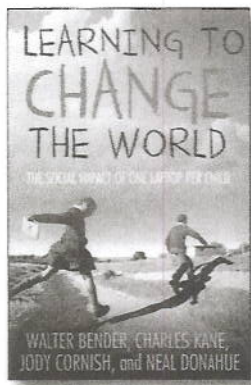


Book Reviews



Are We Learning to Change the World?

Book Review: Walter Bender, Charles Kane, Jody Cornish, and Neal Donahue. Learning to Change the World: The Social Impact of One Laptop Per Child. Palgrave Macmillan; 246 pages; 2012; \$28.00.

Reviewed by Curtis J. Bonk

Introduction to This...“Book”

This is not simply a book. It is actually a social movement and a paradigm for educational change. At its core are the principles and ideas espoused by many of the people discussed in this book. While the authors lay out a fairly thorough analysis of the One Laptop Per Child (OLPC) project and resulting XO laptop and Sugar software platform, they do not conclude whether that project has been a success or not. Instead, they document the constant struggles of innovation within the OLPC project. As such, it is not just a story focused on individual learning with child-centered technology, but one that highlights unique business practices, including those related to marketing, supply chain management, finance, leadership, and innovative engineering and design.

If this is a book, it is simultaneously a history book, a project management guide, a tale about innovators in a technology start-up, and a philosophical doctrine for educators hoping to inspire disenfranchised youth. It might also be considered a casebook related to technology integration. Suffice to say, there are countless lenses or viewpoints to take, including that of educator, government contractor, community organizer, and technology innovator.

The chapters of this book are filled with the hope of a better tomorrow but are situated in the hard social realities and tensions of educational reform today. There is a tension between student performance goals to which schools are held accountable (e.g., reading and math scores) and life skills that children desperately need (e.g., creative

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problem solving, critical thinking, etc.). There is a tension between urban and rural deployment of the XO. And a tension between top-down and bottom-up approaches to buy-in for such a product.

There is a tension between dropping XOs in the hands of students for their self-directed exploration and the clamoring for teacher training in innovative pedagogy related to these machines.

Finally, there is a tension between designing a computer for child-centered learning and the difficulties innovators face when attempting to change the entire ecosystem of schools. Given such tensions, dive into any chapter of *Learning to Change the World* and the stories and reflections you will discover are bound to arouse your interests. You will quickly realize that true progress requires many ingredients.

Pointing Back to Papert

As such, *Learning to Change the World* is a momentous reflective moment in the field of educational technology, including the history of personal computing and the shift from instructor- and text-centered learning to “constructionism.” As a history book, it should enlighten graduate students and others new to the field about the incremental evolution that has brought us to a more learner-centered educational age here in 2013. Learners today generate ideas instead of passively consuming them, just as Seymour Papert of the MIT Media Lab long ago predicted, including an article in this magazine in 1971.

Unfortunately, too many students enrolled in educational technology programs today have never heard of Seymour Papert and his ideas about personal computers as tools to think with. Papert's vision for a world filled with learner experimentation and hypothesis generation is embedded throughout this book. As someone who went to graduate school at Wisconsin in the late 1980s, where Papert's widely acclaimed book, *Mindstorms: Children, Computers, and Powerful Ideas*, was required reading, this book brings back fond memories. Ironically, a month after reading Papert's book, I heard him speak at the World Congress on Education and Technology back in May 1986 in Vancouver and then again at his Media Lab four years later. Clearly, the OLPC project took Papert's experimental ideas from the Mid-1980s and early 1990s in Boston and extended them to the far reaches of the world.

Given this backdrop, rich with grandiose hopes and huge expectations, the results shared in this book related to the OLPC were at times amazing and at other times highly disappointing. In many ways, the various constructionist principles and activities that are embedded throughout the book predate the Web 2.0 and associated participatory learning ideas in vogue today. At the same time, they are also enhanced by this highly powerful Web age. The instantaneous global collaborations that are possible online with a laptop or set of laptops were mere dreams for most educators and students working with Papert and other learning technology leaders back in the 1980s. Today they happen in remote villages of Cambodia as well as the schools throughout Paraguay, Uruguay, and Nigeria.

Clearly, Papert was not operating alone in his media lab. *Learning to Change the World* is also a story made possible by Nicholas Negroponte, the MIT researcher and

cofounder of the MIT Media Lab, whose early visions for the XO laptop came to fruition despite ceaseless political, economic, and educational challenges. In addition to Papert and Negroponte, an assortment of other people make brief appearances in this book, including leading educational and technology thinkers and innovators, such as Alan Kaye, Cynthia Solomon, Marvin Minsky, Jean Piaget, Paulo Friere, John Dewey, and Robert Kozma. Of course, countless others have played vital roles in the project design, implementation, and evaluation.

Commendations and Criticisms

As Walter Bender and his colleagues point out, many thought leaders keenly anticipated this age of learner-centered learning in technology-rich environments. As shown in this book, technology in the hands of youth can be highly empowering. Nevertheless, this educational revolution did not come overnight. Instead, the authors reveal to us that it is incremental; successful revolutions come from evolutions.

Some of the prevailing criticism of the OLPC project has focused on the learning-related impact of the XO in schools. However, stepping back and taking a long view, you will likely see the need for local commitment for innovations. You will also discover many revelations not published by the press. What perhaps surprised me most in the book was the connection of OLPC to the rise of netbooks. While the authors fully acknowledge that they did not directly cause the netbook movement, they did, in fact, map out the means for others to build more power-efficient and smaller devices. As such, they played a crucial role in sparking the netbook movement.

What also amazed me as a former corporate controller and CPA was the extremely thin profit margins (i.e., \$1 per XO) from which they managed to survive despite myriad roadblocks in government contracting, production cycles, and training. At the same time, it was refreshing to read a book about a project that has impacted millions of young lives, while still admitting that they have not come close to their original dreams and aspirations.

The authors should be commended for bringing up a series of debatable topics and issues related to the field of educational technology. For example, can product-driven social change spark paradigmatic change in schools and educational systems? As I digested their "Lessons and Reflections" section at the end of each chapter, I came to the conclusion that perhaps it can. In these ending reflections, there were numerous management and leadership principles carefully organized and explained (e.g., "The goal is not just to innovate, but also to create value"). Also worth reading and digesting carefully are the book appendices, which contain interesting stories and caveats related to major XO purchases and installments in different countries and regions of the world, including Peru, Nicaragua, and parts of the United States.

I also appreciated the frankness that I felt when reading different sections of the book. For instance, the authors fully admit to being arrogant at times. They acknowledge that the OLPC team set somewhat unrealistic expectations. As exemplified in a 2006 TED talk by Negroponte, there were quite lofty early targets established about price (i.e., \$100), sales, manufacturing, and XO special features.

Such bold projections attracted extensive media attention. However, in attempts to meet their audacious predictions as well as stay solvent, OLPC participants were often forced to wear the hats of fundraisers, marketing specialists, support personnel, computer designers, instructional designers, and teacher trainers.

Among my issues and criticisms are several noticeable typos in this book. These were distracting and led me to believe that the book was hastily produced. Second, there were issues that seemed to be rehashed several times, as if the four authors had ownership over different sections of the book but all of them wanted to tell the same story. Third, at times, I wanted to hear from the voices of Papert and Negroponte themselves. While the authors cited their work throughout the book and gave each full credit for their ideas, a book to fully capture and illuminate a project of this magnitude certainly warrants hearing, even briefly, from key OLPC leaders and founders in a few timely chapter quotes.

There was also an exciting admission in the book when the authors discussed the role of the instructor as one of guide who nudges or scaffolds students. It was here that I thought references to the work of Vygotsky and his contemporaries might be in order.

Finally, I was disappointed with their vision of the future detailed near the end of the book, as it seemed to simply mark where we have been and where we are today in terms of the XO laptop and similar products now in design (e.g., an XO tablet). No more bold predictions!

"Freedom to Learn" in Learning to Change

And what about the children for whom these XO machines were originally envisioned and built? The case studies in the appendices indicate that they explore ideas of personal interest, show up in school more often, and design computer programs, music scores, and even books. As Carl Rogers would say, they have freedom to learn and will be better able to self-direct their own learning later in life. While that is the target of the OLPC philosophy, at times I felt that children were not the real focus of this book. Instead, in many ways, the XO (i.e., the technology) was the centerpiece for Bender and his colleagues, as they describe their attempts to design, contract, build, and deliver it.

In the end, *Learning to Change the World* documents a project at the intersection of educational reform, learning theory, technology and business innovation, and personal creativity. As such, this book might be as important for technology mangers, heads of non-profit organizations, students in MBA programs, and government policy-makers as it is for teachers, instructional designers, or educational psychologists. Whatever your discipline, you will likely resonate with more than a few anecdotes and ideas in this book. And, as you read them, you can decide if, when combined, these have been world-changing or not. □

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