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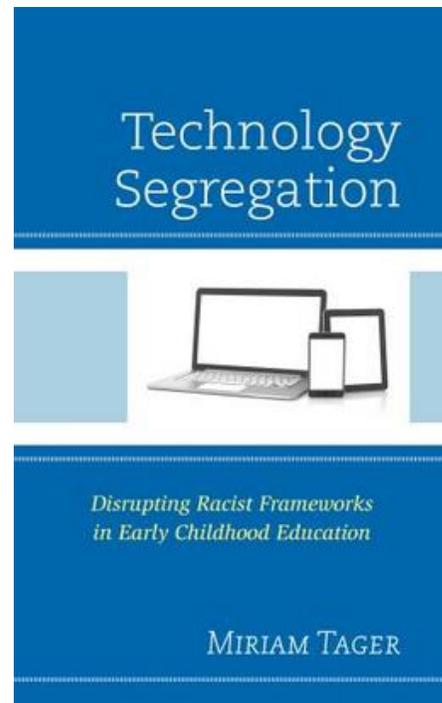
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The COVID-19 pandemic has highlighted profound inequities in the ability of K-12 schools across the U.S. to support students' use of technology. As we collectively grapple with how to serve students better through the immediate public health crisis – and well beyond it – Miriam Tager's *Technology Segregation* offers important insights and perspectives that can guide the work of educators.

Supporting children's use of technology is challenging because we know relatively little about classroom-based best practices for young children, i.e., those between pre-K and second grade (Burnett, 2010; Plowman & Stephen, 2005). Advocates and policy makers recommend that educators use their professional judgment to determine when and how to incorporate technology into their classrooms and that teachers need training and professional development to do this work successfully (National Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children's Media, 2012). In this context, Tager's book makes three key contributions to our understanding of technology and learning in the first few years of elementary school.

First, the book provides a clear definition of what it meant by "technology," particularly in the context of young children's learning. Tager argues in Chapter 4 that three components are crucial: devices, software, and



connectivity. She advocates for a broad conceptualization of devices that includes desktops, laptops, and tablets, which can be used by both teachers and students, as well as smartboards, auto-document cameras, and other assistive technology devices largely used by teachers. Importantly, Tager argues that the combination of appropriate devices and software coupled with consistent internet connectivity constitutes the “technology infrastructure” that can be harnessed for student learning. Throughout the book, and in a variety of ways, Tager stresses the importance of the time, effort, and financial resources necessary to maintain this infrastructure at the classroom, school, and district levels.

Once schools have the components of a robust technology infrastructure, Tager shows the reader how educators can use the tools at their disposal to make meaningful improvements in students’ learning experiences. This is the second major contribution of *Technology Segregation*. Using anecdotes throughout the book, Tager makes the point that there are more and less productive ways to use technology and provides helpful, practical advice. She draws on her observations of elementary school classrooms in three districts in New Jersey and Massachusetts to provide numerous examples of how teachers are integrating technology into their instruction, or are unable to do so. In one example (p. 59), she describes the ways in which second-grade students, who are learning about making inferences while reading, are able to have a rich learning experience due to the technology they can access. Students first have the opportunity to learn about inferencing on their individual devices; they are then able to watch a video together on the smartboard in the classroom; and finally, students complete an activity with an accompanying worksheet that they have previewed together through the classroom’s auto-document camera. Tager argues that the classroom’s technology infrastructure enables students to work in groups and independently; it also helps curb behavioral issues that might arise during the lesson. Anecdotes like this make the book a useful guide for novice elementary school educators as well as more experienced educators who are hoping to incorporate more technology into their instruction.

The third contribution of this book is to articulate a framework – technology segregation – for understanding the unequal distribution of technology infrastructure across U.S. schools and districts. Tager’s explanation of technology segregation is sweeping. She argues that it cannot be understood, or subsequently uprooted, without considering the effects of structural racism and its manifestation in social processes like residential and school segregation (Chapters 2 and 3). She also argues that key federal policies and programs have likely, if indirectly, contributed to technology segregation (Chapter 7). For instance, she contends that funding allocations within the No Child Left Behind legislation enabled wealthier schools and districts to improve their technology infrastructure while high-poverty schools did not receive similar amounts of money (p. 98).

Notably, Tager explores the ways in which informal processes also contribute to technology segregation (Chapter 5). For instance, she points to

the dominance of white men in leadership positions in the technology sector and the fact that fewer than 2% of specialists, managers, or executives at ten prominent companies (including Microsoft, Apple, Amazon, and Google) are Black (pp. 69-17). Tager argues that this lack of representation of women and people of color in the technology sector means that children of color do not have easily-identifiable role models in this field.

This focus on social processes at the macro-level is informative and helpful for scholars like me, who are interested in understanding the source of inequities in access to technology. However, additional contextual and methodological information would have provided a deeper understanding of the book's findings. For instance, while I do not question the centrality of structural racism in perpetuating technology segregation, Tager could have provided more localized evidence to make her point stronger. In other words, instead of focusing on patterns of residential and school segregation on a national scale, it would have been helpful to know more about the history of residential segregation in the neighborhoods of the four schools she focused on (Grayson and Mitchell in the same school district in New Jersey; and Center Street and Todd James in neighboring districts in Massachusetts). I would have liked to know more – and sooner in the book – about Tager's data collection methods and timeline. It is not until Chapter 7 that we learn that Tager had three main data collection activities: classroom observations, interviews with five teachers, and two focus groups. And although she provides rich contextual information about three of the four schools in the book's first chapter, it remains unclear why she only focuses on students from one school (Grayson) or how students and teachers were selected as participants in this study.

Despite these limitations, the lessons from this book will be useful to a variety of audiences. In addition to helping teachers build a technology infrastructure in their classrooms or schools, the book contains valuable information for curriculum developers. For instance, as the Computer Science for All movement grows, the information contained in *Technology Segregation* about technology infrastructure, teachers' technological literacy, and detailed documentation about the ways in which technology is already incorporated into various subject areas will be valuable in creating professional development opportunities for teachers as well as curricular materials for their students. Tager's recommendations in the final chapter can also serve as a guide for school and district leaders who are seeking to address inequalities in technology infrastructure within or across schools. The variety of recommendations – from investing in school facilities, to mandating computer programs only after schools have enough devices, to ensuring district websites are accessible in multiple languages – provides both immediate and actionable next steps and long-term goals.

Without a doubt, Tager has a vision of a more equitable future in which teachers are more technologically literate, have access to a functioning technology infrastructure, are racially conscious in their pedagogical practices,

and can support their students and their families more effectively. I am excited by the possibilities this future affords all children, especially those who have been historically underserved. Tager's book provides not only hope for such a future, but also a summary of the barriers that must be overcome and some helpful practices to begin the work towards those goals.

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About the Reviewer

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