

BOOK REVIEW

***HIGHER EDUCATION IN AN ERA OF DIGITAL
COMPETITION: CHOICES AND CHALLENGES******Donald E. Hanna & Associates (Madison, WI:
Atwood Publishing, 1999, 362 pp., \$29.95)*****Kim E. Dooley***Texas A&M University*

In a recent doctoral defense, a graduate student who works for a multimedia development company recommended a book for the committee. At the time, we were discussing the emerging needs of higher education as we approached the year 2000. Compelling issues of how technology would shape how we learn and reform the college classroom were among the topics discussed. Perhaps a similar conversation took place 100 years ago with anticipation of the shift from an agrarian society to an industrial one. But today, it is not the automobile that serves as the vehicle, but access to information anytime, anywhere.

Instructional strategies have changed very little in the last 100 years (chalk and talk still abounds), yet Donald E. Hanna and his co-authors dare to discuss the topics that truly could shape the future of higher education. Administrators, instructors, support personnel,

and students can all benefit from the diverse topics and thought-provoking approaches expressed in this book. The overarching theme is about *change*. Hanna begins the preface with an overview of five themes that shape the book's content: (1) the emergence of a global learning society, (2) changing the patterns of learning, (3) learning challenges of advanced technologies, (4) transformational change and leadership in higher education, and (5) ethics, equity, and personal values: leadership for a new age. Although each of the book's chapters are connected to these themes, the chapters are not divided and ordered according to these themes, allowing for a mixture of each theme throughout the book. For simplicity in this review, I will discuss the chapters in sequence.

Hanna begins the first chapter with an overview of higher education in an era of digital competition, specifically by reviewing poten-

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tial global consequences. "Major organizational changes and new developments in higher education are being accelerated by dynamic advances in global digital communications and increasingly sophisticated learning technologies....Barriers to accessing higher education learning opportunities are being reduced globally because of improved learning technologies" (p. 19). He provides characteristics and assumptions of traditional institutions and poses the question of why universities will change, although change in higher education is difficult. "Decisions about core values and governance greatly influence the culture of the organization....Given this framework, it is not surprising that major forms and types of universities that have developed to date have significant staying power and are resistant to organizational transformation...." (p. 26). He goes on to note that change is "often inhibited by organizational inertia rather than resistance to change by leaders, faculty members, or students" (p. 28). Hanna discusses the external pressures for change including increasing demand for continuing education and competency-based programs, a fast-paced economy causing a shift in the skills and abilities of today's workforce, and globalization in both commerce and communication. He concludes his first chapter with a vision for the future. "In the case of traditional universities, leaders need to be cognizant of the powerful forces resisting change, and understand the academic and administrative culture of their organizational environments" (p. 40).

The second chapter is also authored by Donald Hanna, but shifts the focus to learning—learning environments, collaborative and cooperative learning, problem-based learning, and learning communities. "Understanding emerging approaches for creating more effective learning environments in an interconnected world is central to addressing the future challenges facing universities and colleges" (p. 46). I particularly liked this chapter because of the praise of innovative thinkers such as John Dewey (1916) and Lev Vygotsky (1962) who connected learning with social context (con-

structivism). He also mentions the role of technology and the work environment, emphasizing "the ability to work in teams, excellent presentation skills, critical thinking processes, and the capacity to use a variety of technologies and software" as the knowledge and skills necessary for "living and working in a rapidly changing, technology-based society" (p. 46). These are the same values I espouse in my teaching philosophy.

The book is worth the cover cost even if you only have time to read Chapter 3. Chris Dede shares his "visions of how sophisticated information technologies may influence the nature of higher education" by initially describing emerging interactive media and then taking the reader on a virtual reality tour of several possible futures through three vignettes—elementary, secondary, and higher education. "Understanding social, psychological, and emotional differences between how humans interact in physical environments compared with virtual environments, in which many direct sensory experiences can only be simulated or imagined, is critical for developing effective learning environments using advanced technologies" (p. 82). I have used the college vignette in my courses to encourage thought and discussion about one possible future with "know-bots" and smart devices like "foreview mirrors." This chapter is terrific!

In Chapters 4, 5, and 6, Donald Hanna takes us through emerging organizational models of the extended traditional university, technology-based universities and new players on the block, such as for-profit, corporate, and competency-based learning universities. Wonderful tables and figures abound with comparisons of traditional residential universities, extended residential universities, distance education/technology-based universities, and for-profit, adult-centered universities, a listing of degrees available through distance learning, and return on investments in learning technologies.

In the next chapter, Janet Poley discusses leadership in the age of knowledge. "Leaders

act as maestros—orchestrating congruence toward an attainable vision while assuring that all contributors are free to do exceptional work” (p. 167). She shares her own top ten list of lessons learned in a concise and direct format. She summarizes that “higher education needs more deep-thinking, diplomatic, cosmopolitan, cross-fertilizing integrators in its leadership ranks” (p. 181).

Another hot topic in the age of multimedia and distributed learning is intellectual property. John Tallman begins this discussion in Chapter 8 with the question, “Who owns knowledge?” (p. 185). His chapter headings include significance of intellectual property, copyright basics and Internet issues, and the rights of copyright owners. It is a good overview of the topic, including several examples of case law and the Digital Millennium Copyright Act to help the novice on this complex topic. He includes a very useful reference list.

Donald Olcott, Jr. takes the reader into another challenging area in Chapter 9: ethics and technology. “The purpose of this chapter is to create a framework for understanding the ethical ramifications of technology use and adoption and the consequences of our technological choices” (p. 221). He defined *technoethics* as the “relationship between technology choices and the ethical consequences of these choices” (p. 222). He shares a formula: that “the delusion of technology = classroom quality” (p. 225) and characterizes several presumptions of quality related to the use of learning technologies in classrooms: (1) that all teachers are technologically literate and have mastered the art of facilitating learning via technology, (2) that student computer simulations capture the essence of real-life experiences, and (3) that everyone is suited for learning at a distance. He also provides a decision-making framework, a case study for technoethic issues, and a code of ethics for technology delivered education.

The theme of global access appears again, as penned by Janet Poley. Chapter 10 takes a hard look at gender, poverty, and race issues. She discusses her participation at the Global

Knowledge Conference and how women in developing countries, particularly rural women, have little or no access to new information and technologies. Dr. Poley’s extensive global experiences provide a candid and horrifying look at the have-nots, domestically as well as abroad. This chapter caused me to reflect on the need for extramural funding and research in this area.

Donald Olcott, Jr. returns in Chapter 11 with the help of Kathy Schmidt to discuss redefining faculty policies and practices, noting that “faculty resistance to change to protect the status quo is pervasive” (p. 260). I have experienced this first-hand in my role as a mentor and coach to faculty that teach at a distance. With incentives and policies lacking, many higher education institutions are unable to move forward in the diffusion of distance education technologies. This chapter examines a number of critical issues affecting the next generation of faculty and their roles with the emergence of instructional technology and distance education. Balancing academic freedom, self-regulated governance, university change, institutional policy, faculty advancement, teaching philosophy, learning technology, funding, productivity and quality, libraries, and credentialism are the primary topics covered in this chapter.

The same authors contributed to Chapter 12 on an integrated technology systems design as a model for aligning pedagogical quality with learning technology. They review the theoretical contributions of behaviorism and cognitivism in the development of pedagogy in the new teaching environment. They note that “faculty who have an interest in pedagogy over technology will be the ones leading the way in technology-enhanced learning” (p. 294). They include several useful figures to serve as a course design matrix.

Chapter 13 reviews learning and the Web with reflections on assessment. Gary Brown poses the age-old concern that Web-learning is less interactive than face-to-face instruction. “An extensive observational study of twenty classes by Nunn (1996) found that typically,

students participate less than 2.28 percent of the time in traditional classes" (p. 315). He moves the reader into evaluation and the concern that "grades fail to reflect learning" (p. 317). "Evaluation and assessment practice, therefore, needs to include strategies that value *how* students think as well as *what* they think" (p. 318). He discusses the use of portfolios, rubrics and other forms of authentic assessments as viable alternatives.

Donald Hanna concludes in Chapter 14 with a vision for the future. He provides a list of strategic choices worth re-stating:

- Who are the learners to be served? What are their needs? What are the intellectual and knowledge needs of learners today and in the future?
- What is the broader context for the learning opportunities that universities provide? What are the most appropriate learning environments and contexts that can enable students to become lifetime learners?
- How can a university provide the maximum access possible for all students, including those who are not resident on the campus? How do new learning technologies support the development of effective learning environments?
- What are the changes in culture, in mission, and in processes that need to be made in order to view a student as a lifetime client or customer, and to serve that student effectively?
- What are the elements of leadership and ethics that enable a university community to move forward strategically to address and implement needed changes?
- How are developing technologies changing the concept of knowledge and its intellectual origins, value, and own-

ership, and what policy options might be pursued by universities as a result? In what ways can the faculty exercise leadership for the changes that are needed, and how can its positive participation be enhanced?

- What organizational models are being used to respond to an increasingly complex and dynamic environment for higher education? What are the strategic options available to a university in considering possible programs that could be offered internationally? (pp. 337- 343).

Donald Hanna also adds the strategic challenges for the future:

- Ambiguous boundaries.
- Interdisciplinary programs.
- Supporting entrepreneurial efforts and technology.
- Redesigning and personalizing student support services.
- Connected and lifelong learning.
- Technologically competent faculty.
- Building strategic alliances with others.
- Incorporating learning technologies into the strategic thinking of universities.
- Measurement of program quality.
- Achieving institutional advantage, and
- Bureaucracy, culture, and assumptions regarding change (pp. 343- 348).

He ends by suggesting that the most important and immediate task for universities to is "build a culture that is friendly to and supportive of innovation and change at all levels of the organization" (p. 348).

As I said before, this book is about *change*. I love the idea expressed on page 9 in a direct quote from Nicholas Negroponte, "such is life in the fast lane of the infobahn."