



LEARNING TO BE WATCHED: SURVEILLANCE CULTURE AT SCHOOL

THE EIGHTEENTH ANNUAL REPORT ON SCHOOLHOUSE
COMMERCIALIZING TRENDS, 2014-2015

Faith Boninger and Alex Molnar

University of Colorado Boulder

May 2016

National Education Policy Center

School of Education, University of Colorado Boulder
Boulder, CO 80309-0249
(802) 383-0058
nepc.colorado.edu

CERU COMMERCIALISM IN
EDUCATION RESEARCH UNIT

The annual report on Schoolhouse Commercialism trends is
made possible in part by funding from Consumers Union and is
produced by the Commercialism in Education Research Unit



Kevin Welner

Project Director

Patricia Hinchey

Academic Editor

William Mathis

Managing Director

Alex Molnar

Publishing Director

Briefs published by the National Education Policy Center (NEPC) are blind peer-reviewed by members of the Editorial Review Board. Find NEPC publications at <http://nepc.colorado.edu>. NEPC editorial board: <http://nepc.colorado.edu/editorial-board>.

Suggested Citation:

Boninger, F. and Molnar, A. (2016). *Learning to be Watched: Surveillance Culture at School—The Eighteenth Annual Report on Schoolhouse Commercializing Trends, 2014-2015*. Boulder, CO: National Education Policy Center. Retrieved [date] from <http://nepc.colorado.edu/publication/schoolhouse-commercialism-2015>

This material is provided free of cost to NEPC's readers, who may make non-commercial use of the material as long as NEPC and its author(s) are credited as the source. For inquiries about commercial use, please contact NEPC at nepc@colorado.edu.

LEARNING TO BE WATCHED: SURVEILLANCE CULTURE AT SCHOOL

THE EIGHTEENTH ANNUAL REPORT ON SCHOOLHOUSE COMMERCIALIZING TRENDS, 2014-2015

Faith Boninger and Alex Molnar, University of Colorado Boulder

Executive Summary

Digital technologies used by marketers continue to evolve. Sophisticated and personalized, they help ensure that today's children and adolescents are constantly connected and available to advertisers wherever they may roam. Moreover, because digital technologies enable extensive personalization, they amplify opportunities for marketers to take over not only public space but also individuals' private space. In this year's report, we consider how schools facilitate the work of digital marketers and examine the effects of their relentless tracking of and marketing to children.

Schools now routinely direct students online to do their schoolwork; and they collect student data using education and recordkeeping software that is useful to marketers as well—creating a threat to students' privacy. Schools' embrace of digital technology augments and amplifies traditional types of education-related marketing, which include: (1) appropriation of space on school property, (2) exclusive agreements, (3) sponsored programs and activities, (4) incentive programs, (5) sponsorship of supplementary educational materials, and (6) fundraising. These marketing efforts, conducted with the implicit blessing of administrators, teachers, and parents, combine to normalize for children the notion that corporations have a legitimate role in their education and in their lives more generally. In addition to threatening children's right to privacy, these practices raise serious concerns about their effect on children's physical and psychological well-being and about their impact on the integrity of the education children receive. By engaging in these practices, schools abet the socialization of students as consumers who take for granted that others have a right to keep their behavior under constant surveillance for marketing purposes—even at the cost of their own well-being.

Recommendations:

It is recommended that:

1. Parents, teachers, and administrators—as individuals and through their organizations—work to make public the threats that branded programs and materials, as well as unregulated digital technologies, pose to children when they are allowed into schools and classrooms.
2. The Federal Trade Commission extend the Children's Online Privacy Protection Act (COPPA) protections to age 14 and strengthen the protections offered to adolescents ages 15-18.¹

3. Industry self-regulation not be relied upon to protect the interests of students. Instead, policymakers should adopt enforceable legislation that holds schools, districts, and companies with access to student data accountable for violations of student privacy.
4. Legislators carefully review proposed legislative language to ensure that it does not contain loopholes that provide companies with opportunities to collect and exploit children's data while also "following the letter of the law."
5. Those designing and reviewing relevant policies ensure that policies protect the privacy not only of student educational records but also of the wide variety of student data (including anonymized data) now being collected and shared. Such policies should explicitly address the potential commercial use of any data collected.
6. School district and privacy specialists review contracts with educational technology and other providers to check specifically for provisions or omissions that enable third parties to monitor and/or exploit students for commercial gain.
7. Policymakers at every level seek to eliminate perverse incentives that encourage parents, teachers, and administrators to sacrifice student privacy in an effort to financially support educationally necessary school activities.

LEARNING TO BE WATCHED: SURVEILLANCE CULTURE AT SCHOOL

THE EIGHTEENTH ANNUAL REPORT ON SCHOOLHOUSE COMMERCIALIZING TRENDS, 2014-2015

Hello Everyone,

This Thursday, December 10th, will be Bring Your Own Technology Device (“BYOD”) Day for Ventura School! Your child can bring their own technology device (iPhone, iPad, ITouch, Samsung Galaxy, etc...) to school. If your child does not have their own technology device, we will have at least 10 iPads in class or they can pair up with another student and share their device together. We will have fun, challenging technology activities that day!

One activity the students will be doing that day are with QR (Quick Response) Codes. Students will be working out math problems that they have been learning in class, in a scavenger hunt form using the QR codes. In order for your child to do this activity, I would like to request that you download this free app onto their device before Thursday.

There are several different scanning apps that students can download on their own devices for FREE.

- * Quick Scan - QR Code Reader - I personally downloaded on my iPhone*
- * QR Reader - downloaded on all Ventura Ipads*

I have found that these work the same, so it may not matter which free scanning app they download.

Thanks for your support!

*Sincerely,
Mrs. Hill*

(teacher letter to parents, December 2015²)

Ethan is a student in Mrs. Hill’s third grade class.³ Because his parents are concerned about the negative effects of technology use among children, he had no personal device (iPhone, iPad, or otherwise) to bring to school for BYOD Day, or to which he could download his own QR code reader. He did, however, participate in the day’s activities using one of the school’s iPads, and he learned how to use it to read QR codes. Now that he knows just how handy

those ubiquitous little codes are, when he gets a smartphone, perhaps he will download his own reader. And if there is no cost to him to do so, chances are good that it will collect information from his phone that will be used to serve him targeted advertisements.⁴

A Short History of Commercialism in Schools

Efforts to exploit students like Ethan for commercial gain are nothing new. In fact, the first documented example of marketing in schools dates from the 1890s, when a hardware store tried to put materials into schools with its marketing slogan on it.⁵ By the 1920s, the phenomenon of companies offering supplementary materials to schools had grown so much that the National Education Association empanelled the “Committee on Propaganda in the Schools” to examine it and offer teachers guidelines for how to evaluate the many materials they received.⁶

Since 1998, our Commercialism in Education Research Unit annual reports have examined trends in schoolhouse commercialism in the context of general marketing trends, especially with respect to marketing to children. Since the 1890s, and certainly since we began following the phenomenon in the 1990s, efforts to promote products, brands, and corporate worldviews—both in schools and out—have retained their essential character even as their sophistication has steadily grown.

What is Constant?

The purpose of marketing—that is, to influence its targets’ attitudes and behaviors—is always the same. In schools, because the targets are children who are compelled under law to attend, an important part of the goal is to exert influence at an early age, to establish attitudes that will affect a lifetime of purchases. This has been the purpose ever since companies first began offering their propaganda for free to schools.

The basic commercial values and activities of marketing have also remained constant. Definitions of “commercialism” typically point to it as a value system that privileges profit above every other concern.⁷ “Marketing,” an integral element of commercialism, refers to any type of promotional activity intended to bring together a brand and its customers; “advertising,” a subset of marketing, consists of the creation and delivery of specific messages presented to potential customers via print or other media.⁸ These fundamental identities have not changed over the years.

Moreover, all marketing promotes the values, stories, and morality of a consumer culture—regardless of the product being marketed or the apparent innocuousness of any given advertisement.⁹ No matter where it appears, marketing to children is intended to shape how children see themselves and how they think about their world, including their families, friendships, romantic relationships, and experiences.¹⁰ No one particular advertisement or marketing campaign has this effect on its own, but each contributes to framing the values of consumption and consumerism as the highest good.¹¹

Another way of thinking about this is that while each advertisement may promote a different product, all advertisements reinforce the same underlying worldview: that the path to happiness and satisfaction lies through consumption. This powerful belief is all the more effectively taught because it is promoted invisibly as an *a priori* assumption and is therefore

seldom questioned.^{12, 13}

Marketers use a variety of techniques to promote consumption, and many of these techniques have also essentially stayed the same. We organize school commercializing activities, in particular, into seven categories: (1) appropriation of space on school property, (2) exclusive agreements, (3) sponsored programs and activities, (4) digital marketing, (5) incentive programs, (6) sponsorship of supplementary educational materials, and (7) fundraising.¹⁴

Many of the wide variety of commercializing activities in schools advertise particular products, but some are designed to promote a worldview consistent with and favorable to that of a given company or industry. For example, Energy Balance 101-sponsored educational materials promoted by Together Counts and the Healthy Weight Commitment Foundation present the food industry's "calories in-calories out" perspective on nutrition, fitness, and weight.¹⁵

Other activities "commercialize" children by encouraging them to adopt a profit-oriented value system without necessarily promoting any particular company or industry. School fundraising efforts can do exactly this when they encourage children to capitalize on their relationships with family and friends in order to collect donations from them or convince them to buy things they don't want in order to support the school.¹⁶ In a very different example, Ethan's school served the marketing industry itself by encouraging students to download and use QR readers: it introduced the children to a form of marketing technology that has not caught on among older consumers.¹⁷

What Has Changed?

Over the past century, marketing and advertising have increasingly encroached on public space, including schools.¹⁸ It is no longer news, for example, that formerly ad-free places, such as parks and ball fields, are now named for sponsors and bear ads on nearly every inch of available space.

So-called "native advertising," "content advertising," or "sponsored content" further integrates advertising into editorial space that was previously off-limits. Whereas publishers once clearly demarcated advertising from other content in their offerings, print and online publishers now present material that looks just like their regular content but is, in fact, produced by advertisers.¹⁹ This merging of advertising and content is embraced by companies looking for new ways to promote their products, by publishers desperate to hold off their imminent extinction, and by advertisers threatened by the popularity of "ad-blockers" that screen out obvious advertisements.²⁰

In schools, all marketing is "native." When Ethan learns how to scan QR codes as part of a math game, for example, it is embedded marketing for a technology that serves marketers much more than it serves him.²¹ Likewise, when he participates in his school's running club, which is sponsored by the local Nike store, it is embedded marketing for Nike.²² And when he learned passing and running skills at a football camp as part of a "Super Kids - Super Sharing" event, it was embedded marketing for the National Football League (NFL).²³

The technology for delivering marketing has become more sophisticated and personal, helping to ensure that today's children and adolescents are constantly connected and targeted by advertisers wherever they may roam. In 1998, we predicted that the nascent Internet would increase the amount of electronic (digital) marketing to children in schools.²⁴ We

had no idea! In 2016, the omnipresence of cell phones, tablets, and computers amplifies the possibilities for marketing to colonize public space. The use of these technologies in school, in the forms of specifically-designed “education technology” and commercial applications modified for school use, transforms how children are taught, tracked, and marketed to.

Digital marketing is now easily personalized—micro-targeted to each individual based on her browsing history and other information that marketers attach to her profile. This level of sophistication necessarily makes digital marketing intrusive. One way of thinking about this is as information being “pushed” and “pulled.” “Old-fashioned” advertising is fully of the “pushing” sort: marketers push information at the target individual in hopes she will pay attention to and be influenced by it. Modern advertising also incorporates “pulling”: marketers extract personal information from the target so that they can more effectively target marketing to her specific interests and needs. Collecting publicly available information (demographics and home ownership, for example) to segment television audiences is an especially coarse form of “pulling” information. Tracking Facebook “likes,” browsing histories, or smartphone location data are much more sophisticated and finely-tuned variants. As one article in *Advertising Age* put it, “Collecting data about customers is virtually as old as marketing itself, but the trillions of data points now available online make it a sophisticated piece of weaponry.”²⁵

Although it remains possible to pull information about a target non-digitally (as when marketers buy lists of new homeowners, etc.), digital technology maximizes how much information is available and how easily it can be transferred; information gleaned from digital behavior can then be combined with information pulled from off-line sources.²⁶ The individual may see the same number of advertisements as she would have otherwise, but increasingly the advertisements are personally tailored to her based on her online behavior and on other digital information, such as her smartphone location data and contact lists. Such information collection and targeting raises concerns about violations of privacy.²⁷

Focus of this Report

School-based marketing efforts are commonly conducted with the blessing and sometimes active participation of school boards and/or governance boards, administrators, teachers, and parents. In the first half of this report, we provide current examples of these marketing efforts and explore how they normalize the participation of corporations as benevolent “partners” both in children’s education and in their larger lives.

In the second half of this report we examine how digital marketing, especially in and through schools, amplifies opportunities for marketers to take over virtual and real school space and invade the private space of students. In prior annual reports, we documented the lack of effective policy to regulate commercialism in schools, and we examined state and federal policy regarding student privacy.²⁸ Here, we turn our attention to the implications for children of being tracked and of experiencing constant digital marketing.

Specific concerns relate: to violations of children’s privacy; to threats to children’s physical and psychological well-being and to the integrity of their education; and, to their socialization as consumers above all else—consumers who take for granted the constant surveillance of their behavior by data-gathering entities for purposes that threaten their well-being.

Commercializing Activities in Schools 2015-2016

“How is it that corporations can masquerade as do-gooders for our schools, when the reality is their motives are less than pure?”

(J., at ParentTech.org)²⁹

We organize school commercializing activities into seven categories: (1) appropriation of space on school property, (2) exclusive agreements, (3) sponsored programs and activities, (4) digital marketing, (5) incentive programs, (6) sponsorship of supplementary educational materials, and (7) fundraising.³⁰ There are many individual examples to be found,³¹ but particularly noteworthy are campaigns that target children using several coordinating approaches that manipulate teachers, administrators, and parents to direct children’s attention toward sponsors’ interests.³²

Civil society organizations and parent activists took both the National Football League (NFL) and McDonald’s, in particular, to task this year for their activities.³³ These corporations offer programs to schools in their own names and also make use of strategic partnerships, especially with non-profit or governmental organizations, to further their public relations outreach into schools.³⁴ They portray themselves as concerned with students’ health and with the quality of their education, and they structure relationships with education stakeholders in ways that make it appear that their involvement in education is helpful, logical, and beneficial for students.

On their face, the corporations’ free programs, teaching materials, and fundraising appear to bolster schools’ efforts to teach important skills and values. Dig a little deeper, however, and it becomes clear that the offerings are, in fact, self-interested campaigns that use schools to develop marketing relationships both with stakeholders and with the children themselves.³⁵ In addition to providing schools with physical advertisements (in the form of branded posters promoting healthy eating, for example), these coordinated marketing campaigns co-opt children’s and parents’ activities, as described below, to redefine for all the meaning of “community partnerships” to specifically include corporations.

The National Football League: Sponsored Educational Materials, Appropriation of Space, Sponsored Programs and Activities, and Incentive Programs

The NFL partnered with Young Minds Inspired (YMI) and Nickelodeon for its “NFL Rush” sponsored educational materials, coordinated with the NFLRUSH.com website and the Nicktoons NFL Rush Zone animated television show. These materials, which the NFL stopped promoting to schools towards the end of the 2015-2016 school year, helped redirect elementary school children back to their televisions and computer screens for more football marketing.^{36, 37} *NFL Rush Fantasy—Learn, Play, Score!*, a math and language arts curriculum for third and fourth graders, directed children to the NFLRUSH.com website to look up player statistics and then use math and critical thinking to play “fantasy football” at the league’s fantasy football website created just for children.³⁸ The December activity, for example, provided children with a playoffs “bracket” to keep track of which teams advance in the playoffs, and had them choose players from the playoff teams to construct their own fantasy team. To do this, children had to register for and sign in weekly at the NFLRUSH.com website. Activity pages exhorted children to “Come back every week for the latest player statistics and to set your fantasy roster.”³⁹ Classroom posters advertised the program.⁴⁰

James F. Thompson, writing about the NFL Rush Zone television show for *Adweek*, could just as easily have been talking about the NFL's sponsored educational materials when he wrote, "This program isn't about stories; it's about sales, branding and, ultimately, NFL profits."⁴¹ To the NFL's credit, it responded to the Campaign for a Commercial-Free Childhood's extensive report on its activities by agreeing to stop promoting fantasy football in schools, and it has taken *NFL Rush Fantasy—Learn, Play, Score!* offline. This does not mean, however, that it has abandoned marketing in schools.

The NFL's Play 60 program is, ostensibly, its effort to inspire children to engage in physical activity. The program is, however, housed at the NFLRUSH.com website, which encourages children to engage in mostly sedentary activities promoting NFL football. It features online games, apps, fantasy football, links to game footage and player profiles, advertisements for its Nicktoons television show, and football telecasts. The league advances Play 60, in effect "whitewashing" it, by partnering with the American Heart Association to promote the annual "Play 60 Challenge" for schools.⁴² This incentive program urges teachers and students to exercise for 60 minutes daily for four weeks in order to win prizes, including a school visit from an NFL player, a \$2,500 grant for the school, a Super Bowl-oriented VIP NFL Play 60 event, and an Xbox video gaming system.⁴³

Another Play 60 coordinated effort is "Fuel Up to Play 60," for which the NFL partners with the National Dairy Council (NDC) and the United States Department of Agriculture (USDA) (The GENYOUth Foundation runs the program; NDC and the NFL co-fund GENYOUth). It is likely that these partnerships enhance the program's reach: Fuel Up to Play 60 reaches 3,000 schools and 14 million students, according to GENYOUth, and is the largest school health initiative in the United States.⁴⁴ It also promotes NFL football by offering NFL-branded prizes to students: player visits, game tickets, NFL footballs and shirts, teacher and student events at local NFL stadiums, and digital prizes.⁴⁵

Finally, the NFL also conducts non-programmatic school-based promotions, such as the Super Kids - Super Sharing project it conducted for Phoenix, AZ, elementary school children before the Super Bowl held there in 2015. Students helped donate books and sports equipment, attended an NFL-sponsored event, and participated in a "Kids Camp" run by an Arizona Cardinals player, where they practiced football drills.⁴⁶ The NFL has organized this project before each Super Bowl since 2000.⁴⁷ As do all the other NFL school programs, it ensures that even children with no initial interest in football or sports are forced to attend not only to football, but specifically to the league's offerings.

McDonald's: Sponsored Programs, Sponsored Educational Materials, and Fundraising

On a December 2014 conference call with investors, McDonald's U.S. President Mike Andres called for McDonald's franchise owners to increase their presence in schools.⁴⁸ McDonald's strong presence in schools takes the forms of assorted sponsored programs, educational materials, and school fundraising opportunities. It markets its activities and materials directly to schools and teachers, and it also financially supports state Parent Teacher Associations (PTAs), fostering goodwill that encourages PTAs to bring McDonald's marketing to students.⁴⁹

Despite McDonald's CEO Don Thompson's claim at the December 2014 shareholders' meeting that "we don't put Ronald out in schools," franchise owners do offer the chain's spoke-

scharacter, Ronald McDonald, free to elementary schools to teach about empathy (“Giving Back with Ronald McDonald!”), friendship and cooperation (“A Friendship Adventure with Ronald McDonald”), character (“On the Inside”), reading (“It’s Book Time with Ronald McDonald”), and exercise (“Get Movin’ with Ronald McDonald”).⁵⁰ They also distribute coupons with report cards, provide “Passport to Play” physical education and other educational materials, offer free meal days for students, sponsor the “McDonald’s All American High School Basketball Games,” and offer college scholarships.⁵¹ The Balanced Active Lifestyle Grants Program provides \$1,000 toward teachers’ efforts to implement “educational programs that demonstrate an original approach to enhancing their students’ physical fitness, nutrition awareness and health education.”⁵² McTeacher Night fundraisers entice children and their families to McDonald’s restaurants to be served by their teachers.

In 2015, anti-commercialism activists, nutrition activists, parents and teachers confronted McDonald’s about its efforts, particularly McTeacher Nights, Ronald McDonald visits, and the marketing to schools of the movie *540 Meals*.⁵³ *540 Meals* promotes McDonald’s via the story of an Iowa schoolteacher’s weight loss while eating a purely McDonald’s diet. As an official brand ambassador for McDonald’s, that schoolteacher promoted McDonald’s and the importance of choice and balance to middle and high school audiences around the United States.⁵⁴ When the Maryland PTA endorsed the film on its website, the organization Healthy School Food Maryland organized a petition to protest it.⁵⁵

“Fun Runs”: Corporations, Fundraising, and the PTA

The McDonald’s examples described above demonstrate how fundraising efforts can provide openings for corporations to market to children and to teach them commercial values in school. Sometimes teachers or schools initiate fundraisers, but especially in elementary schools, parent groups often organize them. There are several potential problems associated with parent-initiated fundraisers.

When a parent organization accepts “partner” or “sponsor” money from McDonald’s or any other corporation, it opens the door to participating in additional activities designed to brand children. For example, the Virginia Parent Teacher Association (PTA), which claims McDonald’s as a sponsor, has included McDonald’s presentations at its annual convention, posts a “golden arches” link on its homepage, and advertises McDonald’s school programs elsewhere on its website.⁵⁶ Similarly, the Colorado PTA thanks McDonald’s with a link on its website for the company’s support of its 2015 convention; it also advertised McDonald’s statewide promotion of free breakfast for students on the first day of school.⁵⁷ The Maryland PTA promoted *540 Meals*.

Further, when they hire private companies to provide fundraising events, “school-affiliated entities” such as parent-teacher organizations or booster clubs sign legal contracts obligating them to conditions set by the companies. These entities are not held to national or state laws that govern school contracts or that require schools to protect student data, and their contracts may invalidate pre-existing contracts between the schools and the companies involved.⁵⁸ Such events often provide opportunities for student data to be collected without sufficient limits on its use or adequate protection of student privacy, such as when a web-based contribution program collects and posts information about student participants in the fundraiser.

Frank Holmes, for example, became concerned about threats to student privacy when his

daughter's school held a "Boosterthon Fun Run" as a PTA fundraiser.⁵⁹ Boosterthon is one of several companies that provide similar turn-key fun run fundraisers: for usually 40-60% of the money raised, company employees visit classrooms to motivate children to solicit pledges and provide "character lessons"; provide an Internet-based system by which pledges can be made; and set up, manage, and clean up after the run.⁶⁰

Mr. Holmes was initially disturbed that the company posted personally identifying information about children online as part of its automated pledging system, although the more he learned about the Boosterthon method, the more aspects of it he questioned. For at least a week before the run, teachers, administrators, and company employees all exhort the children daily to raise money—offering them individual and class prizes as incentives. Company employees disrupt classes and use class time to encourage children to solicit pledges, setting up a social environment and reward structure uncomfortable for students who cannot or do not want to participate.⁶¹ They encourage children to hit up their relatives and everyone else they know for pledges.⁶² They offer non-nutritious food (e.g., popsicles, ice cream, soda, and pizza), among other rewards, as prizes for classes who raise the most money.⁶³ Because they push the students to raise money from family and friends, Boosterthon and similar "fun run" companies may, if the school community is wealthy, raise a significant sum to be split between the school and the company.⁶⁴ If the community is not wealthy, less money is made and a larger percentage is taken by the company.⁶⁵

Regardless of how much money they make, however, these fundraisers engage the entire school community to teach children a commercialized way of thinking about their world. When a PTA contracts with a fun run company, the company staff, teachers, administrators, and parents conspire to teach the children to focus purely on the money raised and the prizes they can win for themselves. Fun run companies market their product as a fundraising tool, but the central aspect of their work is to bring all the players into alignment with the commercial values that validate their existence. That is, all the adults involved participate in manipulating the children to harass family and friends for contributions, to work for trinkets, and most significantly, to learn that manipulation, harassing their family and friends, and working for trinkets are all desirable if they lead to getting the money in the end. Social pressures discourage objections. When Mr. Holmes tried to address these issues with a representative of his state's PTA, the representative told him that "commercialism in schools is not an issue" for the state PTA.⁶⁶

The Fallacy of "Partnership"

Whether they acknowledge it or not, commercialism in schools is, indeed, an issue for parent groups, as it is for teachers, schools, and districts. More than ever, attention is a fungible commodity. Attention turns time into money. Those who can deliver attention in a hyper-cluttered ad environment, even if only for a few seconds, can charge mightily for it. TV networks charged \$1.9 million for a 30-second commercial spot during the 2015 Oscar Awards, and \$4.5 million during the Super Bowl.⁶⁷ Marketing in schools delivers children's attention—and more—to the messages delivered by corporate sponsors.

Corporations such as the National Football League, McDonald's, and Boosterthon—and many others, including Verizon, Samsung, Nike, and Schwan's⁶⁸—structure an environment for educators, parents, and students in which it seems logical and commonsensical to accept, and even seek, sponsorships and financial help. As the adults do just that, they teach children to do the same.⁶⁹ Legislators have come to expect it from them.⁷⁰ To these educa-

tion stakeholders, corporations present their efforts to capture children's attention as helpful "partnerships," and they deny that such strategies constitute marketing, even when the money to fund them comes from marketing budgets.⁷¹

A 2003 *Washington Post* article explored the common-sense logic of corporate partnerships and philanthropy when the National PTA both embraced Coca-Cola as a sponsor and archived its mass media resolution asserting that "marketing to children has no place in the classroom." Then-PTA President Shirley Igo said about corporate sponsors, "We really need them. Our budget is very thin and if we didn't have them, we wouldn't be able to develop new programs." She justified a PTA "partnership" with Coca-Cola to critics by claiming that it was adult- rather than child-focused and that the organization was "just partnering with Coca-Cola to encourage parent and community involvement."⁷²

In 2016, Igo's logic is entrenched. Carol Hazen, former Director of Advocacy Resources at the University of Connecticut's Rudd Center for Food Policy and Obesity, recounts being told by a National PTA leader that "marketing is not on its radar, and will not be until state PTAs start asking for it." She adds, "Which they won't—because they see it as a revenue stream."⁷³ When Frank Holmes objected to his state PTA posting a McDonald's flyer advertising its school programs on the organization's website, he was told that "all they [the state PTA] did

For a corporation, a continuing "relationship" or "partnership" with a school, its stakeholders, and its students is more important—and over time, more lucrative—than any one school marketing program.

was send it out for parents to peruse," and "Whether they WANT to implement those McD programs or not is entirely up to the parents."⁷⁴ What this means is that with its "contribution," McDonald's buys the organizational leaders' willingness to trade the attention of its member parents, who then may offer up the attention and participation of their children in exchange for money or a free program. As a result, everyone involved becomes accustomed to and comfortable with McDonald's presence and influence in school—and even advocates for such relationships, seeing them as normal, natural, and beneficial.

In October 2015, the National Education Association, the Campaign for Commercial-Free Childhood, Corporate Accountability International, and others demanded that McDonald's stop holding McTeacher Nights. Their effort, covered widely in the media, pointed out the potential health consequences of having teachers promote fast food to their captive audience of students.⁷⁵ To the extent that parents, teachers, and administrators become more aware of the potential negative effects on children of allowing branded programs into schools and of their ability to challenge what has become custom, they and their organizations can further promote change.

As McDonald's, the NFL, and Boosterthon all know, however, "in marketing, it's all about building relationships."⁷⁶ For a corporation, a continuing "relationship" or "partnership" with a school, its stakeholders, and its students is more important—and over time, more lucrative—than any one school marketing program. In marketing terms, relationships "foster customer loyalty, interaction and long-term engagement."⁷⁷ In schools especially, they create an environment that welcomes corporations as contributing stakeholders in children's education. This provides openings for ever more marketing, and it whittles away the conception of schools as a public space outside the corporate sphere where children may develop values or visions for themselves, uninfluenced by consumer culture or corporate goals.

More than this, marketing programs that include a digital component hold children in a marketing environment, sometimes in a “program-length commercial” for the length of their school-initiated activity.⁷⁸ When we wrote about advergames in 2009 and 2010, we expressed concern about marketing techniques, such as awarding children branded wallpapers and downloads, that keep them interacting with the brand both online and offline.⁷⁹ The recent evolution of digital marketing technology adds to those concerns: children’s school-initiated online activity can enable behavioral tracking, data mining, and targeted marketing.

Surveillance Culture at School

As digital data-gathering capabilities have expanded, so too have commercializing activities in school, to push products and worldviews on children and increasingly to gather data about them. Any corporation that produces a branded app or website can incorporate technology to collect IP addresses and other information such as the pages, content or ads children see or click on, what they download, what games they play, information about a child’s device, operating system, and settings, and so on. The privacy policy for Scholastic products, for instance, describe such data collection.⁸⁰

This type of data-gathering is mirrored and magnified by instructional and assessment practices in classrooms that, in addition to whatever educational purpose they may serve, by their nature function as mechanisms of surveillance. In the context of an educational technology sector valued at over \$8 billion, the U.S. Department of Education encourages the use of massive data sets (known as “big data”⁸¹) collected from students to facilitate technological innovation that promises to improve “deeper learning,” assessment, and support systems.⁸² Schools and districts collect, store, and report data on such things as attendance, tardiness, test scores and grades for state longitudinal data systems. Teachers record student behavior in classroom management applications, and use “adaptive learning” technologies, such as those marketed by Knewton and Pearson, that record student keystrokes, answers, and response times.⁸³ Jose Ferreira, the CEO of Knewton, said in a 2012 talk that, “Education happens to be, today, the world’s most data-mineable industry, by far.”⁸⁴ He claimed that his own product (which the company says is used for over 10 million students worldwide) collects five to ten million actionable data points per student per day: “We literally have more data about our students than any company has about anybody else about anything. And it’s not even close.”⁸⁵

While such massive amounts of specific and personal data are being collected about children at school, there is little understanding of how that information may be used in the future, or how it may be used to manipulate children and cultivate them as current and future consumers.⁸⁶ Moreover, although a number of bills bearing on education privacy have been introduced in Congress and state legislatures, protection of student privacy to date is extremely limited.⁸⁷

The Real Issues Regarding Privacy of Student Data

Most of the laws protecting student data apply to the disclosure of personally identifiable information (PII). The voluntary Student Privacy Pledge, a self-regulatory project of the Future of Privacy Forum and the Software and Information Industry Association, also focuses on PII.⁸⁸ This focus does not, however, ensure that digital data will not be sold to advertisers,

nor does it prevent students' online behavior from being tracked.

Before we consider some ways that student data might end up in the hands of advertisers, it is useful to review three key federal laws related to the collection and use of student data in the United States.

Federal and State Student Privacy Legislation

Federal law addresses student privacy by means of the Family Educational Rights and Privacy Act ("FERPA"; 20 U.S. Code § 1232g), the Children's Online Privacy Protection Act (COPPA; 15 U.S. Code Chapter 91), and the Protection of Pupil Rights Act (20 U.S. Code § 1232h).⁸⁹ Although each of these laws provides protections to students, each also has distinct weaknesses.

FERPA, which applies to almost all public and private schools, provides the primary set of regulations governing student privacy in the U.S.. Any agency or institution that violates FERPA regulations loses eligibility for federal funds. However, FERPA's scope is limited to "educational records"; the legislation does not protect such items as data collected by education websites or digital "pupil-generated content" (such as essays), unless PII is included in that information.⁹⁰

Moreover, several FERPA exceptions allow student records to be disclosed to certain parties or under certain conditions without parental consent. The most significant exception is that without consent, *school officials* may release student records for any educational purpose they deem legitimate, as when an organization is conducting studies for or on behalf of a school; records are also available to *authorized representatives* of the U.S. Comptroller General, U.S. Education Secretary, or state educational authorities.⁹¹

Changes to FERPA in 2008 and 2011 expanded the definitions of both school officials and authorized representatives. In one of the most important changes, the U.S. Department of Education now considers "school officials" to include "contractors, consultants, volunteers, and other parties to whom an educational agency or institution has outsourced institutional services or functions it would otherwise use employees to perform."⁹² This change has far-reaching implications for student privacy. For example, when school leaders sign a contract to use Google Apps for Education (GAFE), they assign Google the authority of "school official."⁹³ The Department also considers "authorized representatives" to be any individuals or entities that local or state educational authorities, U.S. Secretary of Education, or U.S. Comptroller General select as an authorized representative.⁹⁴ As a result of these changes, schools may now provide data to private companies without parental consent.⁹⁵ Significantly, these private companies are not named "partners," but rather "school officials" or "authorized representatives."

The Children's Online Privacy Protection Act (COPPA), which applies to children under the age of 13, requires companies to obtain parental consent before they can collect personal information from children for commercial purposes.⁹⁶ In December 2012, the Federal Trade Commission (FTC) expanded several definitions under COPPA, increasing protection of children by accounting for new tracking technology.⁹⁷ While these changes are significant, the law does not apply to teens. Teens are especially at risk because they are online more than young children both in and out of school, and also because developmentally they are particularly susceptible to targeted marketing.⁹⁸ Although it may be impractical or impos-

sible to impose a parental approval requirement for teens' online activity, teens' personal information needs to be safeguarded as carefully as younger children's. Jennifer Harris and her colleagues at the University of Connecticut's Rudd Center for Food Policy and Obesity have argued, for example, that children need policy protections from unhealthy food marketing at least until the age of 14.⁹⁹

When a school is using an educational application that involves collection of student data, an important question for districts is whether school personnel can provide consent to a company on behalf of parents, or whether parents themselves must provide consent. If a vendor intends to use or share student information for commercial purposes unrelated to the school or district's educational purposes, then COPPA requires direct parental consent.¹⁰⁰

Finally, the Protection of Pupil Rights Act addresses consent in relation to the collection, disclosure, or use of personal student information for marketing purposes or as a product (a data set) for sale to others.¹⁰¹ It allows schools and districts to participate in gathering student information for marketing purposes, but it requires them to tell parents they are doing so and to allow parents to view the data collection instruments and/or opt their children out.

Proposed Federal Legislation, 114th Congress (2015-2016)

In the 2015-2016 legislative session, Congress introduced eight bills or amendments to bills related to student data (see Appendix A).¹⁰² These included two amendments to the 2015 Elementary and Secondary Education Act (ESEA) reauthorization. The first, House Amendment 54, affirms the "sense of Congress" that Personally Identifying Information (PII) should be protected and shared outside of schools only with clear notice to parents; it also calls for the Secretary of Education to review student privacy regulations to ensure that PII is protected.¹⁰³ Senate Amendment 2080 proposes establishing a Student Privacy Policy Committee to study the regulatory framework and make recommendations.¹⁰⁴ While House Amendment 54 has become part of enacted legislation, Senate Amendment 2080 has not left committee.

Other legislation introduced attempts to: increase transparency regarding what type of data companies collect or generate, how data is used, and whether it is shared; increase parental rights with respect to their children's data; and, implement privacy and security protection requirements for third-party companies with access to student data. Importantly, the bills prohibit the commercial use of student data—but they also contain significant loopholes. For example, language that specifies that a bill does not "limit the ability of an operator to use information, including covered information, for adaptive or personalized student learning purposes" allows providers to track students, since tracking can be considered an aspect of personalizing student learning. However, with that educational purpose met, data can likely also inform further software development and possibly other commercial uses.¹⁰⁵ These bills remain in committee and are unlikely to be enacted, despite pressure from educators and children's advocates for the federal government to take the lead on effective regulation of student data and protection of student privacy.¹⁰⁶

State Legislation

In our 2014 report on schoolhouse commercializing trends, we reviewed state laws passed between 2011-2014 and noted that the overwhelming majority of them applied only to educational record data, and within those records, to personally identifiable information (PII).

Many state laws simply require schools and districts to make parents aware of their rights under FERPA without offering additional protections. Few states offer parents the right to correct their children's data, require specification of how data will be used,¹⁰⁷ require destruction of the data collected,¹⁰⁸ or explicitly prohibit the use of data for commercial purposes.¹⁰⁹ In 2015 and 2016, state legislatures introduced numerous bills addressing student privacy (182 in 2015 and 94 in 2016), but enacted few of them (16 in 2015 and 6 in 2016).¹¹⁰

California laws currently provide the strongest student privacy protections, particularly in California Business and Professions Code §§22584-22585, the Student Online Personal Information Protection Act (SOPIPA). This act regulates Internet sites, online services, online applications, and mobile applications designed and marketed for K-12 school purposes.¹¹¹ It prohibits operators of such services from engaging in targeted advertising, from collecting information to create profiles of K-12 students (except as needed to meet the education purposes for which it was contracted), and from selling or disclosing students' information.

SOPIPA, the strongest privacy legislation in the United States, does not apply to "general audience Internet Web sites, general audience online services, general audience online applications, or general audience mobile applications."¹¹² This means that, as described below, it does not apply to Google applications that are not explicitly part of the Google Apps for Education (GAPE) suite. SOPIPA may also allow Google to collect students' browsing data from their school-assigned Chromebooks.¹¹³

Self-Regulation by Industry: Guidelines, Hazy Promises and Dodgy Behavior

Industry and education professionals emphasize limiting data collection and sharing, and anonymizing students' data whenever possible.¹¹⁴ The Consortium for School Networking (CoSN), a professional association for district technology leaders, calls for students' personal information to be shared under terms or agreements only "with service providers for legitimate educational purposes," and for schools and their contracted service providers to have "clear, publicly available rules and guidelines for how they collect, use, safeguard, and destroy those data."¹¹⁵ These are important guidelines, but vague in how they may be implemented, especially when product development is considered a "legitimate educational purpose."¹¹⁶

In 2014, shortly after California passed its student privacy legislation, the Future of Privacy Forum (FPF) and the Software & Information Industry Association (SIIA) spearheaded the Student Privacy Pledge, stating similar goals.¹¹⁷ As of May 9, 2016, 268 companies have signed onto the pledge.¹¹⁸ Although it contains significant protections, the pledge is far from airtight.

Pledge signatories promise to refrain from: collecting, maintaining, using or sharing student personal information beyond that immediately needed for the contracted educational purposes; selling student information; using or disclosing student information for the purpose of developing behavioral targeting for advertisements to students; knowingly retaining student personal information beyond the time necessary to complete contracts; and changing without notice their privacy policies or other policies regarding the use of student personal information.¹¹⁹ Signatories also promise to: limit data collection to that needed for contracted purpose; disclose clearly in an easy-to-understand manner the nature of data collected about students and why it may be shared with third parties; support parent access to and correction of student personally identifiable information; protect the security of the data

collected; and make sure, in the event of an acquisition of the company, that its successor commits to the same safeguards.¹²⁰

Loopholes are, however, numerous. The pledge: allows companies to use student data for their own purposes in product development; does not require companies to inform or obtain consent from parents before they collect sensitive data from their children's use of the educational software; does not specify where parents can learn about company data policies and if or how they can opt their children out; and does not contain enforcement mechanisms.¹²¹

A 2014 *Politico* article cited legal scholar Joel Reidenberg as noting that “the strength of the commitment [of pledge signatories] will be subject to how certain key terms are understood and interpreted by the companies.”¹²² Since 2014, several examples have clarified differences between companies, on one hand, and parents and privacy advocates, on the other, in their understanding of those terms.

Tony Porterfield, a California software engineer, found potential security flaws in several popular apps his children use in school.¹²³ In February and again in March, 2015, he found holes in the security of the Raz-Kids/LearningA-Z online reading instruction application.¹²⁴ Raz-Kids's parent company, Cambium Learning Group, had previously signed onto the Student Privacy Pledge, and its CEO told the *New York Times* in February 2015, “We are confident that we have taken the necessary steps to protect all student and teacher data at all times and comply with all federal and state laws.”¹²⁵

There is no accountability structure associated with the Student Privacy Pledge. Individuals can file a complaint with the Federal Trade Commission (FTC) that a signatory to the pledge has violated it, and has thereby engaged in “deceptive practice.” An individual could file the same kind of complaint if a company—signatory or not—violates its stated privacy policy.

It seems unlikely that parents would file a complaint with the FTC about a company's non-compliance, and unlikely that the FTC would have the capacity or interest to consider a complaint about a voluntary industry-led pledge.¹²⁶ Khaliah Barnes, Director of the Electronic Privacy Information Center's (EPIC) Student Privacy Project, notes that although the FTC has enforcement powers, it “has been reluctant to bring enforcement actions with respect to student privacy.” The Commission has not yet responded to education privacy-related complaints, for example, that EPIC filed as long ago as 2013.¹²⁷ For this reason EPIC, as well as the Parent Coalition for Student Privacy and other privacy advocates, are calling for enforceable legislation providing parents with private right of action.¹²⁸ Meanwhile, school district lawyers can provide a back-stop by carefully evaluating contracts with education technology providers and demanding terms that exceed current legally required minimum protections. Fordham University's Center on Law and Information Policy has recommended that districts establish data governance advisory councils and that larger districts designate a Chief Privacy Officer to oversee data governance.¹²⁹

Google and Facebook Track Students

In addition to promoting self-regulation, companies that supply “big data” spend millions of dollars to influence lawmaking and keep regulation at bay. In 2013, *Advertising Age* noted that Google and Facebook, “two of the most pervasive digital-data collectors,” significantly increased their lobbying expenditures between 2011 and 2012—to \$19.6 million for Google and \$4.6 million for Facebook in 2012.¹³⁰ Google and Facebook are both widely used by

schools.

According to one Google blog post, it reaches “more than 30 million students, teachers and administrators globally” via its Google Apps for Education (GAFE).¹³¹ In December 2015, the Electronic Frontier Foundation submitted a complaint to the Federal Trade Commission (FTC) accusing Google of tracking students signed into their GAFE accounts when those students navigate to Google-owned general use sites not specifically included in the GAFE suite of services (such as Google Search, Books, News, Maps, and YouTube), and tying those tracking data to the students’ GAFE accounts.¹³²

This complaint highlights the problems with the Student Privacy Pledge that Google signed in January 2015. According to lawyers for EFF, Google argues that the pledge does not apply to general audience websites, so if a student is logged into his GAFE account and travels outside the specific educational sites included in that package to general audience websites (including those owned by Google) the pledge does not apply. Google believes it is following the pledge. If the FTC decides that it is, say the lawyers, the pledge has no teeth.¹³³ They argue that Google gets students’ PII through GAFE, and therefore should not connect it to tracking data obtained from non-GAFE sites.

Facebook, which officially creates accounts only for users over the age of 12, does not distinguish between students and non-students in its tracking activity. Unbeknownst to most users, since 2011 Facebook has tracked whenever its users browse to any page housing a “like” button.¹³⁴ Beginning in 2015, it not only records this browsing data, but also uses it in its ad targeting systems. In other words, when people who have Facebook accounts browse to a page that has a like button (regardless of whether they happen to be logged into their accounts), their visit to that page could be used to determine the ads fed to them in Facebook proper, in other apps that Facebook owns (such as Instagram), and in other mobile applications that use Facebook’s ad network.¹³⁵ Even if users take up Facebook’s offer to opt out of receiving interest-based ads, Facebook continues to track their browsing behavior. EFF’s Nate Cardozo interprets this as meaning that, “Facebook doesn’t allow us to opt out of being tracked all over the Internet; it merely allows us to hide that fact from ourselves.”¹³⁶

Google and Facebook may be the largest companies to collect and use data in legal but questionable ways, but they are likely not the only ones.¹³⁷

The Myth of Anonymous Data

Data anonymization (or “de-identification”) is promoted by the industry as the solution to concerns about tracking.¹³⁸ Even if companies anonymize student data for security or marketing purposes, however, students’ personally identifiable information (PII) may not be fully or permanently protected. From only a few data points, de-identified data can be easily re-identified.¹³⁹ In 2008, Narayanan and Shmatikov demonstrated the re-identification of anonymous Netflix movie raters with a model that revealed those raters’ apparent political preferences and other potentially sensitive information.¹⁴⁰ They pointed out that their model could be applied to any dataset containing “anonymous multi-dimensional records, such as individual transactions, preferences”—or student information.

Moreover, even with only anonymized behavioral tracking data, marketers can target a given computer’s user with advertisements and other communications geared specifically to appeal to and influence that user. EFF’s complaint about Google’s tracking of students centers

on the company tying the behavioral data it tracks to the identified GAFE accounts; but when the child is the primary or only user of the device (as is certainly the case when that device is a school-assigned Chromebook, for instance),¹⁴¹ targeted advertising does not require identification at all.

This being the case, the editor of the trade publication *Advertising Age*, Ken Wheaton, bluntly called data anonymization “a load of horseshit . . . a clever bit of technical and verbal misdirection used by marketers and tech people to keep regulators at bay.”¹⁴² In no way, he claims, does data anonymization actually make people or their data anonymous. This is because, armed with a rich set of anonymized data, “You might not know my name (but you probably do), but that hardly matters if you know every move I make, every breath I take.”¹⁴³

Wheaton also notes marketers’ interest in federal law to address data security, and sees in that a cynical attempt to: (1) distract lawmakers from addressing the issue of data brokering (2) limit marketers’ liability “when their supposedly secure servers get hacked”; and (3) negate laws such as SOPIPA that try to hold them accountable.¹⁴⁴

Understanding How Tracking May Influence Children

In prior annual reports on schoolhouse commercialism, we pointed out that although much online advertising to children takes place outside the school, schools serve as a portal to and reinforcer of digital marketing media and messages.¹⁴⁵ Let’s follow a student to see how this might happen.

Maddie, a high school student, spends a lot of time on the computer both recreationally and for school.¹⁴⁶ With respect to her schoolwork, she says, “Some days it can be hours. I feel like a lot of the stuff is through online documents and things. If I’m not reading a book, for example, I’m working on a presentation for it.” She says that classes that require projects and essays, rather than her math and science classes, are the ones that put her online most.

When she works online, she also spends time on sites other than those she happens to be using for her schoolwork: “I’ll surf . . . open a new tab and go to Twitter, or Facebook, or BuzzFeed. Also Yahoo and Netflix. It’s all so accessible. I’m watching *30 Rock*. Each episode is 20 minutes, which is a good break. I get my texts on my computer, so I see them.”

Of the various applications she uses for school, Maddie is most excited about GAFE (“You don’t have to worry about uploading, downloading, saving. You can use it from anywhere—home, wherever—and it’s great for group projects.”). She uses it mostly to turn in assignments and to work on group projects and create presentations.

She uses other applications as well. She complains that different teachers require the students to use different applications for submitting homework: sometimes turnitin.com, sometimes Edmodo. Her psychology and science classes use domain-specific education technology applications (Psych Sim 5 and Gizmos, respectively) for activities and online experiments. Her teachers rarely take her classes to the school’s outdated computer lab (“Maybe 10-15 times the whole year, but it was so annoying that I remember it.”); instead, they often ask the students to log in using their personal cell phones.

For school-related but non-class activities, Maddie uses Sparknotes to help with reading and Facebook to participate in student groups with which she is associated: the International Baccalaureate program, a volunteer group, the senior class, the school “pep” group, and the

National Honor Society. She must also use a variety of sites tied to the college admissions process: Naviance for college planning, the Common App for applications, Parchment to send transcripts, and the College Board for SATs and AP tests. When she created a profile with the College Board, Maddie probably checked the box that said she wanted to receive information from colleges or scholarship organizations (65–85 percent of students do), thereby providing her consent to the College Board to market her profile.¹⁴⁷

In a typical day, then, Maddie is on her phone and computer on and off throughout the day and into the evening, switching between school and personal use. She has noticed that her computer “knows” what she wants to buy, and feeds her ads accordingly. Once when she had been looking at shoes, she mentioned, an ad for shoes appeared in the middle of a Sparknotes chapter summary.

Maddie is neither unusual nor extreme in her use of technology. Her school does not engage in cutting-edge data collection, nor does it have a “1-to-1” program that would put her online during many more of her classes.¹⁴⁸ Even without those, her schoolwork puts her online for much of her day, where she seamlessly transitions between school-assigned and commercial websites.

How might this affect her? It starts with Maddie preparing an assignment for a class, let’s say a presentation on *Night*, which she read for her ninth-grade English class. As she moves

As she moves in and out of the protected applications that are part of the GAFE suite, marketing companies quietly but persistently track her activity.

in and out of the protected applications that are part of the GAFE suite, marketing companies quietly but persistently track her activity. Accompanied by an application that identifies tracking, we surfed through a couple of sites that Maddie might visit while working on her presentation; we found 16 companies tracking us from dictionary.com and over 35 from Sparknotes.¹⁴⁹ With the information they collect about her, these companies—or other companies to whom they

sell her data—determine what kinds of ads Maddie might respond to, and serve them to her on those sites and on others she visits.

We have all had the experience like the one that Maddie remembers of looking up shoes online and then seeing many shoe advertisements and eerily relevant Facebook “sponsored content” pop up in the following days and weeks. And if we succumb to the temptation and click on one, it prolongs and increases the effect. Shoes, clothes, make-up, more clothes The ads may sprout from Maddie’s initial interest, but from there they proliferate, repeatedly and gently nudging her to think, like, buy, and talk about the products they promote, and to adopt the underlying perspective of consumer culture, that products can make her happy.

The problem is not that ads do this once, twice, or even twenty times. It is that they do it repeatedly from the time Maddie first starts using the Internet, that the potential effects build on themselves, and that Maddie’s schoolwork introduces her to and holds her in this environment that consistently presents her with marketing directed specifically to appeal to her. A developing adolescent, her interests, attitudes, and anxieties are shaped carefully over time by repeated exposure in this commercial womb that surrounds her with products and ideas designed to lead not to her healthy development, but rather to purchase.¹⁵⁰

At a panel discussion at February 2016’s Mobile World Congress, Roi Carthy, the Chief Marketing Officer of ad-blocking company Shine, graphically emphasized the reach and power of Internet marketing: “Every individual using a mobile handset, smartphone or desktop

is being abused by ad-tech—that’s not selective, that is 100 percent.” He continued, “We’re talking about military-grade tracking, targeting and profiling.”¹⁵¹ “Big data,” which is invisibly collected on children via what is essentially constant surveillance of their digital behavior, provides much greater depth of information about them than “old-fashioned,” low-tech profiling and targeting. In other words, data gathering and surveillance are now merged. Metadata can now be analyzed using computational techniques that allow marketers to model specific individuals rather than aggregated groups, to test the accuracy of those models in real time with the individuals in question, and to adapt them accordingly for more effective use.¹⁵²

Although companies that collect, sell, analyze, and buy data may not know children’s names (though they probably do), that hardly matters if they have the information and tools necessary to model everything about those children—including their interests, social networks, personalities, vulnerabilities, desires, and aspirations—and if they have personalized access to children, via their electronic devices, to shape them.¹⁵³ By feeding children ads and other content personalized to appeal specifically to them, and also by choosing what *not* to show them, marketers influence children’s thoughts, feelings and behaviors.¹⁵⁴ As they do, they also test, adjust, and perfect their models of influence—and then track and target some more.¹⁵⁵

How Big Data Practices Amplify Threats to Children’s Physical and Psychological Well-Being

Food products are not only the most marketed products to children in school, but they are also highly marketed products to children online.¹⁵⁶ The food industry leads the way in developing techniques to market its products to children, particularly foods high in fat and sugar and low in nutrition, which lead to obesity, metabolic syndrome, and other illnesses. The threats that over-consumption of such foods pose to children’s health also include higher cholesterol levels and blood pressure, greater incidence of type 2 diabetes, coronary plaque formation, several types of cancer, bone and joint problems, sleep apnea, gout, gallstones, and a shorter life expectancy.¹⁵⁷ Additional medical implications continue to be revealed; for example, type 2 diabetes progresses more rapidly in obese children than it does in adults, and typical treatment fails to slow it.¹⁵⁸ Consequently, obese children are at risk for such complications as heart disease, eye problems, nerve damage, amputations, and kidney failure much earlier in life than people who become diabetic as adults.¹⁵⁹

In addition to threatening their physical well-being, marketing disposes children to a variety of psychological ills: heightened insecurity about themselves and their place in the social world, displacement of values and activities other than those consistent with materialism, and distorted gender socialization.¹⁶⁰ Especially for adolescents, who are even more likely than younger children to be online as part of their schoolwork, marketing exploits psychological vulnerabilities—in particular, their reduced ability to control impulsive behaviors and to resist immediate gratification—and capitalizes on their susceptibility to peer influence and image advertising. Because of its specificity and omnipresence, targeted digital marketing to children, like “consumer culture on steroids,” amplifies these threats.

Heightened insecurity

Through their immersion in consumer culture, children internalize the ideals of that culture: the “good life” and the “body perfect.”¹⁶¹ Psychologist Helga Dittmar points out that consumer culture creates vulnerability in children by causing them to feel far away from the ideals they adopt from consumer culture, and to feel bad about this gap. It then exploits the vulnerability it created by presenting solutions (products) that purportedly can repair children’s identity deficits and negative emotions—which, of course, they cannot. Dittmar’s research supports her contention that when their lives do not match up to the ideals fed to them by toys, television shows, music videos, and advertisements, children become insecure about their bodies and their very selves.¹⁶² Girls as young as five years old, for example, report wanting a thinner body.¹⁶³ Other effects are dissatisfaction, low self-esteem, eating disorders, and compulsive shopping.¹⁶⁴

Displacement of values and activities

Consumer culture pre-empts development of other interests that may be more functional. Psychologist Allen Kanner notes that the more that people believe they need material goods to be happy, the more time, effort, and thought they put into finding and acquiring those goods—and the less time they have for other activities such as spending time with family and friends, engaging in spiritual practices, playing, or creating.¹⁶⁵

This displacement may be especially serious for children, for whom the development of relationship-building skills and creative thinking may be sacrificed when consumer-oriented activity pushes out the time for unstructured, child-directed creative play.¹⁶⁶ Consumer culture packs a “double whammy” for children: not only may it make them unhappy by highlighting their distance from an idealized life and body as noted above, but it may also prevent them from cultivating interests and practices that would distract from, or counteract, their unhappiness. This possibility is consistent with correlations found between higher materialistic values and higher rates of anxiety, depression, psychological distress, chronic physical symptoms, and lower self-esteem.¹⁶⁷ In teenagers, higher materialistic values also correlate with increased smoking, drinking, drug use, weapon carrying, vandalism, and truancy.¹⁶⁸

Distorted gender socialization

Consumer culture in general, and marketing and advertising specifically, present children with highly gendered images that tell them, implicitly, what they are and should be like. Advertising sells children a hypersexualized norm at a time when they are negotiating their own identities.¹⁶⁹ From advertising, children learn that women are dependent, passive, sexual objects.¹⁷⁰ They learn that men pursue excitement and sensation, show little emotion or empathy, especially with regard to sex, and are physically violent.¹⁷¹ Unconsciously, children absorb these messages, which influence their self-concepts. Videogames such as *Grand Theft Auto*, *Halo*, and *Call of Duty*, particularly popular with boys, are hypersexualized and violent—as are advertisements for these games.¹⁷²

Although most of the ads that children see present hypersexualized characters as the norm, the problem is magnified with targeted marketing, because with targeted marketing the ads presented to boys and girls are different. Whereas girls like Maddie are repeatedly reminded of the importance of clothing and their appearance, boys are pushed in other directions—for

instance, toward sports and videogames, where violence, excitement, and emotional aloofness are the norm. Over time, these differences lead girls and boys to see a different set of stimuli.

Although it is not new that girls' and boys' play, conversation, and activities differ, targeted marketing discreetly amplifies and exploits those differences.¹⁷³ If Maddie and her friend Sean get together to collaborate on a presentation for their English class, for example, they may work side by side on their individual computers, each flipping to Facebook and YouTube when they need a break. Even in the same room, they would view different advertisements and not realize that the other is being served a different set of implicit messages about sex and gender roles. Both Maddie and Sean would deny that they are influenced by the ads they see, but research finds that they are, in fact, affected.¹⁷⁴

An important part of the problem of policymaking related to advertising and marketing is that people routinely deny its impact on them. Although it is hard for people to recognize marketing's influence on their behavior, research suggests both that marketing influences people and that people are not reliable judges of that influence.¹⁷⁵ When students and the stakeholders who care about them discount marketing's effects, it becomes logical for all involved to accept advertising and marketing in schools as a reasonable trade-off for the "help" offered by corporations.

Socializing Children to Accept Digital Surveillance as Normal

Advances in digital technology have provided marketers the opportunity to build relationships with consumers as never before. Marketers collect, analyze, and use data to target consumers with increasingly precise messages to promote their brands. The trick, however, is getting the data—and therein lies the genius of Internet business models. The Internet provides seemingly endless free content and services to entice consumers, including children, to eagerly interact with the technology and leave their trail of information behind. But marketers have faced, and have worked steadily and successfully to overcome, some limits: their problem has been that children spend many of their days in school, and at home parents have hesitated to allow them to spend large portions of their free time online. Marketers' goal has been to increase children's interaction with technology, to make it a valid part of their lives all the time—to create a situation that compels them to interact with it for their schoolwork and homework even as more and more games and other services entice them to spend recreational time online. The proliferation of education technology software and general applications that can be used in education settings is, no doubt, at least in part fueled by the need to push boundaries.

Schools have proven to be a soft target for data gathering and marketing. Not only are they eager to adopt technology that promises better learning, but their lack of resources makes them susceptible to offers of free technology, free programs and activities, free educational materials, and help with fundraising. Schools are under relentless pressure to make ever greater use of technology. Our techno-friendly *zeitgeist* embraces and celebrates the rapid proliferation of education technology in every corner of our lives. In school, teachers are encouraged to integrate technology into their lessons and homework, and to rely on computerized student performance data as a diagnostic tool. State and federal laws now require that schools do extensive data reporting; in addition, the Common Core testing regime requires students to take computerized tests—and therefore to be computer-competent before they approach the tests.¹⁷⁶

Although some parents continue to resist the collection and use of their children's data,¹⁷⁷ other factors smooth the way for data gatherers: Many parents' qualms are softened by the apparent safeguards protecting personally identifiable information (PII) that legislation and industry self-regulation provide. Stakeholders, including children, are learning to accept the idea that constant data gathering and attendant surveillance of children is necessary to provide them with desirable educational and financial benefits. Most of us are thrilled by the convenience of computers that seem to know exactly what we want and offer it to us. When a website helps us with a search or offers us the best deal on a product we want to buy, we usually don't stop to consider what information is being collected to enable that help, who is collecting the information, or how else it is being used. Long paragraphs of legalese deter us from exploring the privacy disclosures we must agree to in order to access the service. We are, thus, to some extent being socialized to ignore and tacitly accept the collection, organization, and sale of information about us.¹⁷⁸

All children, including teens, are more susceptible than adults to having their affinities shaped by marketers exploiting their vulnerabilities. Because they believe that what their schools do and parents allow is in their best interest, children are growing up experiencing constant surveillance as a norm to be accepted and even welcomed into their academic and social lives, as it brings them both what they need and what they want from the Internet.

Conclusion

In 2014-2015, digital marketing continued expanding—especially through schools. Corporations use the medium to nurture relationships that entrench their influence, with repeat exposures cultivating more favorable dispositions toward commercial brands, products and worldviews. Tracked on their devices, children are plied with marketing that stems from their school-assigned activity and from where they wander on their breaks from studying. It is not in children's interest, but it is in the interest of everyone who has something to sell, for students to spend as much time online as possible.

The overt commercialization of schools as described in the first section of this report, and the surveillance practices described in the second, both exploit the now chronic underfunding of American public schools—especially in a policy context that requires districts to invest more in testing and accountability and less in teacher salaries, instructional materials, and other educational resources.¹⁷⁹ Chronic underfunding: creates openings for free sponsored educational materials to take the place of books and libraries; helps parents be comfortable with such things as Nike-sponsored running clubs and NFL-sponsored sports days; and helps all stakeholders welcome and expect parent groups to work with corporate “partners” to bring needed funds to their schools.

While education technologies show great promise, they also hold the potential to harm students profoundly if they are not properly managed to ensure that they serve students' best interests.¹⁸⁰ Although it is unrealistic to expect schools to reverse the trend toward the use of educational software, Internet websites, and mobile applications, it is not unrealistic to protect children from the potential dangers of digital marketing. Ideally, children will be protected at all levels: by the parents, teachers, and administrators who serve as the most proximal gatekeepers of commercial activity and protectors of their privacy at their schools, and by the state and federal legislators responsible for enacting relevant policy.

Recommendations

It is recommended that:

1. Parents, teachers, and administrators—as individuals and through their organizations—work to make public the threats that branded programs and materials, as well as unregulated digital technologies, pose to children when they are allowed into schools and classrooms.
2. The Federal Trade Commission extend the Children’s Online Privacy Protection Act (COPPA) protections to age 14 and strengthen the protections offered to adolescents ages 15-18.¹⁸¹
3. Industry self-regulation not be relied upon to protect the interests of students. Instead, policymakers should adopt enforceable legislation that holds schools, districts, and companies with access to student data accountable for violations of student privacy.
4. Legislators carefully review proposed legislative language to insure that it does not contain loopholes that provide companies with opportunities to collect and exploit children’s data while also “following the letter of the law.”
5. Those designing and reviewing relevant policies ensure that policies protect the privacy not only of student educational records but also of the wide variety of student data (including anonymized data) now being collected and shared. Such policies should explicitly address the potential commercial use of any data collected.
6. School district and privacy specialists review contracts with educational technology and other providers to check specifically for provisions or omissions that enable third parties to monitor and/or exploit students for commercial gain.
7. Policymakers at every level seek to eliminate perverse incentives that encourage parents, teachers, and administrators to sacrifice student privacy in an effort to financially support educationally necessary school activities.

Appendix A

Comparison of 2015 Federal Education Data Privacy Bills

The National Association of State Boards of Education's (NASBE's) analysis of proposed federal education data privacy bills.¹



Comparison of 2015 Federal Education Data Privacy Bills

Updated 7/22/2015

| KEY INFORMATION | BILLS THAT PRIMARILY REGULATE SCHOOLS & LOCAL AND STATE EDUCATION AGENCIES | | | | | BILLS THAT PRIMARILY REGULATE THIRD PARTY COMPANIES | | | OTHER | |
|-----------------|---|---|--|---|--|---|---|--|---|---|
| | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | The Student Privacy Protection Act (FERPA Re-Write) (Representatives Rokita, Fudge, Kline, & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Safeguarding American Families from Exposure by Keeping Information and Data Secure) (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
| Status: | Passed in 1974, amended numerous times by legislative action and Department of Education regulations. | Bill introduced July 22, 2015. | Bill introduced May 13, 2015. | Bill introduced May 14, 2015. | Amendment passed July 10, 2015. | Bill introduced April 29, 2015. | Passed in 1988 and effective in 2000, with the FTC empowered to amend through rulemaking. | Bill introduced July 16, 2015. | Bill introduced June 11, 2015. | Amendment introduced July 7, 2015. |

www.nasbe.org

Source: National Association of State Boards of Education¹⁸²

- 1 This table primarily reports objective information about the 2015 federal student privacy bills. In two places, however, it evaluates the bills' provisions for consistency with NASBE's perspective on the proper balance between privacy and the use of technology in schools (i.e., the rows entitled "Strikes a good balance between protecting privacy and enabling valuable data and technology use" and "Acknowledges the importance of data for personalized learning"). We do not agree with NASBE's perspective. We recommend against legislative language that explicitly removes barriers to "the ability of an operator to use information, including covered information, for adaptive or personalized student learning purposes," as do The Student Digital Privacy and Parental Rights Act of 2015 and the SAFE KIDS Act. Such language substantially weakens the privacy protections the bills otherwise afford.

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|---------------------------|--|--|---|---|---|--|--|---|--|--|
| Bottom Line: | FERPA establishes parental rights to access, amendment, and control over the use and disclosure of student data. | Rewrites FERPA to be clearer, to codify some of its regulations, and introduces privacy provisions requiring greater transparency, clear restrictions on data collection and use, and clarifications to keep FERPA current with evolving technologies. | Proposes to amend FERPA by establishing new data security standards, restricting how companies can use student data, and granting greater access to and transparency of data. | Seeks to update FERPA by establishing new restrictions on the collection, use, and sharing of student records, focusing on parental notice and consent. | Incorporates Congressional findings that student PII: should be protected and should be shared outside of schools only with clear notice to parents. Additionally finds that the Secretary of Education has the responsibility to ensure compliance, and that Congress should review all student privacy laws to protect student PII. | Seeks to regulate online service providers to balance classroom innovation with need for improved data security. | COPPA regulates online service providers that direct their products to children from knowingly collecting personal information from children without satisfying certain notice requirements. | Regulates online service providers to implement privacy protections for student data privacy. | Amends the Children's Online Privacy Protection Act of 1998 (COPPA) to update privacy protections for children's use of online services. | Establishes the Student Privacy Policy Committee, which will consist of no more than 20 members appointed by the Secretary of Education, the Comptroller General, and the majority and minority leaders of both houses. The Committee will study and make recommendations. |
| This bill targets: | Primarily targets educational agencies and institutions but also impacts online service providers | Primarily targets educational agencies and institutions but also impacts online service providers. | Primarily targets educational agencies and institutions but also impacts online service providers | Primarily targets educational agencies and institutions but also impacts online service providers | Congress, the Secretary of Education, and schools. | Online service providers (primarily ed tech companies and non-profits) | Online service providers directing products at children | Online service providers (primarily ed tech companies and non-profits) | Any operator providing a service directed at children or that has knowledge that the service collects personal information from children | Reviews entire regulatory framework, including how to improve coordination between federal and state laws. |

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|---|---|---|---|--|--|--|--|--|---|--|
| Level of education targeted: | P-20 | P-20 | P-20 | K-12 | K-12 | K-12 | Children under the age of 13. | P-12 | Any child under age 17 (previously COPPA only covered up to age 13) | N/A |
| Enforcement Authority: | United States Department of Education | United States Department of Education | United States Department of Education | United States Department of Education and private right of action (parents/ students can sue) | United States Department of Education | Federal Trade Commission (with DoE consultation when enforcement involves education agencies or institutions). Enforced against non-profits as well as for-profit companies. | Federal Trade Commission enforces violations of COPPA as unfair or deceptive trade practices | Federal Trade Commission (with DoE consultation when enforcement involves education agencies or institutions). Enforced against non-profits as well as for-profit companies. | Federal Trade Commission as well as state Attorneys General and other agencies as authorized by statute | The Committee will consider and provide recommendations on the appropriate federal enforcement authorities for protecting student privacy. |
| STANDARDS AND GOALS | | | | | | | | | | |
| Strikes a good balance between protecting privacy and enabling valuable data and technology use | Enabled technological innovation over the last four decades, but the privacy protections have had to be extensively supplemented by | Provides key privacy protections, mostly without undermining positive data use practices. | Makes positive privacy updates to FERPA without impeding innovation | Introduces significant limits to data practices that pose clear challenges to the continued use of data for classroom innovation | N/A | Provides key privacy protections without undermining positive data use practices | Establishes critical privacy protections for children while not limiting innovation for web services generally | Establishes data privacy protections without imposing heavy burdens on service providers | Updates COPPA for new technologies in order to protect the privacy of children, but still enables industry innovation | N/A |

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|-----------------|--|--|--|---|--|---|---|--|---|---|
|-----------------|--|--|--|---|--|---|---|--|---|---|

| | | | | | | | | | | |
|---|--|--|---|--|-----|---|---|--|--|-----|
| | federal regulations and guidance in order to keep up with current technologies | | | | | | | | | |
| Remains relevant as technology evolves | <ul style="list-style-type: none"> Lack of forward-looking definitions limits the law's continued application | Provides room for agencies/institutions to continue to adapt to changing technology. | Provides room for agencies/institutions to continue to adapt to changing technology | Limitations imposed on data practices restrict the law's continued relevance | N/A | Provides room for agencies/institutions to continue to adapt to changing technology | Lack of forward-looking definitions limits the law's continued application | Provides room for agencies/institutions to continue to adapt to changing technology | Provides room for agencies/institutions to continue to adapt to changing technology | N/A |
| Is easy for educational agencies/institutions to implement | Established mostly straightforward framework for implementation, though many exceptions to its privacy rules create complexity in implementation | Although the bill includes many positive updates to FERPA that should not pose difficulties to implementation, there are significant burdens put on educational agencies and institutions (and state education agencies) in order for them to, for | Requires few changes from FERPA framework, but does add duty to monitor compliance of service providers | Contains serious challenges for implementation | N/A | Establishes straightforward framework for implementation | The FTC has interpreted COPPA as enabling schools to provide consent on behalf of students. | Establishes straightforward framework for implementation Authorizes schools to grant consent on behalf of students, handling consent similar to COPPA | As long as the FTC continues to interpret COPPA to allow schools to provide consent on behalf of students, this law should be simple to implement for educational agencies/institutions. However, since the law would significantly expand the legal | N/A |

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|-----------------|--|--|--|---|--|---|---|--|---|---|
|-----------------|--|--|--|---|--|---|---|--|---|---|

| | | | | | | | | | | |
|--|---|---|---|--|-----|--|---|--|---|--|
| | | example, have the resources to adequately verify that each third party they contract with has industry-standard security. | | | | | | | requirements for companies contracting with educational agencies/ institutions, that could make the law more difficult to implement for both educational agencies and service providers | |
| Provides clear, understandable definitions of key terms | Defines some key terms but leaves many ambiguous or subject to major exceptions | Definitions are mainly clear, but this bill substantially changes the definition of “educational agency or institution” by separating out “state education authorities” (commonly known as state education agencies). | Does little to build on FERPA definitions | Provides definitions for many key terms but leaves ambiguity in several others | N/A | Introduces clear definitions for key terms such as personally identifiable information and covered information | Provides some definitions but has failed to stay relevant | Mostly defers to FTC rulemaking to establish clear definitions for key terms | Offers clear definitions building on COPPA, such as updating “operator” and “geolocational data” | The Committee may provide or update definitions for terms such as “(i) education record; (ii) personally identifiable information; (iii) aggregated, de-identified, or anonymized data; (iv) third-party; and (v) educational purpose” |
| Bans the use of data for | Not explicitly, but provides some | No parties with access to an | No funds will be provided to institutions | Continues the current version of | N/A | Service providers are prohibited | Though applying only to websites | Service providers are prohibited | Prohibits online service providers | The Committee will ensure that |

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|---|--|---|--|--|--|---|--|---|--|---|
| commercial purposes, such as advertising | restrictive guidelines for use and disclosure of information without consent | educational record or the PII contained therein can use that information to market to students | releasing or providing access to service providers for advertising purposes | FERPA's ban on "the collection, disclosure, or use of personal information collected from students for the purpose of marketing or for selling that information" | | from selling covered information or using it for targeting advertising | providing commercial purposes, it does not prohibit the use of data for those purposes. | from selling covered information or using it for targeting advertising | from using data for "targeted marketing purposes" without consent. | identifiable data cannot be used for targeting advertising or marketing purposes |
| Includes provisions regulating third-party companies that have student data | Information transferred to third parties cannot be shared further without written parental consent, and violations by third parties can be enforced by prohibited access to data in the future | Requires a written agreement between third parties and education agencies or institutions that must include: how and what information will be transferred, and what PII will be created; a description of any subcontractors; not allowing the sharing of PII; an assurance of development of | Third parties must have security systems to protect students' personally identifiable information; Any education records held by third parties must be maintained in a manner that allows parents to access their students' data and a process for corrections; Third parties must | Third parties must de-identify student data; Third parties must destroy student data when a student is no longer serviced by the agency or institution; Third parties must accept liability for any violations as condition for receiving access | N/A | No profiles can be created for marketing or advertising; Sub-contractors are bound under the law; Reasonable security required; Aggregated student data can be used to improve products or for research | Third parties generally must obtain consent for collecting and using data if the service is directed at children | Both third parties and their subcontractors are bound to follow the privacy protections | Third parties generally must obtain consent for collecting and using data Minors or their parents have the right to inspect the data collected on them, challenge it's accuracy, and demand that the data be "erased, corrected...or otherwise amended" | The Committee can establish best practices for any entity that comes into contact with student education records, including best practices for data deletion and minimization |

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|---|--|---|---|---|--|---|---|--|---|---|
| | | policies and procedures that ensure data security using commonly accepted industry standards; penalties; and provisions specifying acceptable uses by the third party of the PII. | maintain a record of all individuals, agencies, or organizations which request or obtain student data; Must destroy all personally identifiable information of students when the information is no longer needed for its specified purpose | | | | | | | |
| Acknowledges the importance of data for personalized learning | N/A | Enables education service providers to provide personalized learning. | N/A | Limits use of personalized learning | N/A | Does not “limit the ability of an operator to use information...for personalized student learning” | N/A | Does not “limit the ability of an operator to use information...for personalized student learning” | N/A | N/A |

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|--|---|---|--|---|--|---|---|---|---|--|
| Includes robust transparency requirements | Robust notice requirements govern when educational agencies make public directory information or seek to disclose other student information | Educational agencies or institutions must requiring educational agencies and SEAs to provide parents with copies of written agreements with third parties; requiring third parties to spell out their use/storage/protection of data in their written agreements with EAls; and requiring EAls to notify parents about how that third party will protect the data | Third parties must maintain records of all individuals, agencies, or organizations that have requested or obtained access to student data. | Thirty days of notice must be provided to parents before third parties have access to student data. Public hearings must be held before classroom video monitoring can be put in place. | N/A | Companies must publicly list what type of data they collect or generate, how it is used, and whether it is shared. This information must be clear and easy to understand. | Contains notice provisions stating “what information is collected from children by the operator, how the operator uses such information, and the operator’s disclosure practices for such information.” | Companies must identify to schools what type of data they collect or generate, how it is used, and whether it is shared. Service providers must also have a publicly-posted privacy policy, even if the product interfaces directly with the school rather than individual students, but contracts are not required to be posted publicly. | Operators of online services and applications must “provide clear and conspicuous notice in clear and plain language of the types of personal information” collected and how it is used | The Committee can provide recommendations regarding transparency, such as providing parental notice of data collection and access rights |
| Creates new parental rights (in addition to the parental rights in FERPA) | N/A | State Education Agencies shall set the procedures by which parents can access their child’s record | Clarifies that parents shall have the right to access personally identifiable information held | No third party may access student data without parental consent. | N/A | Parents may grant or withhold consent for the use or disclosure of protected student | Parents have the right to grant/withhold consent for the collection, use, and disclosure of | Schools rather than parents consent to third party data practices, and parental access to | Requires operators “to obtain verifiable consent” from parents for the collection, use, or | The Committee will consider establishing best practices for ensuring that parents have notice |

www.nasbe.org - Page 8

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|---|--|---|--|---|--|---|---|--|---|---|
| already) | | Parents can access their child's data that is held by third parties through their school or local education agency Specifically does <i>not</i> preempt state law, allowing states to provide parents with additional rights | about their students by an outside party and have a process to challenge, correct, or delete any inaccurate data within those records. | Parents can access student data held by institutions or third parties. Classroom video monitoring requires public hearing and written consent from all parents of all the students in the classroom. | | information and have the right to access their student's personally Identifiable information (PII) held by an outside party. They can challenge, correct, or delete inaccurate data. Parents may request third parties to delete their student's data (except for data required to be maintained by federal or state law). | their children's data as well as to access information collected. | data is provided through the schools | disclosure of information about their children, but FTC has allowed schools to give consent for students using educational services Also grants parents the right to access collected data | of when data is collected and what rights they have to seek the amendment, deletion, or modification of that data |
| Provides for training and capacity-building | No provisions | No provisions | No provisions | No provisions | No provisions | No provisions | No provisions | No provisions | No provisions | The Committee can recommend best practices for local entities handling student data to include professional development for |

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|-----------------|--|--|--|---|--|---|---|--|---|---|
|-----------------|--|--|--|---|--|---|---|--|---|---|

| | | | | | | | | | | employees |
|--|--|---|---|--|-----|--|---|--|---|---|
| Sets penalties for noncompliance and violations (in addition to the existing FERPA penalty of withdrawal of all federal funds or remediation) | Department of Education has authority to withhold funds and/or bring schools into compliance No private right of action | The Secretary of Education can fine educational agencies or institutions if they do not come into voluntary compliance, up to either \$1.5 million or 10% of their annual budget. The Secretary of Education can refer third party violations to the Federal Trade Commission and/or the Attorney General. | No penalties beyond FERPA enforcement mechanisms (no private right of action, but Department of Education has authority to withhold funds and/or bring schools into compliance) | Private right of action; graduated levels of mandatory fines per individual data violation per individual student. | N/A | Federal Trade Commission can fine, bring court cases, and has other enforcement abilities. | Federal Trade Commission can issue civil penalties and bring actions for unfair or deceptive trade practices against operators that violate data collection, use, and disclosure rules. Also empowers state Attorneys General to bring actions for violations. | Federal Trade Commission can fine, bring court cases, and has other enforcement abilities. | Federal Trade Commission can bring actions for unfair or deceptive trade practices against operators that violate data collection, use, and disclosure rules. Also empowers state Attorneys General to bring actions for violations. | N/A |
| Addresses education research (that can be used to help SBE members make educated decisions) | Generally limits research uses without consent. | Researchers conducting studies for or on behalf of an educational agency or institution do not need parental consent for access to student data, | No provisions. | Only aggregated, anonymized, and de-identified data may be used for the development or improvement of products and services. | N/A | Not relevant to researchers unless they work for a company – if a company is funding or doing educational research using the student data it | No provisions. | No provisions. | No provisions. | The Committee will address data sharing to include considering how student data can be protected when used for research |

www.nasbe.org - Page 10

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as it exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|--|--|--|--|--|--|---|---|--|--|---|
| | | but they must destroy that data after use, employ data security safeguards, and ensure that students cannot be reidentified Researchers cannot conduct studies for SEAs, or when the purpose of the study is not regarding “improving the instruction or testing of students attending that” educational agency or institution. | | Any release of student data to third parties must be approved by parents. No funds may be used to support federally-sponsored research on social-emotional data in education. | | holds, that data must be aggregated before research is conducted. | | | | |
| Addresses data security (through training, data breach procedures, or data | No provisions. | Requires general security provisions for both education agencies and third parties. | No funds shall be made available to any educational agency or institution that has not implemented information | No provisions. | N/A | Operators and subcontractors must establish, implement, and maintain reasonable security | Contains only general provisions requiring online services to protect the security of PII and of its website. | Operators and subcontractors must establish, implement, and maintain reasonable security | Provides guideline that “the personal information of a minor should be protected by reasonable and appropriate | No provisions. |

www.nasbe.org - Page 11

| KEY INFORMATION | The Family Educational Rights and Privacy Act of 1974 (FERPA) (as it exists today) | FERPA Discussion Draft (Representatives Kline & Scott) | Protecting Student Privacy Act (Senators Markey & Hatch) S.1322.IS | Student Privacy Protection Act (Senator Vitter) S.1341.IS | Elementary and Secondary Education Act (ESEA) of 1965 – Amendment (Representative Hurd) H.R. 5 | The Student Digital Privacy and Parental Rights Act of 2015 (Representatives Polis & Messer) H.R. 2092.IH | The Children's Online Privacy Protection Act of 1998 (COPPA) (as is exists today) | The SAFE KIDS Act (Senators Blumenthal & Daines) | Do Not Track Kids Act of 2015 (COPPA Amendment Act) (Senator Markey; Representative Barton) H.R. 2734 | ESEA Amendment (Senators Markey & Hatch) S.1177 |
|-----------------|--|--|--|---|--|---|---|--|---|---|
|-----------------|--|--|--|---|--|---|---|--|---|---|

| | | | | | | | | | | |
|----------------------|--|--|---|--|--|---|--|---|--|--|
| governance measures) | | | security policies and procedures that protect student PII maintained by the educational agency or institution. Each third party possessing PII must have information security policies and procedures, including a comprehensive security program designed to protect PII. | | | procedures to protect covered information. Operators must have data breach procedures and policies, must notify the Federal Trade Commission and other appropriate parties of each instance of unauthorized access to personally identifiable information (PII). | | procedures to protect covered information. Does not impose breach notification requirements on service providers | safeguards against risks such as loss or unauthorized access, destruction, use, modification, or disclosure” | |
|----------------------|--|--|---|--|--|---|--|---|--|--|

Notes and References

- 1 See,
Harris, J.L., Heard, A., & Schwartz, M. (2014, January). *Older but still vulnerable: All children need protection from unhealthy food marketing*. UConn Rudd Center for Food Policy and Obesity. Retrieved March 9, 2016, from http://www.uconnruddcenter.org/files/Pdfs/Protecting_Older_Children_3_14.pdf
- 2 While this is a real letter sent home by “Ethan’s” third-grade teacher, the names of the school, teacher, and student have been changed to protect their anonymity.
- 3 “Ethan” is a real student. Ethan is not, however, his real name. We have changed any information about him that would make him identifiable. Nothing substantive, such as the commercial programs offered by his school, has been changed.
- 4 Moynihan, T. (2015, March 25). Apps snoop on your location way more than you think. *Wired*. Retrieved December 17, 2015, from <http://www.wired.com/2015/03/apps-snoop-location-way-think/>
CMU CHIMPS Lab (2014). *PrivacyGrade: Grading the privacy of smartphone apps* (website) Carnegie-Mellon University. Retrieved December 18, 2015, from www.privacygrade.org
- 5 Molnar, Alex (2003, March 9). *The commercial assault on children and the school environment*. Presented at the annual meeting of the Association for Supervision and Curriculum Development, San Francisco, CA.
- 6 Although now we use the sanitized term “sponsored educational materials,” in the past the materials offered by schools were more accurately referred to as “propaganda.”
National Education Association (1929, July). *Report of the Committee on Propaganda in the Schools*. Presented at the meeting of the National Education Association, Atlanta, GA. Retrieved October 21, 2015, from <http://catalog.hathitrust.org/Record/006581884>
- 7 Brown, Lesley, ed. (1993). *The new shorter Oxford English dictionary*. Oxford: Clarendon press, p. 451.
Twitchell, James B. (1999). *Lead us into temptation*. New York: Columbia University Press, p. 30.
Jacobson, Michael F. & Mazur, Laurie A. (1995). *Marketing madness*, Boulder, CO: Westview Press, p. 12.
- 8 Dictionary.com (n.d.). *Marketing*. Author. Retrieved February 25, 2014, from <http://dictionary.reference.com/browse/Marketing>
Dictionary.com (n.d.). *Advertising*. Author. Retrieved February 25, 2014, from <http://dictionary.reference.com/browse/advertising?s=t>
The word “advertising” derives from the Latin, “advertere,” which means “to turn toward.”
Online Etymology Dictionary (n.d.). *Advertise*. Author. Retrieved October 28, 2015, from <http://www.etymonline.com/index.php?term=advertise>
- 9 Jhally, S. (2005). *Advertising as social communication* (online course; part one: Why study advertising?). Retrieved July 22, 2009, from <https://vimeo.com/32949613>
Kanner, A.D. (2008, November). Now, class, a word from our sponsors. . . Boston, MA: Campaign for Commercial Free Childhood. Retrieved January 29, 2013, from http://www.commercialfreechildhood.org/sites/default/files/kanner_nowclassaword.pdf
- 10 Jhally, S. (1997). *Advertising and the end of the world*. Media Education Foundation. Retrieved April 21, 2016, from http://www.mediaed.org/assets/products/101/transcript_101.pdf
Jhally, S. (2005). *Advertising as social communication* (online course; part one: Why study advertising?). Retrieved April 25, 2016, from <https://vimeo.com/32949613>
Kanner, A.D. (2008, November). Now, class, a word from our sponsors. . . Boston, MA: Campaign for Commercial Free Childhood. Retrieved January 29, 2013, from

http://commercialfreechildhood.org/sites/default/files/kanner_nowclassaword.pdf

- 11 Jhally, S. (2005). *Advertising as social communication* (online course; part one: Why study advertising?). Retrieved April 25, 2016, from <https://vimeo.com/32949613>

Jhally, S. (1997). *Advertising and the end of the world*. Media Education Foundation. Retrieved April 21, 2016, from http://www.mediaed.org/assets/products/101/transcript_101.pdf

Kanner, A.D. (2006, January/February). The corporatized child. *The California Psychologist*, 39(1). Retrieved April 25, 2016, from <http://commercialfreechildhood.org/resource/corporatized-child>
- 12 Cultural observers long have noted that propaganda is most effective when it goes unnoticed:

“This is the secret of propaganda: those who are to be persuaded by it should be completely immersed in the ideas of the propaganda, without ever noticing that they are being immersed in it.” Attributed to Nazi propagandist Joseph Goebbels, cited in, among many other places,

Pratkanis, Anthony and Elliot Aronson (2001). *Age of propaganda: The everyday use and abuse of persuasion*. New York: Holt Paperbacks (87).

“Individuals are controlled through the power of the norm and this power is effective because it is relatively invisible. In modern society, the behaviour of individuals is regulated not through overt repression, but through a set of standards and values associated with normality which are set into play by a network of ostensibly beneficent and scientific forms of knowledge.”

McNay, L. (1994). *Foucault: A critical introduction*. Cambridge: Polity (94-95).

“So the images, the values, the ideas of advertising are lodged inside us because that’s the way all culture works. To not be influenced by advertising would be to live outside of culture. No human being lives outside of culture.”

Jhally, S. (1997). *Advertising and the end of the world*. Media Education Foundation. Retrieved April 21, 2016, from http://www.mediaed.org/assets/products/101/transcript_101.pdf
- 13 The “third person effect” refers to the phenomenon that people tend to think that advertising and other such communications influence others more than themselves. See,

Shavitt, S., Lowrey, P., & Haefner, J. (1998, July 1). Public attitudes toward advertising: More favorable than you might think. *Journal of Advertising Research*, 38, 7-22.

Wilson, T.D., & Bar-Anan, Y. (2008). The unseen mind. *Science*, 321, 1046–1047. Retrieved April 25, 2016, from <http://www.cs.cornell.edu/courses/cs5846/2008fa/sciencemagarticle.pdf>
- 14 Molnar, A., and Boninger, F. (2015). *Sold Out: How marketing in school threatens children’s well-being and undermines their education*. Lanham, MD: Rowman and Littlefield.
- 15 Healthy Weight Commitment Foundation (2015). School Toolkit. *Together Counts*. Retrieved December 22, 2015, from <http://www.togethercounts.com/school-toolkit>
- 16 Apex Fun Run (n.d.). How to get a pledge [vimeo video]. Retrieved March 8, 2016, from <https://vimeo.com/133144303>

Grinberg, E. (2015, August 27). PTA fundraiser lets parents donate cash instead of cupcakes. *CNN.com*. Retrieved March 7, 2016, from <http://www.cnn.com/2015/08/27/living/pta-fundraiser-bake-sale-alternative-feat/>
- 17 Strout, A. (2013, April 4). The death of the QR code. *Marketing Land*. Retrieved December 22, 2015, from <http://marketingland.com/the-death-of-the-qr-code-37902>

Consistent with Strout’s conclusions, even teenagers we informally surveyed disdain QR readers.
- 18 Jhally, S. (1997). *Advertising and the end of the world*. Media Education Foundation. Retrieved April 21, 2016, from http://www.mediaed.org/assets/products/101/transcript_101.pdf

Jhally, S. (2005). *Advertising as social communication* (online course; part one: Why study advertising?). Retrieved July 22, 2009, from <http://www.comm287.com/partone/>

McLaren, C. & Torchinsky, J. (2009). *Ad nauseum*. New York: Faber and Faber, Inc.

- 19 Carr, D. (2013, September 15). Storytelling ads may be journalism's new peril. *New York Times*. Retrieved April 25, 2016, from <http://www.nytimes.com/2013/09/16/business/media/storytelling-ads-may-be-journalisms-new-peril.html>
- Molnar, A., Boninger, F., Wilkinson, G., Fogarty, J., & Geary, S. (2010). *Effectively embedded: Schools and the machinery of modern marketing – The thirteenth annual report on schoolhouse commercializing trends: 2009-2010*. Boulder, CO: National Education Policy Center. Retrieved December 5, 2012 from <http://nepc.colorado.edu/publication/Schoolhouse-commercialism-2010>
- Native advertising is similar to “program length advertising” that is disallowed in the United States for children under 12 by the Children’s Advertising Review Unit. See,
Children’s Advertising Review Unit (2009). Self-regulatory program for children’s advertising (Ninth Edition). Better Business Bureaus, Inc. Retrieved April 25, 2016, from <http://www.caru.org/guidelines/guidelines.pdf> (p.9).
- 20 Kantrowitz, A. (2013, December 4). Arguments fly during FTC workshop on native advertising. *Advertising Age*. Retrieved November 11, 2015, from <http://adage.com/article/media/arguments-fly-ftc-workshop-native-advertising/245536/>
- 21 Rys, R. (n.d.). What are those square barcodes in print? *Hidefcolor.com*. Retrieved December 22, 2015, from <http://hidefcolor.com/blog/qr-code/square-barcodes-print-qr/>
- 22 Duggan, E. (2015, May 13). Personal communication (telephone) with Faith Boninger.
- 23 Arizona Super Bowl Host Committee (2015, January 22). Super kids-super sharing. Author. Retrieved March 1, 2016, from <https://azsuperbowl.com/community-event/super-kids-super-sharing/>
- 24 Molnar, A. (1998). *Sponsored schools and commercialized classrooms: Schoolhouse commercializing trends in the 1990s*. Tempe and Milwaukee: Commercialism in Education Research Unit and the Center for the Analysis of Commercialism in Education. Retrieved January 29, 2014, from <http://nepc.colorado.edu/publication/sponsored-schools-and-commercialized-classrooms>
- 25 Delo, C. (2012, April 23). You are Big Brother (but that isn’t so bad). *Advertising Age*. Retrieved March 4, 2016, from <http://adage.com/article/news/marketers-big-brother-bad/234290/>
- 26 United States Federal Trade Commission (2014, May). *Data brokers: A call for transparency and accountability*. Washington, DC: Author. Retrieved December 21, 2015, from <https://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf>
- 27 United States Federal Trade Commission (2014, May). *Data brokers: A call for transparency and accountability*. Washington, DC: Author. Retrieved December 21, 2015, from <https://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf>
- 28 Molnar, A. & Boninger, F. (2014, March 11). *Schoolhouse commercialism leaves policymakers behind—The Sixteenth annual report on schoolhouse commercializing trends, 2012-2013*. Boulder, CO: National Education Policy Center. Retrieved March 27, 2016, from <http://nepc.colorado.edu/publication/schoolhouse-commercialism-2013>
- Molnar, A. & Boninger, F. (2015, April 9). *On the block: Student data and privacy in the digital age—The seventeenth annual report on schoolhouse commercializing trends, 2013-2014*. Boulder, CO: National Education Policy Center. Retrieved December 22, 2015, from <http://nepc.colorado.edu/publication/schoolhouse-commercialism-2014>
- 29 J. (2012, April 19). Of Mazdas and Loraxes [blog post]. Retrieved February 3, 2016, from <http://parenttechorg.blogspot.com/2012/04/of-mazdas-and-loraxes.html>
- 30 Molnar, A., and Boninger, F. (2015). *Sold out: How marketing in school threatens children’s well-being and undermines their education*. Lanham, MD: Rowman and Littlefield.
- 31 For example, in the newest incarnation of “brand ambassadors” at school, high schooler Max Baron runs a

company, PrepReps, whose “social influencers” have a combined social media following of just under 1 million students. These influencers represent brands both in person and via social media to foster brand loyalty among their peers in school.

Bruell, A. (2015, December 21). Meet the 17-year-old running a profitable agency out of his prep-school dorm room. *Advertising Age*. Retrieved December 29, 2015, from <http://adage.com/article/print-edition/meet-17-year-running-a-profitable-dorm-room-agency/301876/>

- 32 Chester, Jeff & Montgomery, Kathryn (2007, May). *Interactive food and beverage marketing: Targeting children and youth in the digital age*. Berkeley, CA: Public Health Institute. Retrieved March 23, 2016, from <http://digitalads.org/documents/digiMarketingFull.pdf>
- Molnar, A., Boninger, F., Wilkinson, G. & Fogarty, J. (2009). *Click: The twelfth annual report on schoolhouse commercialism trends: 2008-2009*. Tempe, AZ: Commercialism in Education Research Unit, Education Policy Studies Laboratory, Arizona State University. Retrieved February 2, 2016, from <http://nepc.colorado.edu/publication/schoolhouse-commercialism-2009>
- 33 Campaign for Commercial-Free Childhood (n.d.). Stop McTeacher Nights. Author. Retrieved March 26, 2016, from <http://www.commercialfreechildhood.org/action/stop-mteachers-nights>
- Hinds, C. (2015, January 21). Flat-out unethical food marketing to kids. *U.S. Healthy Kids*. Retrieved February 2, 2016, from <https://ushealthykids.org/2015/01/21/flat-out-unethical-food-marketing-to-kids/>
- Wilking, C., Golin, J., & Feick, C. (2015, January). Out of bounds: The NFL’s intensive campaign to target children. *Center for Commercial-Free Childhood*. Retrieved February 2, 2016, from <http://commercialfreechildhood.org/sites/default/files/outofbounds.pdf>
- 34 Strauss, V. (October 15, 2015). Why educators are asking McDonald’s to stop holding McTeacher’s Nights. *Washington Post*. Retrieved March 23, 2016, from <https://www.washingtonpost.com/news/answer-sheet/wp/2015/10/15/why-educators-are-asking-mcdonalds-to-stop-holding-mteachers-nights/>
- Wilking, C., Golin, J., & Feick, C. (2015, January). Out of bounds: The NFL’s intensive campaign to target children. *Center for Commercial-Free Childhood*. Retrieved February 2, 2016, from <http://commercialfreechildhood.org/sites/default/files/outofbounds.pdf>
- 35 National Football League (2014, August 11). A letter from the Commissioner. Author. Retrieved February 19, 2016, from <http://www.nfl.com/news/story/09000d5d82054f96/article/a-letter-from-the-commissioner>
- Strauss, V. (October 15, 2015). Why educators are asking McDonald’s to stop holding McTeacher’s Nights. *Washington Post*. Retrieved March 23, 2016, from <https://www.washingtonpost.com/news/answer-sheet/wp/2015/10/15/why-educators-are-asking-mcdonalds-to-stop-holding-mteachers-nights/>
- Wilking, C., Golin, J., & Feick, C. (2015, January). Out of bounds: The NFL’s intensive campaign to target children. *Center for Commercial-Free Childhood*. Retrieved February 2, 2016, from <http://commercialfreechildhood.org/sites/default/files/outofbounds.pdf>
- 36 Young Minds Inspired (YMI) creates sponsored educational materials for many clients, including Disney, the Academy of Motion Picture Arts and Sciences, and Paramount Pictures.
- Hill, A. (2015, March 5). Entertaining with class: Marketing entertainment properties in school. *MediaPost*. Retrieved April 25, 2016, from <http://www.mediapost.com/publications/article/244627/entertaining-with-class-marketing-entertainment-p.html>
- Young Minds Inspired (n.d.). Lesson plans. Retrieved February 2, 2016, from Young Minds Inspired (n.d.). Retrieved April 29, 2016, from <http://ymiclassroom.com/categories/language-arts/>
- Find NFL Rush materials at,
- Young Minds Inspired (n.d.). NFL RUSH FANTASY — Learn, Play, Score! Lesson plans. Retrieved February 2, 2016, from <http://ymiclassroom.com/lesson-plans/nflrushfantasy/>

- 37 As of April 28, 2016, neither the National Football League or Young Minds Inspired is listed as a signatory to the Student Privacy Pledge.
Future of Privacy Forum and The Software & Information Industry Association (2016). *Student Privacy Pledge: Signatories*. Retrieved May 9, 2016, from <https://studentprivacypledge.org/signatories/>
- 38 Young Minds Inspired (n.d.). Learn, Play, Score! (teacher's guide). Author. Retrieved February 2, 2016, from http://ymiclassroom.com/wp-content/uploads/2014/08/nflrf_teacherguide.pdf
- 39 Young Minds Inspired (n.d.). The Playoffs (worksheet). Author. Retrieved February 2, 2016, from http://ymiclassroom.com/wp-content/uploads/2014/12/nflrf_dec-act.pdf
- 40 Wilking, C., Golin, J., & Feick, C. (2015, January). Out of bounds: The NFL's intensive campaign to target children. *Center for Commercial-Free Childhood*. Retrieved February 2, 2016, from <http://commercialfreechildhood.org/sites/default/files/outofbounds.pdf>
- 41 Thompson, J.F. (2012, September 5). NFL targeting kids via cartoons. *AdWeek*. Retrieved February 2, 2016, from <http://www.adweek.com/prnewser/nfl-cartoon-pr-campaig/45439?red=as>
- 42 American Heart Association (2013). Play 60 Challenge [Press Release].
Retrieved February 2, 2016, from <http://education.state.nj.us/broadcasts/2013/OCT/15/10387/NFL%20Play%2060%20Challenge.pdf>
- 43 American Heart Association (2013). Play 60 Challenge [Press Release].
Retrieved February 2, 2016, from <http://education.state.nj.us/broadcasts/2013/OCT/15/10387/NFL%20Play%2060%20Challenge.pdf>
- 44 GENYOUth Foundation (2014, August 11). GENYOUth's 2014 progress report. Author. Retrieved February 2, 2016, from <http://www.genyouthfoundation.org/genyouths-2014-progress-report/>
Wilking, C., Golin, J., & Feick, C. (2015, January). Out of bounds: The NFL's intensive campaign to target children. *Center for Commercial-Free Childhood*. Retrieved February 2, 2016, from <http://commercialfreechildhood.org/sites/default/files/outofbounds.pdf>
- 45 Wilking, C., Golin, J., & Feick, C. (2015, January). Out of bounds: The NFL's intensive campaign to target children. *Center for Commercial-Free Childhood*. Retrieved February 2, 2016, from <http://commercialfreechildhood.org/sites/default/files/outofbounds.pdf>
- 46 Perez, M. (2015, January 23). Super Kids-Super Sharing project exceeds goal and helps local students in need. *Cronkite News*. Retrieved February 2, 2016, from <http://cronkitenewsonline.com/2015/01/super-kids-super-sharing-project-exceeds-goal-and-helps-local-students-in-need/>
- 47 Perez, M. (2015, January 23). Super Kids-Super Sharing project exceeds goal and helps local students in need. *Cronkite News*. Retrieved February 2, 2016, from <http://cronkitenewsonline.com/2015/01/super-kids-super-sharing-project-exceeds-goal-and-helps-local-students-in-need/>
- 48 Picchi, A. (2014, December 11). Why McDonald's says it wants "to be in the schools." *CBS Interactive, Inc.*. Retrieved February 15, 2016, from <http://www.cbsnews.com/news/why-mcdonalds-says-it-wants-to-be-in-the-schools/>
- 49 Healthy School Food Maryland (2015, November 3). McDonald's nutrition education curriculum endorsed by Maryland PTA? No thanks! Retrieved February 3, 2016, from <http://www.gopetition.com/petitions/maryland-pta-end-your-partnership-with-mcdonalds.html>
Spitzer, G. (2012, December 5). Should the Washington PTA be partnering with McDonald's? *KPLU88.5*. Retrieved February 3, 2016, from <http://www.kplu.org/post/should-washington-pta-be-partnering-mcdonalds>
- 50 Campaign for Commercial-Free Childhood (n.d.). This clown doesn't belong in schools. Author. Retrieved February 3, 2016, from http://org.salsalabs.com/o/621/p/dia/action3/common/public/?action_KEY=16325

McDonald's Operators' Association of Southern California (n.d.). Ronald McDonald school show request. Author. Retrieved February 3, 2016, from https://www.mcdonaldssocal.com/pdf/School_Show_Request_Form.pdf

- 51 Alexandrianews.org (2015, March 4). McDonald's® announces the 12th Annual McDonald's Educates Scholarship Program for greater Washington D.C. area students. Author. Retrieved February 3, 2016, from <http://www.alexandrianews.org/mcdonalds-announces-the-12th-annual-mcdonalds-educates-scholarship-program-for-greater-washington-d-c-area-students/>

Colorado PTA (2015, August 25). McDonald's kicking off school year by providing FREE BREAKFAST to all Colorado kindergarten – 8th graders Wed., Sept 9, 6:00 – 9:00 AM [press release]. Retrieved February 3, 2016, from <http://copta.org/mcdonalds-kicking-off-school-year-by-providing-free-breakfast-to-all-colorado-kindergarten-8th-graders-wed-sept-9-600-900-am/>

McDonald's (n.d.). In your community: McDonald's educational resources materials. Retrieved May 22, 2015, from <http://www.mcdonaldseducates.com/edumaterials.html>

McDonald's (n.d.). In your community: Passport to play. Retrieved May 22, 2015, from <http://www.mcdonaldseducates.com/passport.html>

McDonald's (2016). Inspiration. Retrieved February 3, 2016, from http://www.mcdonalds.com/us/en/our_story/our_communities/inspiration.html

Segedie, L. (2015, May 21). McDonald's 2015 shareholders meeting statement from Leah Segedie. Corporate Accountability International. Retrieved May 22, 2015, from <https://www.stopcorporateabuse.org/press-statement/mcdonalds-2015-shareholders-meeting-statement-leah-segedie>

- 52 McDonald's of the Ozarks (n.d.). McDonald's of the Ozarks Balanced, Active Lifestyle Grant application. Retrieved February 3, 2016, from <https://www.surveymonkey.com/r/?sm=nZCN8JJ4OeGRoiIpnI1SBOWWgUSgziOnRs%2BoTLZ%2BzaM%3D>

- 53 Campaign for Commercial-Free Childhood and Corporate Accountability International (2015, October). Open letter from educators. Author. Retrieved February 3, 2016, from <http://commercialfreechildhood.org/sites/default/files/openlettertomcdonalds.pdf>

Healthy School Food Maryland (2015, November 3). McDonald's nutrition education curriculum endorsed by Maryland PTA? No thanks! [petition]. Retrieved February 3, 2016, from <http://www.gopetition.com/petitions/maryland-pta-end-your-partnership-with-mcdonalds.html>

McDonald's New York Tri-State Area (2015, August 18). Iowa teacher who lost 60 lbs. eating McDonald's documents his experiment in new documentary "540 Meals: Choices Make the Difference [press release]. Retrieved February 3, 2016, from <http://www.prnewswire.com/news-releases/iowa-teacher-who-lost-60-lbs-eating-mcdonalds-documents-his-experiment-in-new-documentary-540-meals-choices-make-the-difference-300130322.html>

Siegel, B.E. (2015, October 12). "540 Meals:" A McDonald's infomercial coming to a school near you. Retrieved February 3, 2016, from <http://www.thelunchtray.com/cisna-540-meals-a-mcdonalds-infomercial-coming-to-a-school-near-you/>

- 54 Ferdman, R.O. (2016, May 13). McDonald's quietly ended controversial program that was making parents and teachers uncomfortable. *Washington Post*. Retrieved May 13, 2016, from <https://www.washingtonpost.com/news/wonk/wp/2016/05/13/mcdonalds-is-no-longer-telling-kids-in-schools-that-eating-french-fries-most-days-is-fine/>

- 55 Healthy School Food Maryland (2015, November 3). McDonald's nutrition education curriculum endorsed by Maryland PTA? No thanks! [petition]. Retrieved February 3, 2016, from <http://www.gopetition.com/petitions/maryland-pta-end-your-partnership-with-mcdonalds.html>

- 56 Virginia PTA (2014). 2014 Virginia PTA annual conference workshop descriptions. Retrieved February 4, 2016, from http://www.vapta.org/component/docman/doc_view/3719-2014-workshop-descriptions-final.html?Itemid=77

On its website, the Virginia PTA posts a flyer advertising programs offered by McDonald's of Hampton Roads

and Northeast North Carolina. Flyer retrieved December 7, 2016, from http://www.vapta.org/new-unit-document-package/doc_download/5174-mcdonald-s-hamptonrd-teachapp-aug-2015.html

- 57 Colorado PTA (2015, August 25). McDonald's kicking off school year by providing FREE BREAKFAST to all Colorado kindergarten – 8th graders Wed., Sept 9, 6:00 – 9:00 AM [press release]. Retrieved February 4, 2016, from <http://copta.org/mcdonalds-kicking-off-school-year-by-providing-free-breakfast-to-all-colorado-kindergarten-8th-graders-wed-sept-9-600-900-am/>
- 58 For a review of laws enacted 2011-2014, see,
Molnar, A. & Boninger, F. (2015). *On the block: Student data and privacy in the digital age—The seventeenth annual report on schoolhouse commercializing trends, 2013-2014*. Boulder, CO: National Education Policy Center. Retrieved February 4, 2016, from <http://nepc.colorado.edu/publication/schoolhouse-commercialism-2014>
- 59 Frank Holmes is a real parent; however, this is not his real name. For purposes of this report, we have changed any information about him that would make him identifiable. The substance of his experience is unchanged.
- 60 Apex and the recently bankrupt Fund Runners are other similar companies.
Purcell, D. (2015, April 23). Smells like school spirit. Bloomberg Business. Retrieved April 25, 2016, from <http://www.bloomberg.com/news/articles/2015-04-23/public-schools-turn-to-professional-fundraisers>
- 61 Use of school time for fundraising, which is inconsistent with its policies, led the Los Angeles Unified School District (LAUSD) to cancel a planned fun run organized by Apex, whose business model is similar to that of Boosterthon.
Castelo, J. (2016, February 10). Personal communication (email) with S.R. Ballas [provided via Public Records Act Request by the Los Angeles Unified School District].
- 62 Booster Enterprises, Inc. (2010-2016). Pledge secrets [website]. Retrieved March 9, 2016, from <https://www.boosterthon.com/pledgesecrets/>
Patrick (2014, February 6). Boosterthon pledge-o-meter. *Ms. Patrick's Classroom Website*. Retrieved February 4, 2016, from <http://sites.jackson.k12.ga.us/tpatrick/2014/02/06/boosterthon-pledge-o-meter/>
- 63 As part of the Boosterthon process, each class chooses a set of prizes to be awarded as they reach pledge solicitation milestones. Several teachers posted their class's "pledge-o-meters," indicating the prizes to be won, in their class blogs. For examples, see,
Denten, D. (2013, November). November! [blog post]. Retrieved February 4, 2016, from <http://mrsdenten.cmswiki.wikispaces.net/Archives>
Rhyne, L. (2013, April 25). Mrs. Rhyne's Fourth Grade: April 25th, 2013 [blog post]. Retrieved February 4, 2016, from <http://mrsrhyne.weebly.com/math-and-science-news/april-25th-2013>
- 64 Helena City News (2014, October 1). Boosterthon Fun Run raised \$53K. Author. Retrieved April 25, 2016, from <http://helenacitynews.blogspot.com/2014/10/boosterthon-fun-run-raised-53k.html>
- 65 Israel, J. (2015, April 3). These corporations that raise money for schools keep 48 percent for themselves. *Think Progress*. Retrieved April 25, 2016, from <http://thinkprogress.org/education/2015/04/03/3640081/boosterthon-apex-fundrunners-keep-half/>
- 66 Holmes, F. (2016, February 1). Personal communication (e-mail) with Faith Boninger.
- 67 O'Reilly, L. & Lutz, A. (2015, February 1). Watch all the 2015 Super Bowl ads here. *Business Insider*. Retrieved February 4, 2016, from <http://www.businessinsider.com/the-2015-super-bowl-ads-2015-1>
Crupi, A. (2016, January 20). Oscars boycott not likely to shake up ABC's bottom line. *Advertising Age*. Retrieved February 4, 2016, from <http://adage.com/article/media/oscars-boycott/302240/>
- 68 Associated Press (2015, December 3). Eugene school board approves Nike apparel agreement. *Washington Times*. Retrieved March 8, 2016, from <http://www.washingtontimes.com/news/2015/dec/3/eugene-school-board-approves-nike-apparel-agreemen/>

Famolari, D. (2014, December 13). With a clear gender gap in the science, technology, engineering, and math (STEM) fields, Verizon seeks to support technology education. *Verizon Ventures*. Retrieved March 8, 2016, from [http://www.verizonventures.com/blog/2014/12/with-a-clear-gender-gap-in-the-science,-technology,-engineering,-and-math-\(stem\)-fields-verizon-seeks-to-support-technology-education/](http://www.verizonventures.com/blog/2014/12/with-a-clear-gender-gap-in-the-science,-technology,-engineering,-and-math-(stem)-fields-verizon-seeks-to-support-technology-education/)

Schwan's Cares (2014, November 18). 9 tips to better fundraising. *One Voice*. Retrieved April 25, 2016, from <http://onevoice.pta.org/?p=5025>

Solve for Tomorrow 2015 (2015). Samsung Solve for Tomorrow [website]. Retrieved March 8, 2016, from <http://www.samsung.com/us/solvefortomorrow/home.html>

Israel, J. (2015, April 3). These corporations that raise money for schools keep 48 percent for themselves. *Think Progress*. Retrieved April 25, 2016, from <http://thinkprogress.org/education/2015/04/03/3640081/boosterthon-apex-fundrunners-keep-half/>

Schwan's Cares. (2014, November 18). 9 tips to better fundraising. *One Voice*. Retrieved April 25, 2016, from <http://onevoice.pta.org/?p=5025>

- 69 Garfinkle, H. (1964, Winter). Studies of the routine grounds of everyday activities. *Social Problems*, 11(3), 225-250. Retrieved February 15, 2016, from <http://www.jstor.org.ezproxy1.lib.asu.edu/stable/pdf/798722.pdf?acceptTC=true>

Helena City News (2014, October 1). Boosterthon Fun Run raised \$53K. Author. Retrieved April 25, 2016, from <http://helenacitynews.blogspot.com/2014/10/boosterthon-fun-run-raised-53k.html>

- 70 Brent, B.O. & Lunden, S. (2009). Much ado about very little: The benefits and costs of school-based commercial activities. *Leadership and Policy in Schools*, 8, 307-336.
- 71 Picchi, A. (2014, December 11). Why McDonald's says it wants "to be in the schools." *CBS Interactive, Inc.* Retrieved February 15, 2016, from <http://www.cbsnews.com/news/why-mcdonalds-says-it-wants-to-be-in-the-schools/>

Miller, C.C. (2011, April 4). Promoting science, and Google, to students. *New York Times*. Retrieved March 8, 2016, from <http://www.nytimes.com/2011/04/04/technology/04fair.html>

- 72 Mayer, C.E. (2003, June 21). PTA turning to corporate sponsors for funds. *Washington Post*. Retrieved February 15, 2016, from <http://www.commercialalert.org/issues/education/national-pta/pta-turning-to-corporate-sponsors-for-funds>

- 73 Hazen, C. (2016, February 16). Personal communication (telephone) with Faith Boninger.

- 74 Holmes, F. (2016, February 1). Personal communication (email) with Faith Boninger.

- 75 Aubrey, A. (2015, October 15). McTeacher's Nights: Teachers unions say no to school fundraisers. *The Salt*. Retrieved March 27, 2016, from <http://www.npr.org/sections/thesalt/2015/10/15/448960665/mteachers-nights-teachers-unions-say-no-to-school-fundraisers>

Pfeiffer, S. (2015, October 16). Nonprofits pressure McDonald's to end 'McTeacher's Night.' *Boston Globe*. Retrieved March 27, 2016, from <https://www.bostonglobe.com/business/2015/10/15/boston-nonprofits-pressure-mcdonald-ends-its-mteacher-night-program/7HQToaty8suXULpDjIud6N/story.html>

- 76 Clark, C. (2012, May 24). In marketing, it's all about building relationships. [blog post] Retrieved February 23, 2016, from http://www.itoimedia.com/weblog/2012/05/in_marketing_its_all_about_bui.html

- 77 Olenski, S. (2013, May 9). This Is the most important word when it comes to relationship marketing. *Forbes*. com. Retrieved February 23, 2016, from <http://www.forbes.com/sites/marketshare/2013/05/09/this-is-the-most-important-word-when-it-comes-to-relationship-marketing/#71604fc52050>

- 78 See, for examples,

Young Minds Inspired (n.d.). Lesson plans. Retrieved February 2, 2016, from Young Minds Inspired (n.d.). Retrieved February 2, 2016, from <http://ymiclassroom.com/categories/language-arts/>

Disney (n.d.). Gravity. [website] Retrieved March 24, 2016, from <https://epcotspaceshipearth.com/gravity/>

McDonald's (2015). Product development challenge. Retrieved March 24, 2016, from

<http://www5.mcdonalds.com/teachers/product-development-challenge.htm> [website]

- 79 Molnar, A., Boninger, F., Wilkinson, G., & Fogarty, J. (2009). *Click: The twelfth annual report on schoolhouse commercialism trends: 2008-2009*. Boulder and Tempe: Education and the Public Interest Center & Commercialism in Education Research Unit. Retrieved January 8, 2016 from <http://nepc.colorado.edu/publication/schoolhouse-commercialism-2009>
- Molnar, A., Boninger, F., Wilkinson, G., Fogarty, J., & Geary, S. (2010). *Effectively embedded: Schools and the machinery of modern marketing – The thirteenth annual report on schoolhouse commercializing trends: 2009-2010*. Boulder, CO: National Education Policy Center. Retrieved March 24, 2016, from <http://nepc.colorado.edu/publication/Schoolhouse-commercialism-2010>
- 80 Scholastic, Inc. (2016). Privacy policy. Author. Retrieved April 25, 2016, from <http://www.scholastic.com/privacy.htm#kidsprivacy>
- 81 The Oxford English Dictionary defines “big data” as “data of a very large size, typically to the extent that its manipulation and management present significant logistical challenges”
- Press, G. (2013, June 18). Big data news: A revolution indeed. *Forbes.com*. Retrieved February 21, 2016, from <http://www.forbes.com/sites/gilpress/2013/06/18/big-data-news-a-revolution-indeed/#1e6d81397b9f>
- 82 Billings, K. (2015, February 24). SIIA estimates \$8.38 billion US market for preK-12 educational software and digital content. *SIIA Blog*. Retrieved April 26, 2016, from <http://blog.siiia.net/index.php/2015/02/siia-estimates-8-38-billion-us-market-for-prek-12-educational-software-and-digital-content/>
- U.S. Department of Education Office of Educational Technology (2013). *Expanding evidence approaches for learning in a digital world*. Author. Retrieved April 26, 2016, from <http://tech.ed.gov/wp-includes/ms-files.php?file=2013/02/Expanding-Evidence-Approaches.pdf>
- For a critical discussion of the use of adaptive learning technologies, see,
- Saltman, K.J. (2016, April 19). Corporate schooling meets corporate media: Standards, testing, and technophilia. *Review of Education, Pedagogy, and Cultural Studies*, 38(2) 105-123.
- 83 Knewton (2016, January 26). Pearson and Knewton team up to personalize math education [press release]. Retrieved April 26, 2016, from <https://www.knewton.com/resources/press/pearson-and-knewton-team-up-to-personalize-math-education/>
- Singer, N. (2014, November 16). Privacy concerns for ClassDojo and other tracking apps for schoolchildren. *New York Times*. Retrieved April 26, 2016, from http://www.nytimes.com/2014/11/17/technology/privacy-concerns-for-classdojo-and-other-tracking-apps-for-schoolchildren.html?_r=0
- Tulenko, J. (2016, April 5). Why digital education could be a double-edged sword. *PBS*. Retrieved April 26, 2016, from <http://www.pbs.org/newshour/bb/why-digital-education-could-be-a-double-edged-sword/>
- Wilson, K. & Nichols, Z. (2015, January). *The Knewton Platform: A general-purpose adaptive learning infrastructure*. Knewton. Retrieved April 26, 2016, from <http://learn.knewton.com/technical-white-paper>
- 84 Ferreira, J. (2012, November 3). Knewton - Education datapalooza [YouTube video]. Retrieved April 26, 2016, from <https://www.youtube.com/watch?v=Lr7Z7ysDluQ>
- 85 Ferreira, J. (2012, November 3). Knewton - Education datapalooza [YouTube video]. Retrieved April 26, 2016, from <https://www.youtube.com/watch?v=Lr7Z7ysDluQ>
- Knewton (2016, February 2). Knewton to Accelerate Personalized Learning for Students Worldwide with \$52M in Financing [press release]. Retrieved April 26, 2016, from <https://www.knewton.com/resources/press/67525/>
- 86 Saltman, K.J. (2016, April 19). Corporate schooling meets corporate media: Standards, testing, and technophilia. *Review of Education, Pedagogy, and Cultural Studies*, 38(2) 105-123.
- Tulenko, J. (2016, April 5). Why digital education could be a double-edged sword. *PBS*. Retrieved April 26, 2016, from <http://www.pbs.org/newshour/bb/why-digital-education-could-be-a-double-edged-sword/>
- 87 Billings, K. (2015, February 24). SIIA estimates \$8.38 billion US market for PreK-12 educational software and digital content. *SIIA Blog*. Retrieved April 25, 2016, from <http://blog.siiia.net/index.php/2015/02/siia-estimates-8-38-billion-us-market-for-prek-12-educational-software-and-digital-content/>

[estimates-8-38-billion-us-market-for-prek-12-educational-software-and-digital-content/](#)

Simon, S. (2014, October 7). Big Tech pledges student privacy; critics scoff. *Politico*. Retrieved January 28, 2016, from <http://www.politico.com/story/2014/10/student-privacy-tech-companies-111645>

Simon, S. (2015, March 23). Privacy bill wouldn't stop data mining of kids. *Politico*. Retrieved April 25, 2016, from http://www.politico.com/story/2015/03/privacy-bill-wouldnt-stop-data-mining-of-kids-116299.html?hp=14_4

Vance, A. (2015, June). Trends in state legislation on student data privacy. National Association of State Boards of Education. Retrieved April 26, 2016, from http://www.nasbe.org/wp-content/uploads/NASBE-Policy-Update-2015-Legislative-Session-Data-Privacy_-June-2015.pdf

- 88 Future of Privacy Forum and Software & Information Industry Association (2015). *Student Privacy Pledge*. Author. Retrieved December 22, 2015, from <http://studentprivacypledge.org/>

- 89 "Family Educational Rights and Privacy Act "(FERPA). 20 U.S.C. § 1232g. Retrieved March 24, 2016, from <https://www.law.cornell.edu/uscode/text/20/1232g>

"Children's Online Privacy Protection Act," 15 U.S. Code Chapter 91. Retrieved January 8, 2015, from <http://www.law.cornell.edu/uscode/text/15/chapter-91>

"The Protection of Pupil Rights Amendment" (PPRA). 20 U.S.C. § 1232h. Retrieved March 24, 2016, from <https://www.law.cornell.edu/uscode/text/20/1232h>

- 90 If such excluded materials contain Personally Identifying Information (PII) from education records, then they, too, are included in the law's protection. FERPA gives parents the right to obtain a copy of their institution's policy concerning access to educational records, to halt the release of personally identifiable information, and to review their children's education records and request corrections, if necessary (although, significantly, it does not provide parents private right of action to institute a lawsuit. Parents can submit a complaint to the Family Policy Compliance Office, which is designated to review complaints and violations under FERPA.). Parents can also choose to opt out of its policy of allowing schools to release "directory information," which includes students' names and addresses, to the public. Originally, it also prohibited educational institutions from disclosing "personally identifiable information in education records" without parental consent.

Electronic Privacy Information Center (n.d.). Family Educational Rights and Privacy Act (FERPA). Author. Retrieved January 5, 2015, from <https://epic.org/privacy/student/ferpa/default.html>

Family Educational Rights and Privacy Act (FERPA). 20 U.S.C. § 1232g (2012). Retrieved March 24, 2016, from <https://www.law.cornell.edu/uscode/text/20/1232g>

Privacy Technical Assistance Center (2014, February). *Protecting student privacy while using online educational services: Requirements and best practices*. U.S. Department of Education. Retrieved February 16, 2015, from <http://tech.ed.gov/wp-content/uploads/2014/09/Student-Privacy-and-Online-Educational-Services-February-2014.pdf>

California state law has more extensive protections than federal law:

"An act to add Section 49073.1 to the Education Code, relating to pupil records," Cal Ed Code § 49073.1 (2015)

- 91 34 CFR § 99.31(a)(3)

34 CFR § 99.35(a)(1)

Electronic Privacy Information Center (EPIC) (n.d.). EPIC v. The U.S. Department of Education. Author. Retrieved April 25, 2016, from <http://epic.org/apa/ferpa/>

Ravitch, D. (2013, April 8). Why Is the US Department of Education weakening FERPA? *Diane Ravitch's Blog*. Retrieved April 25, 2016, from <http://dianeravitch.net/2013/04/08/why-is-the-us-department-of-education-weakening-ferpa/>

United States Department of Education (2012). *Family Educational Rights and Privacy Act regulations*. Author. Retrieved April 25, 2016, from <http://www2.ed.gov/policy/gen/guid/fpco/pdf/2012-final-regs.pdf>

- 92 Rotenberg, M. & Barnes, K (2013, January 28). Amassing student data and dissipating privacy rights.

- Educause Review Online*. Retrieved April 25, 2016, from <http://www.educause.edu/ero/article/amassing-student-data-and-dissipating-privacy-rights>
- 93 Google, Inc. (n.d.). *Google Apps for Education (online) agreement*. Author. Retrieved December 18, 2015, from http://www.google.com/apps/intl/en/terms/education_terms.html
 - 94 “Family Educational Rights and Privacy Act” (FERPA). 20 U.S.C. § 1232g (2012).
Rotenberg, M. & Barnes, K (2013, January 28). Amassing student data and dissipating privacy rights. *Educause Review Online*. Retrieved April 25, 2016, from <http://www.educause.edu/ero/article/amassing-student-data-and-dissipating-privacy-rights>
 - 95 The Department of Education’s guidelines of “best practices” for schools and districts recommends case-by-case evaluation of any online educational services to determine if FERPA-protected information is implicated; if so, of course, the school or district must ensure that FERPA requirements are met. The guidelines also recommend that schools and districts maintain written contracts for any use of online educational services, and that these contracts contain provisions for: which data will be collected; with whom they may be shared; how they will be stored; how they will be secured; how they may be accessed by students, parents, and the school; when they will be destroyed; and whether the school or district may be indemnified for a vendor’s failure to comply with relevant laws. These guidelines do not, however, hold the force of law.
Privacy Technical Assistance Center (2014, February). *Protecting student privacy while using online educational services: Requirements and Best Practices*. U.S. Department of Education. Retrieved February 16, 2015, from <http://tech.ed.gov/wp-content/uploads/2014/09/Student-Privacy-and-Online-Educational-Services-February-2014.pdf>
Rotenberg, M. & Barnes, K (2013, January 28). Amassing student data and dissipating privacy rights. *Educause Review Online*. Retrieved April 25, 2016, from <http://www.educause.edu/ero/article/amassing-student-data-and-dissipating-privacy-rights>
 - 96 “Children’s Online Privacy Protection Act,” 15 U.S. Code Chapter 91. Retrieved January 8, 2015, from <http://www.law.cornell.edu/uscode/text/15/chapter-91>
 - 97 An expanded definition of “personal information” took effect in 2013. It includes location (such as street address and city) available from mobile devices, photos, videos, audio recordings, screen or user names, and persistent identifiers (such as “cookies” and other hidden software). It also closed loopholes that previously allowed third parties to collect personal information from children via “plug-ins.”
Center for Digital Democracy (2013, June). *The new children’s online privacy rules: What parents need to know*. Author. Retrieved March 27, 2016, from <https://www.democraticmedia.org/sites/default/files/CDDCOPPAparentguideJune2013.pdf>
 - 98 Harris, J.L., Heard, A., & Schwartz, M. (2014, January). *Older but still vulnerable: All children need protection from unhealthy food marketing*. UConn Rudd Center for Food Policy and Obesity. Retrieved March 27, 2016, from http://www.uconnruddcenter.org/resources/upload/docs/what/reports/Protecting_Older_Children_3.14.pdf
Pechmann, C., Levine, L., Loughlin S., & Leslie, F. (2005). Impulsive and self-conscious: Adolescents’ vulnerability to advertising and promotion. *Journal of Public Policy Marketing*, 24, 202–21.
 - 99 Harris, J.L., Heard, A., & Schwartz, M. (2014, January). *Older but still vulnerable: All children need protection from unhealthy food marketing*. UConn Rudd Center for Food Policy and Obesity. Retrieved March 27, 2016, from http://www.uconnruddcenter.org/resources/upload/docs/what/reports/Protecting_Older_Children_3.14.pdf
 - 100 Electronic Frontier Foundation (n.d.). *Legal overview: Key laws relevant to the protection of student data*. San Francisco, CA: Author.
 - 101 “The Protection of Pupil Rights Amendment” (PPRA). 20 U.S.C. § 1232h. Retrieved March 24, 2016, from <https://www.law.cornell.edu/uscode/text/20/1232h>
 - 102 “Do Not Track Kids Act of 2015,” S. 1563, 114th Congress (2015-2016). Retrieved March 27, 2016, from <https://www.govtrack.us/congress/bills/114/s1563>

- H. Amdt. 54 to H.R. 5, 114th Congress (2015-2016). Retrieved March 27, 2016, from <https://www.congress.gov/amendment/114th-congress/house-amendment/54/text>
- “Protecting Student Privacy Act of 2015,” S. 1322, 114th Congress (2015-2016). Retrieved March 27, 2016, from <https://www.govtrack.us/congress/bills/114/s1322>
- “SAFE KIDS Act (Safeguarding American Families from Exposure by Keeping Information and Data Secure),” S. 1788, 114th Congress (2015-2016). Retrieved March 25, 2016, from <https://www.govtrack.us/congress/bills/114/s1788/text>
- “Student Digital Privacy and Parental Rights Act of 2015,” H.R. 2092, 114th Congress (2015-2016). Retrieved March 25, 2016, from <https://www.govtrack.us/congress/bills/114/hr2092>
- “Student Privacy Protection Act,” S. 1341, 114th Congress (2015-2016). Retrieved March 27, 2016, from <https://www.congress.gov/bill/114th-congress/senate-bill/1341/committees>
- “Student Privacy Protection Act,” H.R. 3157, 114th Congress (2015-2016). Retrieved March 27, 2016, from <https://www.govtrack.us/congress/bills/114/hr3157>
- S. Amdt. 2080, 114th Congress (2015-2016). Retrieved March 27, 2016, from <https://www.congress.gov/amendment/114th-congress/senate-amendment/2080/text>
- 103 “Every Student Succeeds Act,” Public Law 114-95 (2015-2016). Retrieved March 27, 2016, from <https://www.govtrack.us/congress/bills/114/s1177>
- 104 S. Amdt. 2080, 114th Congress (2015-2016). Retrieved March 27, 2016, from <https://www.congress.gov/amendment/114th-congress/senate-amendment/2080/text>
- 105 “SAFE KIDS Act (Safeguarding American Families from Exposure by Keeping Information and Data Secure),” S. 1788, 114th Congress (2015-2016). Retrieved March 25, 2016, from <https://www.govtrack.us/congress/bills/114/s1788/text>
- Simon, S. (2015, March 23). Privacy bill wouldn’t stop data mining of kids. *Politico*. Retrieved April 25, 2016, from http://www.politico.com/story/2015/03/privacy-bill-wouldnt-stop-data-mining-of-kids-116299.html?hp=14_4
- Stickland, R. (2016, March 9). Personal communication (telephone) with Faith Boninger.
- “Student Digital Privacy and Parental Rights Act of 2015,” H.R. 2092, 114th Congress (2015-2016). Retrieved March 25, 2016, from <https://www.govtrack.us/congress/bills/114/hr2092>
- 106 Herold, B. & Camera, L. (2015, October 19). Educators hope Congress provides clarity, support on privacy Issues. *Education Week*. Retrieved February 29, 2016, from <http://www.edweek.org/ew/articles/2015/10/21/educators-hope-congress-provides-clarity-support-on.html>
- Roscorla, T. (2015, December 7). Electronic Frontier Foundation conducts ongoing investigation into school surveillance. Center for Digital Education. Retrieved February 29, 2016, from http://www.centerdigitaled.com/k-12/Electronic-Frontier-Foundation-Conducts-Ongoing-Investigation-Into-School-Surveillance.html?utm_source=related&utm_medium=direct&utm_campaign=Electronic-Frontier-Foundation-Conducts-Ongoing-Investigation-Into-School-Surveillance
- 107 Kansas requires specification of use only when the data is shared. North Carolina and Wyoming law imply a need for specification because they require the data to be destroyed when its specified use is complete.
- “An act to add Section 49073.6 to the Education Code, relating to pupil records,” Cal Ed Code § 49073.6 (2015)
- “An act to add Section 49073.1 to the Education Code, relating to pupil records,” Cal Ed Code § 49073.1 (2015)
- “Student Online Personal Information Protection Act,” Cal Bus & Prof Code § 22584 (2015)
- “Student Data Protection, Accessibility, Transparency, and Accountability Act of 2014,” C.R.S. 22-2-309 (2014)
- “Student Data Accessibility, Transparency and Accountability Act of 2014,” Idaho Code § 33-133 (2014)
- “Kansas Student Data Privacy Act,” K.S.A. § 72-6214 (2013)

“An Act to Ensure the Privacy and Security of Student Educational Records, as Recommended by the Joint Legislative Oversight Committee on Information Technology,” N.C. Gen. Stat. § 115C-402.5 (2014), N.C. Gen. Stat. § 115C-402.15 (2014)

NY CLS Educ § 2-c (2014), NY CLS Educ § 2-d (2014)

Wyo. Stat. § 21-2-202 (2014)

“Student Data Accessibility, Transparency, and Accountability Act of 2013,” 70 Okl. St. § 3-168 (2014)

108 “An act to add Section 49073.6 to the Education Code, relating to pupil records,” Cal Ed Code § 49073.6 (2015)

“An act to add Section 49073.1 to the Education Code, relating to pupil records,” Cal Ed Code § 49073.1 (2015)

“Student Online Personal Information Protection Act,” Cal Bus & Prof Code § 22584 (2015)

“Student Data Protection, Accessibility, Transparency, and Accountability Act of 2014,” C.R.S. 22-2-309 (2014)

“Student Data Accessibility, Transparency and Accountability Act of 2014,” Idaho Code § 33-133 (2014)

“Kansas Student Data Privacy Act,” K.S.A. § 72-6214 (2013)

“An act to enact R.S. 17:3913 and 3996(B)(34), relative to student information; to limit the type of information to be collected on students; to prohibit the collection of certain information; to prohibit the sharing of student information; to provide exceptions; to provide for access by parents and specified others to certain student information stored in public school computer systems; to provide for student identification numbers; to provide definitions; to provide criminal penalties; and to provide for related matters,” La. R.S. § 17:3913 (2015)

“An Act to Ensure the Privacy and Security of Student Educational Records, as Recommended by the Joint Legislative Oversight Committee on Information Technology,” N.C. Gen. Stat. § 115C-402.5 (2014), N.C. Gen. Stat. § 115C-402.15 (2014)

NY CLS Educ § 2-c (2014), NY CLS Educ § 2-d (2014)

Wyo. Stat. § 21-2-202 (2014)

109 “An act to add Section 49073.6 to the Education Code, relating to pupil records,” Cal Ed Code § 49073.6 (2015)

“An act to add Section 49073.1 to the Education Code, relating to pupil records,” Cal Ed Code § 49073.1 (2015)

“Student Online Personal Information Protection Act,” Cal Bus & Prof Code § 22584 (2015)

“Student Data Protection, Accessibility, Transparency, and Accountability Act of 2014,” C.R.S. 22-2-309 (2014)

“Student Data Accessibility, Transparency and Accountability Act of 2014,” Idaho Code § 33-133 (2014)

“Kansas Student Data Privacy Act,” K.S.A. § 72-6214 (2013)

“An act to enact R.S. 17:3913 and 3996(B)(34), relative to student information; to limit the type of information to be collected on students; to prohibit the collection of certain information; to prohibit the sharing of student information; to provide exceptions; to provide for access by parents and specified others to certain student information stored in public school computer systems; to provide for student identification numbers; to provide definitions; to provide criminal penalties; and to provide for related matters,” La. R.S. § 17:3913 (2015)

20-7-104, MCA (2013)

“An Act to Ensure the Privacy and Security of Student Educational Records, as Recommended by the Joint Legislative Oversight Committee on Information Technology,” NY CLS Educ § 2-c (2014), NY CLS Educ § 2-d (2014)

R.I. Gen. Laws § 16-103-3 (2014)

R.I. Gen. Laws § 16-103-4 (2014)

Wyo. Stat. § 21-2-202 (2014)

110 Hochleitner, T. (2016, April 12). States enact new student data privacy laws. *The Flashlight*. Retrieved April

- 26, 2016, from <http://dataqualitycampaign.org/blog/2016/04/states-enact-new-student-data-privacy-laws/>
- Vance, A. (2015, June). Trends in state legislation on student data privacy. *Policy Update*, 24(2). National Association of State Boards of Education. Retrieved April 26, 2016, from <http://www.nasbe.org/wp-content/uploads/NASBE-Policy-Update-2015-Legislative-Session-Data-Privacy-June-2015.pdf>
- 111 “Student Online Personal Information Protection Act,” Cal Bus & Prof Code, §§ 22584-22585 (2015)
- 112 Electronic Frontier Foundation (n.d.). *Legal overview: Key laws relevant to the protection of student data*. San Francisco, CA: Author.
- “Student Online Personal Information Protection Act,” Cal Bus & Prof Code, §§ 22584-22585 (2015)
- 113 Electronic Frontier Foundation (n.d.). *Legal overview: Key laws relevant to the protection of student data*. San Francisco, CA: Author.
- 114 CoSn (Consortium for School Networking)(n.d.). Student data principles: 10 foundational principles for using and safeguarding students’ personal information. Washington, DC: Author. Retrieved December 31, 2015, from <http://cosn.org/sites/default/files/pdf/Student-Data-Principles-FINAL.pdf>
- Future of Privacy Forum and The Software & Information Industry Association (2014, October 7). Original press release for the Pledge to Safeguard Student Privacy [press release]. Washington, DC: Author. Retrieved January 7, 2016, from https://studentprivacypledge.org/?page_id=213
- 115 CoSn (Consortium for School Networking)(n.d.). Student data principles: 10 foundational principles for using and safeguarding students’ personal information. Washington, DC: Author. Retrieved December 31, 2015, from <http://cosn.org/sites/default/files/pdf/Student-Data-Principles-FINAL.pdf>
- 116 Simon, S. (2015, March 23). Privacy bill wouldn’t stop data mining of kids. *Politico*. Retrieved March 10, 2016, from <http://www.politico.com/story/2015/03/privacy-bill-wouldnt-stop-data-mining-of-kids-116299>
- 117 Future of Privacy Forum and The Software & Information Industry Association (2014, October 7). Original press release for the Pledge to Safeguard Student Privacy [press release]. Washington, DC: Author. Retrieved January 7, 2016, from https://studentprivacypledge.org/?page_id=213
- The White House, Office of the Press Secretary (2015, January 12). Fact sheet: Safeguarding American consumers & families [press release]. Washington, DC: Author. Retrieved January 7, 2016, from <https://www.whitehouse.gov/the-press-office/2015/01/12/fact-sheet-safeguarding-american-consumers-families>
- 118 Notably, Pearson, McGraw Hill, and Educational Testing Service [ETS], three companies that dominate the U.S. student testing market, have not signed on to the Student Privacy Pledge.
- Future of Privacy Forum and The Software & Information Industry Association (2016). *Student Privacy Pledge: Signatories*. Retrieved May 9, 2016, from <https://studentprivacypledge.org/signatories/>
- Strauss, V. (2015, March 30). Report: Big education firms spend millions lobbying for pro-testing policies. Washington Post. Retrieved May 26, 2015, from <http://www.washingtonpost.com/blogs/answer-sheet/wp/2015/03/30/report-big-education-firms-spend-millions-lobbying-for-pro-testing-policies/>
- 119 Future of Privacy Forum and The Software & Information Industry Association (2014). *Student Privacy Pledge*. Retrieved January 7, 2016, from <http://studentprivacypledge.org/>
- 120 Future of Privacy Forum and The Software & Information Industry Association (2014). *Student Privacy Pledge*. Retrieved January 7, 2016, from <http://studentprivacypledge.org/>
- 121 Simon, S. (2014, October 7). Big Tech pledges student privacy; critics scoff. *Politico*. Retrieved January 28, 2016, from <http://www.politico.com/story/2014/10/student-privacy-tech-companies-111645>
- 122 Simon, S. (2014, October 7). Big Tech pledges student privacy; critics scoff. *Politico*. Retrieved January 28, 2016, from <http://www.politico.com/story/2014/10/student-privacy-tech-companies-111645>
- 123 Singer, N. (2015, February 8). Uncovering security flaws in digital education products for schoolchildren. *New York Times*. Retrieved January 7, 2016, from <http://www.nytimes.com/2015/02/09/technology/uncovering-security-flaws-in-digital-education-products-for-schoolchildren.html>
- Porterfield, T. (2015, November 30). VTech vs EDtech. [blog post] Retrieved January 7, 2016, from

<http://edtechinfosec.org/2015/11/30/vtech-vs-edtech/>

- 124 Singer, N. (2015, March 5). Digital learning companies falling short of student privacy pledge. *New York Times*. Retrieved January 7, 2016, from <http://bits.blogs.nytimes.com/2015/03/05/digital-learning-companies-falling-short-of-student-privacy-pledge/>
- 125 Singer, N. (2015, February 8). Uncovering security flaws in digital education products for schoolchildren. *New York Times*. Retrieved January 7, 2016, from <http://www.nytimes.com/2015/02/09/technology/uncovering-security-flaws-in-digital-education-products-for-schoolchildren.html>
- 126 If the FTC investigates a complaint, it may decide that the company does engage in an unfair or deceptive practice. If it does, it may issue a “cease and desist” order, and it may take the company to court to “obtain civil penalties or consumer redress.” It may also decide to stop pursuing the complaint at any point.
- Federal Trade Commission (n.d.). A brief overview of the Federal Trade Commission’s investigative and law enforcement authority. Author. Retrieved March 9, 2016, from <https://www.ftc.gov/about-ftc/what-we-do/enforcement-authority>
- Golin, J. (2016, March 7). Personal communication (telephone) with Faith Boninger.
- 127 In December 2013 EPIC filed a complaint against [Scholarships.com](http://www.scholarships.com), claiming that [Scholarships.com](http://www.scholarships.com) transfers data it elicits from students to a business affiliate that sells the data for general marketing purposes, and that it fails to use reasonable security practices. In September 2014 EPIC filed a complaint against the Maricopa County Community College District, arguing that the District’s failure to maintain an adequate security program led to a massive data breach.
- Electronic Privacy Information Center (2013, December 12). EPIC files privacy complaint to protect student data. Author. Retrieved March 10, 2016, from <https://epic.org/2013/12/epic-files-privacy-complaint-t.html>
- Electronic Privacy Information Center (2014, September 29). EPIC urges FTC to investigate Maricopa data breach. Author. Retrieved March 19, 2016, from <https://epic.org/2014/09/epic-urges-ftc-to-investigate.html>
- 128 Barnes, K. (2016, March 10). Personal communication (telephone) with Faith Boninger.
- How emerging technology affects student privacy. Hearing before Subcommittee on Early Childhood, Elementary and Secondary Education, Committee on Education and the Workforce, House of Representatives, 114th Congress (2015, February 12). (Testimony of J.R. Reidenberg). Retrieved March 27, 2016, from http://edworkforce.house.gov/uploadedfiles/reidenberg_testimony_final.pdf
- Stickland, R. (2016, March 28). Personal communication (email) with Faith Boninger.
- 129 Reidenberg, J.R., Russell, N.C., Kovnot, J., Norton, T.B., Cloutier, R., & Alvarado, D. (2013, December 12). *Privacy and cloud computing in public schools*. New York, NY: Center on Law and Information Policy at Fordham Law School. Retrieved March 28, 2016, from http://www.fordham.edu/info/23830/research/5917/privacy_and_cloud_computing_in_public_schools
- 130 Kaye, K. (2013, March 11). Big data goes to Washington -- And spends lots of money. *Advertising Age*. Retrieved April 25, 2016, from <http://adage.com/article/dataworks/big-data-washington-spends-lots-money/240232/>
- 131 Bout, B. (2014, April 30). Protecting students with Google Apps for Education [blog post]. Retrieved May 2, 2016, from <http://googleforwork.blogspot.com/2014/04/protecting-students-with-google-apps.html>
- 132 A second aspect of the complaint is that Google sets the default on the Chromebooks it sells to schools to “track, store on its servers, and data mine for non-advertising purposes, records of every Internet site students visit, every search term they use, the results they click on, videos they look for and watch on YouTube, and their saved passwords.” Google claims to use these data only to improve its services.
- Gillula, J. (2015, December 2). Google’s student tracking isn’t limited to Chrome Sync. *Electronic Frontier Foundation*. Retrieved December 30, 2015, from <https://www.eff.org/deeplinks/2015/12/googles-student-tracking-isnt-limited-chrome-sync>
- 133 Cardozo, N. & Cope, S. (2015, December 17). Personal communication (telephone) with Faith Boninger.
- 134 Cardozo, N. (2015, October 14). Internet companies: Confusing consumers for profit. *Electronic Freedom*

- Foundation. Retrieved March 27, 2016, from <https://www.eff.org/deeplinks/2015/10/Internet-companies-confusing-consumers-profit>
- 135 Simonite, T. (2015, September 16). Facebook's like buttons will soon track your web browsing to target ads. *MIT Technology Review*. Retrieved January 13, 2016, from <http://www.technologyreview.com/news/541351/facebook-like-buttons-will-soon-track-your-web-browsing-to-target-ads/>
- 136 Cardozo, N. (2015, October 14). Internet companies: Confusing consumers for profit. *Electronic Freedom Foundation*. Retrieved March 27, 2016, from <https://www.eff.org/deeplinks/2015/10/Internet-companies-confusing-consumers-profit>
- 137 Herald, B. (2014,). Ed-tech vendors' privacy policies under scrutiny. *Education Week*. Retrieved March 8, 2016, from <http://web.a.ebscohost.com.ezproxy1.lib.asu.edu/ehost/detail/detail?vid=7&sid=f8ec6379-d641-44ef-b8ee-b73f7640e401%40sessionmgr4001&hid=4206&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#AN=95669015&db=aph>
- Singer, N. (2015, February 8). Uncovering security flaws in digital education products for schoolchildren. *New York Times*. Retrieved January 7, 2016, from <http://www.nytimes.com/2015/02/09/technology/uncovering-security-flaws-in-digital-education-products-for-schoolchildren.html>
- 138 Wheaton, K. (2015, March 23). Hocus pocus! Your data has been anonymized! Now they'll never find you! *Advertising Age*. Retrieved March 30, 2015, from <http://adage.com/article/ken-wheaton/data-anonymized-find/297713/>
- 139 Narayanan, A. and Shmatikov, V. (2008). Robust de-anonymization of large sparse datasets. *SP '08 Proceedings of the 2008 IEEE Symposium on Security and Privacy*, pp. 111-125. Retrieved December 20, 2015, from https://www.cs.utexas.edu/~shmat/shmat_oako8netflix.pdf
- 140 Narayanan, A. and Shmatikov, V. (2008). Robust de-anonymization of large sparse datasets. *SP '08 Proceedings of the 2008 IEEE Symposium on Security and Privacy*, pp. 111-125. Retrieved December 20, 2015, from https://www.cs.utexas.edu/~shmat/shmat_oako8netflix.pdf
- 141 Greenwich Public Schools (2014, December 23). iPads for elementary students, Chromebooks for secondary students [press release]. Retrieved March 8, 2016, from http://www.greenwichschools.org/uploaded/district/pdfs/News_Archives/News_Archives_2014-15/PR_-_DLE_Phase_III_Device_122314.pdf
- 142 Wheaton, K. (2015, March 23). Hocus pocus! Your data has been anonymized! Now they'll never find you! *Advertising Age*. Retrieved March 30, 2015, from <http://adage.com/article/ken-wheaton/data-anonymized-find/297713/>
- 143 Wheaton, K. (2015, March 23). Hocus pocus! Your data has been anonymized! Now they'll never find you! *Advertising Age*. Retrieved March 30, 2015, from <http://adage.com/article/ken-wheaton/data-anonymized-find/297713/>
- 144 Wheaton, K. (2015, March 23). Hocus pocus! Your data has been anonymized! Now they'll never find you! *Advertising Age*. Retrieved March 30, 2015, from <http://adage.com/article/ken-wheaton/data-anonymized-find/297713/>
- 145 Molnar, A., Boninger, F., Wilkinson, G., & Fogarty, J. (2009). *Click: The twelfth annual report on schoolhouse commercialism trends: 2008-2009*. Boulder and Tempe: Education and the Public Interest Center & Commercialism in Education Research Unit. Retrieved January 8, 2016 from <http://nepc.colorado.edu/publication/schoolhouse-commercialism-2009>
- 146 While Maddie is a real student, this is not her real name. For purposes of this report, we have changed any information about her that would make her identifiable, but we have not changed the substance of the details described.
- 147 Simon, S., (2014, May 15). For sale: Student 'hopes and dreams.' *Politico*. Retrieved February 29, 2016, from <http://www.politico.com/story/2014/05/student-data-privacy-market-106692#ixzz41afTe9Ew>
- 148 For cutting edge integration of technology and data collection in schools, see,
- Herold, B. (2016, January 11). The future of big data and analytics in K-12 education. Retrieved January 15, 2016, from <http://mobile.edweek.org/c.jsp?cid=25919951&rssid=25919141&item=http%3A%2F%2Fapi>

[edweek.org%2Fv1%2Ffew%2F%3Fuuid%3D2FoD87D4-B561-11E5-8925-71C9B3743667](http://mobile.edweek.org%2Fv1%2Ffew%2F%3Fuuid%3D2FoD87D4-B561-11E5-8925-71C9B3743667)

149 Ghostery. <https://www.ghostery.com/> [website].

150 Cf.,

Thaler, R.H. & Sunstein, C.R. (2009). *Nudge: Improving decisions about health, wealth, and happiness*. New York: Penguin Books.

151 Johnson, L. (2016, February 23). Yahoo exec calls out mobile ad blocker for ‘destroying the ecosystem.’ *Adweek*. Retrieved February 23, 2016, from <http://www.adweek.com/news/technology/yahoo-exec-calls-out-mobile-ad-blocker-destroying-ecosystem-169820>

152 Tufekci, Z. (2014, June 29). Facebook and engineering the public. *Medium*. Retrieved April 25, 2016, from <https://medium.com/message/engineering-the-public-289c91390225>

Tufekci, Z. (2014, July). Engineering the public: Big data, surveillance and computational politics. *First Monday*. Retrieved December 18, 2015, from <http://firstmonday.org/ojs/index.php/fm/article/view/4901/4907>

According to the USGS, “Metadata describe information about a dataset, such that a dataset can be understood, re-used, and integrated with other datasets. Information described in a metadata record includes where the data were collected, who is responsible for the dataset, why the dataset was created, and how the data are organized. Metadata generally follow a standard format, making it easier to compare datasets and to transfer files electronically.”

United States Geological Survey (USGS)(2015, November 25). Metadata. Author. Retrieved March 8, 2016, from <http://www.usgs.gov/datamanagement/describe/metadata.php>

For how big data have been used in professional basketball and retail settings, and may be used specifically in educational contexts, see also,

Herold, B. (2016, January 11). The future of big data and analytics in K-12 education.

Education Week. Retrieved January 15, 2016, from <http://mobile.edweek.org/c.jsp?cid=25919951&rssid=25919141&item=http%3A%2F%2Fapi.edweek.org%2Fv1%2Ffew%2F%3Fuuid%3D2FoD87D4-B561-11E5-8925-71C9B3743667>

153 Tufekci, Z. (2014, June 29). Facebook and engineering the public. *Medium*. Retrieved April 25, 2016, from <https://medium.com/message/engineering-the-public-289c91390225>

154 Zittrain, J. (2014, June 1). Facebook could decide an election without anyone ever finding out. *New Republic*. Retrieved April 25, 2016, from <https://newrepublic.com/article/117878/information-fiduciary-solution-facebook-digital-gerrymandering>

155 Tufekci, Z. (2014, July). Engineering the public: Big data, surveillance and computational politics. *First Monday*. Retrieved December 18, 2015, from <http://firstmonday.org/ojs/index.php/fm/article/view/4901/4907>

156 Harris, J.L., Schwartz, M.B., LoDolce, M., Munsell, C., et al. (2014, November). Sugary drink FACTS 2014 Some progress but much room for improvement in marketing to youth. Hartford, CT: *Rudd Center for Food Policy and Obesity*. Retrieved April 25, 2016, from http://www.sugarydrinkfacts.org/resources/SugaryDrinkFACTS_Report.pdf

157 Centers for Disease Control and Prevention (2012). Child obesity facts. Atlanta, GA: Author. Retrieved April 25, 2016, from <http://www.cdc.gov/healthyyouth/obesity/facts.htm/>;

Fontaine K.R, Redden C.T, Wang C, Westfall A.O, & Allison D.B. (2003). Years of life lost due to obesity. *Journal of the American Medical Association*, 289, 187-193. Retrieved April 25, 2016, from <http://www.soph.uab.edu/Statgenetics/Research/YearsLostObesity.pdf>

Koebnick, C., Smith, N., Black, M.H., Porter, A.H., Richie, B.A., Hudson, S., Gililand, D., Jacobsen, S.J., & Longstreth, G.F. (2012). Pediatric obesity and gallstone disease. *Journal of Pediatric Gastroenterology and Nutrition*, 55(3), 328-333

Musmeche, C. (2012, April 25). Childhood obesity leads to unnecessary surgeries. *New York Times*. Retrieved

April 25, 2016, from
<http://parenting.blogs.nytimes.com/2012/04/25/childhood-obesity-leads-to-unnecessary-surgeries/>

Huge rise in gout cases (2012, October 6). Nursingtimes.net. Retrieved April 25, 2016, from
<http://www.nursingtimes.net/nursing-practice/clinical-zones/rheumatology/huge-rise-in-gout-cases/5050304.article/>

Stanford Hospital and Clinics (2013). What is obesity? Stanford, CA: Author. Retrieved April 25, 2016, from
<http://stanfordhospital.org/clinicsmedServices/COE/surgicalServices/generalSurgery/bariatricsurgery/obesity/effects.html/>

Sturm R, Wells K.B. (2001). Does obesity contribute as much to morbidity as poverty or smoking? *Public Health*, 115:229-235. Retrieved April 25, 2016, from <http://www.rand.org/pubs/reprints/RP952.html/>

- 158 Grady, D. (2012, April 29). Obesity-linked diabetes in children resists treatment. *New York Times*. Retrieved April 25, 2016, from <http://www.nytimes.com/2012/04/30/health/research/obesity-and-type-2-diabetes-cases-take-toll-on-children.html>

Today Study Group (2012, June 14). A clinical trial to maintain glycemic control in youth with type 2 diabetes. *New England Journal of Medicine*; 366, 2247-2256. Retrieved April 25, 2016, from
<http://www.nejm.org/doi/full/10.1056/NEJMoa1109333>

- 159 Grady, D. (2012, April 29). Obesity-linked diabetes in children resists treatment. *New York Times*. Retrieved April 25, 2016, from
<http://www.nytimes.com/2012/04/30/health/research/obesity-and-type-2-diabetes-cases-take-toll-on-children.html>

MacNeil/Lehrer Productions (2012, June 6). Study: Standard treatment ineffective for kids with obesity-linked diabetes. *PBS Newshour*. Retrieved April 25, 2016, from
http://www.pbs.org/newshour/bb/health-jan-june12-diabetes_06-06/

Today Study Group (2012, June 14). A clinical trial to maintain glycemic control in youth with type 2 diabetes. *New England Journal of Medicine*; 366, 2247-2256. Retrieved April 25, 2016, from <http://www.nejm.org/doi/full/10.1056/NEJMoa1109333>

- 160 Molnar, A., Boninger, F., Wilkinson, G. & Fogarty, J. (2010). *Effectively embedded: The thirteenth annual report on schoolhouse commercialism trends: 2009-2010*. Tempe, AZ: Commercialism in Education Research Unit, Education Policy Studies Laboratory, Arizona State University. Retrieved January 26, 2016, from
<http://nepc.colorado.edu/publication/Schoolhouse-commercialism-2010>

- 161 Dittmar, H. (Ed.) (2008). *Consumer culture, identity and well-being: The search for the 'good life' and the 'body perfect.'* Hove, England and New York: Psychology Press, Taylor and Francis Group, chapters 6, 7, 8.

For anecdotal evidence that young boys are also susceptible, see:

Hoffman, J. (2010, January 29). Masculinity in a spray can. *New York Times*. Retrieved April 25, 2016, from
<http://www.nytimes.com/2010/01/31/fashion/31smell.html>

- 162 Dittmar, H. (Ed.) (2008). *Consumer culture, identity and well-being: The search for the 'good life' and the 'body perfect.'* Hove, England and New York: Psychology Press, Taylor and Francis Group, 210.

Bell, B.T., Lawton, R. and Dittmar, H. (2007, June). The impact of thin models in music videos on adolescent girls' body dissatisfaction. *Body Image*, 4(2), 137-145.

- 163 Lowes, J. & Tiggerman, M. (2003). Body dissatisfaction, dieting awareness, and the impact of parental influence on young children. *British Journal of Health Psychology*, 8, 135-14.

- 164 Dittmar, H. (Ed.) (2008). *Consumer culture, identity and well-being: The search for the 'good life' and the 'body perfect.'* Hove, England and New York: Psychology Press, Taylor and Francis Group, 216.

- 165 Kanner, A.D. (2007, June 8). *The corporatized child* (p.3). Paper presented at the Psychology-Ecology-Sustainability Conference, Lewis and Clark University, Portland, Oregon.

See also,

Jhally, S. & Barr, W. (n.d.). *Advertising, cultural criticism, and pedagogy: An interview with Sut Jhally*

- (conducted by William O'Barr). Retrieved January 27, 2016, from <http://www.sutjhall.com/articles/advertisingcultura/>
- 166 Hanley, P. (2010, January 26). Consumer culture saturates kids' lives. *The Star-Phoenix*. Retrieved February 1, 2010, from <http://www.thestarphoenix.com/technology/Consumer+culture+saturates+kids+lives/2484487/story.html> [no longer available].
 - 167 Schor, Juliet B. (2004). *Born to buy*. New York, Scribner.
 - 168 Kasser, Tim (2002). *The high price of materialism*. Cambridge, MA: MIT Press.
 - 169 Dill-Shackleford, K. (2009). *How fantasy becomes reality: Seeing through media influence*. NY: Oxford University Press.
Dill-Shackleford, K. (2015, February 5). Personal communication (telephone) with Faith Boninger.
 - 170 Maybach, K.L. & Gold, S.R. (1994). Hyperfemininity and attraction to macho and non-macho men. *The Journal of Sex Research*, 31, 91-98.
 - 171 Mosher, D.L. & Sirkin, M. (1984). Measuring a macho personality. *Journal of Research in Personality*, 18, 150-163.
 - 172 Dill-Shackleford, K. (2009). *How fantasy becomes reality: Seeing through media influence*. NY: Oxford University Press.
Dill-Shackleford, K. (2015, February 5). Personal communication (telephone) with Faith Boninger.
Scharrer, E. (2004). Virtual violence: Gender and aggression in video game advertisements. *Mass Communication and Society*, 7(4), 393-412.
 - 173 Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
 - 174 Dill-Shackleford, K. (2009). *How fantasy becomes reality: Seeing through media influence*. NY: Oxford University Press.
 - 175 Dill-Shackleford, K. (2009). *How fantasy becomes reality: Seeing through media influence*. NY: Oxford University Press.
Molnar, A., Boninger, F., Wilkinson, G., Fogarty, J., & Geary, S. (2010). *Effectively embedded: Schools and the machinery of modern marketing – The thirteenth annual report on schoolhouse commercializing trends: 2009-2010*. Boulder, CO: National Education Policy Center. Retrieved March 24, 2016, from <http://nepc.colorado.edu/publication/Schoolhouse-commercialism-2010>
 - 176 Gewertz, C. (2015, May 13). Online testing drives 'tech prep' priorities. *Education Week*. Retrieved March 8, 2016, from <http://web.a.ebscohost.com.ezproxy1.lib.asu.edu/ehost/detail/detail?vid=13&sid=f8ec6379-d641-44ef-b8ee-b73f7640e401%40sessionmgr4001&hid=4206&bdata=JnNpdGU9ZWVhc3QtbGl2ZQ%3d%3d#AN=102706951&db=aph>
 - Molnar, A. & Boninger, F. (2015, April 9). *On the block: Student data and privacy in the digital age—The seventeenth annual report on schoolhouse commercializing trends, 2013-2014*. Boulder, CO: National Education Policy Center. Retrieved December 22, 2015, from <http://nepc.colorado.edu/publication/schoolhouse-commercialism-2014>
 - 177 Parent Coalition for Student Privacy (2016, February 29). Retrieved February 21, 2016, from <http://www.studentprivacymatters.org/> [website].
 - 178 Lord, R. & Henney, M. (2015, August 20). Surveillance Society: Students easy targets for data miners. *Pittsburgh Post-Gazette*. Retrieved February 29, 2016, from <http://www.post-gazette.com/news/surveillance-society/2015/08/20/Surveillance-Society-Students-easy-targets-for-data-miners/stories/201508230018>
 - 179 States continue to fund elementary and secondary schools less than they did before the Great Recession. At least 31 states provided less state funding per student in the 2013-2014 school year than in the 2007-2008 school year

Leachman, M., Albares, N., Masterson, K., & Wallace, M. (2016, January). Most states have cut school funding, and some continue cutting. *Center on Budget and Policy Priorities*. Retrieved March 27, 2016, from <http://www.cbpp.org/research/state-budget-and-tax/most-states-have-cut-school-funding-and-some-continue-cutting>

See also,

Baker, B.D. (2010, December 23). The new normal? An extension of the old normal in many states! *National Education Policy Center*. Retrieved March 27, 2016, from <http://nepc.colorado.edu/thinktank/new-normal>

180 Kohn, A. (2016, March 16). The overselling of education technology. *Edsurge*. Retrieved March 27, 2016, from <https://www.edsurge.com/news/2016-03-16-the-overselling-of-education-technology>

181 See,

Harris, J.L., Heard, A., & Schwartz, M. (2014, January). *Older but still vulnerable: All children need protection from unhealthy food marketing*. UConn Rudd Center for Food Policy and Obesity. Retrieved March 9, 2016, from http://www.uconnruddcenter.org/files/Pdfs/Protecting_Older_Children_3_14.pdf

182 National Association of State Boards of Education (2015, July 22). Comparison of 2015 federal education data privacy bills. Author. Retrieved March 9, 2016, from <http://www.nasbe.org/wp-content/uploads/2015-Federal-Education-Data-Privacy-Bills-Comparison-2015.07.22-Public.pdf>