


Learning in the Cloud: How (and Why) to Transform Schools with Digital Media

December 2012 – Volume 16, Number 3

Learning in the Cloud: How (and Why) to Transform Schools with Digital Media		
Author:	Mark Warschauer (2011)	
Publisher:	New York: Teachers College Press	
Pages	ISBN	Price
132 pages	978-0-8077-5249-4	\$31.50 USD



Over the past few decades almost every sector of U.S. society has been transformed by advances in information technology, but K-12 education has not kept pace. Mark Warschauer, in his book *Learning in the Cloud: How (and Why) to Transform Schools with Digital Media*, makes the case that this must change if schools are to graduate students who are able to adapt and contribute in a constantly changing new knowledge economy. There are numerous books on technology and schools, but what makes this small book unique is that it tackles the big questions with concise and well-reasoned arguments based on extensive research, including the author’s own case studies of 1:1 programs carried out from 2003-2010.

In his preface, Warschauer argues that it takes more than handing a child a computer to transform schooling. “Such transformation requires clear goals about what digital media in school can achieve; the appropriate curricula, pedagogy, and assessment to reach these goals; and the right social and technical infrastructure to support the endeavor” (p. ix). The organization of the book closely follows this statement. Warschauer begins to build support for this thesis in Chapter I with a comparison of data from two vastly

different 1:1 programs—a negative example in Birmingham, Alabama, and a positive example from Littleton public schools in Colorado. He goes into detail about the difference between simply handing out devices to students versus an integrated program with clear goals and the investment into infrastructure and teacher training necessary to reach those goals.

The three most commonly stated goals for technology use in schools are (1) to improve academic outcomes, (2) to cultivate 21st century skills and, (3) to decrease social and educational inequities. In Chapter 2, Warschauer critically examines the conventional wisdom surrounding each of these goals. *Under what circumstances does technology usage actually lead to gains in academic achievement? Is it enough to equip students with 21st century skills or do they also need to acquire advanced domain knowledge? Although access to technology has significantly increased for disadvantaged groups, why isn't the achievement gap narrowing?* This chapter, one of the strongest in the book, provides research-based answers to all of these questions.

In Chapter 3, Warschauer looks in detail at what hardware, software and digital content tools are available to schools, including many free options such as open source software, cloud computing, social media, and open educational resources (OER) such as Scratch. He discusses lower-cost netbooks as a “good enough” alternative to laptops and gives examples of schools where 1:1 netbook initiatives have positively impacted student achievement. He also discusses the potential benefits of digital textbooks, especially if they are developed with interactive capabilities.

Chapter 4, “Exemplars,” examines four schools that have achieved powerful results through technology. The common thread between the schools is that they use digital media for authentic learning experiences; two of the examples involve students writing for a public audience and the other two focus on schools that encourage experiential, project-based learning.

Another strong chapter is Chapter 5, “Designs.” According to Warschauer, “Computers themselves are only a small part of educational reform with technology” (p. 67). Technology will only lead to improved results when it is used as part of an integrated and carefully designed program based on innovative and sound curriculum, pedagogy and assessment. Warschauer looks at each of these factors individually. Of the schools that Warschauer and his team have researched, the most successful are the ones that have placed a strong emphasis on curriculum development. Pedagogy also needs to be updated from the industrial model of the past few centuries. The recent mantra of teachers as a “guide on the side,” is not always the answer, however, according to Warschauer, “Good learning with technology stems from good teaching” (p. 74). Teachers today need more than instruction on how to use technological tools; the best teachers with technology will need to grasp where technological, pedagogical and content knowledge intersect. Warschauer then lays out the advantages of formative and performance assessment and discusses the role technology can play for each. The chapter ends with a brief look at the benefits and challenges of virtual schooling.

Chapter 6 looks at digital media and educational environments and includes such timely topics as BYOT (bring your own technology) initiatives, the importance of leaders having a vision of the possibilities of educational reform through technology and the necessity of teacher buy-in and professional development.

I chose to read this book because I work at a charter school that implemented a 1:1 laptop initiative last year. The transition has not always been smooth, especially with infrastructure, but things are improving in the second year. Many of the digital media resources that we are using are motivating to students (important in itself), but I really wanted to know how to best use technology to increase student achievement. I took away a lot from the discussion of exemplary technology schools. Although most of the research cited in *Learning in the Cloud* is U.S.-based, the fundamental principles would certainly apply in an international context as well. One of the most basic tenets is that computers are not just a tool, but part of a larger “sociotechnical infrastructure” that cannot be neglected. The affect of different approaches toward technology on the academic achievement of English learners is also mentioned in several places.

In the conclusion, Warschauer asserts that change through digital media will neither be fast nor easy. It is necessary, however, and this book is a great starting place for teachers or school leaders who wish to take advantage of technology to transform teaching and learning in their schools. Each chapter in *Learning in the Cloud* could merit a book by itself, and Warschauer includes an extensive bibliography for those interested in delving deeper into the research on these issues.

Reviewed by

Shannon L. Du

University of North Carolina, Charlotte, USA

[<sdu4@uncc.edu>](mailto:sdu4@uncc.edu)

© Copyright rests with authors. Please cite TESL-EJ appropriately.