Data&Society

Advertising in Schools

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Introduction

If you have ever attended a high school football game, you've likely spotted ads for the town dentist's office or the small local bank on the field's scoreboard or, stepping into the school hallways, you might see a sprawling corporate ad across student lockers. This type of advertising can largely be categorized as *contextual*—directed towards a specific audience by virtue of its placement within a particular location. And yet, most current discussions about commercialism in schools focus on *addressable* advertising, or the use of data to target advertising to a specific individual. In discussions of potential consequences for students, we need to ensure that contextual advertising is not conflated with data collection. Debates over digital advertising in schools have inherited the frames through which older, pre-digital forms of advertising have been conceptualized, and have also been characterized as departing from them in significant ways. But what, exactly, is new and how have older practices evolved?

Advocacy groups are increasingly concerned that digital advertising might allow more pervasive marketing to children in schools. Extending arguments that have long been used around advertising in schools, they claim that as a "captive audience," students in primary and secondary schools have little choice over what they are exposed to on school grounds (Rossell and Bachen 1992; Consumers Union, 1998; Ford, 2010). These groups support (1) limiting children's exposure to advertising at school and (2) restricting use of student data for marketing purposes. Absent from these expressions of concern is evidence that addressable advertising is occurring at schools or that student data are used for in-school advertising. Recent debates ideologically couple student data collection with third party data sharing and addressable advertising (Hamison and Kiesecker, 2012). It is important to untangle what is new because of technology and what is an ongoing concern. For over a century, schools have collected

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demographic, behavioral, performance, and health-related information about students to inform instruction, programming, resource allocation, and interventions (Marsh, Pane, and Hamilton, 2006; Snyder, 1993). And debates about advertising in schools are not new (Larson 2001).

Although numerous laws and policies already exist to regulate what marketers can do with student information (see Appendix), concerns over the changing nature of student data collection have prompted new legislation. In 2015 alone, U.S. legislators passed 28 state laws regarding student privacy, all of which specifically addressed the commercial use of data (Vance, 2016).   Existing and emerging legislation focuses on children's right to privacy and attempts to restrict the collection of personal information and sharing with third parties; however, across state and federal laws, advertising to children is not illegal. In brief, at the federal level, the Federal Educational Rights and Privacy Act (FERPA) protects student data from unauthorized disclosure, with specific provisions for mental health and disciplinary data, and the Protection of Pupil Rights Amendment (PPRA) provides parents with some rights regarding marketing in schools. The Children's Online Privacy Protection Act (COPPA) restricts the kinds of data that child-directed websites can collect.

A few high profile cases of the misuse of student data for commercial purposes have sparked greater scrutiny of companies' obligations towards student privacy standards. In 2015, digital rights group the Electronic Frontier Foundation (EFF) filed an official complaint with the Federal Trade Commission (FTC) against Google Apps for Education's collection of student information for marketing purposes (Mitrano, 2015). India-based mobile ad firm InMobi was fined by the FTC in June 2016 for violating COPPA. Though not an educational technology company, InMobi's tracking of the location of child users without parental consent (including instances where parents had opted out) affects perceptions of trustworthiness across child-centered apps (Moscaritolo, 2016). While such cases have generated significant media coverage and regulatory action, there is scant evidence that the use of student data for advertising purposes in violation of the law is a widespread practice. Responses from InMobi and Google indicate negligence insofar as they failed to develop programs to prevent tracking, rather than intentional targeting of children's data. Many companies are paying greater attention to these concerns. By 2015, 209 learning technology companies signed a pledge promising that they would refrain from using or disclosing student information they collect for advertising (Student Privacy Pledge).

While risks of exposure to traditional advertising have been the subject of various studies in the past, evidence on the relationship between data collection, advertising, and potential harms remains limited. Research on potential harms arising from advertising primarily focus on exposure in the home environment, finding evidence of increased consumerism (Wilcox, et al., 2004) and mixed results in

negative impacts on food choices (Reisch, et al., 2013; Livingstone and Helsper, 2006). These studies also acknowledge that advertising can additionally serve a positive role in promoting healthy practices and raising awareness. Defining harm in an advertising context is often contested. Some argue that commercialism in youth culture is itself harmful. For example, researchers argued harm in one study that found in the case of Channel One, a twelve-minute news program shown in schools that contains two minutes of advertising,[1] that students exposed to Channel One were significantly more favorable toward products advertised in the program, demonstrated higher recall of product brands, and showed higher tendencies toward materialism than the control group (Greenburg and Brand, 1993).

What new harms might student data collection and sharing represent in terms of advertising? For the most part, concerns remain unspecified and general, more suspicion around how data is being used than actual examples of harm resulting from student data use in advertising (Kharif, 2014). A legacy of fear surrounding school practices may be impacting debate over digital advertising in schools. While 'tracking' has a specific use in describing the process of following a student's behaviors in an online system or browser, the term has a fraught history in schooling. *Tracking*, or ability grouping in schools has been seen by critics as reinforcing inequality structures, contributing to a cycle of poverty, and enabling the school to prison pipeline (Ansalone, 2001). Uncertainty surrounding what data is collected by learning technologies promotes fears of worst case scenarios in which data collected now will inhibit a student's future opportunities. The processes and purposes of sharing with third parties remain unclear, making it difficult for parents, teachers, and privacy advocates to determine what threat, real or perceived, digital advertising might pose for students.

Another point of confusion is the business models for educational technology companies whose products are used in schools. A prevailing assumption is that free services are funded by advertising revenue. If advertising isn't funding edtech companies, how do they make money? While large companies such as Facebook, Twitter, and Google rely on advertising as part of their business model, increasingly, educational technology companies are discouraged from pursuing an advertising-based revenue model. The founders of Class Dojo, a communications app for teachers and parents, insist that for the foreseeable future, their product will remain free and they will not sell data. The founders report that their current model depends upon 'venture capital investments', which industry experts observe is not a sustainable model (Kolodny, 2015). Edmodo, an online learning community platform, follows the more common 'freemium' model: its service is free, but it receives a percentage of profits

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[1] Channel One was started in 1989 and was purchased May 2014 by Houghton Mifflin Harcourt.

from third party apps sold on its platform (similar to Apple's App Store). Edmodo also charges for professional development services and has recently launched a premium service, Snapshot for Schools, that charges an annual fee. Who is the customer for these educational technology products? Depending on their business model, edtech companies may target school administrators, teachers, government, military, other edtech companies, or parents (Arora, nd).

While this primer does not aim to weigh in on long-standing debates on the potentially detrimental effects of advertising on youth, nor make claims as to the appropriate limits of commercialism in schools, it does seek to analyze the specific impact of new digital and networked technologies on this long established area of contention and concern.

Types of Advertising

Because schools are considered open forums for community involvement, the First Amendment protects free speech in schools, and with it, advertising on school grounds and properties.[2] In 2000, the U. S. Government's General Accounting Office (GAO) identified four types of advertising occurring in schools: (1) **sales of products** within school grounds; (2) **direct advertising** on school property; (3) **indirect advertising** through sponsored material/activities; and (4) **market research**.

Today, digital advertising is playing a greater role in school settings, through web traffic to school and educational websites, while new forms of advertising have emerged that originate exclusively from online environments as opposed to contracts between districts and vendors. Importantly, the GAO's typology includes three categories for understanding *exposure* to advertising and products (sales of products, direct advertising, and sponsored material) and only *one* that addresses data *collection* (market research). With the advent of digital advertising, these two processes (exposure and collection) typically occur together outside of school, raising questions about how existing typologies can be adapted to the current landscape. The following section uses the four-part framework defined by the GAO to explain the traditional practices of in-school marketing and how those practices have been changed by network technologies. The differences between contextual and addressable advertising have implications for this framework and we will show where advertising is now data-driven and addressable versus traditionally contextual.

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[2] School property is considered both "nonpublic" *and* public forums. For example, see Texas Association of School Board, 2015.

Traditional Advertising Practices

Sales of products have long occurred on school campuses, with companies annually contracting with schools to sell snack foods and soft drinks in cafeterias and vending machines. Such exclusive contextual advertising agreements have long been a practice between schools and vendors (Jennings, 2011).

Many areas of school campuses contain forms of direct, contextual advertising that do not involve the sale of products; logos are branded on school billboards, athletic fields, and lockers; printed ads are common in yearbooks and school bulletins.[3] An oft-cited example is the "Channel One News" program created in 1989, which was subject to controversy over its advertising practices (Channel One News). In exchange for free television equipment, Channel One (as previously mentioned) provided a daily ten-minute complimentary educational broadcast with two minutes of paid advertisements during the show (Austin et al., 2006). The incentive structure of advertising in exchange for resources has been criticized for potentially compelling underserved schools to tolerate ads and sales in exchange for resources. According to findings by the American Psychological Association (Wilcox et al., 2004, p. 60), marketing and exclusive agreements may be more prevalent at schools in low-income areas, where they are "more likely than their middle- or upper-class counterparts to welcome cola contracts or other commercial incentives as a source of funding."

Retailers and manufacturers have created forms of indirect contextual advertising through sponsored educational materials. Fast-food and general retailers like McDonald's and Target have integrated advertising with incentive programs in certain districts. In one case, McDonald's offered to offset printing costs for schools if they would include an offer for free happy meals for "A" and "B" students along with report cards (Elliot, 2007). Companies such as Young Minds Inspired (YMI) work with corporations like Walmart and Pfizer, among others, to develop educational materials around their products, which YMI then markets to schools (Young Minds Inspired, n.d.). Unlike simple, direct branding (logos on school materials) these educational materials advertise their primary function as educational, while also including messaging or values approved by corporations.

Other companies and research firms have focused on performing market research in schools. Student data is lawfully collected and sold for marketing by organizations like the College Board and American

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[3] For an example of sales in New Jersey, see Rundquist, 2013.

College Testing (ACT). These suppliers of national standardized tests for college placement are able to sell student information. The data is considered voluntarily given when students are asked, prior to the exam, to check off a box if they wish to receive information from colleges and scholarship organizations (Simon, 2014). In some cases, market research on students has been contested. In 1999, research firm Educational Market Resources came under scrutiny for its access to at least 1,000 schools in which it performed market research through panels and surveys in middle school classrooms; school districts received $5 per student for each completed student survey (Farber, 1999).

Advertising Goes Digital

As web and digital technologies have made their ways into school halls and classrooms alike, many traditional models are finding online equivalents. There have been significant changes to both direct and indirect contextual advertising, as well as a significant expansion of the data collection/use practices previously categorized as market research. Both direct and indirect marketing can now involve digital exclusive agreements and online fundraising and rewards programs. In addition, digital technologies have been seamlessly integrated into the sponsored educational materials of YMI and the like. Finally, traditional "market research" has expanded to include the collection and selling of student metadata in larger established markets for the use of granular user data. These practices often tap into the same concerns over privacy and influence as their traditional counterparts, but the formal properties of network technologies can make them more difficult to document and/or regulate.

Whereas direct contextual marketing through exclusive contracts used to be limited to logos and branding on school premises, digital exclusive agreements are becoming more common. For example, educational technology company SkoolLive, which brands itself as the "first, nationwide, on-campus digital network,"(SkoolLive) provides kiosks to schools[4] that not only act as online bulletin boards, but also carry local and national advertisements (DeNisco, 2015). Physical school property is not the only space for digital advertising; some of the most high traffic educational properties are virtual: school homepages, which, along with email, are courted by marketers who count on frequent hits by both parents and children. Marketing firms like Education Funding Partners have created programs that specialize in connecting businesses to school districts in order to negotiate advertising on websites (Education Funding Partners, 2014).

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[4] See the 2016 market map available at http://www.skoollive.com/#!markets/kyyjt.

While fundraising and other incentive programs still exist within school walls, retailers have also included them for online fundraising and rewards. Staples and Target offer teachers and students reward programs, which give a percentage of profits on web purchases to affiliated schools.[5] Classic fundraising schemes, such as selling wrapping paper during the winter holidays, now have online stores to augment traditional door-to-door sales.[6] And web native brands are also participating; Bing has integrated redeemable points into its educational search engine (Connell, 2014).

Just as direct marketing has found its way online as students and families use the web as part of their daily interactions with schools, indirect marketing through educational material has also moved to the web as faculty digitize their instruction and exercises. YMI, mentioned in the previous section, for instance, now creates web exclusive courses, exercises and websites for its partners. Along with the National Football League they developed a full curriculum in math and language arts for third and fourth graders, entitled NFL Rush Fantasy – Learn, Play, Score, which was subsequently taken down. The site required students to register online in order to access player charts to use in class exercises (Molnar and Boninger, 2016).

While collecting identifiable information on students is illegal, selling student metadata — data describing general rather than specific online activity — is a potentially valuable commodity to vendors. When a website or app is designated as a "school official" with a legitimate educational interest in using accessed student information, it must adhere to stricter regulations than a general purpose, consumer-facing site or app. Commercial organizations with an educational focus can still aggregate data and metadata from children over the age of thirteen (Center for Democracy & Technology, 2015). Such is the case with free website Khan Academy, which does not operate inside the school system, but tracks, collects, and shares information on its students automatically, though company officials state that all third party sharing is done with explicit consent of users (Herold, 2014b). In fact, Scholastic Inc.'s list of the 25 best websites for teachers all contain advertising widgets and/or collect data on site traffic primarily through Google Analytics.[7]

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[5] For example, see Woolridge Elementary PTA, "Rewards Programs" and Staples, "Staples Rewards."
[6] For example, see School-fundraisers.com, "Online Fundraising: School Fundraising Ideas."
[7] Widgets and cookies discovered via the "Ghostery" extension for Chrome by the author (Hudson, 2016).

Current Challenges and Issues

The landscape of marketing in schools and among students has become an increasingly complex field. New technologies exist alongside traditional sponsorship contracts. Students are logging in to third-party platforms from school computers and doing research on Wikipedia, *The New York Times*, and YouTube alike. At the same time, parents, teachers, as well as local and federal lawmakers are all wrestling with the complications of new technologies and old regulations. What follows is a consideration of four major challenges in this area: the changing boundaries of "the school," the difficulties of transparency, the murky legality of certain marketing practices, and a confusion of terms and practice with regards to data collection and use.

The Changing Boundaries of School Activity

Distinctions between in-school versus out-of-school spaces are no longer adequate for understanding how students encounter advertising or become subject to data collection. While digital educational services must contract and negotiate what and how they may advertise to students in the same way as big-box retailers, these restrictions are not universal to all ads students may encounter. For one, it is difficult for students not to see advertisements during the school day if they have web access. While educational applications and websites contracted with schools are required to restrict advertising in the classroom, commercial websites are not. Sites ranging from TeensHealth to Teen Vogue, and social media sites like Facebook, all contain "cookies," or tracking data of user activity, for advertising. Unless the school has set up advertising blockers on their networks, students are exposed to advertising that is consistent with general web usage. Data will also be collected on students by these websites automatically, unless age or educational purpose is specified.[8] Importantly, advertising has increasingly become part of the conditions of access to various educational tools and materials, as teachers send students online for assignments.

Given the blurred boundaries between young people as students and as general web users, and the differences in protections this entails, new anxieties have emerged over private companies handling sensitive student material. The Data Quality Campaign (DQC), an advocacy group devoted to promoting student achievement through the use of data, encourages both more transparency and clarity with how districts contract with vendors and strengthening structures and policies for

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[8] Such filtering may be outside of the norm for IT departments in schools who focus more exclusively on hacking than regulating advertising. For thoughts on the subject see: Chou, 2016.

unintentional breaches.[9] Importantly, such breaches are inevitable with online data.[10] Yet much of the concerns over student advertising have been conflated with those surrounding student data privacy more generally.

Issues of Transparency and Control

While companies like Pizza Hut and McDonald's have legally contracted and advertised in schools for over a decade, their exclusive agreements and products are much more clear-cut than the convoluted "terms of service" authored by tech companies, which are continuously modified as services are upgraded. One of the major issues in the current landscape is that while school districts act as de facto gatekeepers, negotiating how advertising can be implemented on their properties, there is a lack of transparency, particularly to parents, as to how this happens. In 2015, a Future of Privacy Forum (FPF, 2015) survey found that only 21% of parents approved the use of data to "help companies offer more targeted ads." As legal scholar Elana Zeide (2015) has observed, parents increasingly worry that "private companies could prioritize profit motives at students' expense by, for example, taking shortcuts on security or sharing or selling information to data brokers." Consequently, an important question is how regulatory oversight can be adapted to the shifting nature of these forms of agreements. FPF's survey noted that parents were generally confident about their understanding of how student data is used by school districts, and yet lacked knowledge of federal laws on the subject.

While there has been a clear increase in the use of cloud-computing and web-based programs in schools, the methods various school districts use to regulate student data are decidedly more opaque. A study (Reidenberg et al., 2013) by the Center for Law and Information Policy (CLIP) at Fordham University revealed that 95% of public school districts are using cloud-based services. However, they could not identify what over half the services were used for, and found the contracts for the services to be confusing to teachers. Ultimately, the researchers concluded that schools lacked understanding of the "nature of student information that the district outsources to third parties" (p. 24).

And such confusion is not limited to schools and faculty. In an exploratory international survey of parents' attitudes toward online privacy, Clemons and Wilson (2015) found that while parents were aware of tracking in search engine queries, they were generally less informed about how service providers were able to integrate their child's information from numerous online sources for the sake

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[9] For an example of their policies see Data Quality Campaign, 2014.
[10] Occasional data breaches have occurred, although not at a national scale. See: Meissner, 2015; D'Orio, "Little Hacks."; Goldman, 2013.

of advertising. While parents believed they should have power over how student data should be collected and used, there was a disconnect between their assumptions about data collection and the realities of use.

Misuse of Student Data

Legislators face an increasingly complex tangle of national and state laws as well as policies that have not been rewritten for the latest data-driven advertising methods. As a result, policymakers often set broad and unclear rules for how to regulate and enforce proper practices, which is confusing for advertisers because standards and expectations are unevenly applied and unclear (Bulger, Taylor & Schroeder, 2014).

The importance of transparency in corporate handling of student data has been confirmed by a number of cases where illegal practices have been uncovered. In 2013, a lawsuit was filed against Google by 9 plaintiffs over the mining of student data through its educational email applications.[11] The suit, based on violations of wiretapping and privacy laws, was settled out of court (Ng & Somvicihian, 2014), but led to Google's admission that it had automatically aggregated student data through its email and other apps for education services. Representatives admitted to scanning and indexing educational emails "for a variety of purposes, including potential advertising, via automated processes that cannot be turned off..." (Herold, 2014a). Shortly after, the company reported removing all scanning from its Apps for Education email service, and made similar changes to business and government accounts (Bout, 2014). Although numbers were not released regarding the magnitude of Google's data acquisition, as one of the largest actors in educational technology and advertising, the company is emblematic of what appears to be a wider trend of automatically collecting data as part of the general process of the service.

Class Size Matters, a parent advocacy group lobbied against (and precipitated the closure of) inBloom, a proposed personalized learning platform that was scheduled for adoption by at least 9 states (Haimson, 2013). Lack of transparency from the non-profit initiative resulted in the advocacy group questioning inBloom's student data collection practices, including data security, opt-out, and potential for sharing with third parties.[12] Poorly defined data-privacy policies by service providers such as social education app Edmodo have also led to uncertainty and concerns about how student metadata are shared with

[11] For a full analysis of the case, see Mitrano, 2015.
[12] For details on this affiliation and its effect on New York State education policy, see Bennett & Weber, 2015

third parties (Herold, 2014b). Student behavior-tracking apps like ClassDojo have privacy policies that promise not to sell or share student information to third parties for advertising or marketing, but also state that the company may show its users advertisements "based in part on your personally identifiable information" (Singer, 2014).

Ultimately, however, many concerns about the misuse of student data commercially are largely speculative. In order to accommodate the release schedule and speed of app development, a number of educational portals, such as Clever, have contracted with districts, with the intent of being one-stop-shops for safe and secure programs of value to teachers and students. As of 2015, Clever is estimated to be used by one in three schools in the U.S. (Shapiro, 2015). However, its position allows a potential new mode of entry for advertisers who could theoretically solicit the portal to include branded content. Additionally, Clever's terms of service explicitly state that they will not assume responsibility for advertisements or transactions from third party providers (Clever, "Clever"). There is no evidence that Clever is catering to marketers—in fact, the company only permits teachers to access apps that have first received district approval, thus adhering to traditional contract agreements between vendors and schools, and complying with FERPA.[13] Ultimately, however, while the current legal structure allows for businesses to collect student data, they are primarily expected to self-regulate their use of that information, and face legal and financial ramifications only if they are investigated by the FTC or other agencies.[14]

Confusion of Terms and Practice

Before the advent of addressable advertising, school-based advertising was contextual: advertisers knew where people would be at a certain time, for example a basketball game or a movie and directed their messaging to a particular group of people in a particular geographic area or in the context of a particular event. We could not find evidence that school-based advertising has shifted from this approach. Yet, current debates around advertising involving student data are mainly concerned with *addressable* advertising, which is targeted to a particular person based on data analysis to help determine preferences and likelihood of buying a particular product or engaging in a desired activity.

[14] FERPA complaints are filed through the Family Policy Compliance Office of the U.S. Department of Education. Other government agencies including the Government Accountability Office and houses of Congress have held hearings/commissioned reports on the subject.

A shift in focus towards closer scrutiny of more common practices and business models pursued by educational technology companies may be valuable in better understanding actual risks to students. There are emerging concerns over two business practices in particular – the freemium model and brand lock-in. In both cases, a lack of transparency over what data is collected and how it is shared and re-shared contributes to fears that businesses are granted an inordinate, and potentially unchecked, degree of access and power within schools and vis-à-vis students in particular.

Some businesses operate under the "freemium" model, in which companies provide limited services in their apps for free and then charge for additional features. One means to sustain their venture is through the collection of data, which is sold to advertisers for marketing purposes. As previously mentioned, Edmodo, a social network site marketed for schools had 33 million registered users in 2014 (Herold, 2014b), does not disclose direct student data. Instead its model focuses on revenue from third party app sales on its platform and annual subscriptions to its premium service.

Brand "lock-in" (Lanier, 2011) occurs when a student user becomes attached to an account through a school service. For instance, if a school uses Google Apps for Education and a student is given a Google-run education account for email, word processing, and other activities, he or she may then "lock-in" to the account, developing brand loyalty to Google, having become accustomed to the applications. This is significant given that, as of the third quarter of 2015, Google's penetration into the US educational technology market consisted of 40 million users of Google Apps for Education (Boost eLearning, 2015) and 53% of all devices sold to classrooms are in the form of either Chromebooks or run on Google's Android operating system (Taylor, 2015).

While Google will not collect data from the account, a student may be reliant on its service for years. If the student opens a secondary personal account with the company, he or she, if over the age of thirteen, can then be served advertisements. In a 2015 complaint to the FTC, the EFF alleged that this type of lock-in also means that as students move from Google's educational to commercial services — from email to YouTube, for instance — they will then be subject to advertising through its commercial applications (Electronic Frontier Foundation, 2015). Google has countered the EFF's claims in a public statement, which asserts that core Google Apps for Education abide by student protection laws; use of Chrome Sync is voluntary and information collected is anonymized; and add-on commercial services, such as YouTube or Blogger, can be disabled by students or teachers (Rochelle, 2015).

Conclusions and Open Questions

Concerns around advertising in schools are entangled in overlapping fears around potential harms of addressable advertising, and the potential for student data collection to result in data breaches or inhibit future opportunities. Conceptually, advertising is paired with student data collection and student data collection is paired with sharing with third parties. This primer has attempted to disentangle school-based advertising from student data collection to better assess potential harms. While data collection and sharing practices remain murky and actual business models of edtech companies continue to be unclear, the motives behind advertising in schools will be treated with suspicion.

Moving forward, schools and advertisers should be more forthcoming and transparent to parents about the potential commercial aspects of data collected about students, otherwise uncertainty will likely result in restricting potentially beneficial learning resources. Districts, industry, and philanthropic groups must partner to provide education for parents and teachers around the benefits of data use and provide transparency around the ways in which data are secured and shared. If districts and industry implemented safeguards, both legal and practical, it could help assuage concerns around the potential for data collection to prevent students' access to future professional and educational opportunities through sharing of disciplinary or mental health records. In the long run, what might fear and uncertainty cost? In focusing on addressable advertising, is there a potential for missing a larger harm or conversely missing out on the potential benefits of data-driven learning?

Industry practice

- How common is the marketing of metadata by educationally-oriented websites and applications? Beyond the schoolroom, when and where are websites with an educational purpose collecting data? And for what?

- What kinds of advertising are placed in schools? Are some types of content seen as more or less problematic? For example, should advertisements from colleges, SAT prep courses, or student loan services be treated the same as advertisements from retailers or fast food?

Blurring of boundaries between school-related activities occurring in school and out of school

- How do school districts and legislators frame "the problem"? Do they understand issues of digital advertising strictly within the spatial boundaries of school grounds, or do they view it as an issue of access and income?

- What responsibilities do schools have to educate students and families about digital advertising by services that parents or students might select for themselves?

- How does student exposure to advertising differ from exposure outside of school? What are the implications of focusing on school settings versus youth exposure more generally?

Effects on student development and opportunity

- How are students affected by digital advertising? To what extent is digital advertising part of the school day? How does out-of-school advertising influence students' educational development?

- What commercial data collection is occurring in schools? Does commercial data collection impact students' future educational opportunities and access to financial aid?

Effects on equity

- How does advertising differ across schools with demographics of varying income levels? Is student exposure to digital advertising more common in low, middle, or high-income neighborhoods? Are other forms of advertising more prevalent in these areas?

- Does advertising intensify existing equity challenges? Do schools in more privileged environments receive more or less benefits from advertising? Do advertisers pay more to attract the attention of wealthier students?

Stakeholder understanding and response

- How knowledgeable are stakeholders of current and potential legislation concerning students and marketing? How well versed are parents with the details of contractors' terms of service? Do companies know and adhere to the legal requirements of doing business in schools? Do school districts understand how student data is collected for the sake of marketing?

- What non-legal approaches are stakeholders taking to address advertising issues? To what degree is web content filtered in schools? Are schools utilizing web filters or ad blockers to regulate advertising content?

While technology has altered how data is collected and introduced new pathways for enabling advertisers to reach students, many of these questions raise broader issues about how students should be protected and supported. Moving forward, addressing advertising in educational contexts requires different tactics as divisions between learning, information, and sociality are being reconfigured.

APPENDIX: A Brief Guide to Legal Issues & Policies

A set of laws and policies regarding advertising to children regulates what marketers can do on school property. At the core of these laws are three key legal points:

Student Privacy: Only parents and schools have exclusive rights to student information. At issue is when and to whom educators can disclose information. As schools outsource administrative activities to businesses, the potential for misuse of student data has grown.

Data Safety and Longevity: Schools and third party vendors are expected to protect student information from any potential breach, but do they have the capacity and for how long must the data remain secure? This debate is particularly salient because online advertisers are capable of building user profiles and tracking persons through their web activity.

Transparency of Commercial Activity in Schools: While districts contract with vendors for a variety of services, schools must inform parents of the relationship that exists between the school and the vendor. The law puts the onus on educators to inform parents of commercial activity in which children take part, so that parents may opt out if they choose (Reidenberg et al., 2013). However, with constantly changing terms of service contracts, the task of clearly and promptly informing parents of third party vendors' activities in schools is becoming increasingly difficult for districts.

Major Federal Legislation On Student Privacy

Three laws serve as the cornerstone of national student privacy legislation, providing guidelines to both advertisers and school districts on the manner, content, and disclosure of advertising to students:

The **Family Education Rights and Privacy Act (FERPA)** of 1974 is designed to grant parents access to and control over the disclosure of student information, empowering them to opt in or out of sharing educational records. FERPA limits the disclosure of school data to all but "school officials" without parental consent. After amendments to the law in 2008 and 2011, the term "school officials" was expanded to include vendors and contractors who perform educational services that normally would be undertaken by employees ("Family Educational Rights," p. 14). This expansion has enabled schools to disclose student details to businesses that not only provide school services, but also advertise on the internet. For example, FERPA is the reason why Google qualifies as a "school official"; their Apps for Education suite (GAFE) supplies services that would otherwise be covered by the school.

Consequently, the company can bypass the rule providing parents the ability to "opt out" of the service (Peterson, 2015). However, under FERPA, the contracted businesses cannot independently disclose or otherwise handle educational material without district and, ultimately, parental permission. Simply stated, a vendor utilizing student data without parental approval for the sake of marketing would be in violation of FERPA (Reidenberg et al., 2013).

The second law, the **Children's Online Privacy Protection Act (COPPA)** limits the amount of personally identifiable information that can be collected online from children under the age of thirteen without parental permission. The law was expanded by the FTC in 2013 to include any sort of "persistent identifier that can be used to recognize a user over time and across different websites or online services" ("Complying with COPPA"). Once companies identify the student/child as being under a certain age, they must obtain parental consent before collecting further information.[15] A point of clarification is that COPPA does not make advertising to children illegal, but limits the types of data that can be collected from children under the age of thirteen.

Finally, the **Protection of Pupil Rights Amendment (PPRA)** directly addresses the collection of student data for marketing purposes. The PPRA requires schools to notify parents in order to allow them to opt out of having their children participate in a variety of activities, including the "collection, disclosure or use of personal information collected from students for marketing purposes, or to sell or otherwise provide information to others for marketing purposes" (Reidenberg et al., 2013, p. 9). Giving parents the right to opt out in these cases has also been written into proposed state legislation.[16]

State Laws On Student Privacy

A growing patchwork of state laws apply to student data. New legislation on commercial activity in schools is being put forward, with 34 bills passed nationally from 2011 to 2014 (Molnar, and Boninger, 2015, p. 11), and 28 new student privacy laws approved by 15 states in 2015 (Data Quality Campaign, 2015). With growing numbers of bills proposed each year – 170 bills were brought to a vote in the first four months of 2015 (Center for Democracy & Technology, 2015, p. 10) – it is increasingly difficult for corporations to clearly navigate through what counts as acceptable commercial activities, navigating between local

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[15] See answer 14 of COPPA's frequently asked questions: https://www.ftc.gov/tips-advice/business-center/guidance/complying-coppa-frequently-asked-questions.
[16] Data Quality Campaign also found a tendency towards both opt-out and opt-in options by parents in the statutes proposed in 2015. See: Data Quality Campaign, 2015.

laws and national standards.

A number of trends have surfaced in the most recent spate of proposed legislation. First, out of the 34 bills concerning student privacy ratified from 2011 to 2014, less than half directly addressed the use of data for advertising purposes.[17] Twenty-five of the bills proposed in 2015 were based on California's Student Online Personal Information Protection Act (SOPIPA; Data Quality Campaign, 2015), which is becoming a template for framing state rules. SOPIPA recognizes that existing laws restrict website operators from acquiring and disseminating information from minors for the sake of advertising; it further prohibits "an operator of an internet website, online service, online application, or mobile application from knowingly engaging in targeted advertising to students or their parents or legal guardians, using covered information to amass a profile about a K–12 student, [or] selling a student's information..." ("Bill Text – SB-1177"). Although the bill does allow for "marketing educational products directly to parents," it requires that the material "did not result from the use of covered information obtained by the operator" through services provided to the school.

SOPIPA's approach, which is primarily prohibitive to advertisers, is not uncommon according to advocacy group Data Quality Campaign (DQC). This organization found that 125 of the 182 bills introduced in 2015 were prohibitive in action, as opposed to focused on "governance," which they define as giving more power to school boards and/or appointing a specific officer to deal with issues of privacy (Data Quality Campaign, 2015). The bill also requires service providers to ensure procedures are followed in safeguarding data, another common trend according to DQC.

Other Laws and Policies

Section 5 of the Federal Trade Commission (FTC) Act allows the Commission to take action against "unfair or deceptive" business practices against consumers (Center for Democracy & Technology, 2015, p. 9). As a consequence, the FTC can investigate and fine companies found in violation of either legal or publicly stated practices. Moreover, the Software & Information Industry Association's (SIIA) Student Privacy Pledge, which has been signed by 209 educational technology companies, acts as an industry-driven public statement of fair practice, and infractions can warrant sanctions and penalties from the

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[17] To glean this number we looked at CERU's report (Molnar and Boninger, 2015), and compared numbers to SIIA's chart of new laws in 2014: https://www.siia.net/LinkClick.aspx?fileticket=F-VZJXxuP6A%3D&portalid=0. Based on these numbers, somewhere between 9 and 13 laws were passed that addressed the issue.

FTC. However, the FTC is unable to cope with and investigate day-to-day privacy concerns by design (ibid., p. 2).

While most of these measures have centered on the safety of student data, the Children's Internet Protection Act (CIPA) explicitly focuses on regulating the web content children can access on school grounds. The law mandates the use of web content filters in K-12 schools. However, CIPA primarily inhibits access to anything harmful to minors, with an emphasis on obscenity and pornography, rather than advertising or marketing.

As of 2015, seven new national bills and amendments have been proposed in Congress. All but one of the resolutions regulate the use of student data for commercial purposes, either by banning service providers from selling or using data for targeted advertising, or by withholding funds to institutions who share information. As with state laws, two of the bills afford more power to parents, by preventing third party access without parental approval or allowing parents to ask third parties to delete information about their child.[18]

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[18] For full analysis, see National Association of Boards of Education, 2015.

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