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Book and Software Review

Associate Editor's Column

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Rethinking Education in the Age of Technology: The Digital Revolution and Schooling in America, by Allan Collins & Richard Halveson, New York: Teachers College Press, 2009. 176 pp., \$54.00 cloth, \$21.95 paper.

Guest Reviewer: Kim Floyd, West Virginia University

There is no denying the influence that technology has had on both the instructional content presented and the instructional delivery models used in today's schools. In light of emerging technologies, the face of education is changing, evolving, and taking many new forms. Collins and Halveson present the historical development and a current examination of the American educational system. They explore the potential that technology holds for society, the marketplace, and school systems in the future. The book outlines how educators and parents need to change their mindset, rethinking how they can embrace technology to improve learning for all students.

In Chapter 1, the authors discuss the many paths that education may take in today's world. Learners, parents, and employees are becoming more empowered by technology and seeking new ways to harness it to engage in learning experiences. Learning is no longer limited to the space within the walls of a school building and learning outcomes are no longer measured by a score on a standardized assessment.

The next two chapters present a lively debate between technology enthusiasts and technology skeptics. Chapter 2 sets the stage with the enthusiasts' point of view. The authors argue that in order to prepare students for the global marketplace of the

21st century, the manner and materials used to educate students must move beyond traditional didactic instruction and paper-and-pencil assessment. Acquisition and demonstration of knowledge and skills is better accomplished through meaningful, project-based learning where technologies are integrated into both the teacher's instruction and the student's work product. The authors describe many facets of today's learners—the ability to learn any where and at any time, access to ever-changing multimedia, and the empowerment provided through learner control of the learning experience. They argue that each of these characteristics suggests the need for a revitalization in the delivery of educational programs.

Chapter 3 turns to the skeptics' argument. The authors discuss the conservative tendencies of schools and suggest that the continuation of traditional approaches to education may be due in large part to an overall resistance to change. They feel that overcoming the perception of many stakeholders that education in its present form is adequate and sustainable will be difficult. Further, they outline barriers to the use of technology in schools, culminating in a persuasive discussion of incongruity between how technology functions and how schools operate.

In Chapter 4, the authors walk readers through the foundations of schooling in America. They describe how events in history changed the face of the education system with each major social revolution and resulted in the universal formal school system now in place. The chapter ends with a discussion of the unique demands on and expectations for today's schools.



While Chapter 4 addresses the past, Chapter 5 presents the future, describing emerging alternatives to traditional education. In this chapter, the authors discuss the many new options for education, from home schooling to learning centers, that have led to the development of genuinely lifelong learning opportunities. They close the chapter with a new perspective: "Limiting our concerns about our learning with new technologies to schools can blind us to important issues and possibilities" (p. 90).

Chapter 6 compares and contrasts the earlier apprenticeship era, the current public schooling era, and the emerging lifelong learning era. The authors point out that within each of these eras, the issues faced have been the same: responsibility, expectation, content, pedagogy, assessment, location, culture, and relationships. Education has changed over time as a direct result of how educators have responded to each of those issues. As the potential for lifelong learning becomes a viable option for many, the authors warn that there may be some individuals who cannot access and assimilate to the new technologies driving this change.

As with any transformation, there are positive and negative outcomes. In Chapter 7 the authors posit that some of what may be lost with a movement to a more technology-based education system could include social cohesion, multiculturalism, and equity of learning opportunities. Additionally, without the need for social interdependence, a culture of isolation rather than community outreach and involvement may become the norm. The authors end the chapter with an examination of the promises technology may hold: education that is customized and available anywhere/anytime, the potential increase in self-actualization in a learning environment, and the transference of accountability from the schools to parents and students.

In the current school paradigm, system change cannot occur without innovative and targeted policy development, and in Chapter 8 the authors outline key areas. First, there will be increased use of performance-based assessment, so measures of learner outcomes will need to rely more on applications than on standardized tests. Second, the use of technology requires a shift away from traditional teaching and learning, so curriculum revision will become of critical importance. Third, equity in learning opportunities for all learners must be ensured,

so resources to increase technology access for every student will need to be obtained.

In Chapter 9, the authors discuss the challenges that schools face when the students are digital natives who are completely comfortable using a variety of technologies and are eager to adopt new ones. Moving from an educational to a societal perspective, the authors describe how technology has changed pop culture, shaped the social interactions and opportunities of youth, and created a multitude of leisure activities not previously available.

In the last chapter, Chapter 10, the authors identify the issues that must be addressed to complete a paradigm shift successfully from the current school-focused educational model to a broad-based, lifelong learning model. They discuss seven areas in which society needs to rethink education in a technological world. The chapter ends with their vision for the future that can be used to stimulate lively debates about the potential that technology holds for the future of education.

Collins and Halveson's book is a thorough and even-handed examination of the issues technology presents for today's schools. Parents, teachers, and teacher educators can benefit from the authors' considerable understanding and thoughtful explanation of the evolution of education, the potential of new technologies, and the needs of consumers in the 21st century. The book creates a foundation for open dialogue about the dilemmas that current schools systems face and the opportunity for collaborative efforts to address them by embracing, rather than rejecting, technology.

Author Notes

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