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Quality in Online Education: Results from a Revolution

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Editors Note: The authors have given us a snapshot of global developments in online learning for higher education, K-12, and industry at the beginning of the new millennium. The adoption of the Internet for distance learning is revolutionizing the way people learn, what they learn, and from whom they learn.

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Abstract

The global information economy and its marketplace are moving educators to reshape higher education around the world. Universities and businesses alike are re-examining their relationships and their futures. As they implement updated strategies they are redefining venue and pedagogy, which means they must also redefine measures of quality. The result is turning out to be both positive and important - for their institutions, for their students, and for the societies they serve. This paper summarizes current developments in on-line higher education - both the problems that arise and the considerable benefits that may accrue to students and educational institutions alike.

It has been said that one of the most important ventures -- the real "killer app" -- of the Internet will turn out to be education. When one looks at the evidence that is available today, a strong case can be made for that prediction. Old-line universities are joining with (and sometimes competing with) some of the world's leading businesses as higher education becomes part of the worldwide marketplace. Universities, traditionally territorial and bastions of independence, are finding themselves partners in international collaboratives. What is this new phenomenon? What is bringing about this online globalization in education? Who are some of the players? What does it mean for prospective students? And in this newfound marketplace, what does it take to offer a quality product and become a long-term winner?

The Setting: A Global Economy and the Internet

The most important force in this development is the global information economy. Never has education been so important to so many. Governments, companies, and individuals all recognize that while assembly-line labor is valuable, the real competitive advantage lies in a well-educated imagination, producing breakthrough ideas that advance the technologies and lead to new products, new initiatives, and ultimately a stronger society.

It's obvious that the global economy is largely the result of modern information, telecommunication, and transportation systems. And just as this worldwide system evolved, with its increasing demand for a better-educated workforce, the Internet was born, followed shortly by its World Wide Web.

The Internet, itself created by universities, brought into play some fundamental characteristics. The Internet essentially represented the death of distance. One small example: a university in California put a course on the Web as an accommodation to some of its local working graduate students, and one of the first registration inquiries came from Hong Kong. Distance doesn't matter. Similarly, most courses on the Internet permit the student to be time-independent, free of the need to attend class on certain days and at specified times. The basic requirement is for Internet access and a well-crafted, properly supported course.

The potential for education and the development of the Internet are inextricably linked. The growth of the Internet was initially focused on the U.S. and all too often is mostly identified with western industrialized countries. But serious change is underway. Speaking in Singapore in November, Nicholas Negroponte, Director of the Media Lab at the Massachusetts Institute of Technology, declared that developing countries will soon dominate Internet usage, and that wireless technology (along with the right policy and cultural mix) will speed the process. [\[i\]](#) He pointed out that an exodus of software programmers from India, for example, shows that richer countries have no monopoly on the necessary expertise, and that in Asia, India and China in particular have great Internet potential, with India farther along at present.

Perhaps an example to support Mr. Negroponte's prediction is in Vietnam. In mid-November the New York Times published a long story about Truong Gia Binh, the entrepreneurial head of Vietnam's Corporation for Financing and Promoting Technology. [\[ii\]](#) His intent, according to the report, is to build his company into one that produces its own software, installs and maintains computer networks, and provides Internet access as well as online programming. At present the net is subject to many government restrictions, and Internet penetration is about one-tenth of one percent. Hanoi's reported target, however, is to reach the global average by 2010. Mr. Binh's company is

number two among five licensed Internet service providers. His current clientele is small, but it's growing at 30 percent per year; his target is 70 percent.

Opportunity and Response

The growth of the Internet and the demand for education have spawned a wide range of programs and alliances, many combining traditional universities and business interests. Consider a few of them:

Last year 18 universities from China, Singapore, Australia, New Zealand, the U.K. and continental Europe, the U.S. and Canada formed an alliance called Universitas 21. An initial joint venture with Rupert Murdoch's News Corporation foundered, but in November Universitas 21 announced plans to develop online learning materials with Thomson Learning, a division of the well-known Thomson Corporation. According to the report, Thomson Learning will be responsible for course design, testing and assessment, and student-database management. Universitas 21 will award degrees, diplomas, or certificates to students who complete the course requirements. It's expected that Internet delivery will be augmented by satellite television where necessary. [iii] The initial members from Asia and Oceania are the National University of Singapore, the University of Hong Kong, the University of Peking, Fudan University, the University of Melbourne, the University of New South Wales, the University of Queensland, and the University of Auckland. Additional universities are expected to join.

Shortly after Universitas 21 was announced, the Global University Alliance was launched. Based in Hong Kong, this organization consists of nine universities from New Zealand, Australia, Taiwan, the Netherlands, the U.K., the U.S., and Canada. The stated intent is "to penetrate the Asian education market." John Hinchcliff, Vice-Chancellor of the Auckland University of Technology, -- one of the principal initiators of the Alliance - points out that the group's strengths include strong course content based on their existing programs, cross-accreditation of courses, and sharing of expertise for developing new programs. The first courses of the Global University Alliance were online last fall (2000).

There is also substantial development in Latin America. Internet-based distance education in Mexico represented a market of US\$10 million in 2000. It is expected to grow to US\$64 million by 2003, and companies are beginning to focus on it. For example, Apendeweb.com now seeks to serve the corporate professional education market. [iv]

In June 2000 an Internet-based business school for those speaking Spanish or Portuguese, e-ducavia, was announced as a joint project of IBM, Telefonica, and Cisco Systems. At the time of the announcement it was anticipated that e-

ducavia would open early in 2001. [\[v\]](#)

In Puerto Rico the Ana G. Mendez University System [\[vi\]](#) has announced its Vision 2005, which includes a strong emphasis on using information technologies for the development of international programs across the Caribbean, Latin America, and the Hispanic communities of the United States. Indeed, they already export instruction to schools in New York City. The Ana G. Mendez system is also a member of HETS, the Hispanic Educational Telecommunications System. [\[vii\]](#)

Meanwhile, a group in Brazil has announced the formation of UNIAL, which is to be established as an international distance education service for speakers of Portuguese.

In Japan a high-level committee that advises the Education Minister, Tadamori Oshima, has recommended that students in Japan's national universities should be allowed to earn up to half their undergraduate degrees online, and that courses now offered through correspondence should be available online or through email correspondence. The recommendations, from Japan's University Council, were part of a list of suggestions for making Japanese universities "more internationally competitive." [\[viii\]](#)

And a November press release announces that Virtual Academics.com's Barrington University branch school in China, Wuhan Barrington College, has been approved by the Hubei Province Education Department. Barrington has also established a dual degree program with the Universidad Yacambu of Lara Venezuela to offer Spanish language degree programs, and "with this new agreement Virtual Academics.com will now have governmental approved curriculum in Spanish, to market to the global Hispanic community." [\[ix\]](#)

In these days of rapid change and many newcomers it may be worth noting the final paragraph of the press release from Virtual Academics.com: "This press release contains forward-looking statements that involve a number of risks and uncertainties. Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements include, but are not limited to, the Company's limited operating history, fluctuations in quarterly results, ability to gain market acceptance of products, competition, ability to integrate acquisitions, and other risks listed from time to time in reports files with the Securities and Exchange Commission, which factors are incorporated herein by reference." [\[x\]](#)

Some Leading Indicators

While these online collaboratives and enterprises are bursting forth, the idea of serving students across multiple time zones and national boundaries is hardly

new. One of the pioneer virtual institutions, National Technological University (NTU), began in 1995 to use a digital channel on PanAmSat 2 to cover an area from New Zealand to Australia, Indonesia, Singapore, Malaysia, Thailand, much of China, South Korea, Japan, and Siberia. NTU began in 1998 to work with a private Brazilian university to offer programs via DBS in Brazil.

The University of the South Pacific, with campuses in Fiji, Samoa, and Vanuatu, from the time it was established in 1968 has been using practically all available technologies to serve students in the 12 Pacific countries that jointly own the university.

The University of Maryland's University College teaches 35,000 students at hundreds of sites. Its commencement ceremonies currently are held in Heidelberg, Tokyo, Okinawa, Seoul, Schwäbisch Gmünd, Irkutsk, and Vladivostok, in addition to its hometown in the U.S.

Changing Business, Changing Education

The worldwide economic and technological changes are affecting the intersection of education and business. As traditional companies face the Internet era, perhaps none are affected more than book publishers (unless, perhaps, it's the music publishers). Last August (2000) one of the world's major publishers of textbooks, Harcourt General, received approval from the Massachusetts Board of Higher Education to launch its own virtual university, to be known as Harcourt Higher Education. (They had intended to call it Harcourt University, but ran afoul of state regulations that define that term.) Harcourt's next step is to seek accreditation from the New England Association of Schools and Colleges - about which, more later. Initially Harcourt will offer five programs, leading to five degrees: associate's and bachelor's degrees in information technology and in business, and bachelor's degrees in health science. The new institution's president said they hope to have course enrollments of 50,000 to 100,000 within five years, with first-year revenues of \$18 million. The initial cost of each course is \$900. They also hope to sell courses to other companies or universities and, along the way, they expect to sell some books. [\[xi\]](#)

The world's largest educational publisher is Pearson P.L.C., based in London. Pearson has recently launched an international MBA program in association with the University of Cambridge. A major player is FT Knowledge, which is related to the Pearson company that publishes the Financial Times. Cambridge and the company will split tuition revenues evenly, and while tuition was not immediately announced, similar programs charge as much as \$100,000. The Internet and related technologies will be used for about a third of the courses, and a variety of other approaches - including face-to-face instruction - will be used also. [\[xii\]](#)

The attractions of the global marketplace are not limited to companies that emphasize technology-based delivery. The University of Phoenix, a subsidiary of the Apollo Group, is now the largest private university in the United States, with 75,000 students in 18 states, Puerto Rico, and British Columbia. The fastest-growing element of the university is its online program. Last summer (July 2000) the president of the University of Phoenix, Jorge Klor de Alva, was named president of Apollo International, which looks toward establishing institutional partnerships or its own campuses in China, Brazil, India, Mexico, and other countries yet to be named. Mr. Klor de Alva points out that Brazil has 2.1 million college students today but expects 5.1 million by 2008. Similarly, Mexico, with 1.8 million students at present, expects 4 million within this decade. The market is there - for somebody. [\[xiii\]](#)

The Market, the Customer, and Delivering a Quality Product

It is often observed that education is becoming a commodity. The customer - the student or perhaps her employer - decides what needs to be learned, shops for a program that can meet the requirement with the right conditions at the right price, and buys. Shopping includes some familiar considerations: Is the product offered under a trusted brand? Does it carry an authoritative Seal of Approval?

In many ways the idea of education as a commodity is shorthand for some profound changes taking place: changes within education that are occurring in response to changes in the student clientele. The global information infrastructure is part of the cause and also part of the response.

There was a time, not so long ago, that a student went to college at age 18 or thereabouts, completed a degree in about four years, and went off to the world of work. He or she progressed through the ranks of a company, mastering new skills along the way. As the PTC audience knows better than most, this scenario has disappeared. Within the U.S., and increasingly around the world, the typical undergraduate is about 26, working at least halftime, perhaps with children to raise. He or she probably doesn't complete a degree at one institution, so it's important that credit can be transferred readily from one college to the next. The elapsed time to complete the undergraduate degree is five or six years, not four.

Once this student graduates and joins a company fulltime, education remains an occasional requirement, as technologies advance, jobs develop and disappear, and new skills are demanded. Today's career involves progress through a succession of companies and a constant need to keep up with this ferment of innovation and change. So one never really completes an education.

In practical terms, what does that mean? First, education becomes a routine

part of the day-to-day environment at work or at home. It must be available when it's needed, under conditions that don't make learning, work, and home mutually exclusive factors. Within universities the amazing growth of distance learning programs is largely a response to that fundamental requirement.

Second, there must be a common, transportable currency to certify the knowledge and skills acquired as a result of education programs. When you tell a potential employer, "I got an A in that course," you haven't said anything about what specific skills or knowledge you've acquired. Slowly but surely, education is abandoning the idea that quality is measured by hours spent in class, in favor of independent tests that show what you can do or what you actually know about the subject.

The fundamental result is that higher education is moving away from the traditional schedules and processes of instruction, to an emphasis on student learning - however that learning is accomplished. As any present-day college graduate will recognize, that is a major shift in the university's culture, organization, and mindset. Less emphasis on meeting for a specified number of minutes during a specified number of weeks, and more emphasis on results. Less of a campus focus, more of a program focus. Less emphasis on scheduling for the convenience of the professor, and more on meeting the requirements of the student - wherever that student may be. In the process, online programs move from the periphery to the mainstream of university strategy. And at the same time, traditional measures of quality, such as classroom time and on-campus resources, need to be reconsidered.

Quality in the Age of Online Learning

What makes a college or university worth attending? What constitutes a good buy? In an online culture where information exchanges are ubiquitous, we expect to see customer/student rating systems emerge. These will allow a prospective customer/student to see how a course rates on a number of variables. These might include:

- Was the professor/tutor responsive?
- Was the level of difficulty of the material appropriate for the course level?
- Was the course accurately described in advertisements?
- Was the course software easy to master and readily available?
- Were there resources needed for success in the course but not provided by the institution (e.g., access to library, additional software)?

Most of these ratings are likely to be at a course level because that is how an individual will experience their encounter with a particular institution.

While online rating systems will be critical to help students match their needs to the levels of service offered by a particular institution, there will also be an ongoing issue of independent, informed assessments of the overall quality of an institution. This is critical both for the student and for the taxpayers or donors who subsidize the institution. How can quality be judged? And who is responsible for setting the standards and deciding whether they have been met? Around the world it's either an agency of government or an independent body that decides whether to accredit an institution: to award its Seal of Approval to those colleges and universities that meet the standards and pass the tests.

Traditionally these accreditation agencies have been responsible for working with colleges and universities in a given country or, in larger venues like the US, in a given region of the country. These agencies have typically been individualistic, reflecting to some extent the idiosyncrasies of their territories. But the world of the Internet has caught up with them: What happens when "their" institutions join consortia like Universitas 21 or the Global University Alliance, that involve universities in another region or another country? What happens when "their" students persist in moving to new jobs and transferring to institutions elsewhere? What happens when libraries have publications online and not in the stacks where they can be counted? What happens when a student takes a class at her own pace online and doesn't spent three hours a week in a campus classroom? It's a worldwide problem, and the accreditors have come to recognize that idiosyncrasies have their place, but there must be a more coherent view of what constitutes quality.

In the US there are eight regional accreditation agencies. Last year they made a joint decision to commission WCET to work with them and prepare a set of common guidelines with which to judge programs that are offered electronically rather than in classrooms. As part of our preparation for this task we consulted the evaluation standards of several other countries in the Pacific region and Europe.

The resulting document was published jointly by the accreditors and sent to their constituencies for comment late in 2000. [xiv] During the next few months the results will be reviewed and the final version issued. Its essentials, however, are not likely to change. The full document is posted on the WCET Web site, www.wiche.edu/telecom/ While it is addressed to American institutions, Its contents will not be unfamiliar to those responsible for accreditation of distance learning programs anywhere. And as several observers have pointed out, the next step is to recognize that educational programs not only cross state or regional boundaries; many are truly international, and accreditation - quality assurance - has become a matter that

nations need to address cooperatively.

Perhaps as a prelude to a broader international discussion, then, here is a status report about what accreditors in the United States are about to adopt as guidelines for the accreditation of distance learning programs. Some highlights:

- Time spent in class (“seat time”) is no longer a factor. The fundamental measure of success is student achievement: compare student performance to the intended learning outcomes of the course.
- There’s more to the problem than simply putting courses online. Institutions must assume that students will not be physically present on campus; therefore, a properly designed program provides online (or phone/fax) availability of services like program information, registration, secure payment, academic advising, timely intervention regarding student progress, bookstore services, and a help desk for ongoing technical support.
- Whether the university’s program is offered on a campus or around the world, the library is essential. Students must have access to online databases, the reference desk, interlibrary loan services, etc., as a routine part of their study.
- Distance learning courses introduce new issues concerning faculty workload, compensation, and intellectual property rights. Upfront agreements on these issues are critical.
- Faculty members must have training in the use of the technologies, plus continuing support in the preparation and presentation of their courses.
- Appropriate interaction - synchronous or asynchronous - between faculty and student and among students is an essential part of the program.
- The institution’s budgets and policies recognize the technology and staffing requirements of these programs.
- Although institutions enter into partnerships, outsource important functions, and join consortia, they cannot delegate the fundamentals. They remain responsible for the programs they offer and the degrees they award.

The guidelines recognize that increasingly, students attend multiple institutions over time - perhaps in multiple regions or nations - and a realistic and understandable record of their accomplishments is important to them, to the colleges and universities involved, and to prospective employers in this global information economy. One of the guidelines, therefore, is this: “In its articulation

and transfer policies the institution judges courses and programs on their learning outcomes, and the resources brought to bear for their achievement, not on modes of delivery.”

The introductory paragraph of our WCET report to the accreditation commissions reads as follows: “The evolution of distance and distributed education, particularly through new online technologies, marks the transformation now occurring in higher education. In the United States and elsewhere, higher education faculty and administrators are responding to several new opportunities engendered by information technology. These opportunities include restructuring students’ learning environments, joining new collaborations and partnerships, and choosing to serve new communities of learners.”

The global information economy and its marketplace are moving educators to reshape higher education around the world. Universities and businesses alike are re-examining their relationships and their futures. As they implement updated strategies they are redefining venue and pedagogy, which means they must also redefine measures of quality. The result is turning out to be both positive and important - for their institutions, for their students, and for the societies they serve.

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Mr. Witherspoon was founding President of the Public Service Satellite Consortium, the first principal executive for television of the Corporation for Public Broadcasting, the first General Manager of KPBS-TV/FM, San Diego’s public broadcasting stations, and founding Board Chairman of National Public Radio. He is the author of *Distance Education: A Planner’s Casebook* and other publications concerned with planning and evaluating distance education programs. He and Sally Johnstone, the Director of WCET, served as principal consultants to the Council of Regional Accrediting Commissions (U.S.) as they prepared coordinated guidelines for the evaluation of electronically offered degree and certificate programs.

Dr. Sally M. Johnstone is the founding director of the Western Cooperative for Educational Telecommunications (WCET) at the Western Interstate Commission for Higher Education (WICHE). In that role she is a resource for

state governing boards, legislators, governors, as well as college and university administrators on higher education technology issues.

Dr. Johnstone serves on the Board of the American Association of Higher Education (AAHE), the U. S. Open University's Board of Governors, and the Advisory Panel for the Consortium for the Advancement of Private Higher Education. She earned her Ph. D. in experimental psychology from the University of North Carolina at Chapel Hill.

The WCET is a membership organization with staff located in Boulder, Colorado. Its 240 members are located in 44 U.S. states and five countries. WCET staff develop research projects focusing on the integration of technology into the teaching and learning processes, consult with higher education institutions, hold professional development institutes for practitioners, and generally support their members in the planning for and implementation of distance learning.

Endnotes

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[iii] Geoffrey Maslen, "Universitas 21 Announces Online-Education Agreement with Thomson Learning," The Chronicle of Higher Education, 22 November 2000.

[iv] "Mexico: Growing market for educational Internet services," South American Business Information, 30 October 2000.

[v] "Telefonica, IBM, Cisco Form Online Business School," Reuters, 12 June 2000.

[vi] See < <http://www.suagm.edu/>>

[vii] See < <http://www.hets.org/>>

[viii] Alan Brender, "Japanese Students Should Be Permitted to Earn Credits Online, an Influential Panel Says," The Chronicle of Higher Education, 29 November 2000.

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[\[xii\]](#) “U. of Cambridge Will Collaborate With a Media Giant on an Online MBA,” The Chronicle of Higher Education, 4 August 2000.

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