

Chapter 12

Individual Differences, Learning Opportunities and Learning Outcomes, Digital Equity: Bridging the Gap – Creating Learning Opportunities for All Students

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ABSTRACT

Information and communication technologies are prevalent in almost every aspect of our world, ranging from their presence in schools to even being used by a passenger on a bus. Unfortunately, not all individuals have the same opportunity or access to these technologies, especially children who are still receiving their education. This limited opportunity creates a disparity between those who have access and those who do not, the impact goes far beyond just securing the latest device, rather it can impact their future as students. With limited access many of these children may not be career ready. Policymakers as well as institutions of education need to pay attention to the growth of these technologies as well as the infrastructure that is in place to ensure equal opportunities for all. This chapter provides an overview of what is commonly discussed when talking about digital equity and digital access in PK-12 schools. Examples of teacher implications and resources are provided, and a call for a shift in culture is present. The chapter concludes with recommendations for schools and policy-makers to consider when they begin to address the technological needs in order to prepare students for the future.

INTRODUCTION

Bridging the Gap – Creating Learning Opportunities for ALL Students

We have the right to receive the kind of education that does not discriminate on grounds of disability, ethnicity, religion, language, gender, capabilities, and so on (UNESCO 2003, 5).

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If we broadly use the term social justice we can find from the literature when looking at economics and philosophical views on this topic it simply breaks down to equal opportunities. Over fifty years ago, *Brown vs. the Board of Education* set the precedence in the United States with the promise that all children would receive equal education. The United Nations Educational, Scientific and Cultural Organization (2003) calls for planning to overcome exclusion when it comes to education. The expectation that all receive equal access and opportunities when it comes to education isn't something that is hard to convince others of its importance. While it seems to easy to agree with this on paper, it becomes a bit more complicated in reality. As we view the news we see gaps at every turn, there is inequity in wealth, jobs, healthcare, homes, and education. My work with pre-service teachers allows me a front row view to all of the above-mentioned topics. We hear of initiatives that state we need more Science, Technology, Engineering, and Mathematics (STEM) teachers who will encourage their students to go into one of these high need and growth areas. The fixations on these areas and can indeed have an impact on a nations development. It seems that the centerpoint of all of this lies one common factor: Technology.

The use of technology and technological devices is something that has become ubiquitous in the 21st Century. Information and communication technologies (ICTs) are prevalent in not only in personal lives, but into almost every aspect of our world, ranging from the use in schools to even being used by a passenger on a bus. Our society waits for baited breath for the "next big thing" as lines form overnight to ensure that the latest and greatest cell phones are in the hands of consumers as soon as possible. Documents from the U.S. Department of labor contain information forecasting that careers in technology are the fastest growing areas of the labor force. With the emergence of Massive Open Online Courses (MOOC) as well as a shift in higher education to provide more content online, to the Massive Multiplayer

Online Games (MMO/MMOG). We suddenly find ourselves in a world where it is possible to live in one area of the world and attend school in a different area, play games that are simultaneously played with others in a synchronous mode where we are allowed to even take on different personas. While this availability seems abundant, and a user simply needing to select which mode of selection would be the biggest decision that is hardly the case. Games should be easy venues to get acquainted with technology. It seems however, that even within these games there is a disparity when it comes to access. The 2015 SuperBowl was flooded by ads for The Game of War; the game itself is free on your ICT device. Upon reading a review it seems that while the game is free, those individuals who are willing to spend the money within the game are the ones who are allowed to fully experience the game. Those who are new to the game and have few resources even within this alternative world find they are stymied and prevented from growing their wealth or expand their troops.

The ability to successfully navigate these complex ICTs is crucial for students who will be filling these positions. Unfortunately not all students have the same opportunity or access. Since the inception of the World Wide Web the wealth of information has continued to grow due to the fact that anyone can get online. This premise might suggest that there are no limitations to who would be able to access information. Yet at the same time there are companies who wish to regulate how the Internet will be navigated, perhaps even allowing individuals with greater resources to purchase faster or greater access. There tends to be a lot of media attention to these events as well. However, there are some individuals who are markedly absent from these events, those individuals who have more pressing issues on their minds than getting technology in their hands. For example, if you have an individual who is working two jobs and is trying to fight being evicted from

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