Guest editorial

In the call for proposals for this special issue, we noted that inclusive teaching, inclusive pedagogy and inclusive education provide theoretical and practical guidance that can be used to intentionally design learning experiences that work to reduce educational inequity experienced by students who are marginalized based on their race, gender, socioeconomic status, ability status and other identity markers. As Gannon (2017) suggests, inclusive pedagogy is "a realization that traditional pedagogical methods — traditionally applied — have not served all of our students well" (para 13). Such realization should prompt educators to explore intentional pedagogies and designs that foreground inclusion, rather than attending to inclusion as an afterthought, or not at all.

We recognize and appreciate that intentionally designing for inclusion is complex and layered. For example, the answer to the question, What does it mean to "be included?" is neither simple nor straightforward. One of the primary ways that we define inclusion is through exclusion — if you are not in, you are out. By definition, then, can we ever include everyone? Moving beyond the binary of inclusion and exclusion, Mitchell (2019) challenges us to recognize inclusion as a multifaceted, never-complete process. In doing so, we look to a variety of scholars and frameworks such as culturally relevant pedagogy (Ladson-Billings, 1995), design justice (Costanza-Chock, 2018, 2020), disability studies (Foley and Ferri, 2012), Universal Design for Learning (Rose *et al.*, 2014) and Open Educational Resources and Open Pedagogy (DeRosa and Jhangiani, 2017). We find that a multidisciplinary approach is important to this work, because it moves us beyond the tendency to stake a disciplinary claim in inclusive design; we believe that varied approaches are necessary to understanding and exploring the different strands and contexts of inclusion, as well as where and how those contexts intersect.

The complexity of inclusive design deepens when we layer on digital tools that may further exacerbate inequities. As digital educators, we should approach this work by seeking to understand in what ways digital technologies erect barriers to inclusion. As Selwyn *et al.* (2017) ask, "to what extent are technologies in school situated in dominant structures of power and production" (p. 151)? What digital practices, such as surveillance or data extraction, are distributed unevenly and have significant detrimental impacts for marginalized students? Further, how are technologies and technology companies deepening educational inequities by advancing technologies that mine and commodify student data (McMillan Cottom, 2017)?

These are not hypothetical questions; we are already beginning to understand how the answers to these questions impact students. For example, Eubanks (2017) argued that "marginalized groups face higher levels of data collection" including within the context of their educational experiences. Automated systems built on algorithms, like those found in learning analytics dashboards, early warning systems and attendance trackers, are more likely to be deployed at schools that serve a large population of marginalized students. Gilliard (2016) found that acceptable use policies at schools serving working class and minority students created more rigid rules around students' access to information – creating what he termed "digital redlining" – and limiting the decisions and opportunities available to marginalized students. The critical work of those researchers, and others like Noble (2018), Benjamin (2019) and O'Neill (2016), can help educators to recognize how technologies, when applied without an intentional orientation toward inclusion, can harm students.

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Researching inclusive education and digital learning

Our intention with this special issue is to highlight the role that research can play in informing and shaping inclusive design practice. Inclusion is complex and layered to practice, and it is also complex to research. The four articles in this special issue – representing the work of scholars based in Italy, Sweden and the United States – highlight inclusive design practices and possibilities within a variety of digital learning contexts.

In Learning Inclusion through Makerspace: A Curriculum Approach in Italy to Share Powerful Ideas in a Meaningful Context, Bombieri and Guisti discuss the possibility of the makerspace as a site of inclusion, and describe the implementation of a makerspace curriculum for young children with differing abilities. In their article Remote Teaching for Equal and Inclusive Education in Rural Areas? An Analysis of Teachers' Perspectives on Remote Teaching, Pettersson and colleagues share the results of a study examining the experiences of, and organizational support models in place for, remote teachers in rural Sweden. They argue that for remote teaching to be an equitable learning experience for rural communities, teachers need to be supported in the development of their technological competence. In Designing with Care: Towards a Care-Centered Model for Online Learning Design, Robinson, Bali and Kilgore propose that more attention to the affective/emotional aspect of online learning is needed, and that care-centered models provide helpful frameworks understanding how inclusion is modeled and enacted in online learning experiences. Mehta and Aguilera, in A Critical Approach to Humanizing Pedagogies in Online Teaching and Learning, use a critical pedagogy lens to examine and unpack the tensions inherent in what they term "autonomous models of humanizing online pedagogy."

It is interesting to note that three of the four articles published in this special issue are conceptual/theoretical pieces or descriptions of practice. They offer needed and useful frameworks for design and practice that center care and humanizing pedagogies, and glimpses into curricular efforts to create inclusive learning environments and experiences. On the one hand, the focus on theory and practice over traditional research studies may point to the fact that on the whole, we are in the early stages of efforts to implement and understand inclusive digital learning.

We also acknowledge the complexities of conducting such research in ways that resonate with inclusive practices. Youth participatory action research and other participatory research methods that challenge the power structures of the traditional researcher-researched dynamic may be appropriate for exploring, with participants, their experiences of inclusion and exclusion in digital learning spaces – and, in the case of action research approaches, generate plans to make those spaces more inclusive. In a similar vein, design-based research provides an approach to designing, iterating and evaluating curricular interventions in which "practitioners and researchers work together to produce meaningful change in contexts of practice (e.g., classrooms, after-school programs, teacher online communities)" (Design-Based Research Collective, 2003, p. 6). We also look to fields like digital sociology for ways to move beyond the individual class application of inclusive design, in order to investigate how accountability systems, for example, play a role in how problematic technologies – technologies not aligned with inclusive practice – are brought in to education (see for example, Selwyn, 2017, p. 160).

We believe that attending to inclusive design – particularly when designing with digital tools and in digital learning environments – is critical to more equitable learning. Thank you to the special issue authors for taking up this topic, and for illuminating possible paths forward toward more inclusive digital learning.

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