**Vidal, D. (2020).** *From dysfunction to innovation in technology: Overcoming critical infrastructure and organizational dynamics in education.* **Rowman & Littlefield.**

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While the need for effective integration of technology at the classroom level is not new, it has become critical during the COVID-19 pandemic. Districts across the United States have done their best to administer emergency remote teaching, pivoting from a brick-and-mortar approach to various classroom-based and completely virtual models. Unfortunately, the pitfalls of quickly integrating technology into a K-12 classroom are numerous, including sacrificing rigor and structure simply to upload a Google classroom shell with a Zoom component. Even more complicated problems can occur beyond the classroom walls, including gaps in tech knowledge and resources at the district level. Darryl Vidal's *From Dysfunction to Innovation in Technology* offers K-12 teachers and administrators a place to begin the conversation when embarking on the challenging journey of one-to-one instruction.
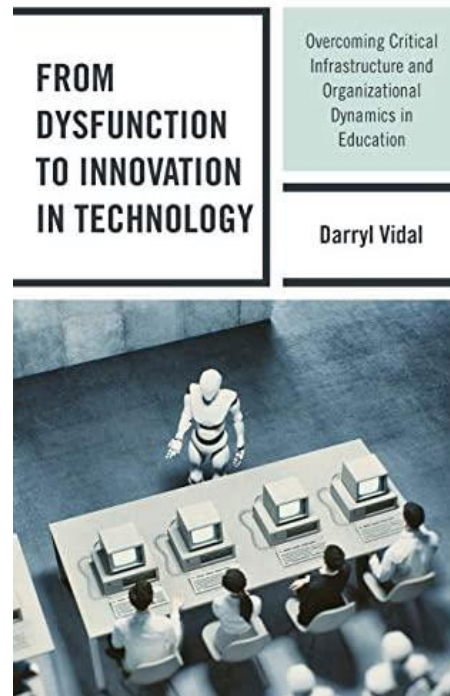
Vidal's expertise in long-range, strategic planning is a result of his work with school districts, having provided technology consulting services since the 1980s. His work focuses on moving K-12 systems into technologically modern existences that utilize learning management systems and technology

upgrades. However, Vidal's goal in this book in not to force an outdated system into modernization. Instead, he writes to move educators from including technology in the classroom merely to enhance a curriculum to redefining and redesigning technology integration to significantly impact and transform students' critical thinking, collaboration, and research skills.

Vidal's book resonates with other scholarly research on obstacles to technology integration and the necessity of systemic support for successful classroom implementation (Francom, 2020; Inan & Lowther, 2010; Liu et al., 2017). His approach emphasizes the importance of a rigorous curriculum paired with an integrated technology. The framework Vidal uses is the SAMR Model, wherein a system begins technology integration by substituting technology for other modes of delivery in the classroom, then moves into augmentation and modification, and ends with a redefinition of learning through technology (Puentedura, 2013).

This book begins with an idea that will be familiar to most readers involved with K-12 education: adding technology to a classroom without preparation, training, and purpose is a recipe for disaster. Vidal's book elaborates on this issue by noting the various entities that impact districtwide technology integration, such as district leadership, state initiatives, and funding. Teachers who are comfortable with technology, have been using it, and are beyond the SAMR model's first phase of substituting technology for other modes of instructional delivery will find in Vidal's work the next steps to move further through the SAMR model: adopting a "redefined curriculum" that Vidal identifies as a Tier 4 Curriculum, or "The 6Cs."

"6C Development" provides guidance for teachers who have reached the pinnacle of the SAMR Model. Work starts with a focus on the desired curriculum, then moves into incorporating common core state standards, cognitive factors, the context of lessons and delivery, critical thinking skills, and ends with collaboration. This approach is appropriate for any curriculum or technology adoption, in the sense that an educator begins with the curriculum, moves through the standards, builds in critical thinking, and refines the process through professional learning communities and collaborative goals. A similar design can be found in Dexter et al. (2006), which breaks down technology integration in higher education into content-specific adoptions and recommends district leadership support for successful integration. Once the 6C Development process is complete, Vidal outlines how teachers and leaders can then disseminate the work throughout the district, in conjunction with technology adoption.

A difficult topic to tackle for any practitioner is how to use technology to transform a classroom purposefully. Merely putting an iPad or Chromebook into a student's hands does nothing more than substitute one means of access for another. Vidal adopts an approach that is a step-by-step instruction guide for a teacher to create a classroom that doesn't merely look at technology as a potential tool but as something integral to a rigorous and practical curriculum. He uses the SAMR model as a starting point for

teachers to create a classroom that innovates with technology – what Vidal emphasizes as a "Tier Four Curriculum." By identifying the SAMR Model as a guide that leverages new technology features in conjunction with curriculum, he provides a useful compendium. For example, as a teacher substitutes a physical book with an iPad, there is a sense of "What's next?" and "Is this enough to say I'm integrating technology?" The SAMR model can help teachers identify the substitution and begin augmenting their classroom by adding graphics and digital notes to the text, eventually moving into an interactive exercise that will modify and redefine their students' learning.

The expertise of Vidal's long-range, strategic planning is evident throughout the text as he presents strategies for overcoming obstacles inherent to any large-scale system in education. Early chapters introduce technology integration and the need to have district leadership actively promote the adoption of new technology. Middle chapters point out the need for professional development, especially when using the SAMR model and moving content areas through the theoretical framework. The book's final thoughts create a roadmap for implementation and change, taking into account the need for ongoing support and professional development. As a result, this book could benefit district leadership responsible for technology integration, as it is a useful resource when thinking about what infrastructure needs to be in place before attempting a move into a one-to-one teaching environment. They could benefit from Vidal's strategies for streamlining internal digital communication and overcoming disruptions that can occur with technology integration, such as selecting one operating system rather than buying multiple platforms (Apple v. PC). Information on assessment serves as a reminder to monitor impacts and seek feedback about positive and negative growth areas.

One concern must be raised about Vidal's work. Surprisingly, he does not provide any examples of his experience implementing any of the strategies outlined in the book or working with districts to move from one area of technology use to another. Readers could benefit from case studies or real-world examples and stories that make for the best types of reflection when leading a team of people who desire a roadmap for successful technology integration. Yet, Vidal's book stands apart from other work on classroom-based technology implementation, (Ko & Rossen, 2017; Stavredes, 2011), as he spends a great deal of time writing about the need for district leadership support for all design and work. Rather than a strategic, operational guide – a step-by-step approach that identifies pitfalls and exemplifies triumphs – this volume is a conceptual guide. Without the "how-to," Vidal's work may not be what a district leadership and its technology team seeks or needs.

Despite this criticism, *From Dysfunction to Innovation in Technology* is a valuable resource for K-12 district leadership and classroom teachers as they discuss the potential implications of technology adoption while guiding a transformational curriculum model. Vidal's technology integration experience

is evident, and he makes the subject accessible to anyone who wants to move from using technology as a substitution for physical materials to making it a significant part of the curriculum and classroom. *From Dysfunction to Innovation in Technology* addresses essential considerations, including directions to take when faced with what may appear to be insurmountable complications, like a lack of infrastructure at the district level or missing innovation strategies. Ultimately, Vidal's work would be a useful resource for any district, if not as a step-by-step guide, then-as a source of common language for administrators and teachers to use when designing a curriculum with technology integration as a focus.

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