

The effects of e-commerce on universities essay sample

[Business](#), [E-Commerce](#)



Executive Summary

It is no exaggeration but an authentic truth that information technology has diversely affected all fields of business in one way or the other. E-commerce has also a significant effect on the business and work procedure of universities in multiple manners. Universities provide an education for our citizens. E-commerce is the production, sales, advertising and distribution of products or services through telecommunication network. E-commerce brings in the whole industry and activities like applications, producers, information exchange, and economic exchange under one word called the internet. E-commerce is highly dependent on the technology. Example: interconnectivity among satellites, telecommunications, cables etc. E-commerce needs to keep in mind the process infrastructure, which involves the various means of making payment, distribution and delivery over the internet possible. Certain standards have to be maintained if a country wants to indulge in e-commerce. More precisely, teaching, research, and public service can be regarded as simply the current manifestations of the more fundamental roles of creating, preserving, integrating, transmitting, and applying knowledge through E-Commerce tools. E-commerce uses internet as its major tool. It is a valuable medium for international trade as it reduces communication costs, reduces time-to-market for goods and also exports services. E-commerce simplifies processes, reduces costs, and makes them more efficient.

Introduction

It is not surprising that powerful new digital technologies, which in effect are knowledge media, have the potential for major impact on each of the many and varied activities of the university. After all, this technology was developed in part in our campus research laboratories by our faculty, and many of the earliest applications of information technology have been developed and deployed on our campuses. Yet, in truth, the instructional activities of the university have tended to resist technology-driven change. Earlier technologies that were supposed to drive radical change—television, computer-assisted instruction, and wireless communications—have bounced off the classroom without a dent. E-commerce has a transforming impact on the activities of the university, because of both its unusual and relentless pace of evolution and the manner in which it relaxes traditional constraints such as space and time. (Duderstadt, 78-84) There are already signs that the traditional classroom lecture-based format of university learning is evolving in response to the opportunities offered by digital technology. Almost half of all university classes today use Internet resources as part of their syllabus, and over one-quarter have Web sites. Most students and faculty interact regularly using E-mail or conferencing software. Even more profound transformations will be driven by today's generation of students who seek highly interactive, collaborative, and customized learning experiences.

One can easily identify changes occurring in the other activities of the university. E-commerce has provided the scholar with powerful new tools to solve complex problems, simulate natural phenomena, and interact with colleagues. The library is becoming less a repository and more a center for

knowledge navigation. Our capacity to reproduce and distribute digital information with perfect accuracy and with essentially zero cost has shaken the very foundations of copyright and patent law and threatens to redefine the nature of the ownership of intellectual property. Digital communications networks are allowing universities to extend their array of public services far beyond the campus and even the state to encompass the nation or even the world. The teaching function occurs primarily through a professor's lecturing to a class of students, who in turn respond by reading assigned texts, writing papers, solving problems or performing experiments, and taking examinations. A few students might also take advantage of faculty office hours for a more intimate relationship, but this is rather rare for most students. The technology used is primitive, for the most part, consisting primarily of books, chalk boards, oral lectures, and static images, occasionally assisted by audiovisual equipment and limited electronic communication.

From Computer-Aided Instruction to Cyberspace Learning Communities

Although it has been slow in coming, we are beginning to see early signs of the impact of technology on education. Here we should clarify our terminology, since technology-assisted or computer-mediated instruction is frequently interpreted as on-line education, as exemplified by the asynchronous learning networks or virtual universities now springing up in higher education. The computer has been used to augment traditional classroom instruction for decades. Early applications such as the computer-aided instruction Plato system developed by the University of Illinois aimed

to use the computer to enhance learning by automating routine drills such as language repetition or self-paced instruction. However, these were generally both resource-intensive and of marginal utility in augmenting conventional classroom instruction.

For many years universities have utilized passive telecommunications technology such as television to extend teaching to people unable or unwilling to attend campus-based classes. In its simplest form, such broadcast technology-assisted learning is really a “talking heads” paradigm, in which faculty lectures are simply delivered at a distance, through either live transmission or videotape. There have been efforts to broadcast such instruction on public television, augmented by written correspondence. A more effective approach utilized on-site teaching assistants to work directly with the students. Some distance learning allowed the use of student feedback via telephone or two-way video interaction with the instructor (in the case of live transmission).

It is not surprising that the early efforts to utilize e-commerce in higher education simply replaced the broadcast of lectures over television with passive lecture courses either distributed on CD-ROMs or streamed from Internet Web sites. Although there was usually some opportunity for student interaction and feedback through E-mail or chat rooms, the pedagogy was still very much based on the transfer of knowledge in a lecture format. The aim was to use e-commerce to perform ordinary tasks more efficiently, such as providing course syllabi and readings or linking students with instructors. The real power of e-commerce can be achieved only when we take

advantage of the shift from the one-to-many character of broadcast media, to the many-to-many ability of digital networks. To this end, the most productive early applications of e-commerce in higher education involved using computer conferencing, electronic mail, listservs, and other computer-based collaboration technology to link together both students and faculty in highly interactive learning communities, unconstrained by geographical location or time. (Hawkins, 63-75)

The most significant advantage of such computer-mediated learning is access, the degree to which it frees learning opportunities from the constraints of space and time. It is understandable why the convenience of anytime-anyplace learning technologies is important to adult learners whose work or family obligations limit access to the residential university experience, an increasing number of on-campus students are also using on-line learning to augment their classroom experiences, since they, too, seek both the convenience and the learning resources provided through the Internet.

Distributed learning has a deeper significance than simply relaxing the barriers of space and time. Because of its interactive nature, it transforms learning from simply absorbing new knowledge to the act of creating knowledge. It provides new mechanisms for rich social interactions that simply could not exist if restricted to face-to-face contact. It provides both students and faculty with access to learning resources far beyond the boundary of the campus itself. Imagine, for instance, conducting a course on the public health implications of AIDS with the on-line participation of

students from African countries or a course in archaeology augmented by virtual reality tours of various excavation sites around the world.

Students already make extensive use of e-commerce for informal learning, typically without the involvement or even the awareness of the faculty. They build study groups, in some cases spanning several academic institutions, working together to seek information, answer questions, and develop learning skills. In a very real sense, such study groups based on computer networks are providing students with greater control over their educational experiences. They also represent a trend in which students construct their own consortia of learning resources—and academic institutions—just as the faculty build their own research consortia. Of course, these network-based student groups represent an important step toward active student learning.

Virtual reality—the use of visual, audio, and tactile sensations to create a simulated total sensory experience—has become common both in training and simulation and in gaming. However, higher education is more likely first to make use of distributed virtual environments, in which computers create sophisticated, three-dimensional graphical worlds distributed over networks and populated by the representations of people interacting together in real time. Such software representations of people in virtual worlds are known as avatars. Here the goal is not so much to simulate the physical world but to create a digital world more supportive of human interaction. (Feldman, 14-15) The software required for such distributed virtual environments is social in nature. It is not so much designed to simulate reality as to enable conversation and other forms of human collaboration.

Although we generally think of distributed learning as most useful to adult learners whose work or family obligations prevent their attendance at conventional campuses, online learning has also become important within the traditional residential campus environment. Both on campus and off, an increasing number of students and faculty members have access to broadband networks that allow them not only to access university resources such as libraries and student services, but also to form online learning communities through electronic mail, listservs, and other collaboration technologies. Their educational, research, and other university activities span both the physical campus and cyberspace. (McRobbie, 122-26)

Even more important, on-line learning communities stimulate students to become more actively involved in the learning process, with the potential to significantly transform the way that learning occurs in the university, enabling the faculty to design and implement learning processes and environments that are far more effective than the traditional classroom lecture-based paradigm. Computer-based simulations and role-playing exercises give students hands-on experiences in any subject. Networks provide ready access both to vast knowledge resources as well as to original source materials. The flexibility of network-based communication allows faculty members to tailor teaching styles to each student's needs, shifting the faculty member's role from a source of information to a supervisor or coach of the learning process. (Wulf, 46-52) Perhaps most significantly, it has moved the consideration of learning once again to center stage in higher

education, even in those research universities long dominated by concerns of scholarship rather than teaching.

To date, there has been relatively little attention given to the way that information technology might reshape the cognitive process of learning. Furthermore, few seem to recognize that information technology may break the long-accepted linkage between economic measures such as expenditure per student or students per faculty and educational quality. There seems to be limited awareness of just how different a generation of students raised in a world of interactive electronic media is from their parents—and their teachers.

Unlike those of us who were raised in an era of passive, broadcast media such as radio and television, today's students expect—indeed, demand—interaction. They prefer to learn by doing, mastering new tasks through what we might regard as play. Their nonlinear style of learning seems inconsistent with the rigid, sequential approach of the traditional university curriculum, building a pyramid of prerequisites that must be mastered in order.

(Dolence, 210-16) Yet, there is some evidence that the highly experiential and interactive approach to learning by the digital generation may be particularly effective in a media-rich environment.

The new interactive resources provided by emerging information technology represent the wave of the future for our society. As our knowledge base expands, isolated individuals will increasingly lose their ability to know everything that they need to grapple with complex challenges. We must

equip our students with the ability to exploit these new technologies. They must learn the difficult art of communicating across disciplinary and cultural differences in the pursuit of common goals, discovering which collaborative tools serve us best for our different purposes. The new literacy enabled by digital technologies is rapidly becoming an essential skill in a knowledge-driven society and a responsibility of higher education. (Daniel, 39-43)

The new knowledge media may fundamentally change what it means to be a professor and a student at our universities. Faculty members may become more like coaches or consultants than didactic teachers, designing learning experiences and providing skills instead of imparting specific content. Even our introductory courses may take on a form now reserved for only the most advanced seminar classes, thereby allowing more personal interaction. Not only do these new technologies create educational opportunities, but they also represent the literacy of our future. The medium of intellectual communication is in the process of evolving from the journal article to more comprehensive multimedia and even interactive documents. These shifts portend vast changes in the ways that information is manipulated and interaction is structured in our society. Universities cannot call themselves successful unless they provide students with the fundamental skills that they require in the twenty-first century.

In these new learning paradigms, the word student becomes largely obsolete, because it describes the passive role of absorbing content selected and conveyed by teachers. Instead, we should probably begin to refer to the clients of the twenty-first-century university as active learners, since they

will increasingly demand responsibility for their own learning experiences and outcomes. There is strong evidence that the traditional class lecture approach to university education is one of the least effective forms of learning. Studies show that the more that one is involved in the learning experience, the more that one learns. In a future increasingly dominated by sophisticated educational commodities and hyper learning experiences, the role of the faculty member will shift.(de Alva, 190-94) In these new paradigms the role of the faculty member becomes that of nurturing and guiding active learning, not identifying and presenting content. That is, they will be expected to inspire, motivate, manage, and coach students.

More specifically, faculty members of the twenty-first-century university will find it necessary to set aside their roles as teachers and instead become designers of learning experiences, processes, and environments. In the process, tomorrow's faculty members may have to discard the present style of solitary learning experiences, in which students tend to learn primarily on their own through reading, writing, and problem solving. Instead, they may be asked to develop collective learning experiences in which students work together and learn together, with the faculty member becoming more of a consultant or a coach than a teacher.

Conclusion

This is likely to become the value of the university—to create learning communities and to introduce students into these communities. Undergraduates are introduced to communities associated with academic disciplines and professions. Graduate students and professional students are

involved in more specialized communities of experience and expertise. From this perspective, one of the important roles of the university is to certify through the awarding of degrees that students have had sufficient learning experience with a variety of communities.

Once we have realized that the core competence of the university is not simply transferring knowledge but developing it within intricate and robust networks and communities, we realize that the simple distance-learning paradigm of the virtual university is inadequate. The key is to develop computer-mediated communications and communities that are released from the constraints of space and time. (Brown, 11-19) In true learning communities the distinction between teachers and students blurs. Both groups become active learners, working together to benefit each other. While this duality is commonplace at the level of graduate education, where graduate students frequently learn more about a specialized subject than their faculty advisers, it is far less common in undergraduate education. Yet, we have long known that some of the most significant learning occurs when one also serves as a teacher. Advanced undergraduates should be encouraged to assume such teaching roles, not only to other undergraduates but even on occasion to faculty members themselves.

Such learning communities seem better aligned with how learning really should occur in a university. The classroom paradigm is usually dominated by one-way information flow from the faculty member to the student. Learning is not simply information transfer. It involves a complex array of social interactions in which the student interacts not only with the faculty

member but also with other students, the environment, and possibly objects as well, for example, books! The role of the university and the faculty should be to facilitate the formation of learning communities, both through formal academic programs and through social, extracurricular, and cultural activities that contribute to learning in the university. When students and faculty join such communities, they share the ideas, values, and practices that lead to learning.

Perhaps part of our difficulty in reconceptualizing the university experience is that we still tend to think of the baccalaureate degree as a well-defined learning experience that prepares a student for life, but today learning has become a lifelong activity. Today's students will need to continue to learn, through both formal and informal methods, throughout their lives.

Works Cited

Brown, John Seely, and Paul Duguid. "Universities in the Digital Age." *Change* 28, no. 4 (July 1996), 11-19.

Daniel, John S. *Mega-Universities and Knowledge Media*. London: Kogan Page, 1996. 39-43

de Alva, Jorge Klor. "Remaking the Academy in the Age of Information." *Issues in Science and Technology*. Washington, DC: National Academy Press, 1999. 190-94

Dolence, Michael G, and Donald M Norris; Transforming Higher Education: A Vision for Learning in the 21st Century. Ann Arbor: Society for College and University Planning, 2005. 210-16

Duderstadt, James J. A University for the 21st Century. Ann Arbor: University of Michigan Press, 2000. 78-84

Feldman, Stuart. Presentation on “ Technology Futures” at the Workshop on the Impact of Information Technology on the Future of the Research University. January 22, 2001. 14-15.

Hawkins, Brian L. “ Technology, Higher Education, and a Very Foggy Crystal Ball, ” Educause Review 35, no. 6 (2000), 65-73.

McRobbie, Michael A., and Judith G. Palmer. “ Strategic and Financial Planning for Information Technology in Higher Education.” In Forum Futures 2000, edited by Maureen E. Devlin and Joel W. Meyerson. San Francisco: JosseyBass, 2001. 122-26

Wulf, William A. “ Warning: Information Technology Will Transform the University.” Issues in Science and Technology 11, no. 4. Washington, DC: National Academy Press, 2005, 46-52.