

Book Review - The "E" is for Everything: E-commerce, E-Business, and E-Learning in the Future of Higher Education

Reviewers Jos Rikers
Open University of the Netherlands

Editors: Richard N. Katz and Diana G. Oblinger
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Reviewed by: **Jos H.A.N. Rikers**, Open University of the Netherlands

The Educause Leadership Strategies series addresses critical themes related to information technology (IT) that will shape higher education in years to come. By gathering a team of knowledgeable authors, each one very much involved in the introduction of IT, the editors have succeeded in compiling a book that addresses many questions and issues. Richard N. Katz, vice president of EDUCAUSE, has a University of California background. Diana G. Oblinger, who in previous years held several management positions with IBM, is currently vice president for information resources and chief information officer for the sixteen-campus University of North Carolina system.

The central theme of this book is the relationship between e-commerce, e-business and e-learning, and the role they will likely play in higher education. The editors begin by painting a picture of what a first-time student will encounter upon entering the University of California's, Santa Cruz campus system in the year 2010. The scenario depicts how the first Web generation of university students might engage in a higher education system, once information technology has been seamlessly integrated with every aspect of its business processes. Does this sound preposterous? No, say the editors. The "E" is already in the air.

In the first chapter, the editors navigate the sea of "E", a world where the Internet and the World Wide Web will fundamentally change the way companies operate on all levels. Education, of course, is also taking part in this change. The downside of this chapter is that readers face some confusion regarding the use of terms and terminology. For instance, the editors decided to use the "e" prefix to cover many complex technologies and activities addressed later in the book. And although the editors build their case using a large number of examples, statistical data, and research outcomes, it is obvious that they wrote this chapter during the high times of the new economy. Given the significant problems the new economy encountered with the downturn in 2001, they probably would have tempered their views if only they had been in the know at the time!

The author of the second chapter, Kenneth C. Green, is the founder of The Campus Computing Project, the largest continuing study on the role of information technology in U.S. colleges and universities. The data he presents in this chapter are based on a 1999 Campus Computing Survey, which showed that by the fall of 1999, significant numbers of students were already beginning to seriously engage in Internet based e-commerce. This trend can be compared to U.S. colleges and universities, who were not ready to participate in the 1999 e-commerce explosion. In fact, less than 5 percent of the U.S.'s two- and four-year colleges had a strategic plan for e-commerce, and less than a fifth were in the process of developing such a plan.

Green then explains why colleges and universities were late to the dance. The factors he cites are: cultural differences between companies and campuses; the complexity of e-commerce is often not fully understood by campus policy makers and therefore not perceived as mainstream; the divide between academic and administrative computing; and last, but not least, the vast resources required to introduce e-commerce in the first place. While, Green describes the situation within the context of the United States, the factors he cites are perhaps more applicable outside that nation. The idea that education should be considered an industry (and should be run like any other industry) is still inimical to the academic values held around the globe. Therefore, it can be concluded that e-commerce will emerge on campuses, but only when it is accepted as a part of the institutional mission.

Chapter three is written by Robert A. Wallhaus, who among his many activities as a higher education consultant, also works for the Illinois Board of Higher Education. Asserting that e-learning will force us to look for new ways of collecting data and describing higher education situations, developments, and trends, Wallhaus says that while traditional learning modes will continue to be offered for years to come, new approaches to offering and consuming alternative forms of learning will increase. The data used to analyse emerging trends in higher education clearly shows that a dual situation is coming into existence – one that will eventually use both traditional and new measurements. To make matters even more complex, Wallhaus says this analysis will only work if the old and new data collection methods are compatible. Therefore, he argues, a broader contextual model for describing the learning process under the e-learning regime will be required. He also points out that such a conceptual framework already exists, having been developed by the National Postsecondary Educational Cooperative (NPEC) in 1999. Wallhaus then examines trends in data collection, which he says will eventually see a more fluid exchange of data between individual learners and their institutions. This trend will have enormous implications for data collecting and analyses mechanisms, positive and negative. In fact, in Wallhaus' opinion, one of the more threatening pitfalls is that this trend could lead to incompatible student records systems. The author then concludes this chapter by providing a classification structure describing learning providers.

Chapter four was written to put our feet back on the ground! The author, David L. Wasley, is the assistant to the associate vice president of information resources and communications, Office of the President, at the University of California (UC). He directs his attention to the development of universal digital credentials for all members of the UC university community, a process he sees as the cornerstone for the development of middleware services for the deployment of next-generation technologies. Wasley then goes on to discuss middleware services, which he says must be developed before the university community can step into e-learning and e-commerce on a large scale. Discussing the need for standardisation of the electronic information environment, he then defines this information environment as a set of electronic information services, on-line resources, communications services, applications software, and workstations that enable us to teach, learn and work more effectively, without constraints of time and place. Wasley then discusses the development of general solutions according to open standards for authentication, authorization, directory services, and encryption, solutions that can all be integrated to a "middle ware block" that can subsequently enable the university community to transform its business processes.

In the fifth and final chapter, Richard Katz addresses the issue of information policy support and campus e-business. According to Katz, universities and colleges must be prepared to adequately address emerging issues such as the appropriate use of institutional information and the protection of information originating or residing in college and university information systems. Privacy, access, ownership, and security issues posed by e-business are extraordinarily complex, and according to Katz, represent as much a set of cultural, behavioural, and policy issues as they do technical ones. Presenting readers with an "Integrated Policy Framework", the author starts off with this key assumption: Under what conditions (responsibilities of resource users) and for what members of the campus community is access to the network, network-based services, and networked-based information, considered a "basic right"? According to Katz, policy development is not simply a process obeying strict rules that are, for the most part, context specific. However, he is convinced that e-business applications will open new vistas, while at the same time creating new risks. An integrated policy framework to guide the new developments will nonetheless be hard to institute. On the other hand, an integrated, e-business environment without a supporting policy framework will be nearly impossible to manage.

In the final chapter, written by PriceWaterhouseCoopers' Jillinda J. Kidwell, John Mattie, and Michael Sousa examine the pitfalls of implementing new technology. They argue that universities and colleges that get the urge to participate in e-business and e-learning initiatives should not become overawed by the feeling to do something. Instead, they say that implementation of e-business in a college or university requires a balanced and well thought out strategy. At PriceWaterhouseCoopers, for instance, they identified a four stage evolutionary model for adopting an e-business strategy (relevant for all industries, as well as

higher education). The four stages described are: presence, integration, transformation, and convergence. Outlining the details of this strategy, the authors say that to deploy e-business and e-learning effectively, an organization must be prepared to guide the process from beginning to end, step-by-step. At all times the organization must be prepared for their next move. In conclusion, the authors provide a list of diagnostic questions that can be used to analyse an organization on all the eight areas they mentioned in the book.

Overall, this book gives a thorough overview of the issues that an institution implementing e-business initiatives will encounter. Starting with background on the development of e-business in higher education in the first two chapters, the third chapter offers advice on collecting data to benchmark success in the e-environment. Chapters four, five and six deal with the introduction of e-business from a technical, policy and organizational point of view. Included are practical checklists, models, and diagnostic questions to test the readiness of an organization for e-business. This book a must read for all decision makers involved in the introduction of e-business in higher education. Indeed, when putting the challenge of implementing e-business into perspective, it often seems as if the problems do seem to pile up quickly! But one still should be aware of what is ahead and take time to prepare, rather than just blindly participate in e-business because everybody else is doing so.

This book provides a clear overview of all the issues that really matter when discussing the introduction of e-business and e-learning into a higher education organization. While it is obvious that it was written from a North American context, it can be of value to other regions where cultural and economic constraints exist and where educational situations and systems differ. This is especially true for developing countries, where e-learning is often seen as a cost effective solution to problems of low access and participation rates in higher education.

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