POLICY BRIEF

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Will Big Data from the Digital Ocean Swamp Privacy Rights?

EXECUTIVE SUMMARY

Pearson, the testing giant that deems itself "the world's leading learning company," published a report titled, "Impacts of the Digital Ocean on Education" in February 2014. The report suggests, "As technology facilitates movement toward collecting information from more natural interactions, the social nature of everyday lives will become apparent in the data collected." Critics are concerned not only about the reconceptualization of learning such a movement might spur but also the privacy rights that might be compromised in its pursuit.

In the same month, the U.S. Department of Education issued a 14-page advisory titled, "Protecting Student Privacy While Using Online Educational Services: Requirements and Best Practices." The document provides advice conditioned by the Family Educational Rights and Privacy Act (FERPA), the Protection of Pupil Rights Amendment (PPRA), and other relevant data-security measures.

Schools and universities need to examine and take action on privacy issues before their institutions are sucked down by the undertow of the Digital Ocean. Personalizing learning based on digital usage—a great deal of which is generated by testing that is of questionable value—sounds good in the Pearson report. But beyond the sound bites lie unanswered questions: What is learning? What learning is of most value—and to whom? And how can understandings about learning shape effective teaching? Until these fundamental questions are answered, Big Data poses more problems than solutions.

Institutions—whether K-12 or higher education—should work to foster effective privacy management. A starting point may lie in three objectives: 1) reform FERPA, 2) designate a Chief Privacy Officer, and 3) create an institutional privacy plan.

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INTRODUCTION

In February 2014, Pearson, the testing giant that deems itself "the world's leading learning company," published a report titled, "Impacts of the Digital Ocean on Education" (DiCerbo and Behrens 2014). The authors of the report write glowingly about moving from "items in isolation to activity in context," from "assessment isolation to educational unification," and from "individual paradigm to social paradigm"—all resulting from new capacities to collect and analyze data. Big Data.

Pearson authors Kristen E. DiCerbo and John T. Behrens expound:

> As technology facilitates movement toward collecting information from more natural interactions, the social nature of everyday lives will become apparent in the data collected. (p. iii)

In an ideal world this notion might seem benign. Coming from a corporate giant that already has its tentacles in the lives of students and educators to an unprecedented degree, it sounds more like a tsunami-grade invasion of privacy. Unless safeguards are instituted at all levels, critics aver, personal privacy rights are likely to drown in this so-called Digital Ocean.

DISCUSSION

Big Data collection and use by corporations such as Pearson pose privacy risks that are causing increasing concern across the spectrum of education, from kindergarten to grad school. Concerns stem not only from what the Pearson report terms a shift from a "digital desert" to a "digital ocean," but also from recent news reports about data breaches and revelations about the data-mining practices of various corporate entities. Concerns about the use and misuse of Big Data cross international boundaries, and other nations are likely to take note of what is occurring in the United States.

In February 2014, the U.S. Department of Education increased pressure on schools and universities to review and reform their procedures for outsourcing student data to providers such as Pearson, Google, and other online services. The department issued a 14-page advisory titled, "Protecting Student Privacy While Using Online Educational Services: Requirements and Best Practices," through its Privacy Technical Assistance Center (PTAC at http://ptac.ed.gov).

The document provides advice conditioned by the Family Educational Rights and Privacy Act (FERPA, which originated in 1974 and has been reauthorized over the years), the Protection of Pupil Rights Amendment (PPRA), and other relevant data-security measures. It is a valuable resource for school and university personnel and institutional policy makers. Specifically, the advisory report addresses:

> privacy and security considerations relating to computer software, mobile applications (apps), and web-based tools provided by a third-party to a school or district that students and/or their parents access via the Internet and use as part of a school activity. (p. 1)

While the privacy issues broadly concern online learning, they come squarely into focus for K-12 educators relative to emerging Common Core State Standards assessments, which are delivered online and intended to be pervasive, affecting students in most grades and in most states across the nation. Commentator Benjamin Herold (2014), writing for *Education Week,* suggests the dilemma posed by the *Digital Ocean* report this way:

> A compelling vision of the data-driven future of K-12 schooling? Or a chilling description of a brave new educational world in which even students' smallest actions are converted to digital data and used to build permanent "learner profiles"?

The effects at K-12 are felt in higher education both directly and indirectly. FERPA also applies to student information privacy at the university level. Consequently, higher education policy makers also must navigate the Digital Ocean to steer clear of the privacy reefs concerning what can and cannot be disclosed and to whom. In the long term, student learning also may be shaped in new, and not necessarily positive, ways if, as the *Digital Ocean* authors foresee, education is "reinvented…to take advantage of a digital-first-, data-first world" (p. 27).

Education researcher and critic Diane Ravitch (2014), in a blog post, framed the issue with acerbic pessimism:

> We are about to take a dive into the Digital Ocean, whether we want to or not. Big data will tell Pearson and other vendors whatever they want to know. They will know more about our children and grandchildren than we do.

The ED advisory is a useful resource. However, some critics also worry that the current implementation of FERPA is a weakened alternative to earlier regulations, which were amended in 2011. The watchdog group Electronic Privacy Information Center (EPIC at http://epic.org), for example, sued the U.S. Department of Education in 2012, alleging that the department issued regulations that failed to safeguard student privacy. However, the Court dismissed the lawsuit in 2013, holding that EPIC did not have standing to bring the claims they asserted. The substance of the claims was not addressed.

Education writer and blogger Donovan R. Walling (2014) has referred to the proliferation of K-12 standardized testing (and concomitant data collection and data-mining) as Big Test. Big Data and Big Test, he writes, are analogous to Big Oil, which people associate with the *Exxon Valdez* oil spill of 1989 or the *Deep Horizon* spill of 2010. Big Test, according to Walling, is creating a "test spill" that is doing similar "environmental" damage in schools, and the spillover will significantly affect universities over time as well. But a more insidious consequence may be the long-term damage to personal privacy by Big Data and its corporate collectors.

CONCLUSION

Schools and universities need to examine and take action on privacy issues before they get sucked under in the Digital Ocean. DiCerbo and Behrens contend that the education world is moving from a

period when data collection was expensive and limited to one in which data are abundant, detailed, and accessible for use in shaping teaching and learning. Personalizing learning based on digital usage—a great deal of which is generated by testing that is of questionable value—may sound good on first hearing. But beyond the sound bites lie unanswered questions: What is learning? What learning is of most value—and to whom? And how can understandings about learning shape effective teaching? Until these fundamental questions are answered, Big Data poses more problems than solutions. The Digital Ocean is vast, unknown territory—and no one yet knows the extent of the dangers in the deep.

IMPLICATIONS AND RECOMMENDATIONS

The promise of better educational tomorrows that bobs on the surface of the Digital Ocean should not lure school and university personnel and policy makers into thinking that a clichéd rising tide will lift all boats. Tracy Mitrano (2014), writing for *Inside Higher Ed,* suggests that institutions should actively work to foster effective privacy management. The ideas are equally applicable to K-12. Mitrano suggests three objectives: 1) reform FERPA, 2) designate a Chief Privacy Officer, and 3) create an institutional privacy plan. These suggestions represent a reasonable starting point.

Since the 1970s, FERPA has been revamped to suit changing times. But technical safeguards are absent, and the shifting tides of the Digital Ocean render FERPA a perpetual work-in-progress. Educators are in the frontline when it comes to knowing the risks to privacy and how they might be mitigated through better regulation.

A Chief Privacy Officer, given the complexity of privacy matters in our digital world, seems like a responsible option. A designated point person could assist the school district or institution in navigating the waters.

Finally, institutional awareness of privacy issues should prompt action to ensure not only compliance with existing regulations but also work at the intersection of research, practice, and policy to craft solutions to localized privacy issues.

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