Chapter 1
Leadership and Technology: The Need for District, School, and Digital Vision

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ABSTRACT

The current trends and needs in education across the globe require that leaders must think in unprecedented ways that focus on the present and future integration of technology. This requires school systems, and their leaders, to build vast technological infrastructures that include continuous hardware, software, and training updates. As technology continues to advance at a rapid pace, educational systems across the world seek to find ways to address the needs of their current student populations while undertaking the daunting task of preparing for future technological needs that are uncertain and constantly advancing at rates most school systems find difficult to sustain. The chapter focuses on some of the current skills educational leaders employ to navigate the advancements in technology and education that are presently in practice while highlighting how they prepare the next generation of students with the next generation of digital tools required for their success.

INTRODUCTION

The current trends and needs in education across the globe require that leaders must think in unprecedented ways that focus on the present and future integration of technology. Administrators also are required to acknowledge that how they lead their teachers has a direct connection with creating smart, technology-rich classrooms in their schools. This requires that educational systems, and most importantly their leaders, build comprehensive technological infrastructures that include continuous hardware and software development and network upgrades with their previous systems to incorporate the numerous digital opportunities and requirements that students must have in order to remain relevant.

As technology continues to advance at a rapid pace, educational institutions across the world urgently seek to find new ways of addressing the needs of their current student populations while undertaking

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the formidable task of preparing for a future that is uncertain. The effects of the Coronavirus have impacted most aspects of life, but the consequences that it will have on the educational systems are yet to be determined and fully understood. The rapid transition to on-line learning has posed some serious challenges for educational leaders, many of whom may not have been prepared to migrate from physical classrooms to the world of virtual learning. For some students and teachers who had a sound technology plan and solid infrastructure, it was an easier transition, but for many other districts, it has proven to be an arduous task that saw the disruption of their educational programs.

Leadership in the Digital Age

In addition to the growing responsibilities of school leaders that include important and encompassing topics that are already being addressed, such as social-emotional development, achievement gaps, equity, diversity and STEM, staying current with the rapidly changing landscape of technology inside and outside of the classroom is an ongoing endeavor that demands the attention and focus of building and district-level administration. School leaders must not only be knowledgeable of the new and innovative software and hardware developments that are unfolding for instructional uses, they need to also remain current with the many social media platforms that are used. These new modes allow multiple forms of communication with their stakeholders, and more importantly, remain current on how to keep their students safe as well as ensuring that professionalism is maintained with employees (Dodson, 2020). Most likely, this is why it has also been found that a school leader's familiarity, knowledge, and experience with technology have a direct correlation to how technology is used and implemented with their classroom teachers (Hero, 2020).

Indeed, principals and district administrators play a pivotal role in the implementation of technology and must be able to work efficiently within a rapidly advancing technological environment with frequent changes. Unlike previous generations in school systems, where technological advancements in the field of education occurred at a much more modest and deliberate pace, the current climate is vastly different and requires educational leaders to be more vigilant in attaining and maintaining their technological acumen. But relying solely on an individual buildfing principal or district leader has some serious limitations that could prevent productive and meaningful progress for teachers as well as the entire instructional program.

Researching and implementing new technology is a perpetual task that requires a great expenditure of time and resources on the part of all educators. But the pressure for leaders to ensure that teachers and students are provided with all of the necessary cutting-edge tools is much more encompassing (Richardson, 2013). Many teachers look to their building principals as technology leaders, especially since they control their budgets, even if they may not have any real expertise in this area. Despite their levels of competency, school and district administration are tasked with the very important role of providing a clear vision for what types of technology will be used in classrooms and how it will be implemented. In order for the vision to be meaningful, however, it must be created with the necessary components that include hardware, software and professional development which are essential for its implementation. Too often it can be found that technology vision and mission statements are merely well-crafted sentences with appropriate buzzwords that lack substance and have little meaning.

Leaders are expected to provide a technology vision that will meet the needs of all stakeholders and remain current with what will be needed for students to succeed and instructors will be required to implement. They are also expected to create a digital learning environment that gives teachers the necessary

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