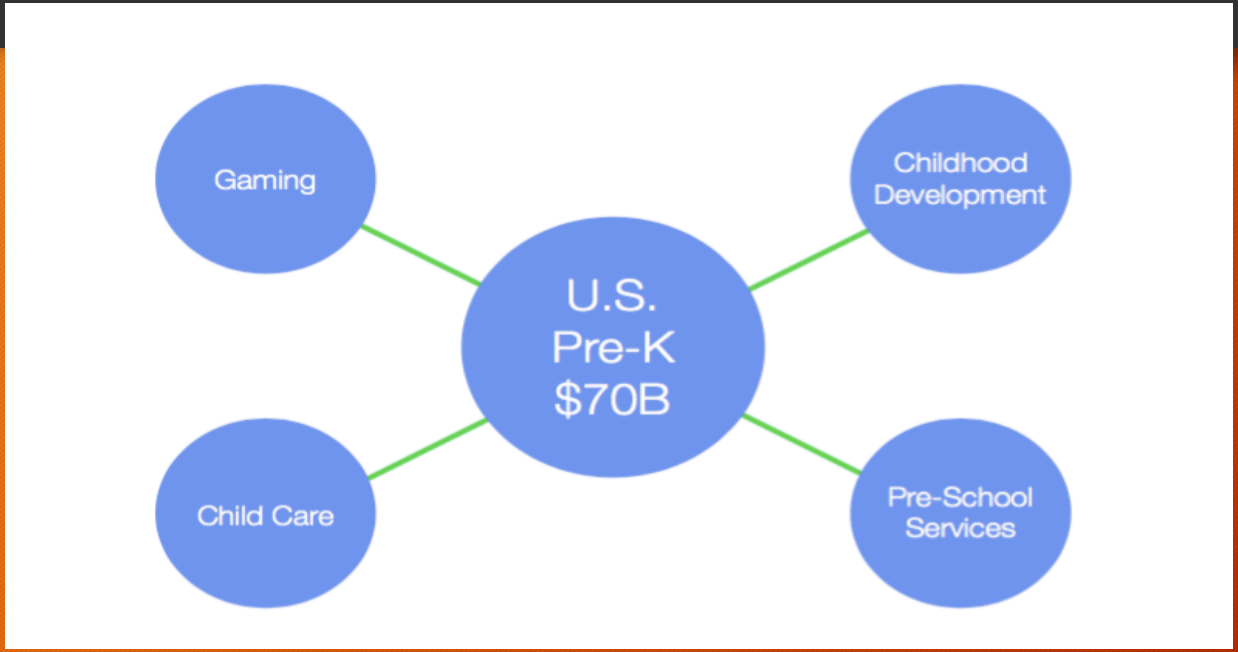
(Global Silicon Valley GSV Asset Management, American Revolution 2.0 Report)




American Revolution 2.0: How Education Innovation Is Going to Revitalize America and Transform the U.S. Economy, *Global Silicon Valley Asset Management*, http://bit.ly/GSVPlan

# U.S. Pre-K Market estimated to be ~$70 Billion Dollars

(Global Silicon Valley GSV Asset Management, American Revolution 2.0 Report)




American Revolution 2.0: How Education Innovation Is Going to Revitalize America and Transform the U.S. Economy, *Global Silicon Valley Asset Management*, p. 177 http://bit.ly/GSVPlan

# With “online preschool” and other educational technology programs, what kinds of harms are researchers and child advocates concerned about?

- Neurological, physiological, developmental
- Hormonal / sleep disruptions
- Eyesight/vision problems
- Social, emotional, relational
- Cognitive, attentional

- … and more recently in public view, **privacy related data harms and data exploitation**

# Social & Emotional Learning (SEL) Matters*

## (yet be wary of attempts to 'measure' SEL; emotions, attitudes, and behavior are at the root of data exploitation concerns)




Image from http://casel.org

- *YES. Authentic, relational, human rooted social and emotional learning = foundational to healthy child development.*
- *Note: New wave of SEL programming is now being marketed via edtech apps pitching "solutions" to strengthen SEL core competencies.*
- Parents are reporting many examples of intrusive questions being asked of students (without consent) about their families, emotions, attitudes, and behaviors (Parent Coalition for Student Privacy).

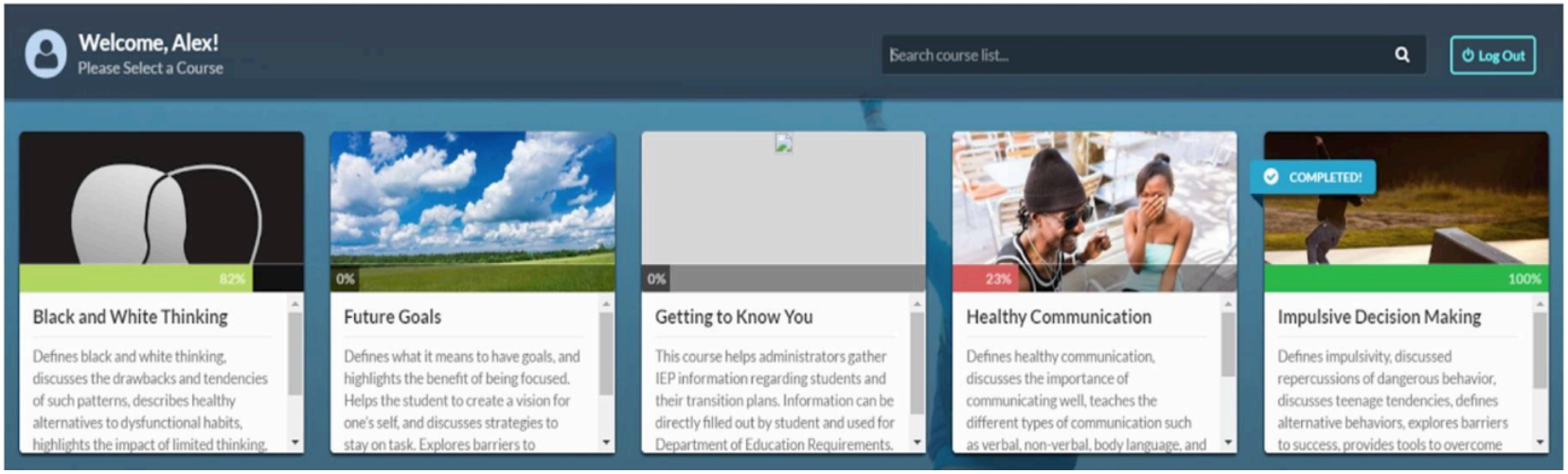
# Social Emotional Online Learning Modules

## Can be monitored by school staff - even deleted content.

### A Window into Students' Emotions

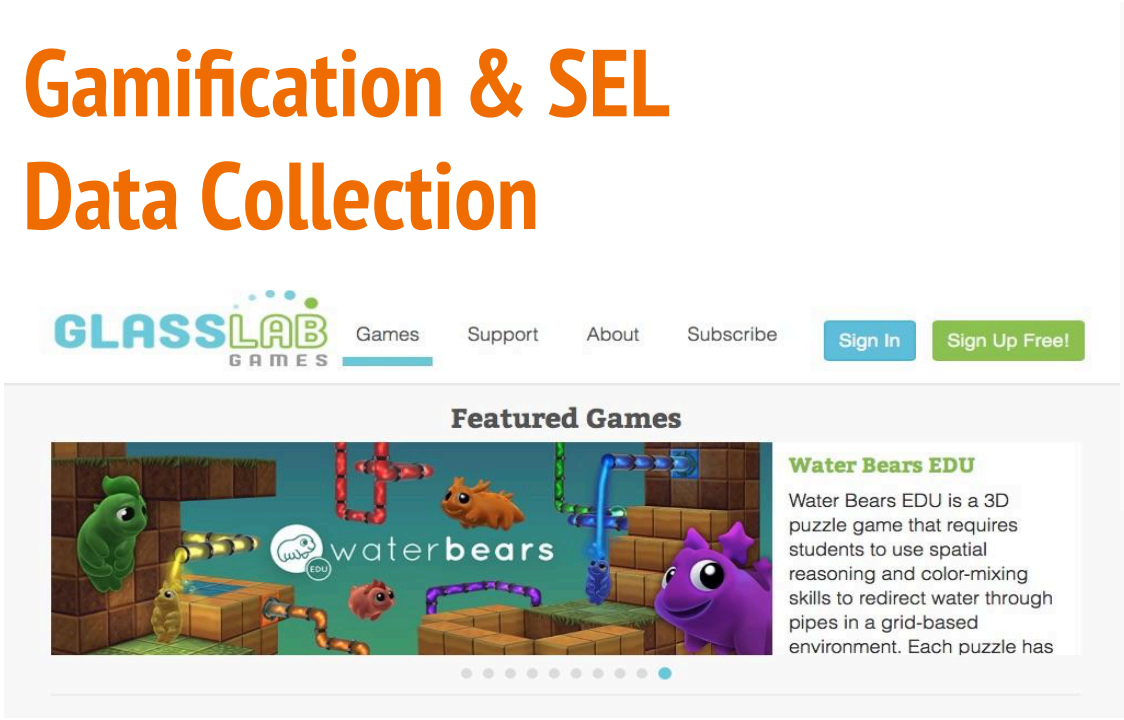
"Sarah was our first beta tester," said Base Education co-founder and CEO, Robin Glenn. Robin had spent the last eight years as a therapist, mostly serving at-risk teenagers in Douglas County School District near Denver, CO. Her students' struggles ran the gamut, from depression to substance abuse to truancy.

"Sarah was willing to share things online that she wouldn't share with staff," observed Robin. "Her responses, which the counselor could read in real time, gave the counselor clues about what Sarah was going through and teed up a meaningful dialogue."




One of Base Education's most compelling features is its ability to record deleted text so teachers or counselors can review all of a student's answers, even those that a student changed. I

# Gamification & SEL Data Collection




"Besides being an efficient and engaging educational tool, virtual environments also collects a lot of **behavior data which can be used with Educational Data Mining (EDM) techniques to assess students' learning competencies."**

**21st Century Skills**

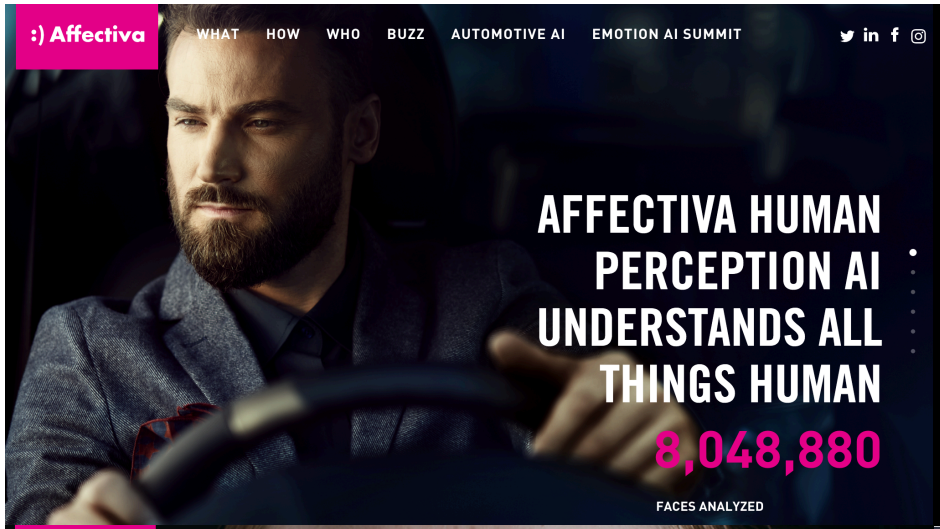
- Collaboration
- Problem Solving
- System Thinking
- Creativity
- Communication

**21st Century Readiness**

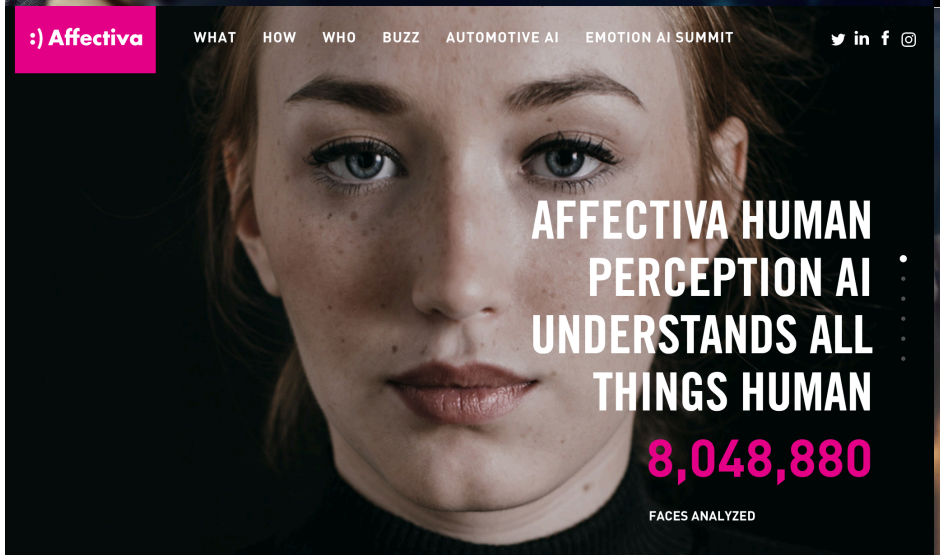
- Financial Literacy
- Life Skills
- Career Skills
- Technology
- Leadership

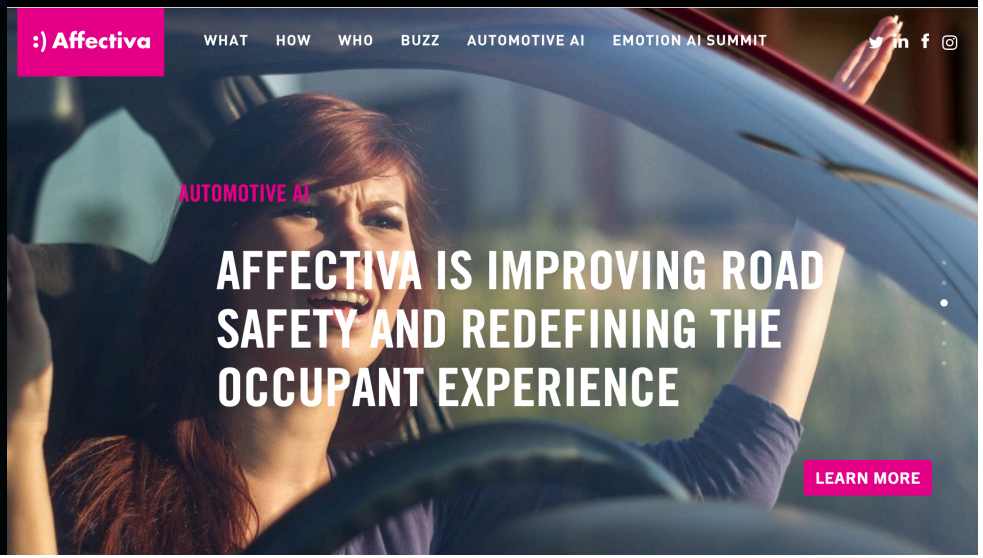
**Academic Skills**

- English Language Arts
- Mathematics
- Social Studies
- Science
- Foreign Language
- Arts
- Health and Phys Ed

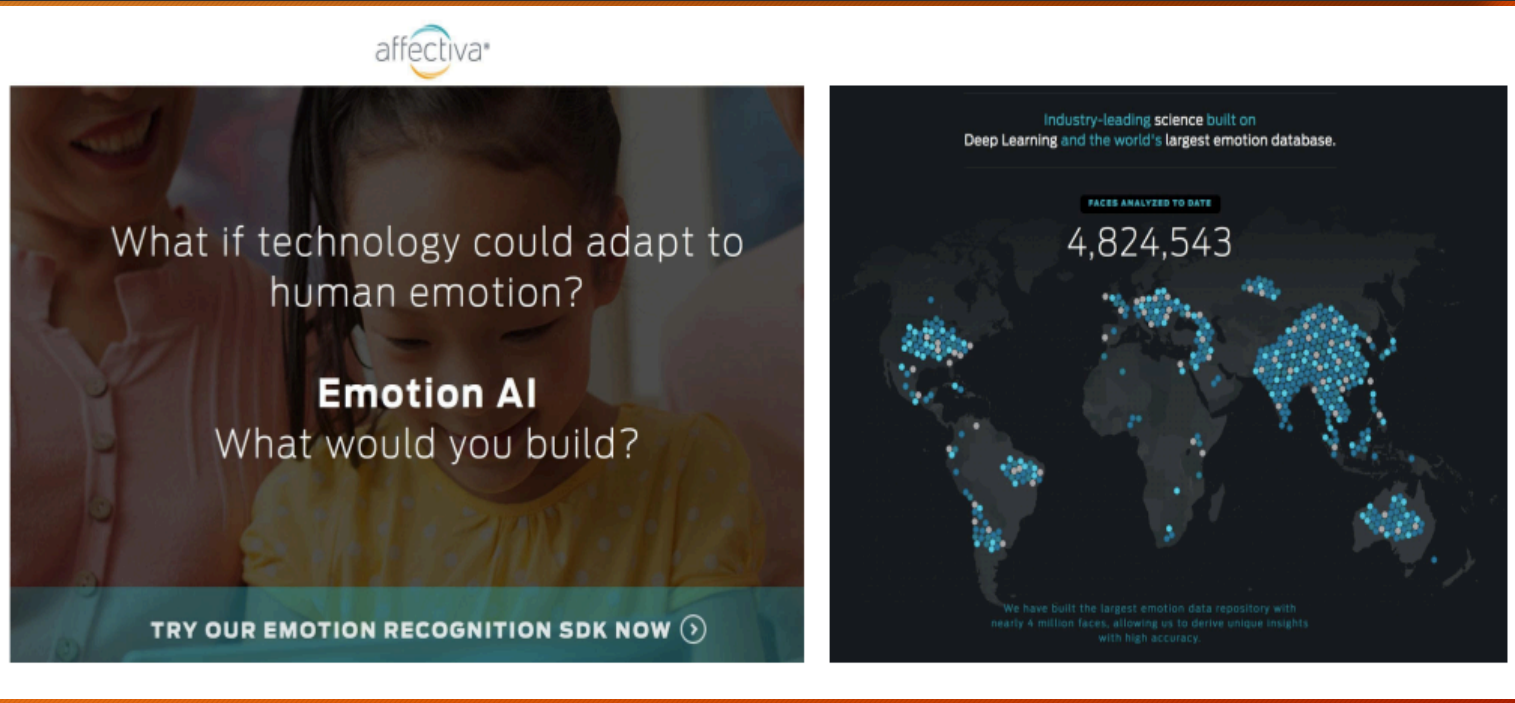

:) Affectiva
WHAT HOW WHO BUZZ AUTOMOTIVE AI EMOTION AI SUMMIT
AFFECTIVA HUMAN PERCEPTION AI UNDERSTANDS ALL THINGS HUMAN
8,048,880
FACES ANALYZED


HOW IT WORKS
USING COMPUTER VISION, SPEECH ANALYTICS, DEEP LEARNING AND A LOT OF DATA, WE ANALYZE HUMAN STATES IN CONTEXT
LEARN MORE


:) Affectiva
WHAT HOW WHO BUZZ AUTOMOTIVE AI EMOTION AI SUMMIT
AFFECTIVA HUMAN PERCEPTION AI UNDERSTANDS ALL THINGS HUMAN
8,048,880
FACES ANALYZED


:) Affectiva
WHAT HOW WHO BUZZ AUTOMOTIVE AI EMOTION AI SUMMIT
AUTOMOTIVE AI
AFFECTIVA IS IMPROVING ROAD SAFETY AND REDEFINING THE OCCUPANT EXPERIENCE
LEARN MORE

“Tracking gestures and key points on the subject’s face, Affdex is able to analyze subtle movements and correlate them with complex emotional and cognitive states. This is much more than simple facial recognition. The Affdex system can identify and follow dozens of precise locations on an individual’s face. The muscular micro-shifts of every smile, yawn, or moment of confusion are captured and reflected in the data.”




Screenshot from Affectiva Affdex website, April, 2018

## AffdexMe




AffdexMe is an open source application that demonstrates the use of the Affdex S connected to your device to view, process and analyze live video of your face. Sta see your own face on the screen, and metrics describing your facial expression of

### Teachers who can "read minds"

Face-coding algorithms help teachers learn from students' facial expressions. They can know when students are confused or struggling with a concept, and even gauge the expressions of autistic children. Facial coding also improves online education. Advanced neural headsets will allow teachers to actually "read" students' minds—a red beeping light warns of students whose focus and attention have dropped below acceptable levels.

Affectiva, a start-up from MIT's media lab uses its software, called Affdex, to help understand the facial expressions of autistic students. With over one billion facial expressions in its database, the software analyzes facial cues to determine underlying emotions.

### The evolution of learning

#### Personalized learning for everyone

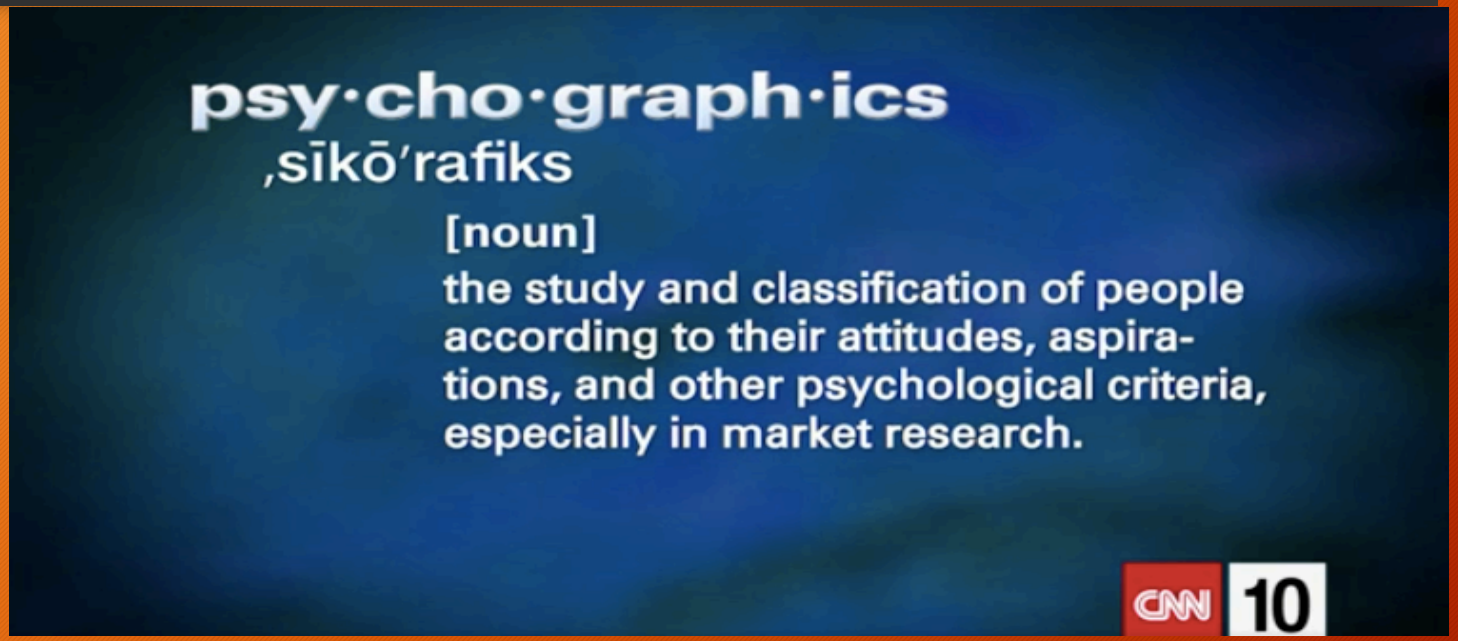
In the online world of 2020, students have unprecedented access to learning resources around the globe, largely without reference to barriers such as time, location, and institution. Academic analytics and facial coding technology are built into online learning environments, enabling real-time assessment and personalization of content. Most students have their own digital learning profiles recording their skills, knowledge, and credentials throughout their lifetimes. These profiles are updated automatically based on learning and career experiences.

AltSchool, a San Francisco based K-8 school, aims to redefine the education industry by leveraging technology to offer personalized learning experiences. At AltSchool, students help develop their own personalized learning plans through a '3P' process—a learner profile, a personalized learning plan and a playlist (playlist is a weekly list of activities to be performed). Depending on a student's interests and passions, playlist activities can range from solving mathematical problems to developing 3D prototypes of products. Technology plays a central role in personalizing learning experiences as student profiles, playlists, and milestones are recorded on a mobile device. For assessment, the school uses computerized tests that are adjusted based on an individual's skills.

# The "Future" of Learning(?)

http://government-2020.dupress.com/wp-content/uploads/2014/11/Education-+-sources-11-7-14_Ramani-proofread.pdf

# Big Data, Psychological Profiling, and Predictive Analytics




https://www.cnn.com/2018/04/12/cnn10/ten-content-fri/index.html?no-st=1524201513

## The New Media Consortium/ Consortium for School Networking Horizon Report

"2016 K-12 Edition examines emerging technologies for their potential impact on and use in teaching, learning, and creative inquiry in schools."

**Zero mention** of health related issues, hazards, or developmental concerns with use of new (untested) devices.

http://cdn.nmc.org/media/2016-nmc-cosn-horizon-report-k12-EN.pdf
Also accessible here: http://sco.lt/7V9Oan

NMC CoSN LEADING EDUCATION INNOVATION

NMC/CoSN Horizon Report > 2016 K-12 Edition



THURSDAY, JUNE 15, 2017 7:00 PM

LOS ANGELES

# Can Digital Learning Dismantle the American Class System?



Image courtesy of Adobe Stock.

A Zócalo/Arizona State University Event

Moderated by Goldie Blumenstyk, Senior Writer at *The Chronicle of Higher Education* and Author of *American Higher Education in Crisis? What Everyone Needs to Know*

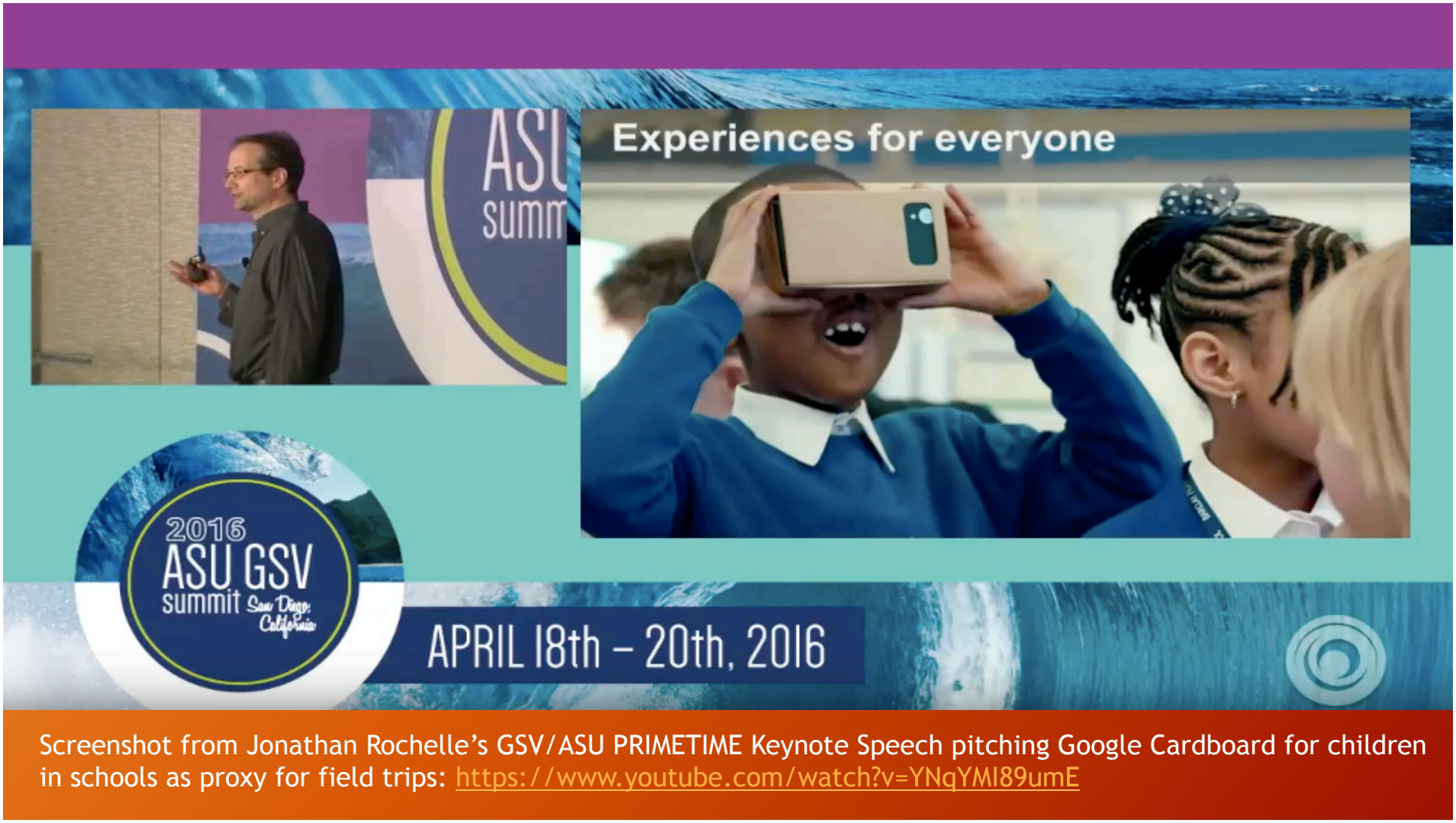
➢ Make A Reservation

ASU Arizona State University

KCRW

Representatives on panel are all from higher education institution while VR marketing targets elementary aged child

http://www.zocalopublicsquare.org/event/can-digital-learning-dismantle-american-class-system




Screenshot from Jonathan Rochelle's GSV/ASU PRIMETIME Keynote Speech pitching Google Cardboard for children in schools as proxy for field trips: https://www.youtube.com/watch?v=YNqYMI89umE




Clickbait images of children on VR normalizes assumptions of device safety




https://www.commonsensemedia.org/research/virtual-reality-101

**Suggested Age Guidelines for VR**

VR manufacturers have been careful to acknowledge that the effects of VR on children and the risks are largely unknown, and most recommend cautious age guidelines. With the exception of VR devices specifically targeted toward child users, most companies recommend that no children younger than 12 or 13 use them. However, there is no clinical rationale for this age, as it is not based on empirical evidence (Yamada-Rice et al., 2017). Sony, for instance, suggests that no one under the age of 12 should use its PlayStation VR, even though a number of the games and characters are cartoonish and child-friendly. There are some

**Researcher cited above and repeatedly throughout Common Sense Media report has the title *of "Senior Research Manager"* at Dubit…**




"From launching the first kids game world back in 1999, through to **creating the first kids' virtual reality game on Oculus Rift in 2014,** our interactive studio of 55 professional designers develop cross-platform entertainment that kids love." [Oculus Rift is owned by Facebook]




http://www.dubitlimited.com/ Screenshots taken April 21, 2018

WEARVR

## WEARVR

Dubit is a co-founder of WEARVR, the leading independent Virtual Reality App Store with over 2,000 titles.

# What Common Sense Media and "Dubit" sites Don't Mention about VR Risks: [Biometric] Data Exploitation

"VR is delivered through a device, which can be used to track eye movements, and VR technology to monitor other biometrics like heart rate, pulse, and electrical activity in the brain is already on the way (see here or here). You've probably heard of Google's A/B tests, which enable web designers to vary individual aspects of a web page and track how people respond. **Now imagine such tests in VR space, targeted at each individual user, and able both to vary all kinds of stimuli affecting all the senses, and to measure all kinds of responses."…**

https://sensemadehere.wordpress.com/2018/02/05/what-we-should-worry-about-when-we-worry-about-virtual-reality/

# So what about “educational” apps and programs?

## What might we find inside software marketed to be boost academic learning at “pre-school” age? What are examples of *actual content* being viewed by children?



Education

# Preschool is good for children, but it's expensive. So Utah is offering it online.




This video demonstration shows a game used by preschoolers in the Utah Preparing Students Today for a Rewarding Tomorrow program. It is meant to help students understand how changing a letter in a word can create a new word. (UPSTART)

By Emma Brown October 9, 2015

Original title:
"Preschool is good for poor kids, but it's expensive…"

**URL from Washington Post article:**

https://www.washingtonpost.com/local/education/preschool-is-good-for-poor-kids-but-its-expensive-so-utah-is-offering-it-online/2015/10/09/27665e52-5e1d-11e5-b38e-06883aacba64_story.html

View 1 Minute demo video on article link above.

# FAQs for Current Participants

**How much support do I need to give my child while he or she works on the program?**

Most children can use the program independently within 20 minutes of starting it. Encourage your child to work independently, and don't worry if he or she makes mistakes. When your child gets an answer wrong, the computer program follows up later with activities and games to teach the skill again so your child can get it right next time. We also have families who prefer to sit with the child during this time to experience the software and provide motivational support. You just need to remember not to help the child with the activities while he/she is on the software.

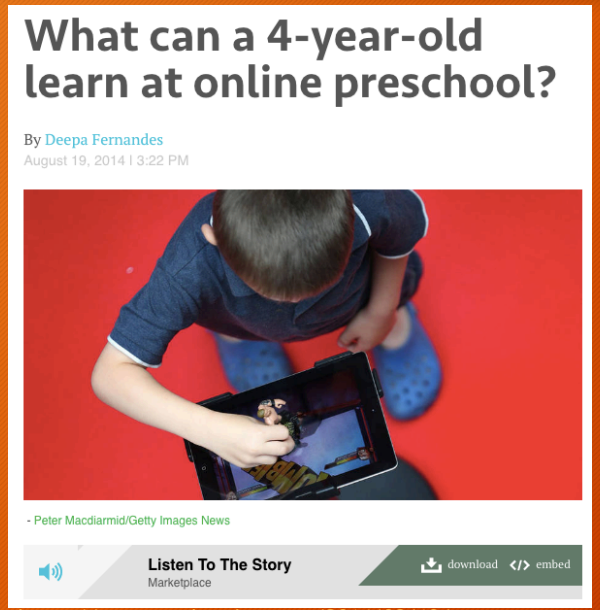
While your child isn't likely to need help working on the computer, he or she will need your encouragement to get started every day. Although the program is a lot of fun, your four-year-old may choose to assert his or her independence by saying, "Not today." Your enthusiasm and follow through are an important part of the program. And when you need ideas, **User Support is available to help.**

http://www.waterfordupstart.org/faq/

# What do other examples of “online preschool” look (and sound) like?




https://thestay-at-home-momsurvivalguide.com/2014/05/free-preschool-online-chalk-preschool.html




https://www.marketplace.org/2014/08/19/education/learning-curve/what-can-4-year-old-learn-online-preschool




http://hechingerreport.org/thousands-parents-enrolling-children-online-preschool/

# What does research suggest about about online learning in other age groups?

# Cyber Charters Have Overwhelming Negative Impact

**Figure 6: Online Charter Effect Size by State, Math**




The 0.00 line for this graph represents the average TPS VCR, White, non-poverty, non-ELL, non-SPED student.

* Denotes significant at the .05 level. ** Denotes significant at the .01 level.

- http://blogs.edweek.org/edweek/DigitalEducation/2015/10/CREDO_online_charters_study.html

# Virtual and Blended Learning Schools Continue to Struggle and Grow




- **"Key Takeaway: Increasing numbers opting for online and blended learning schools despite evidence of poor performance."**

- [Selected quote]:
- "Measures of school performance consistently show virtual school outcomes that lag significantly behind those of traditional brick-and-mortar schools," said Gulosino. "While this finding did not surprise us, given past research with similar findings, we were surprised to find that blended schools tended to score similar or lower on performance measures than virtual schools."

- "Nevertheless, enrollment growth has continued, assisted by vigorous advertising campaigns, corporate lobbying, and favorable legislation."

http://nepc.colorado.edu/newsletter/2016/04/virtual-schools-annual-2016

# Investigative report by ACLU on how EAA's "Buzz" Program Exploited Detroit's Most Vulnerable Kids




http://www.aclumich.org/article/guyette-how-eaas-buzz-program-exploited-detroits-most-vulnerable-kids

"Getting Smart" reports exact same situation as a *success*

GETTING SMART
Amplifying Innovations in Learning




## K-8 Schools

23. Michigan's Education Achievement Authority (EAA) operates 6 formerly low performing Detroit K-8 schools, including Nolan K-8 (pictured), that share an innovative platform and school model. See Building Buzz in Detroit and a feature on Flexible Blended Learning Spaces.

http://www.gettingsmart.com/2014/11/100-schools-worth-visiting/

DE GRUYTER OPEN

Proceedings on Privacy Enhancing Technologies ; 2018 (3):63–83

Irwin Reyes*, Primal Wijesekera, Joel Reardon, Amit Elazari Bar On, Abbas Razaghpanah, Narseo Vallina-Rodriguez, and Serge Egelman

# "Won't Somebody Think of the Children?" Examining COPPA Compliance at Scale

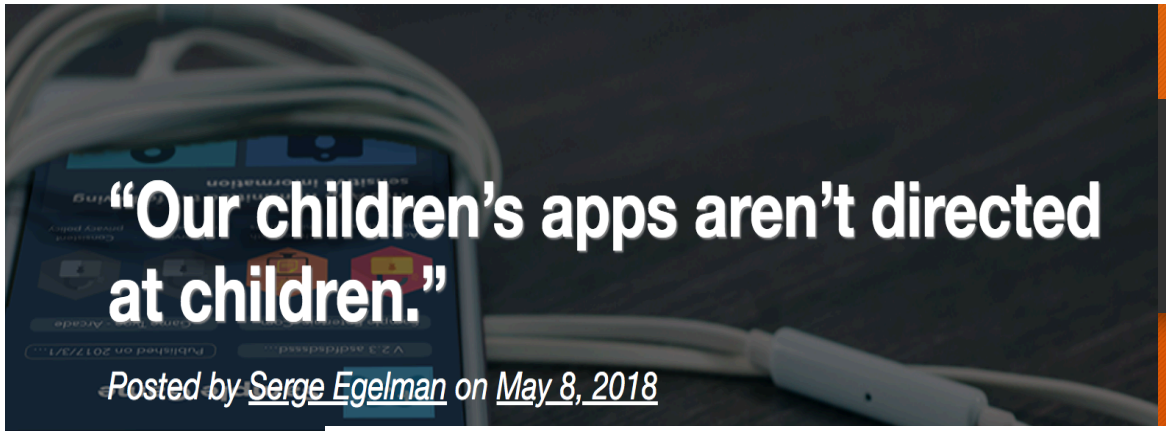
**Abstract:** We present a scalable dynamic analysis framework that allows for the automatic evaluation of the privacy behaviors of Android apps. We use our system to analyze mobile apps' compliance with the Children's Online Privacy Protection Act (COPPA), one of the few stringent privacy laws in the U.S. Based on our automated analysis of 5,855 of the most popular free children's apps, we found that a majority are potentially in violation of COPPA, mainly due to their use of third-party SDKs. While many of these SDKs offer configuration options to respect COPPA by disabling tracking and behavioral advertising, our data suggest that a majority of apps either do not make use of these options or incorrectly propagate them across mediation SDKs. Worse, we observed that 19% of children's apps collect identifiers or other personally identifiable information (PII) via SDKs whose terms of service outright prohibit their use in child-directed apps. Finally, we show that efforts by Google to limit tracking through the use of a resettable advertising ID have had little success: of the 3,454 apps that share the resettable ID with advertisers, 66% transmit other, non-resettable, persistent identifiers as well, negating any intended privacy-preserving properties of the advertising ID.

DOI 10.1515/popets-2018-0021
Received 2017-11-30; revised 2018-03-15; accepted 2018-03-16.

"Based on our automated analysis of 5,855 of the most popular free children's apps, **we found that a majority are potentially in violation of COPPA, mainly due to their use of third-party SDK's.**" …

"Of the 3,454 apps that share the resettable ID with advertisers, **66% transmit other, non-resettable, persistent identifiers as well, negating any intended privacy-preserving properties of the advertising ID.**"

https://petsymposium.org/2018/files/papers/issue3/popets-2018-0021.pdf



# “Our children’s apps aren’t directed at children.”

*Posted by Serge Egelman on May 8, 2018*

In our study of kids’ Android apps, we observed that a majority of apps specifically targeted at kids may be violating U.S. privacy law: the Children’s Online Privacy Protection Act (COPPA). In response to this revelation, many companies that we named in our paper have responded by stating that they are not covered by the law because either their apps are not directed at children or they have no knowledge that any of their users are children. As a broader issue, we have also noticed that many companies appear to turn a blind eye to COPPA compliance by stating in their privacy policies that their obviously-child-directed apps are not directed at children.

As I’ll explain in this post, these excuses are disingenuous at best and outright lies at worst: for every app that we examined, the developer took proactive steps to market their apps to children under 13, and therefore appear to be subject to COPPA because their apps are “directed” at children.

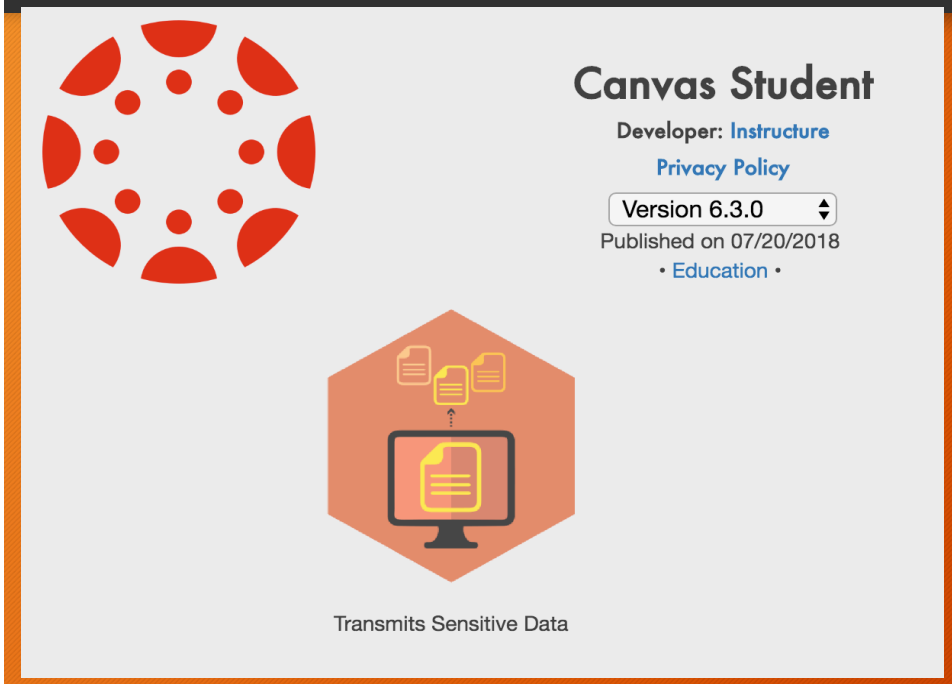
https://blog.appcensus.mobi/2018/05/08/our-childrens-apps-arent-directed-at-children/

# AppCensus: Learn The Privacy Cost of Free Apps




https://search.appcensus.io/

# Sample of landing page with search for common Learning Management System app



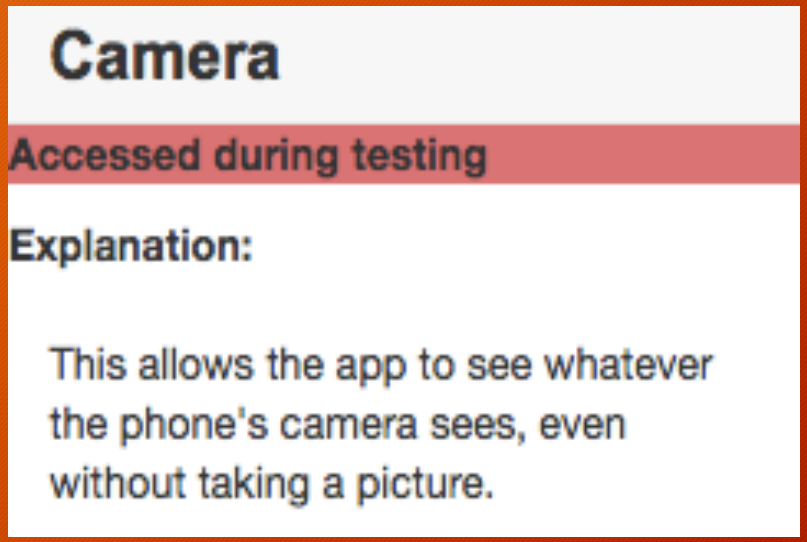




https://search.appcensus.io/app/com.instructure.candroid/183

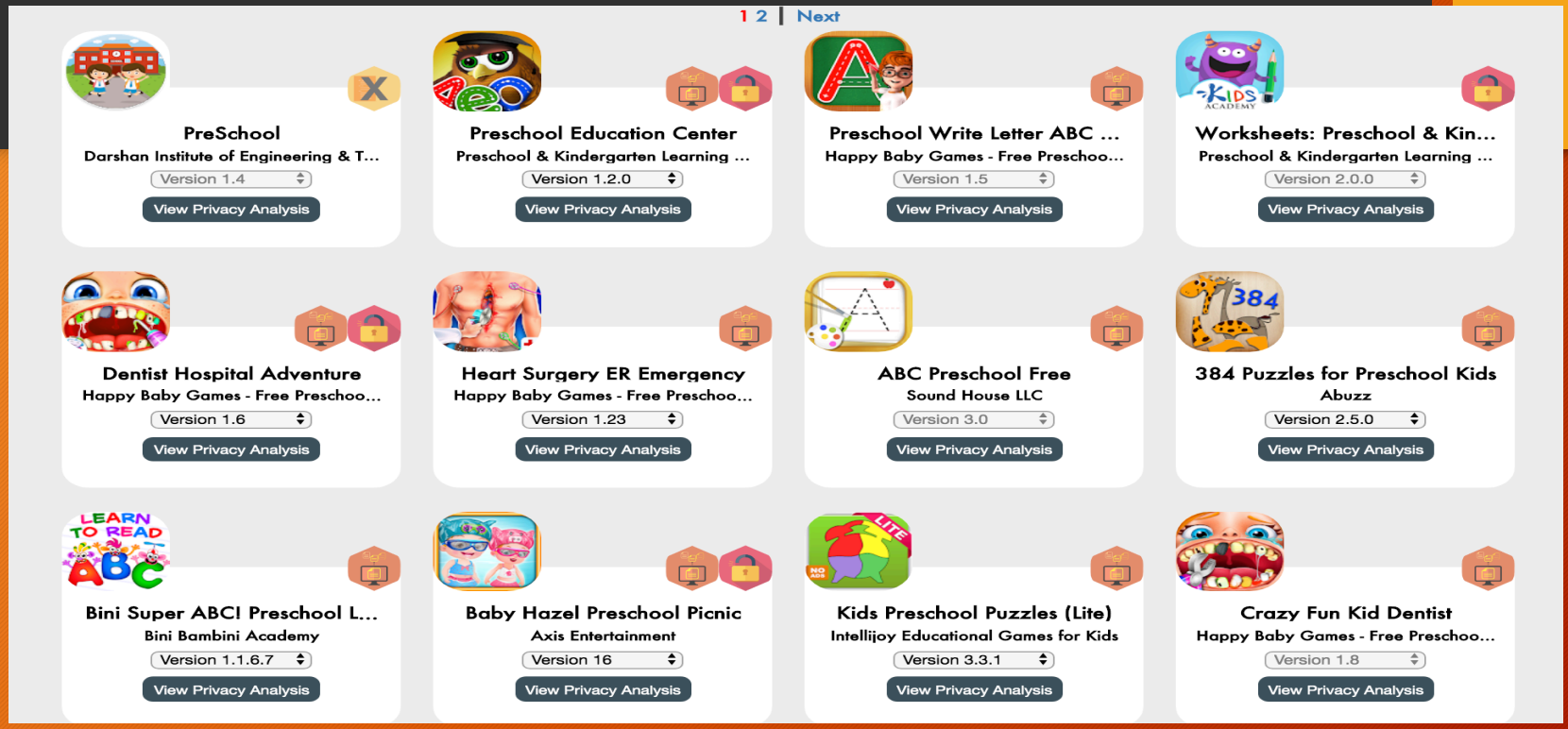
# Remember that emotion tracking software, Affectiva?



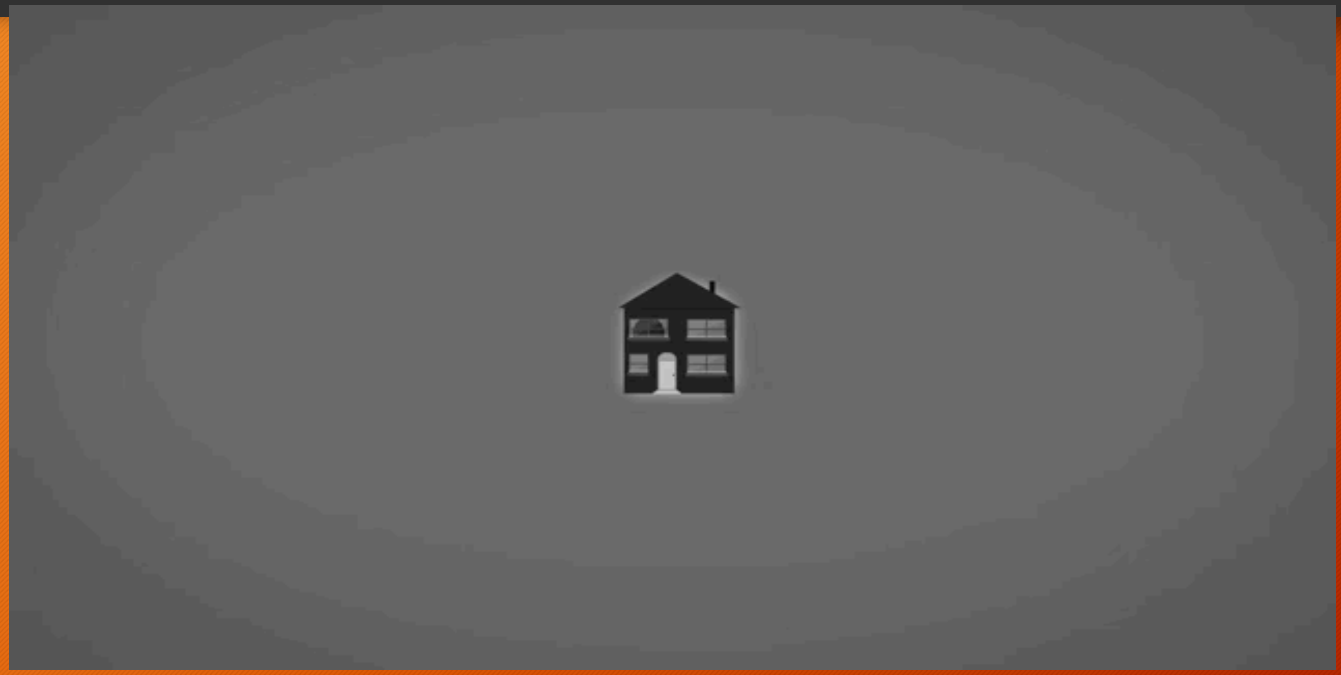

https://search.appcensus.io/app/com.affectiva.affdexme/685

# AppCensus Privacy Analysis Landing Page for “Preschool” Search

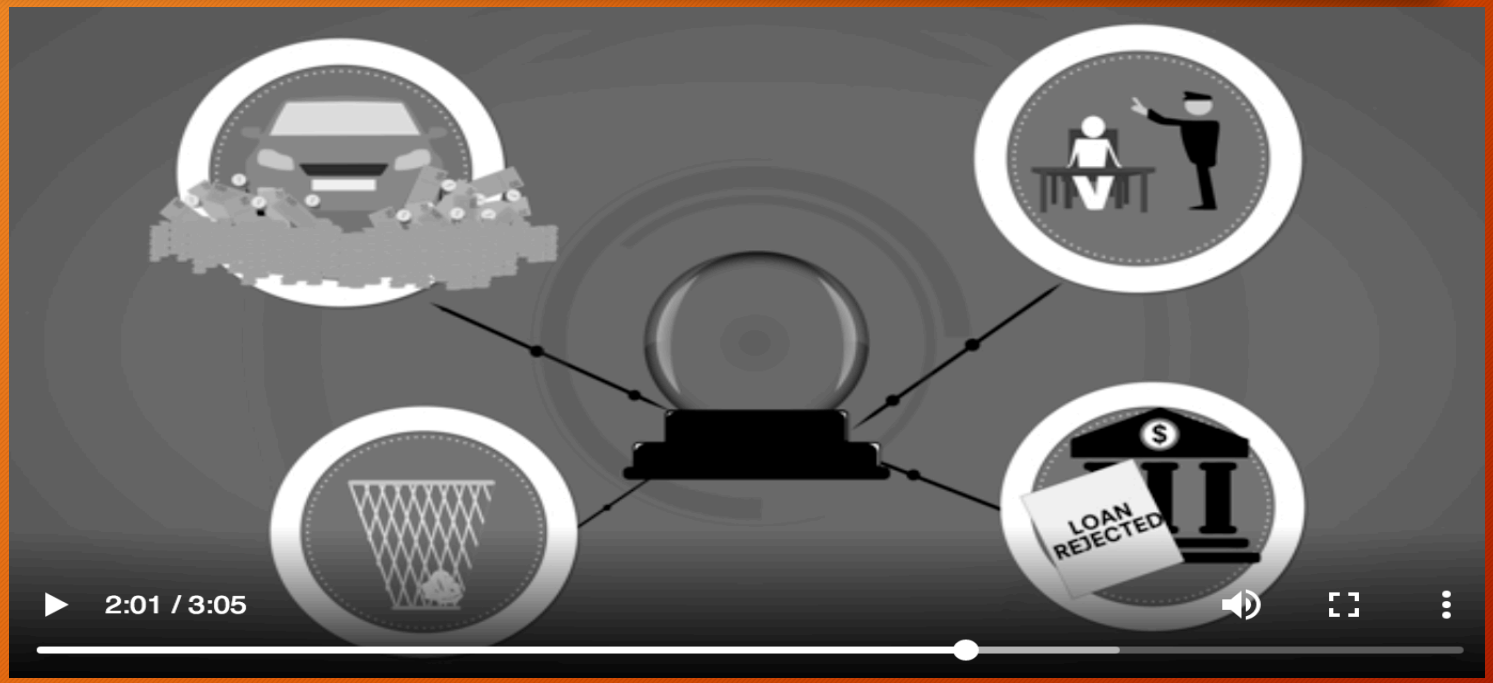


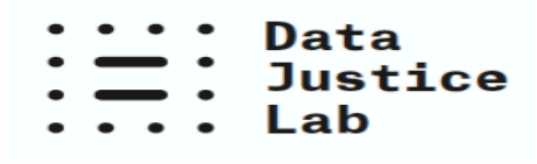

Of the 101 apps displayed in the “preschool” category, 67 (67%) were found to have security/ privacy issues of either ”transmitting sensitive data” or not having a privacy policy.

# Will “Online Preschool” and Early Use of Emerging Technologies Put Enrolled Children at Greater Likelihood for Data Exploitation?



# Concerns about Data Privacy and Data Exploitation involve more than companies just using data for advertising…






MENU

Exploring social justice
in an age of datafication

# Data Justice Lab

The Data Justice Lab examines the intricate relationship between datafication and social justice, highlighting the politics and impacts of data-driven processes and big data. The lab is hosted at Cardiff University's School of Journalism, Media and Culture.

**Read more >>**

https://datajusticelab.org/

# Data Justice

- Reframing the debate: beyond individual privacy to questions of equality, fairness and power
  - Data processes are uneven
  - Data process can discriminate and exclude
  - Data processes create new 'have' and 'have nots'
  - Data processes advance predictive and preemptive governance

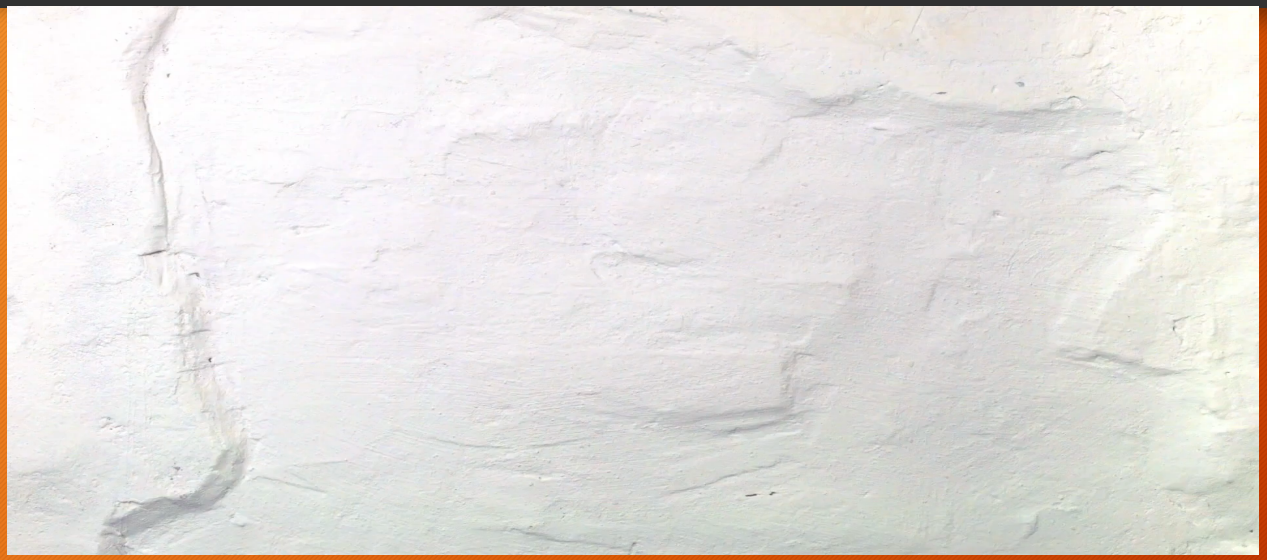
# Data Justice Lab

## Research

At the Data Justice Lab we carry out research that engages with data analytics from a social justice perspective. This includes research that examines the implications of institutional and organizational uses of data as well as research that provides critical responses to potential data harms and misuses. Areas of research include (but are not limited to):

- Data discrimination
- Data colonialism
- Digital labour
- Prediction and Preemption
- Data ethics
- Algorithmic governance
- Social justice-informed design
- Uses of data by social justice groups
- Data-related activism and advocacy

# Towards Data Justice: Social Justice in the Era of Datafication



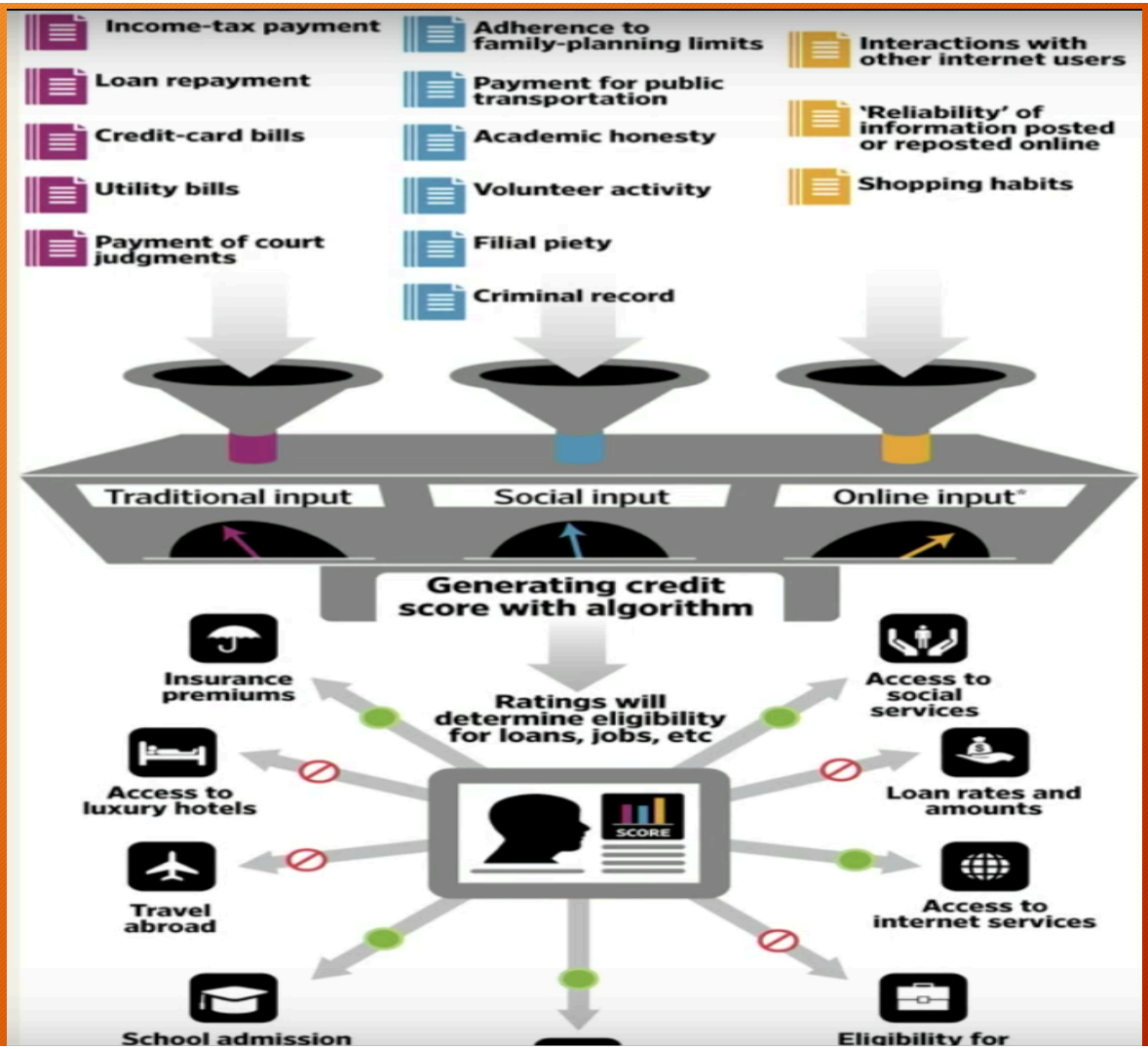
https://re-publica.com/en/session/towards-data-justice-social-justice-era-datafication

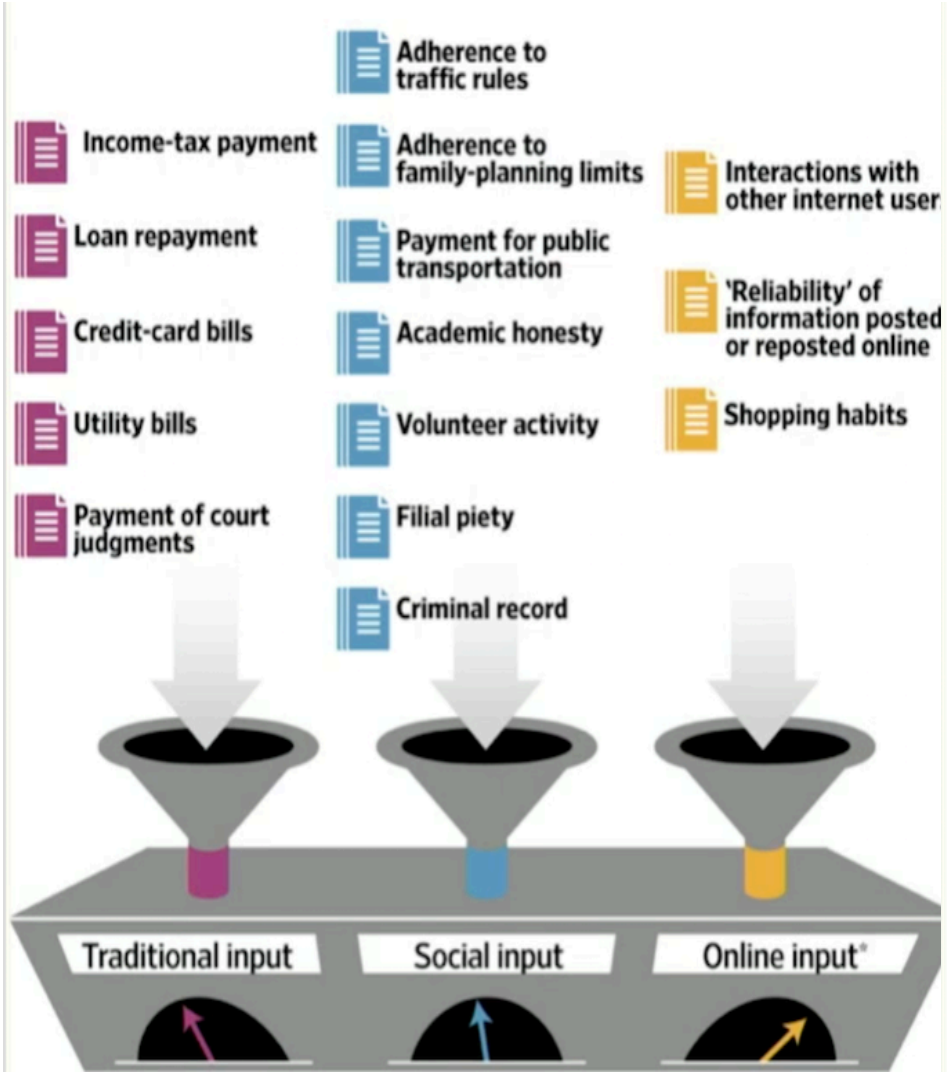
"We are living in a datafied society in which the collection and processing of massive amounts of data is being used for decision-making and governance across more and more areas of social life.

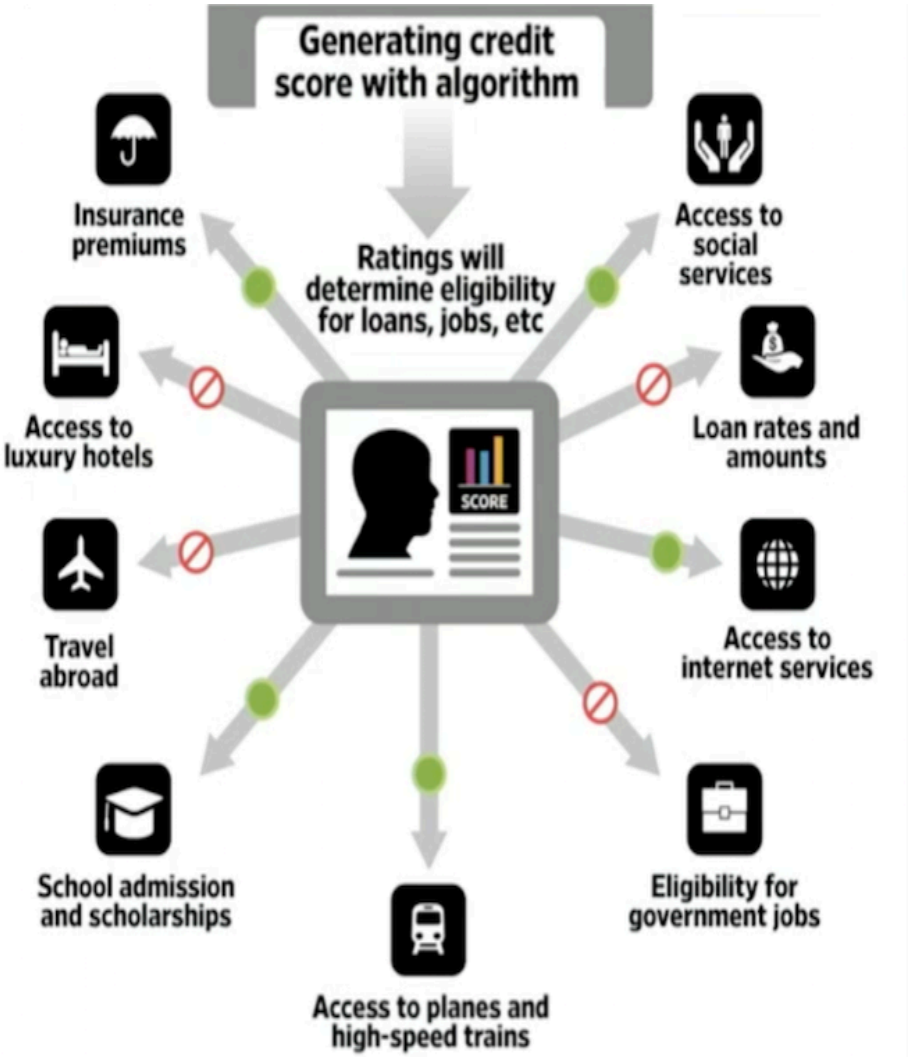
*How do we address possible harms and challenges for social justice?*

*Are calls for individual privacy and encryption tools sufficient?*

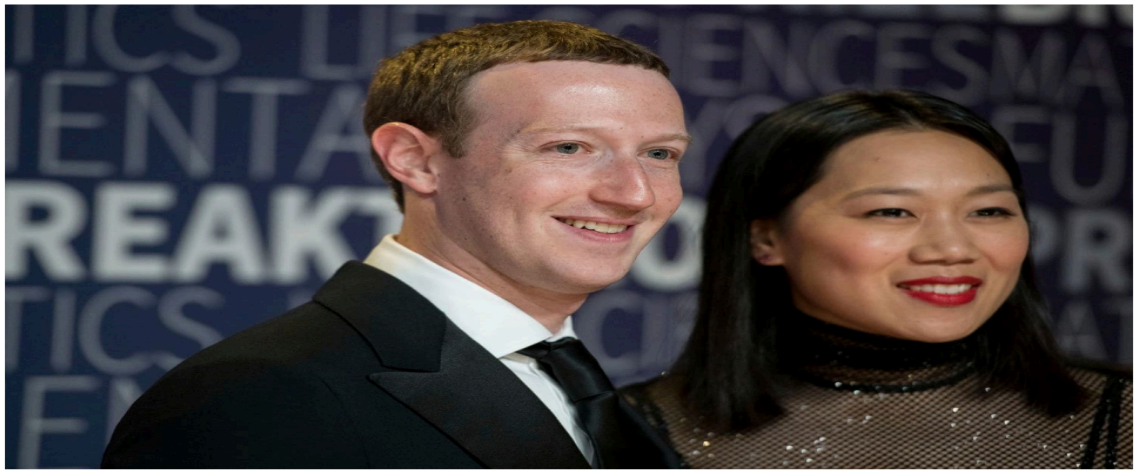
This talk will propose a broader agenda to both understand and create social justice in the era of datafication."


Income-tax payment
Loan repayment
Credit-card bills
Utility bills
Payment of court judgments
Adherence to family-planning limits
Payment for public transportation
Academic honesty
Volunteer activity
Filial piety
Criminal record
Interactions with other internet users
'Reliability' of information posted or reposted online
Shopping habits
Traditional input
Social input
Online input*
Generating credit score with algorithm
Ratings will determine eligibility for loans, jobs, etc
SCORE
Insurance premiums
Access to luxury hotels
Travel abroad
School admission
Access to social services
Loan rates and amounts
Access to internet services
Eligibility for


Income-tax payment
Loan repayment
Credit-card bills
Utility bills
Payment of court judgments
Adherence to traffic rules
Adherence to family-planning limits
Payment for public transportation
Academic honesty
Volunteer activity
Filial piety
Criminal record
Interactions with other internet user
'Reliability' of information posted or reposted online
Shopping habits
Traditional input
Social input
Online input*


Generating credit score with algorithm
Ratings will determine eligibility for loans, jobs, etc
SCORE
Insurance premiums
Access to social services
Access to luxury hotels
Loan rates and amounts
Travel abroad
Access to internet services
School admission and scholarships
Eligibility for government jobs
Access to planes and high-speed trains

# Students protest Zuckerberg-backed digital learning program and ask him: 'What gives you this right?'



Mark Zuckerberg and Priscilla Chan arrive at the annual Breakthrough Prize Ceremony at the NASA Ames Research Center this month in Mountain View, Calif. (Peter Barreras/Invision/AP)

By **Valerie Strauss**
November 17, 2018

Students at a New York high school have protested in recent weeks an online education program developed with engineers working for Facebook founder Mark Zuckerberg in the latest challenge to the growing "personalized learning" movement in U.S. education.

More than 100 students from Brooklyn's Secondary School for Journalism left campus during school hours last week and this week. Protest leaders sent a letter to Zuckerberg questioning his support for the Summit Learning Platform, which is being used in some 380 schools in a number of states and the District of Columbia.

https://www.washingtonpost.com/education/2018/11/17/students-protest-zuckerberg-backed-digital-learning-program-ask-him-what-gives-you-this-right/?utm_term=.73fd3c52a66a

## Letter (selection) from Brooklyn students who walked out in protest of Summit to Mark Zuckeberg:

Unlike the claims made in your promotional materials, we students find that we are learning very little to nothing. It's severely damaged our education, and that's why we walked out in protest. . . .

Another issue that raises flags to us is all our personal information the Summit program collects without our knowledge or consent. We were never informed about this by Summit or anyone at our school, but recently learned that Summit is collecting our names, student ID numbers, email addresses, our attendance, disability, suspension and expulsion records, our race, gender, ethnicity and socio-economic status, our date of birth, teacher observations of our behavior, our grade promotion or retention status, our test scores and grades, our college admissions, our homework, and our extracurricular activities. Summit also says on its website that they plan to track us after graduation through college and beyond. Summit collects too much of our personal information, and discloses this to 19 other corporations.

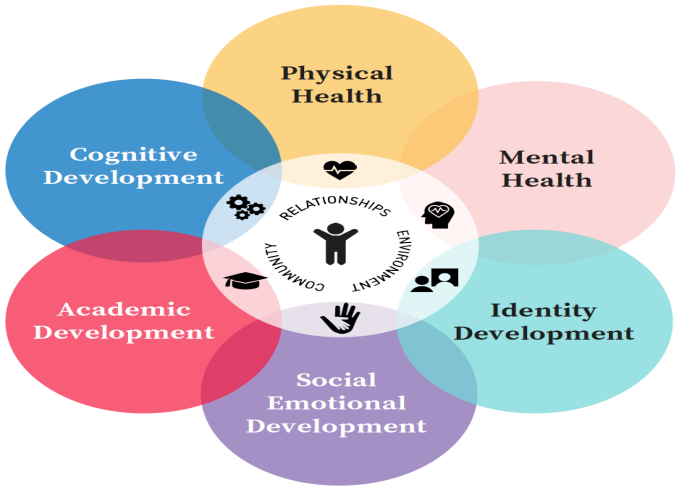
What gives you this right, and why weren't we asked about this before you and Summit invaded our privacy in this way?

https://www.washingtonpost.com/education/2018/11/17/students-protest-zuckerberg-backed-digital-learning-program-ask-him-what-gives-you-this-right/?utm_term=.73fd3c52a66a

# Slide from *Chan Zuckerberg Initiative* (CZI) Presentation to State Department of Education, 2/22/19

## Comprehensive Student Development

E.g. Sleep, Vision, Fitness




E.g. Executive function
Visual processing
Short-term memory

E.g. Stress management
Strong relationship / Connection
mindfulness

E.g. Literacy
Math
Science

E.g. Sense of purpose
Personal identity
Cultural identity

E.g. Self Regulation, Agency, Curiosity

# Supporting the Silicon Valley Regional Data Trust

SHARE

JAN 18, 2017



We are working to develop systems and tools that put students at the center of their own education. We can't do that without a full, data-based picture of each child — from home life to health status.

We are proud to support the Silicon Valley Regional Data Trust in its effort to create a secure, integrated system where teachers and other service providers can share and learn from vital information about the children they serve.

**Priscilla Chan:** Yesterday, I spoke with the Silicon Valley Regional Data Trust, a group organized by the Santa Clara County Office of Education about an exciting project they are developing — the DataZone. This is a secure data-sharing environment across numerous public agencies that serve children and families, including 66 public school districts in San Mateo, Santa Clara and Santa Cruz Counties.

We also announced that we will be supporting this effort through the Chan Zuckerberg Initiative — it's a great step towards making sure that teachers, doctors and other social service providers have the kind of timely, coordinated information they need to understand the unique challenges that each student faces.

https://chanzuckerberg.com/newsroom/supporting-the-silicon-valley-regional-data-trust/

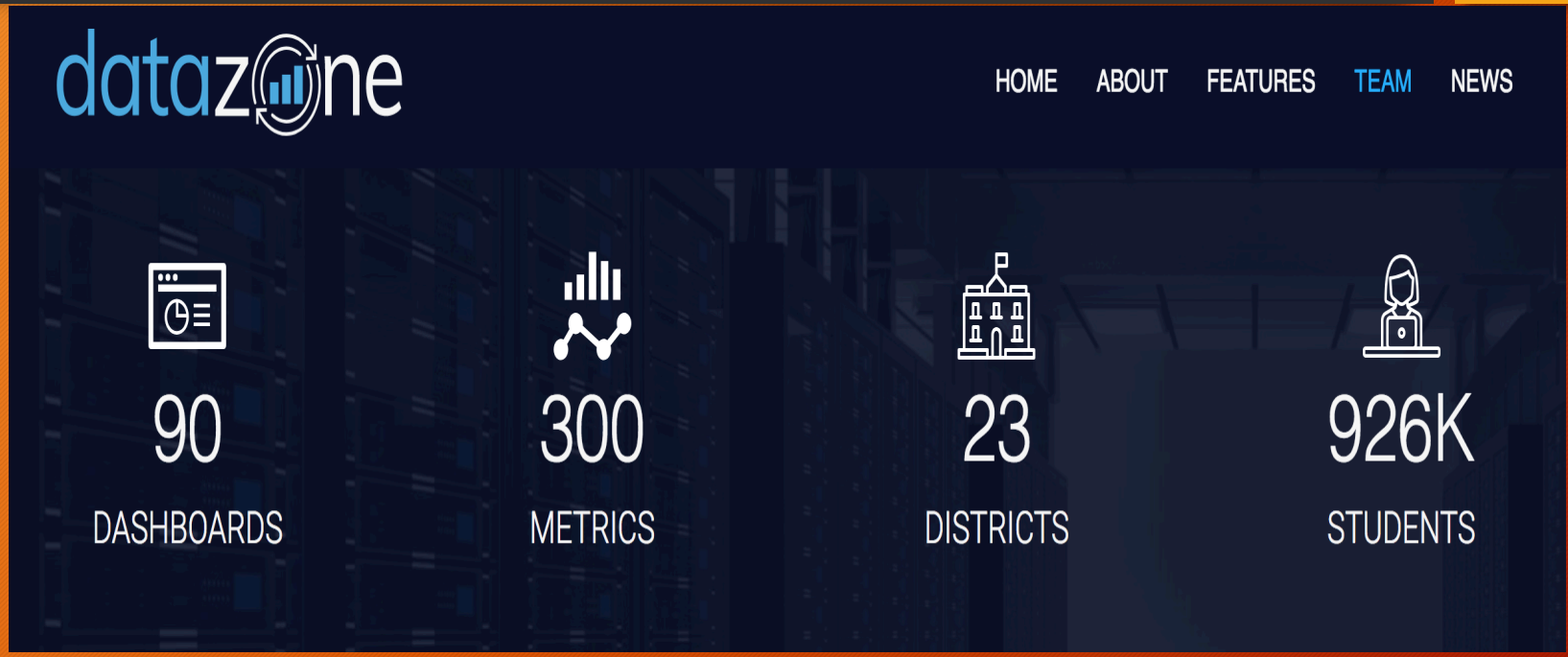
# The “DataZone”

- Santa Clara County Office of Education Strong Start Early Learning Initiative (widespread support for early learning)
- Early Learning Master Plan includes creating ID number (SSID) to track children **age 0-5** into countywide integrated data systems.
- Data sharing is governed by *Silicon Valley Regional Data Trust* [Funded by Chan/Zuckerberg Initiative]
- “Hoonuit”(pronounced “who knew it” to conduct **predictive analytics** on data

https://www.sccoe.org/elmp2017/2017%20ELMP/ELMP%20-%20Full%20Plan.pdf

https://chanzuckerberg.com/newsroom/supporting-the-silicon-valley-regional-data-trust/

# http://Datazone.org



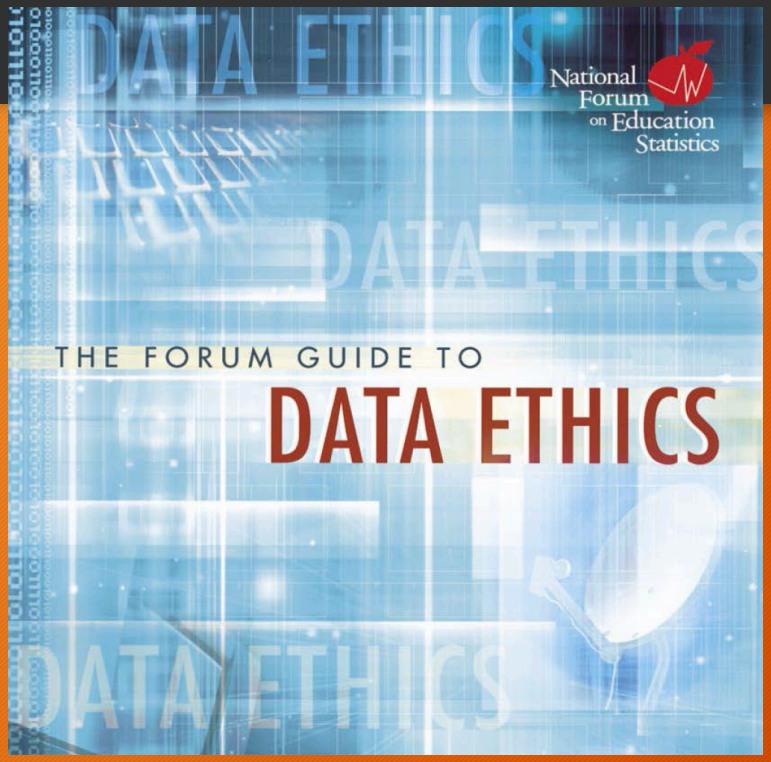
# DataZone powered by “Hoonuit” software

*“Hoonuit’s Early Warning and Intervention solution utilizes **predictive analytics to identify at-risk students** to get them back on track.”*




https://hoonuit.com/resource/video-early-warning-solution-overview/

Massive shift in technologies over past decade.




https://nces.ed.gov/pubs2010/2010801.pdf

## THE FORUM CODE OF DATA ETHICS

### Integrity

1. Demonstrate honesty, integrity, and professionalism at all times.
2. Appreciate that, while data may represent attributes of real people, they do not describe the whole person.
3. Be aware of applicable statutes, regulations, practices, and ethical standards governing data collection and reporting.
4. Report information accurately and without bias.
5. Be accountable, and hold others accountable, for ethical use of data.

### Data Quality

6. Promote data quality by adhering to best practices and operating standards.
7. Provide all relevant data, definitions, and documentation to promote comprehensive understanding and accurate analysis when releasing information.

### Security

8. Treat data systems as valuable organizational assets.
9. Safeguard sensitive data to guarantee privacy and confidentiality.









-Joanna Redden, Co-Director, Data Justice Lab, Cardiff University

Zapp2Photo/Shutterstock.com

Gorodenkoff/Shutterstock.com

1. Targeting based on vulnerability
2. Misuse of Personal Information
3. Discrimination
4. Data Breaches
5. Political Manipulation and Social Harm
6. Data and System Errors

https://theconversation.com/six-ways-and-counting-that-big-data-systems-are-harming-society-88660

GarryKillian/Shutterstock.com

PARENT COALITION FOR
STUDENT PRIVACY



# Educator Toolkit

## for Teacher and Student Privacy

A Practical Guide for
Protecting Personal Data

https://www.studentprivacymatters.org/

08.11.16 | FUTURE OF PHILANTHROPY

# Meet The Billionaire Philanthropist Placing Big Bets On Early Childhood Development

To J.B. Pritzker, there's no area with as much potential social good upside as early childhood investment.

"Billion Dollar Bets to Increase Early Childhood Development," looks at ways philanthropic capital could intervene–for instance, through better home-screening tools, or supporting technology aimed at the needs of lower-income groups.

"The report, part of a series, looks at six "big bets"–or types of investment ideas–philanthropists might focus on. Those include funding better kindergarten-readiness assessments, so service groups can track who and who isn't ready for school. It includes supporting technology like Text4Baby, Ready4K, LENA, and UPSTART aimed at improving "adult-child relationships." And, it includes VC-type investments in early childhood startups, as opposed to funding more conventional non-profits."

https://www.fastcompany.com/3062654/meet-the-billionaire-philanthropist-placing-big-bets-on-early-childho

COUNCIL FOR A STRONG AMERICA

MENU

READYNATION | OUR WORK

# Global Business Summit

Information on our 2018 Global Business Summit on Early Childhood.

"ReadyNation leverages the experience, influence, and expertise of over 2,000 business executives to promote public policies and programs that build a stronger workforce and economy. Since 2006, ReadyNation members have made a bottom-line case for effective, bipartisan investments in children as the future workforce that will drive success in the global marketplace." …

https://www.strongnation.org/readynation

# Social Impact Financing central to business models for Early Ed

**Children's advocates "may attend with a team of at least four business people."**

**"ReadyNation is leading a national coalition of organizations advocating for federal legislation that would facilitate the Pay For Success (social impact financing) model for early childhood programs."**

https://www.strongnation.org/readynation/our-work

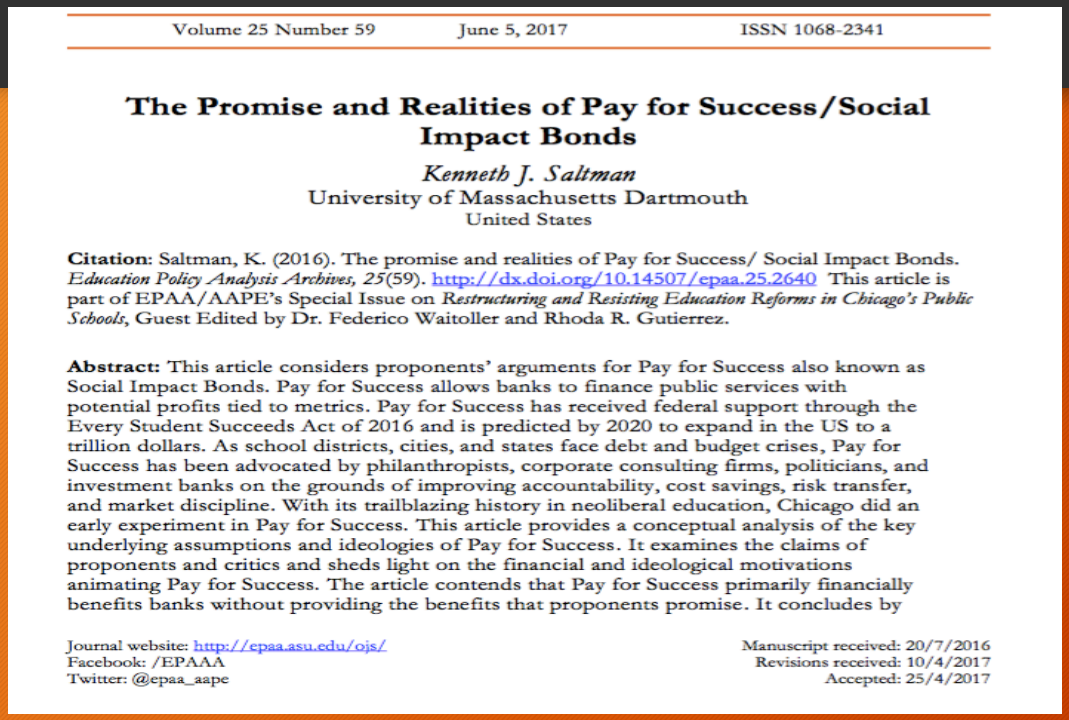
**Q: Who can attend the ReadyNation's 2018 Global Business Summit on Early Childhood?**

ReadyNation's 12th major business summit gathers 200+ business leaders and senior policymakers to discuss investments in early childhood that strengthen the current and future workforce and promote economic vitality. We approve all registrants to ensure a business-focused audience from outside the children's field.

U.S. participants must be business people (outside the early childhood sector), senior policy officials, economists or sponsors/funders. This includes staff from business groups such as chambers of commerce. A children's advocate or other policy expert may attend with a team of at least four business people. Participants from outside the U.S. can be from any sector.

https://www.strongnation.org/articles/506-frequently-asked-questions

# The Promise and Realities of Pay for Success/Social Impact Bonds



Volume 25 Number 59 June 5, 2017 ISSN 1068-2341

**The Promise and Realities of Pay for Success/Social Impact Bonds**

*Kenneth J. Saltman*
University of Massachusetts Dartmouth
United States

**Citation:** Saltman, K. (2016). The promise and realities of Pay for Success/ Social Impact Bonds. *Education Policy Analysis Archives, 25*(59). http://dx.doi.org/10.14507/epaa.25.2640 This article is part of EPAA/AAPE's Special Issue on *Restructuring and Resisting Education Reforms in Chicago's Public Schools*, Guest Edited by Dr. Federico Waitoller and Rhoda R. Gutierrez.

**Abstract:** This article considers proponents' arguments for Pay for Success also known as Social Impact Bonds. Pay for Success allows banks to finance public services with potential profits tied to metrics. Pay for Success has received federal support through the Every Student Succeeds Act of 2016 and is predicted by 2020 to expand in the US to a trillion dollars. As school districts, cities, and states face debt and budget crises, Pay for Success has been advocated by philanthropists, corporate consulting firms, politicians, and investment banks on the grounds of improving accountability, cost savings, risk transfer, and market discipline. With its trailblazing history in neoliberal education, Chicago did an early experiment in Pay for Success. This article provides a conceptual analysis of the key underlying assumptions and ideologies of Pay for Success. It examines the claims of proponents and critics and sheds light on the financial and ideological motivations animating Pay for Success. The article contends that Pay for Success primarily financially benefits banks without providing the benefits that proponents promise. It concludes by

Journal website: http://epaa.asu.edu/ojs/
Facebook: /EPAAA
Twitter: @epaa_aape

Manuscript received: 20/7/2016
Revisions received: 10/4/2017
Accepted: 25/4/2017

**For more information on Social impact Bonds, see:**
**http://bit.ly/sibgamble**

**"The article contends that Pay for Success primarily financially benefits banks without providing the benefits that proponents promise. It concludes by considering Pay for Success in relation to broader structural economic considerations and the recent uses of public schooling to produce short-term profit for capitalists."**

http://epaa.asu.edu/ojs/article/view/2640/1918
DOI: http://dx.doi.org/10.14507/epaa.25.2640

# Blockchain Digital Identity Systems will be pitched as the newest "solution" for data privacy/security concerns

## Digital Identity And Blockchain. "Data Is The New Oil"

21 February 2019 14:55, UTC





News

/ Blocknik
/ Blockchain
/ Cryptocurrency
/ Startups

Adobe Stock/Victor Tangermann

BURST BUBBLE

# Out of 43 Blockchain Startups, Zero Have Delivered Products

Ambitious white papers and press releases don't matter if your tech doesn't do anything.

Dan Robitzski | November 30th 2018

https://futurism.com/tech-research-investigated-43-blockchain-startups

# What can we do? We need collective action.

- Be aware that “Social impact Bonds,” “Pay For Success”, Outcomes Based Contracting and other related financing schemes are tied to the push for longitudinal datasets and technologial – California NAACP has already approved resolutions in opposition to the use of these predatory financing structures.
- Need community education about Data Harms, Data Exploitation,and Data Justice.
- Contact legislators to **reject** longitudinal state database bills.
- Demand that your educational leaders and board trustees hold public forums about data privacy, security, processes, and opportunities for opting out of predictive profiling of youth.

# Critical Questions…

- What can we do to protect youth from data exploitation (at a systemic level)?
- How can we get past the barriers of society and leaders choosing to protect technology companies instead of youth?
- When educators and education leaders turn a blind eye to these trends, are we engaging in effect engaging in systemic bystanderism?

We will be told these data systems are “inevitable.” But with collective action from community, they can be stopped.

“Leaders from the city, county, and school district announced that they are dissolving a joint powers agreement that would have allowed them to share data and coordinate services. The goal was to prevent young people from entering the criminal justice system by identifying problems early on and intervening, but critics argued that data could be used to racially profile and mark them as “future criminals” from an early age.

# St. Paul area leaders nix data-sharing agreement

Some feared program would unfairly profile "at-risk" youth.

**By Emma Nelson** Star Tribune | JANUARY 28, 2019 — 8:29PM



STAR TRIBUNE PHOTOS

St. Paul Superintendent Joe Gothard, left, and St. Paul Mayor Melvin Carter

A controversial agreement between the city of St. Paul, Ramsey County and St. Paul Public Schools to join forces to identify "at-risk" young people has ended before it began.

Leaders from the city, county and school district announced Monday that they are dissolving a joint powers agreement that would have allowed them to share data and coordinate services. The goal was to prevent young people from entering the criminal justice system by identifying problems early on and intervening, but critics argued that data could be used to racially profile children and mark them as "future criminals" from an early age.

http://www.startribune.com/st-paul-ramsey-county-school-district-nix-data-sharing-agreement/504977992/

“There is no moral component to technology unless humans insist that it be there.”

- Jeffrey Armstrong

Former Apple Executive*

** quoted from Take Back Your Power Documentary*




Roxana Marachi, PhD, Education Chair, San José / Silicon Valley NAACP
roxana.marachi@gmail.com // http://EduResearcher.com // http://bit.ly/edpsychtech // http://bit.ly/screen_time
@ConnectEDProf