

Social Media, Education, and Digital Democratization

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DATA AND SURVEILLANCE CAPITALISM

Data can be big and small; they can be digital or a lived experience within a face-to-face world. Each day, across the globe, humans create and breathe into the online universe 2.5 million trillion bytes of data (Stephens-Davidowitz, 2017). The behaviors that people exhibit online are a window into their everyday world and thinking. The affordances of these data present the opportunity to observe behavior in real time and—in many cases—their consequence in the physical world.

For corporations, the notion of more data on consumer behaviors has become its own industry, feeding into marketing and commerce. This sort of surveillance capitalism has been described by business theorist and social scientist Shoshana Zuboff (2014) as one that commodifies virtual information into analytics and sales. In her article, “A Digital Declaration,” Zuboff warned of the potential threats to privacy, freedom, and democracy. As individuals engage within online space, their decisions on what is worth knowing, acquiring, and sharing are virtually imprinted into the proverbial cloud.

SOCIAL MEDIA, EDUCATION, AND DIGITAL DEMOCRATIZATION

Within education, social media provides platforms for policy discourse (Rehm et al., 2020, this issue; Supovitz et al., 2020, this issue), educational resource sharing (Hu et al., 2020, this issue; Liu et al., 2020, this issue), and teachers’ professional learning (Greenhow et al., 2020, this issue). Each engagement generates a trail of data that in totality may be considered *big*. Big data may be defined in terms of volume, variety, and velocity: Volume refers to the amount of data; variety, to the types of data being leveraged; and velocity, to the speed of data processing.

In this special issue, authors describe advocacy groups’ intentional organization and mobilization efforts to influence public opinion on education policy, as well as the relative influence of teachers’ collegial networks on their online curation of resources, and provide an in-depth look into one teacher’s efforts to supplement curriculum and meet her students’ needs. Each contributes uniquely to an emerging field of social media and education and relies on one or more of the components when examining big data.

Leveraging the volume of discourse within Twitter, Rehm et al. (2020, this issue) examined the variation of social psychology across advocacy groups engaged in debate about the Common Core State Standards. To efficiently analyze sentiment, the authors used large-scale natural language processing techniques to identify descriptive differences within four

domains: mood, conviction, thinking style, and drive motivation. Their findings provide insights into the variation across interest groups engaged with education policy and provoke thoughts related to the potential for digital democratization.

Though virtual engagement has largely become commonplace for a majority of individuals, understanding what and how individuals are engaging in is relatively understudied within education (Greenhow, Galvin, Brandon, & Askari, 2020). In this issue, Greenhow et al. provide an understanding of what is currently known within research communities related to K–12 teachers' use of social media. Analyzing a variety of peer-reviewed journals across 13 years, they sampled 58 manuscripts and qualitatively analyzed them to provide a landscape of research within the field. The authors asked how teachers perceived and used social media and sought to understand impacts on teachers' practices. Greenhow et al. call for additional work in the field, particularly for connection to student learning. Future work that examines a variety of data sources, including student assessments, students' perceptions of learning, and teachers' social media interactions, may bridge understandings of the connections from the virtual to face-to-face space and undergird advocacy for a meaningful and equitable digital democracy.

TEACHERS' ONLINE CURATION AND COGNITIVE EMPATHY

Big data can bring together the most unlikely of comparisons. Jennifer Hyman, the CEO of Rent the Runway, a women's fashion retailer for rented designer fashion, noted, "We probably have more data on how women are wearing or not wearing clothes than any other retailer on planet Earth" (Schwartz, 2018). Yet, time and again, analytics comprising purchasing (read: renting) behavior shows that what individuals choose to wear is fundamentally different from what they think they want (Schwartz, 2018). Could this be possible outside of people's wardrobe choices? Hu et al. (2020, this issue) describe the case of one teacher's search for online resources to supplement her curriculum and meet her students' academic needs. They walk readers through Ms. Gonzalez's (teacher's identity is protected through a pseudonym) search for resources online, her planning to incorporate into her teaching, and actual classroom enactment.

How teachers perceive their teaching style may contrast with their lesson planning and instructional perspective, as reflected in their online resource curation. Hu et al. interviewed Ms. Gonzalez and found that a primary driver for her curation of resources lay in her perception of value that the creator could provide as one who might understand her work and environment. This perception of the potential for relation, a component

of cognitive empathy (Small, 2019) from the purveyor of the resource, resonates and may have impacts for virtual diffusion of online curricular content.

The desired ability for understanding and acceptance is at the crux of social bonds. Social networks, a broader view of one's social bonds, have been shown to have significance across physical and virtual space, including on the ability to influence one's beliefs and behaviors (Kadushin, 2012). Liu et al. (2020, this issue) examined how the types of social networks that teachers hold relate to their instructional resource curation within Pinterest, a prominent social media platform. Using a large volume of pinning activity across sampled teachers, the authors leveraged a relational event model to estimate effects of social networks and the variation of effect given the network type. They found significant variation across collegial ties and extended understandings of weak ties (Granovetter, 1973) into a 21st-century context.

BROAD VIEW

The rapid accumulation of data and their relative analytics are a reality and must be navigated with intentional consideration. As big data are generated in volume, variety, and velocity, we find new potential for understanding education more closely from educational policy, teacher learning, and teacher planning and enactment perspectives. Yet, grounding analytics in strong theories and relevant questions to guide our field will best contribute to the already established areas of work and research in education. Shoshana Zuboff (2014) asserted, "If the digital future is to be our home, then it is we who must make it so" (p. 1). This issue acts as a seedling to generate new research, innovation, and approaches to educational inquiry as it relates to activity within social media.

Please join in at #Cloud2Class.

-Cloud to Class Team

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KAITLIN TORPHY is the lead researcher and founder of the Teachers in Social Media project at Michigan State University. She has expertise in teachers' engagement across virtual platforms, teachers' physical and virtual social networks, and education policy reform. She has published work on charter school impacts, curricular reform, and teachers' social networks, and she has presented work regarding teachers' engagement within social media at the national and international levels. Dr. Torphy earned a PhD in education policy and a specialization in the economics of education from Michigan State University in 2014 and is a Teach for America alumna and former Chicago Public Schools teacher.

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ALAN J. DALY is a professor in the Department of Education Studies at the University of California, San Diego. He specializes in social network analysis and educational change processes. He has multiple publications and several books on the topic, including one published by Harvard Education Press entitled, *Social Network Theory and Educational Change*. Professor Daly is also a Fulbright Global Scholar, having spent time in New Zealand and South Africa.

KENNETH A. FRANK is currently a professor in counseling, educational psychology and special education as well as in fisheries and wildlife at Michigan State University. His substantive interests include the study of schools as organizations, social structures of students and teachers and school decision-making, and social capital. His substantive areas are linked to several methodological interests: social network analysis, causal inference, and multilevel models. Recent publications appear in the *Sociology of Education* (2011, "Focus, Fiddle and Friends: Sources of Knowledge to Perform the Complex Task of Teaching," with Yong Zhao, William Penuel, Nicole Ellefson, and Susan Porter) and *American Behavioral Scientist* (2009, "Quasi-Ties: Directing Resources to Members of a Collective").

CHRISTINE GREENHOW is an associate professor in the Educational Psychology & Educational Technology program at Michigan State University. She studies various forms of learning with social media, the design of social-mediated environments for learning, and changes in scholarship practices with new media. Recent publications and projects can be found at <http://www.cgreenhow.org>.

SIHUA HU is a postdoctoral fellow on the COHERE project at Northwestern University. Her research examines various dimensions of teaching quality and how teaching quality is related to mathematics teachers' social networks within physical and virtual spaces. Dr. Hu earned a PhD in mathematics education from Michigan State University and was a co-PI for an American Education Research Association conference convened in October 2018 on social media and education.

MARTIN REHM obtained his Ph.D. at Maastricht University, the Netherlands. He is currently the transfer manager at the Institute for Educational Consulting at the University of Education in Weingarten, Germany. His research interests include informal learning in social media, social opportunity spaces, and applying mixed methods to assess the educational value of social media. His recent work includes: Rehm, M., Cornelissen, F., Notten, A. Daly, A., & Supovitz, J. (2020). Power to the people?! Twitter discussions on (educational) policy processes. *In Mixed methods approaches to social network analysis for learning and education*. Routledge.