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INTRODUCTION

Like us, you may have noticed an increase in the use of the term *digital equity* across educational spaces and places. Defined by researchers as “equal access and opportunity to digital tools, resources, and services to increase digital knowledge, awareness, and skills” (Davis, Fuller, Jackson, Pittman, & Sweet, 2007, p.1), digital equity is a hot discussion topic, but sparse actions are being taken. Sharing a desire to encourage more meaningful efforts to narrow the digital equity gap, we three authors connected through our work with ISTE from across the country. We realized that this work cannot happen in isolation. It must begin in traditional educator preparation programs (also known as teacher preparation programs) before teachers are credentialed and step into their own K-12 classrooms, and it must continue even through non-traditional educator preparation programs that support current classroom teachers. How can we address digital inequities while acknowledging how the growing ubiquity of technology continues to change learning landscapes?

Digital equity is not a new concept, yet the body of literature accessible to a broad audience of educators and decision-makers in teacher preparation on this subject is limited to content that addresses software, hardware, and the digital divide in K-12 environments. Although an abundance of literature exists examining the knowledge and attitudes about technology (Ertmer & Ottenbreit-Leftwich, 2010; Overbay et al., 2010), little evidence has been documented that demonstrates how educator preparation programs are preparing preservice teachers, or supporting current teachers through professional development, to address digital inequities. According to the Office of Educational Technology, K-12 schools should be able to rely on educator preparation programs to adequately prepare new teachers for using technology effectively (U.S. Department of

Education, 2016). This should also include preparing teachers to enact digital equity in their own K-12 classrooms.

For this reason, we offer *Closing the Gap: Digital Equity Strategies for Teacher Prep Programs*, which is the first book in our Digital Equity Series and focuses on closing the digital gap in traditional and non-traditional educator preparation programs. As you read and process the material in these two books, we hope that you will follow and join in the conversation on Twitter using #DigEquityBook.

What's in This Book

In this book, we'd like to encourage you to consider educator preparation programs (also called teacher preparation programs) as you further develop an understanding of critical digital equity issues in order to address challenges with a solution mindset and prepare teachers for their equity-centered classrooms. The ideas put forth in the chapters that follow will challenge you to create spaces and opportunities in educator preparation environments for preservice teachers to apply *digital equity practices*. Digital equity, as noted by Resta and Laferrière (2015), "refers to the social-justice goal of ensuring everyone has equal access to technology tools, computers and the internet, as well as the knowledge and skills to use these resources to enhance their personal lives" (p. 744). Faculty who actively model these practices allow preservice teachers an opportunity to witness effective ways to address digital inequities.

To help teacher education professors and educators working with preservice teachers achieve this goal, Chapter 1 will address the main issues in K-12 that contribute to great concerns pertaining to digital equity in educator preparation programs. A brief overview of technology and digital equity in educator preparation programs through the years will follow in

Chapters 2 and 3, then Chapters 4 and 5 will look to the future, suggesting approaches for overcoming digital equity barriers and enhancing teacher preparedness. Although it may be tempting to skip ahead to the action steps offered in the later chapters, we encourage you read through the historical information to draw inspiration and learn from the shifts that have occurred through the years. The chapters in this book will include the following:

- Current research related to the various facets of digital equity
- Highlights of some current approaches to addressing digital inequities
- Recommendations for moving beyond “naming” a problem as a digital inequity into practical recommendations for closing the digital equity gap
- “DE Stories” or “Open Letters to Teacher Educators” sidebars that feature authentic digital equity stories of successes, lessons from the field, and insights gained from teaching experiences to offer practical examples of how to provide equitable learning opportunities and environments for all students
- “What Would You Do?” sections to encourage innovative thinking about how you may either begin or continue to address digital inequities in teacher preparation
- “DE Wisdom” sections that offer key takeaways of digital equity wisdom as motivation for your own continued efforts enacting digital equity

Throughout the book, you will also see references to the ISTE Standards for Educators (International Society for Technology in Education [ISTE], 2017b). The ISTE Standards are a framework designed to support students, educators, administrators,

coaches, and computer science educators with the purposeful integration of technology. Although the ISTE Standards are not the primary focus of the book, it is imperative that consideration be given to the effective inclusion of each strand of the Standards for Educators in teacher preparation courses as well as professional development offerings and non-traditional educator preparation programs.

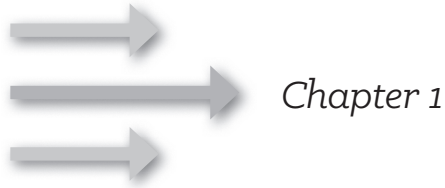
Who This Book Is For

This book is designed to reflect the contributions of teacher education professors and K-12 leaders seeking to ensure digital equity is achieved on campuses, in classrooms, and throughout educator (or teacher) preparation programs. We will offer historical, philosophical, and practical insights while exploring challenges and solutions unique to educator preparation programs. This book will hopefully inform faculty efforts in pursuit of digital equity within educator preparation programs and their future research. When we discuss educator preparation programs, we are not only including formal credentialing programs at universities, but also are referring to professional development opportunities, educational conferences, unconferences, and informal learning spaces. School administrators, educational technology leaders, current educators, and other stakeholders may also benefit from the positive examples and recommendations offered in this book, especially those related to shifting toward digital equity in teacher preparation as this ultimately influences K-12 campuses as well.

If you are ready to join the pursuit for digital equity, you've selected the right book!

Best,

Nicol, Sarah, and Regina



CRITICAL DIGITAL EQUITY ISSUES

In simple terms, digital equity means all students have adequate access to information and communications technologies for learning and for preparing for the future—regardless of socioeconomic status, physical disability, language, race, gender, or any other characteristics that have been linked with unequal treatment.

—Solomon, 2002

Pause for a moment and think about your technological journey to becoming a teacher. For some of you, learning the nuances of a calculator in your mathematics methods class was the extent of your technology instruction. Those of you who have more recent teacher preparation experiences likely have stories about using some of the latest ed tech tools throughout your programs.

Now imagine facilitating a course that supports students using the latest ed tech tools in a classroom with poor connectivity or a limited number of devices while the school or university across town has 1:1 devices and high-speed internet access. Or, how about two sections of the same course with one taught using no technology to access information or for communication, while the other is facilitated with a connected classroom approach in which students share, communicate, and collaborate with other students globally through blogs and various forms of social media? These scenarios of digital inequity are all too familiar for teachers in K-12 classrooms, as well as for faculty or ed tech leaders leading teacher preparation courses.

According to Culatta (in Molnar, 2014), educator preparation programs are in need of help. The poor design and delivery of digital learning experiences in educator preparation can create barriers for future and current teachers, which in turn leads to more difficulties in the classroom. Poorly designed and delivered digital learning experiences often merely try to replicate a paper-based lesson with internet clicks. For example, a professor replacing a paper worksheet with an online version of the same activity does not demonstrate the full potential of digital learning experience to preservice teachers in his class. Inevitably K-12 students suffer from the lack of teacher preparedness for dealing with digital inequities, because preservice teachers potentially reenact the same digital inequities they experience in their preparation programs.

In education, we can aim to ensure students have equal access to devices, software, and the internet, and yet if they do not always have educators trained in the use of technology to help them navigate those tools, then we cannot achieve true digital equity. Educator preparation, both traditional and nontraditional, would be remiss if it did not support the integration of digital equity lessons and practices throughout its programs. In this

chapter, we will offer a brief overview of digital equity in K–12 education today, then define the critical issues and disparities in teacher preparation that can sabotage efforts towards digital equity. Our goal in this chapter is to address the main issues in K–12 that contribute to great concerns pertaining to digital equity in educator preparation programs.

Brief Overview of Digital Equity in K–12 Today

To achieve digital equity, something has to change in education. As James Ford, 2014 North Carolina Teacher of the Year, explained at The Friday Institute’s 2016 Redefining Equity for Digital-Age Learning Convening:

If we are to adequately fulfill our mission as educators, we need to adopt a new way of doing things. We need to recognize the conditions, do away with the constraints of convention and embrace a new model of education. We need to radically rethink what school looks like in 21st-century America, and apply an equity lens to our work. (Ford in Smart & Corn, 2017, p. 8)

Before we can embrace that new model of education, however, we need to understand our students’ current conditions as well as how they’re using technology at home and at school. Rideout and Katz (2016) conducted a survey to see what exactly our students from ages 10 to 13 were doing with technology once they got home from school. The researchers found the following:

Among 10- to 13-year-olds who use computers or the Internet, eight in ten (81%) do so to do homework, and four in ten (44%) to write stories or blogs. Many also use the Internet to connect with teachers (40%) and

other students (46%) about school projects. Among 6- to 13-year-olds, 81% play educational games and use the Internet to look up things that they are interested in. Seven in ten (70%) use computers or the Internet to do something creative, such as make their own art or music. (p. 34)

Rideout and Katz also found that while 94% of families surveyed reported having internet access, the type of access varied as “one quarter (23%) of families below the median income level and one third (33%) of those below the poverty level rely on mobile-only internet access. And many experience interruptions to their internet service or constrained access to digital devices” (p. 5).

Other challenges included slow access, sharing devices between multiple members of the household, and having service cut off because of nonpayment. The researchers found no significant differences in students’ home internet use, regardless of their level of access. There is also no indication that students lack an interest in using devices at home, when accessible (Figure 1.1).

From this data, we see that students at various income levels are generally motivated to use the internet for similar reasons at home; depending on the resources available at home, however, the outcomes may be very different. Consider, for example, an assignment such as watching a flipped video lesson. A student with high-speed access and a dedicated device would likely have few to no barriers in completing this assignment, at least as far as access is concerned. But, what about students with mobile-only access? Those who have to share a device with multiple family members? Those with frequent service interruptions? For a student facing such challenges, a flipped video homework assignment may not be as simple and straightforward to complete.