



## **Chapter XV**

# **Narrowing the Digital Divide: Technology Integration in a High-Poverty School**

June K. Hilton  
Jurupa Valley High School, USA

## **Abstract**

---

*Empirical data from a secondary school that took steps to increase technology integration in its classrooms with the long-term goal of raising student achievement are presented. Results from the analysis of this data indicate positive effects from the implementation of two grants designed to bridge the digital divide. Research confirms that the results from this case study are consistent with the methods for success in implementing technology as a tool to improve student achievement. Future study should involve further data collection via teacher evaluations of the professional development process and the analysis of the results from standardized test scores to confirm the positive impact of technology on student achievement.*

## **Introduction**

---

In December 2000, former U.S. Secretary of Education Richard Riley released the new educational technology plan, *eLearning: Putting a World-Class Education at the*

*Finger Tips of All Children.* This report was a result of an 18-month study by educators, administrators, policy-makers, and the private sector to rethink and revise the national strategy for the effective use of technology in elementary and secondary education. The report outlined five national goals for technology education which include:

*Goal 1: All students and teachers will have access to information technology in their classrooms, schools, communities, and homes.*

*Goal 2: All teachers will use technology effectively to help students achieve high academic standards.*

*Goal 3: All students will have technology and information literacy skills.*

*Goal 4: Research and evaluation will improve the next generation of technology applications for teaching and learning.*

*Goal 5: Digital content and networked applications will transform teaching and learning. (U.S. Department of Education, 2000, p. 4)*

While these goals are certainly worthwhile, the question arises, “Are they attainable for all students and all teachers?” According to Brogan (2000, p. 57), “Many teachers did not grow up with computers and are not receiving the training they need to operate them. Some children do not have a computer at home whereas others may have several.” This fact is corroborated by Lori Meyer (2001), who reports that 82% of teachers surveyed by the National Center for Education Statistics (NCES) indicated they were not given enough time outside their regular teaching duties to learn, practice, or plan how to use computers and other technologies. This same study also revealed that the more hours teachers had spent in training, the more prepared they felt to use computers and the Internet for instruction.

In addition to insufficient teacher training, another concern is availability of technology to students and teachers at different schools. The lack of technology based on socioeconomic level known as the “digital divide” has changed its focus in recent years. What used to be considered as simply the difference between those who had computers (the wealthy) and those who did not (the poor) is now changing to focus on how the technology is used in the classrooms. Bushweller and Fatemi (2001) report that in high-poverty communities, schools have one computer for every 5.3 students. This is slightly above the national average of one computer for every 4.9 students. However, this same study found that in schools with fewer than 11% of the students qualifying for free/reduced lunch, 74% of the classrooms had Internet access, while in schools with 71% of the students qualifying for free/reduced lunch, only 39% of the classrooms had Internet access. Also of concern was the fact that teachers tended to infuse technology into lessons much less with low-achieving students than with high achievers. The teachers cited tight time constraints, which made it difficult to cover the prescribed curriculum—an even more difficult task with students who have weaker skills or less motivation (Bushweller & Fatemi, 2001).

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/narrowing-digital-divide/30216](http://www.igi-global.com/chapter/narrowing-digital-divide/30216)

## Related Content

---

### Truth Decay and Epistemic Resilience: Conceptual Pathways for Restoring Democratic Knowledge Systems in the Digital Age

Alp Cenk Arslan (2026). *Media Literacy and the Politics of Digital Misinformation* (pp. 29-56).

[www.irma-international.org/chapter/truth-decay-and-epistemic-resilience/408315](http://www.irma-international.org/chapter/truth-decay-and-epistemic-resilience/408315)

### Second Order Divide in Internet Usage in Developing Countries: An Overlooked Issue?

Aparna Purushothaman, Lone Dirckinck Holmfeldand Moly Kuruville (2017). *International Journal of Digital Literacy and Digital Competence* (pp. 1-13).

[www.irma-international.org/article/second-order-divide-in-internet-usage-in-developing-countries/191258](http://www.irma-international.org/article/second-order-divide-in-internet-usage-in-developing-countries/191258)

### Shifting of Paradigm in Buying Behaviour of Digital Natives

Shee Mun Yong (2023). *Digital Natives as a Disruptive Force in Asian Businesses and Societies* (pp. 44-81).

[www.irma-international.org/chapter/shifting-of-paradigm-in-buying-behaviour-of-digital-natives/325854](http://www.irma-international.org/chapter/shifting-of-paradigm-in-buying-behaviour-of-digital-natives/325854)

### An Argumentative Study on Digital Advertising Literacy

M. Nur Erdem (2020). *Handbook of Research on Multidisciplinary Approaches to Literacy in the Digital Age* (pp. 160-178).

[www.irma-international.org/chapter/an-argumentative-study-on-digital-advertising-literacy/240418](http://www.irma-international.org/chapter/an-argumentative-study-on-digital-advertising-literacy/240418)

### Digital Umwelt: Towards a Didactic Use of Natural Interfaces

Pio Alfredo Di Tore, Nadia Carlomagno, Stefano Di Toreand Maurizio Sibilio (2013). *International Journal of Digital Literacy and Digital Competence* (pp. 38-46).

[www.irma-international.org/article/digital-umwelt-towards-didactic-use/78523](http://www.irma-international.org/article/digital-umwelt-towards-didactic-use/78523)