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Collaboration versus Competition: Trends in Online Learning for Workforce Development

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Since its inception early in the Industrial Revolution, distance education has been one of the ways that higher education institutions have adapted to radical changes in the social and economic environment in which they operate. In turn, it has been shaped by changes in society and, especially, changing workforce needs. Today, online learning is moving distance education into the mainstream, blurring distinctions between on-campus and off-campus instruction as higher education transforms itself to respond to the forces for changes that are being wrought by the Information Revolution. Institutions, freed of geographic boundaries, increasingly are collaborating to serve both traditional students and the current workforce.

Some Historical Parallels

University-level distance education in the United States began in 1892, when the University of Chicago, the University of Wisconsin, and The Pennsylvania State University launched the first U.S. college-based correspondence study programs. These were times of great change in the United States. The Western frontier had closed in 1891. The nation was absorbing several massive waves of immigrants. At the same time, it was shifting from an agrarian to an industrial economy, accompanied by large-scale urbanization and the development of transcontinental railroads and other innovations. As industry attracted more people to the cities, there was an urgent need to improve the productivity of the nation's agricultural base and, simultaneously, to create professionals—engineers, chemists, managers, etc.—to support industrial growth and to develop a cadre of teachers to serve the children of new Americans. Universities—especially the new state “land grant” universities that had been created specifically to respond to the needs of the new industrial economy – initially used the new Rural Free Delivery postal service to deliver correspondence courses designed to improve rural life and help secure the country's agricultural base.

For much of the next century, most American distance education was housed in public state universities. By the 1970s, the first impact of the Information Revolution was being felt, and other institutions—community colleges and professional schools began to use distance education via broadcast, cable, and satellite television to reach adult students locally and to serve specific workforce populations on a regional or national level. Consortia like the National Technological University developed to better coordinate delivery of professional graduate degrees at a distance to employees of major companies. A variety of other collaborations—such as the International University Consortium, which adapted British Open University materials for use by other institutions, and the National University Teleconference Network, which delivered satellite teleconferences at college and university sites nationally—developed to allow institutions to share media-based course materials and to expand the market for their programs.

The Information Revolution and the Need for Transformation

Today, a generation into the Information Revolution, education is again being transformed to meet changing social needs. Distance education is being redefined by the dramatic changes not only in technology but also in the social, political, and economic forces that are driving what has been called by various thinkers the Conversation Economy, the Age of Cognition, the Knowledge Society, and the Global Information Society.

We can identify several broad forces that are driving this transformation:

The Societal Demand for Education The Industrial Age required that about 25 percent of secondary school graduates moved on to higher education to provide society with managers and professionals needed to drive an urbanized industrial economy. In contrast, a March 2010 draft of the National Educational Technology Plan in the U.S. Department of Education stated a goal of increasing the proportion of college graduates to 60 percent by 2020¹. This goal requires that access to education be extended not only to traditional-age students but to larger numbers of working adults than has been the case in the past. It also suggests that larger numbers of high school students must leave school prepared to go on to higher education and, in turn, that society must provide more equitable access to education at all levels.

The Changing Work Environment The need for a more educated workforce is only one of several ways in which the work environment is being transformed in the Information Age. Today's workforce is less geographically defined—knowledge-based companies are less reliant on local workforce more on access to a distributed workforce. As companies rely more on continuous, bottoms-up innovation and problem-solving to remain competitive, collaboration within working teams is becoming more important than individual performance. Moreover, it is increasingly clear that education for work must continue throughout one's working life, as people increasingly have multiple careers.

The Changing Role of Knowledge Throughout the agricultural period and well into the industrial period, the primary roles of education were to conserve knowledge and to pass it on to new generations. In the industrial period, higher education assumed a new role: the creation of new knowledge through research; this translated into a new pedagogy that included laboratory and experiential learning. In a rapidly changing, information-rich environment, the role of knowledge in education is again transforming. Increasingly, the role of education is to develop in students the ability to critically analyze information, transform that information into usable knowledge and to apply that knowledge to solve problems and to create innovations.

A New Workforce Education Mandate

These forces are shaping a new workforce education mandate. People have begun to notice that the Information Revolution is not so much about how quickly information is broadcast, but about how it brings people and ideas together in new ways. We are beginning to realize that the Knowledge Society, in reality, is a "Skills Society." Education in this environment centers around the need to create functional communities in a new working and social environment, to educate workers who can innovate and shape change in the workplace and in the broader society, and to develop new critical workplace skills of inquiry, information validation, knowledge creation, problem solving, and collaboration through virtual teams. Providing access, convenience, flexibility, and cost-effectiveness will continue to be important issues, but the emerging question for the next decade or so is: how can we help individuals learn how to build and sustain new communities built around collaboration and sharing of knowledge to solve both local and, increasingly, global problems?

An Emerging Pedagogy A new pedagogy is emerging as higher education responds to these demands. This pedagogy recognizes that how we learn should reflect how we live and learning should be an active process that is resource-centered and inquiry-based and that develops the

¹ *Transforming American Education*, p.3.

student's skill in collaborative problem solving. Called the Community of Inquiry (<http://communitiesofinquiry.com/>), this approach centers education at the intersection of three forces: the ability of the student to identify with others in a trusted learning community, the ability of students to construct knowledge and confirm its meaning, and the teaching process. Online social networking applications like wikis and blogs are essential to helping institutions use the Community of Inquiry pedagogy at the scale needed to serve workforce education needs. The online environment allows institutions to provide the same pedagogy to both on-campus and distant students.

A Changing Sense of Community In the agrarian and industrial periods, "community" was defined largely by geography. A community was a village or a neighborhood of people who lived inter-dependent lives. In a globalized economy that kind of highly localized interdependence is harder to find. Online learning further removes geographic and time as defining characteristics of interaction among students and between students and the institution. We need to re-perceive the whole idea of community to understand how we are inter-dependent in today's world and to develop the skills needed to work together in a new environment.

For higher education, new ways of thinking about community have implications on at least two levels. At the *institutional* level, we need to re-define the communities we serve and re-articulate our mission in those communities. For most of us, distance education has meant reaching very far beyond our local campus community in order to aggregate markets for specialized programs or serve widely dispersed professional groups. Today, we are starting to see institutions also use online distance education to more effectively serve local commuting students who cannot always come to campus. At the *faculty* level, new kinds of academic communities are emerging that may, in the long run, redefine the relationship between faculty members and their institutions—and, as this paper will explore, define new relationships among institutions.

Implications of Online Learning for Transformation For the past decade, online learning—mostly conducted as a new mode of distance education—has been evolving from experiments to a sustainable innovation in many traditional institutions. Online learning is both a symptom of the changes in the broader society and a tool of transformation. Its growth has several implications for educators if higher education is to meet the workforce needs of the Information Society.

- Just as universities incorporated laboratories into the curriculum during the industrial period, they must mainstream the use of web-based technology to meet today's needs.
- The adult student—long treated as a secondary constituency by traditional universities—must move into the mainstream.
- Institutions must recognize that geography no longer defines their students or the resources that the institution can bring to meet student needs. Fourthly, institutions must adapt to a blurring of traditional distinctions between teaching and research and between on-campus and off-campus teaching.

These implications were reinforced in a national survey conducted by I. Elaine Allen and Jeff Seaman and in 2006. Their report, *Growing by Degrees*, noted a trend toward the convergence of distance education and campus-based instruction. They found that 44 percent of institutions that offer on-campus master's degrees also offer master's degrees online², and 65 percent of institutions that teach online use primarily core faculty to teach their online courses³.

² *Growing by Degrees*, p. 1.

³ *Ibid.*, p. 2.

A New Era of Collaboration

Just as communications technologies led to institutional partnerships for distance education in the 1970s and 1980s, we can now see that information technologies—generally grouped under the umbrella of online distance education – are stimulating new institutional collaborations designed to serve workforce needs. Four examples will illustrate the growing range of collaboration that is emerging.

Collaborations to Share Students The elimination of geography as a barrier between working adults and the academic resources they need is a significant change in the overall educational ecology. In response, institutions increasingly are partnering to share resources in order to meet demand. One example in the United States is the Great Plains Inter-Institutional Distance Education Alliance—the Great Plains IDEA (<http://www.hsidea.org/>). In this alliance, eleven institutions in the American mid-West have collaborated to develop and deliver professional graduate programs that no one of the institutions could do effectively using solely its own resources. Each participating institution develops and delivers online specific courses that meet the degree requirements. Since 1999, the alliance has fostered degree programs in Community Development, Dietetics, Family Financial Planning, Merchandising, and Agriculture. Programs are developed by inter-institutional faculty teams. Students matriculate at the institution of their choice, but take courses from all of the institutions involved in the program.

Collaborations to Share Courses The online environment allows institutions to share specialized courses with students at other institutions. In the United States, the Committee on Inter-Institutional Cooperation—a group of public universities Eastern and Midwestern states—created CourseShare (<http://www.cic.net/Home/Projects/SharedCourses/CourseShare/Introduction.aspx>), a collaboration that uses online delivery to aggregate students from multiple institutions into courses in seldom-taught languages, chemical informatics, speech and hearing sciences, and other disciplines.

Collaborations to Serve a Mutual Client The University of Manchester in the United Kingdom and The Pennsylvania State University in the United States combined resources to serve two multinational companies with a collaborative Master's Degree in Project Management. The two institutions agreed on a common curriculum and shared online content materials. Courses are offered online, with two company-sponsored residencies. Employees in North America can get a degree from Penn State; employees in Europe can get their degree from the University of Manchester.

Collaborations to Share Materials As the number and variety of online courses grows, the opportunity for faculty members and institutions to openly share content beyond traditional institutional boundaries has also grown into an international movement. The spirit of the Open Educational Resources movement was captured in the Cape Town Declaration. Developed in 2007, the declaration has since by signed by more than 2,000 individuals representing 220 organizations worldwide. It reads, in part:

. . . we call on educators, authors, publishers and institutions to release their resources openly. These open educational resources should be freely shared through open licenses which facilitate use, revision, translation, improvement and sharing by anyone. Resources should be published in formats that facilitate both use and editing, and that accommodate a diversity of technical platforms. Whenever possible, they

should also be available in formats that are accessible to people with disabilities and people who do not yet have access to the Internet.

One example of how OERs are encouraging collaboration is the AgShare Open Educational Resources Project at Michigan State University. Funded by a \$1 million grant from the Bill and Melinda Gates Foundation, the project aims “. . . to enable institutions of higher education in Africa to provide free, open access to agriculture education materials in order to improve agricultural practices on the continent and help build sustainable economies.” Specifically:

The program will enable faculty and student researchers, NGO representatives, farmers, and others to form learning networks and share content modules, textbook materials, and videos via the Internet. In remote areas where the Internet is less accessible, information will be distributed through DVDs and printed materials.⁴

The Open Educational Resources movement promises to revitalize the vision of faculty members as participants in international academic communities. It also requires that faculty members who create OERs be consciously aware of the cultural context in which the content operates. On one hand, inadvertent and unnecessary references to local culture could lead to concerns about cultural imperialism and make the OER less valuable to other faculty members. On the other hand, educators should not avoid providing appropriate cultural context to content in online courses. A teaching perspective that looks beyond the initial use of content is needed to make OERs truly powerful educational tools.

Collaborating Through Corporate Partnerships

Online learning has implications for how institutions engage with employers to develop employees. In today’s online distance education environment, geography is no longer a barrier to educating a distributed workforce. Online education has few geographical or time boundaries. All companies conceivably have access to national and international providers to educate their workforce at all levels without losing personnel while they are being educated. They can choose between open enrollment or contract programs. In this new environment, many companies have created internal online training capabilities. In addition, many are developing new relationships with colleges and universities to provide instructor-led noncredit training and degree programs to their employees. Multi-institution partnerships with companies are increasingly common, so curricula can still be tailored to employer needs. Two examples from the United States may illustrate the potential impact of online industry/education collaborations for workforce development.

National Coalition for Education and Learning (<http://www.nactel.org/>) This U.S.-based coalition, managed by the Council for Adult and Experiential Learning, involves six major telecommunications companies, the Communications Workers of America, Pace University and other online education providers. It offers an associate degree in Applied Information Technology with specializations in video technology, wireless networking, and two other fields, plus a Bachelor of Science in Telecommunications.

⁴ *Philanthropy Digest Website*

Energy Providers Coalition for Education (<http://www.epceonline.org/index.html>) This collaboration includes 24 energy companies, four professional associations, two unions, five colleges and universities, and a virtual high school that use online distance education to develop the workforce in the energy industry. It offers industry employees associate and baccalaureate degrees and credit certificate programs in electric and nuclear power, natural gas, and electrical engineering. The coalition lists among its goals the following:

- Employers gain immediate access to online education programs that help meet workforce needs by providing the knowledge and skills necessary for new workers to enter the industry and existing utility employees to move forward in their career.
- As a coalition, members influence EPCE's strategic direction and determine how to best leverage industry sponsored online education to meet current and future workforce challenges.
- Members review and influence the content of the programs, ensuring they are up-to-date and change as the industry changes.
- Employees receive substantial tuition discounts, which can translate into reduced tuition assistance and training expenses.
- Members will have access to a source pool of trained potential employees as the program matures.
- The EPCE programs serve as a solid education platform for further company-specific training⁵

Guiding Principles for Collaboration

Several guiding principles can be gleaned from these examples. First, such coalitions require a clear statement of purpose and benefit for each partner. The working relationship between educational institutions and employers must be marked by collaboration rather than a more traditional customer/supplier relationship. Concrete statements about benefits and expectations define the collaborative nature of the relationship and provide a basis for resolving differences when they arise.

Second, collaboration assumes shared responsibility among participating institutions and employers for program identification and support and for quality control. These should be stated for each partner. The governance structure also should include a clear statement of curricular authority and a formalized, but open oversight structure.

When the coalition includes multiple employers and multiple institutions, members of each sector must function as colleagues rather than competitors. In other environments, the employers often compete, just as the institutions compete for students. However, they must work as colleagues within the context of the collaboration; the parameters for this should be explicated in the agreement.

The online environment also blurs the distinctions between the three primary missions of most higher education institutions: research, teaching, and service. In developing partnerships, institutions and employers should consider the interactions among these three missions and, where appropriate, encourage collaboration in all three areas.

A variety of other policy issues may need to be addressed, depending on the situation. For instance, if institutions expect to share course content, copyright issues should be addressed at the

⁵ Energy Providers Coalition for Education website, *Benefits of Membership*.

outset of the collaboration to ensure that all parties understand the ways in which content may be shared – either with other institutions in the partnership or with partner employers – and the limitations on sharing. Similarly, if the collaboration involves sharing students (in a multi-institution degree program, for instance) students who are matriculated at one institution may need access to computer-based services at other partner institutions. Other programs may require cost or revenue sharing mechanisms. These kinds of policy issues should be identified early and addressed explicitly.

As online distance education moves into the mainstream of academic life, special attention should be paid to the development of quality standards to guide inter-institutional partnerships. In past generations of distance education, the tendency was to create quality standards and practices that were specific to the distance delivery environment. As distinctions blur, institutions will need to decide whether to maintain separate standards between classroom and distance delivery or to develop new standards that can be applied equitably in both environments. Similarly new institutional policies and practices will need to be developed on a wide range of issues, from copyright to faculty promotion and tenure to workload. Without these, future innovation may be hindered.

Conclusion

Over the past decade, online distance education has helped higher education institutions respond to a dramatic increase in the demand for continuing education among working adults. Distance education, which for decades has flourished in specialized institutions or on the periphery of traditional institutions, is moving into the mainstream of our institutions. Traditional distinctions between campus-based and distance education are blurring, as geography ceases to serve as a natural boundary between institutions and students. Increasingly, the online learning environment offers opportunities for institutions to collaborate to share content, share faculty expertise, and share students in order to better serve the workforce. As the examples presented in this paper suggest, the new environment encourages institutions to form partnerships to serve common workforce communities. At the international level, specifically, the challenge will be to develop true institutional partnerships, with shared authority and quality control, especially when the partnerships bring together institutions from both developed and developing countries or countries with different educational cultures.

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