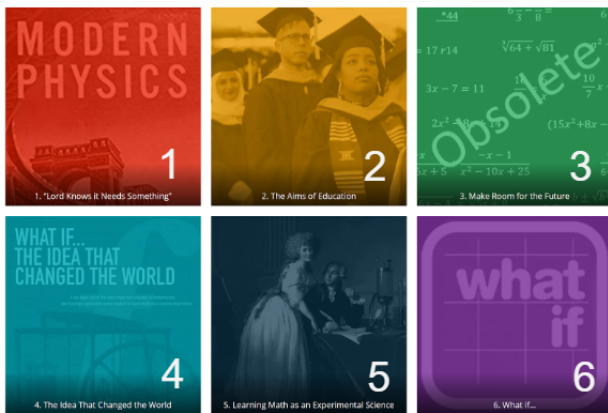# *Make it Real:* *On the Future of Education*

Abstract

Art Bardige (artbardige@gmail.com)

Our education model is broken. Despite the economic promise of and documented need for a bachelor's degree, graduation rates are stagnant, the achievement gap is widening, and costs are bankrupting our kids. While Internet and digital technology have transformed work and life, our schools retain a 19th century form and function and a nine-century-old paper technology pedagogy. The problems confronting our schools, while well known, have heretofore not been recognized as problems digital technology creates and must solve if all our kids are to thrive in the digital age.

Despite my long career as a STEM educator and digital learning entrepreneur in love with technology, I had never, until five years ago, recognized the amazing role technology plays not only in how we learn but in what we learn. This discovery, which I found in the table of contents of a math book written in the year 1202 has reshaped my work and will reinvent education. In *Make it Real,* I tell the story of building a new foundation for learning math on the ubiquitous spreadsheet, asking "What would math education look like if it were reinvented for the 21st century?" In these six chapters you will learn how to use the tools and the real-world information on the Web to reimagine and redesign schools for the digital age.

1. **"Lord Knows it Needs Something"**—on the role of technology in both what and how we learn
2. **The Aims of Education**—on the need for a college degree for a thriving middle class
3. **Make Room for the Future**—on subtracting paper-age skills and adding digital-age skills
4. **The Idea that Changed the World**—on functions and functional thinking for problem solving
5. **Learning Math as an Experimental Science**—on lessons for learning math using spreadsheets
6. **What if...**—on revolutionizing education by making it real and open-web

This book is about the power of technology to be transformative. New technologies increase productivity by making people more effective, efficient, and relevant workers. Open-web schools will reinvent education by using digital technology to make learning much more effective through its greater bandwidth for supporting different intelligences, immediate and targeted feedback, and the creative capacity to ask, "What if…". It will increase learning efficiency by giving teachers and students new tools for making things and solving problems. Finally, it will make schools relevant by opening them to the real world of rich, varied, and appealing challenges. Open-web schools will make teachers into students and students into teachers, integrate disciplines, and use the business world to redesign schools, redefine intelligence, and reevaluate progress. Digital learning can prepare our kids for their future, not our past, and enable us to set an audacious goal: Double the number of college degrees at half the cost within the next decade.