Access to Global Learning: A Matter of Will

Steven R. Van Hook, PhD
University of California at Santa Barbara
Extension Language and Culture Program

April 27, 2006

The World Bank (2002) has concluded that access to education is vital to all

nations for developing productivity and the ability to compete globally. Governments and

individuals are increasingly turning to education to provide a deeper understanding of the

world at large (OECD, 2003). However, with only 17 percent of the world's population

able to advance beyond secondary education levels, new technologies and learning models

are called upon to fulfill the need (Irvine, 2003). Current developments in computer

versatility, extended connectivity, and accessible learning materials may help overcome

education barriers for all ages and incomes worldwide.

Bridging the Divide

In 2005, 104 million children in impoverished nations were deprived of a basic

education; some 60 percent of those were young girls (Center for Global Development,

2005). Of those children fortunate enough to obtain basic learning today, an escalating

160 million students worldwide will be enrolling in higher education by 2025, nearly

double the number of 1997 (Irvine, 2003). Even though global demand for education is

growing at exponential rates, the resources for paying the tuition bill are low or nonexistent

in large parts of the world, with insufficient government funds to meet the full educational

needs even in richer nations. Given this, those who promote education access must seek new avenues to transcend national and financial boundaries, as through the possibilities of distance learning programs.

Several countries, such as India and South Africa, are already heavy importers of distance learning programs through top exporting countries including the United States, Australia, and the United Kingdom; while other nations are developing their own distance learning technologies and programs (Eaton, 2002). Distance education and training will also likely play an important role in expanding education access throughout Central and Eastern Europe, provided there is sufficient funding and regional collaboration to develop the necessary communication infrastructure (Moore & Tait, 2002). The regional disparities are great, as some of largest populated regions (e.g., India and China) also have the lowest concentration of telecommunication services. In many countries, the demand for education is helping to drive the development and expansion of new technologies (Irvine, 2003).

By 2006, fundamental access to online learning options has increased multifold in developed nations and metropolitan areas that can afford internet infrastructure costs, topped by Japan with 89 percent of the population online, followed by Canada at 72 percent, and the United States at 71 percent (Population, 2005). Yet many countries fall far short in access, such as Albania with less than 2 percent of its population online, Bolivia with only 4 percent, and Nigeria at little above 1 percent (World Factbook, 2006). According to the Computer Industry Almanac, the worldwide population of internet users by the end of 2005 totaled 1.08 billion, or only 17 percent of the planet's 6.5 billion population. Still, that rate is more than double the 420 million users of just five years

earlier in 2000, and more than 20 times the 45 million users of a decade earlier in 1995. By 2011, the online population should pass the milestone of two billion people (Worldwide Internet Users, 2006).

No one agency or nation could afford the incalculable costs of providing universal internet access for education. However, many organizations, companies, and individuals have been working to bridge the gap one connection at a time through targeted and cost-effective efforts. At the turn of the 21st century, Bernard Krisher, a 69-year-old former *Newsweek* journalist, brought online learning access to one of the poorest villages in Cambodia devoid of electricity and phone lines. A satellite dish provided a continuous 64,000-bits-a-second connection to a small group of computers in the village, powered by a simple solar power system (Markoff, 2000). By late 2005, Krisher had built 275 schools in Cambodia, 100 of those equipped with computers and access to the internet (Spaeth, 2005). "This closes the gap ... and for Cambodia the gap is not only food and clothing. It's information," Krisher said.

In 1996, operating under a $400,000 grant from USAID, the Network for Democracy launched the National Telecottage Program in Hungary. By 1997, the program had established 14 telecottages across the rural regions of Hungary, providing "equal (access) opportunity for all" (Telecottages, 1998). The telecottage centers provided public internet access to local low-income residents for information services including education and training, and local development assistance. By 2003 the number of telecottages throughout Hungary was closing in on 1,000 serving some 40 percent of the nation's small rural settlements (Telecottages in Hungary, 2003).

The Massachusetts Institute of Technology (MIT) has launched a *one laptop per child* project with worldwide distribution of an innovative computer that will only cost about $100 per unit, charge its batteries with a hand crank, and will connect to the Internet by piggybacking on a wireless signal between nearby users (Young, 2005a). The computers will work in villages with no power, running for up to ten minutes on each minute of cranking. The nonprofit MIT project has so far received $1.5-million in contributions from each of five donor companies, and several countries have already committed to buying at least 5 million of the computers. The United Nations Development Programme has signed an agreement to help distribute the computers to poorer nations, as the first laptops become available in early 2007 (Young, 2006). An administrator for the UN program said the agreement had the potential to "break through the digital divide between rich countries and poor countries." World Economic Forum member Richard Li observed, "It's really not a digital divide, it is an education divide, and information technology is only a conduit to promote education" (Drake, 2000).

Finessing Content Development

As the technological gulfs are filled, the problem remains of providing accessible educational content, especially suitable for the growing diversity of student needs worldwide. While primary and secondary distance learning options have been initially localized and anecdotal, higher education distance programs have been proliferate (National Center for Education Statistics, 2005). Education administrators may balk at the high cost of developing online courses, especially when going up against challengers who have made investments exceeding $1 million per course (Oblinger, Barone, & Hawkins, 2001). Some analysts have predicted that through fundamental changes in the economics

of information, the forces of competition will drive the cost of educational material down to the marginal cost of its reproduction – to the point that online courses will eventually be offered for free, paid for through donations, advertising, and other marketing strategies (Weigel, 2000).

One example of such free educational content is the Fathom online learning website, operated by Columbia University. The University of Chicago, RAND, the American Film Institute, and the Woods Hole Oceanographic Institution, and others have provided content for the Fathom site available free to the public since 2000, with more than 65,000 visitors from 52 countries enrolled in courses and seminars to date.

More recently, Stanford University has begun posting *podcasts* available free through Apple Computer's Stanford on iTunes store, with more than 400 audio files of lectures and other university related materials (Young, 2005b). Other schools are also using Apple's iTunes site to post free audio and video academic content, including the University of California at Berkley.

The Massachusetts Institute of Technology launched its innovative OpenCourseWare project in 2001, with free online access to materials for every course offered through the MIT catalogue. To date, MIT has spent some $6-million per year on the project, mostly funded through foundation grants, and has posted more than 900 of 1,800 total courses. The project has attracted downloaders worldwide who use the content for their own teaching models or programs of self-study. Several other universities are establishing their own foundation-supported open courseware projects targeting beneficiaries in the developing world, "where students cannot afford textbooks and universities are looking for help setting up courses" (Young, 2005c). These programs

encourage visitors to freely use materials such as syllabi, lecture notes, and quizzes. Among that number are course sharing programs offered by Carnegie Mellon University, Johns Hopkins University, Foothill-DeAnza Community College District, and Utah State University.

In other realms, supporters of Wikipedia, an online and open source encyclopedia, have proposed the creation of a collaborative *Wikiversity*, which could serve as a repository of educational materials, online courses, and possibly even offer college degrees (Foster, 2005). The Wikipedia site was launched in 2001 and since then has posted more than 2.5 million encyclopedic entries in 10 different languages. Though still evolving in validity and credibility, such programs demonstrate that there may be other means to provide free educational materials in a community of knowledge sharers. These new models are in synch with a systemic shift toward an education focused more on what students truly need to know and how they can learn it (Keller, 2001), goaded by market-driven employers discounting the value of a diploma, in favor of the more desirable actual competencies a student has learned (Levine, 2003).

The Culture Divide

Curricula and pedagogies need to be adapted to a wider array of cultural and linguistic differences, especially in settings with increasing numbers of international students as institutions seek to expand their enrollments beyond national borders (OECD, 2003). Simply providing educational content is not necessarily a worthy goal, unless the content is viable, valid, credible, and appropriate.

Some are concerned that the act of internationalizing education may actually mean Americanizing it, since the United States is the dominant distance-education purveyor

(Statland de Lopez, 2000). Academic institutions offering education to other nations may frequently be insensitive to the characteristics of a local culture and the students' particular needs. Some analysts are criticizing that some schools may offer lower quality programs abroad than are found at home, and that the program content does not focus on local concerns, while the primary use of English as the language of instruction raises questions of cultural imperialism (Newman, Couturier, & Scurry, 2004).

To accommodate the increasing demand for language and cultural diversity in the globalization of distance learning, there will be a huge market demand for appropriate course materials, and numerous companies and schools are now creating educational content in multiple languages (Irvine, 2003). Researchers are devoting studies to identify teaching methods for better cross-cultural effectiveness (e.g., Bruffee, 2002; Conceicao, 2002). For example, some research has found that certain select themes and images may help to achieve transcultural resonance in international classrooms (Van Hook, 2005).

Achieving the Promise

We are truly living in a time when no aspiring child or adult need live an entire life in ignorance, once we engage the will to make it so. We must first advance through many challenging social, political, and economic spheres. Each of these challenges may prove terminally problematic. The fiscal tyrannies of a competitive market may well deny learning access to those people living beyond the margins of a profitable business plan. Despotic governments may inhibit information flow to their peoples under the guise of national security. However, the greatest hurdle could well be within the social sphere: do we truly believe that universal education for its own sake is a worthy aim, and are we willing to pay the costs?

Some have protested against support for providing education technologies to impoverished nations, rightly observing the obvious: "Poor people can't eat a laptop" (Thomas, 2000). This is true. Poor people can neither eat a hammer nor a textbook, but these are recognized as valuable tools in reducing poverty. Globally accessible education should not be an either/or proposition, but a this/that solution. Bread *and* modems. Health care *and* computers. Shoes *and* wireless access. Once the general will is unleashed, the specific means may inexorably come in small bits and bytes. As it has been simply put: now that we can, we must.

References

Center for Global Development. (2005). *Missing the mark: Girls' education and the way forward.* Retrieved April 17, 2006 from http://www.cgdev.org

Drake, W.J. (2000). *From the global digital divide to the global digital community.* A report prepared on behalf of the World Economic Forum delivered to the G8 summit in Okinawa, Japan July 21-23, 2000.

Eaton, J.S. (2002). *Maintaining the delicate balance: Distance learning, higher education accreditation, and the politics of self-regulation.* Washington, DC: American Council on Education.

Foster, A.L. (2005, December 16). Wikipedia, the free online encyclopedia, ponders a new entity: Wikiversity. *The Chronicle of Higher Education.* Retrieved December 16, 2005 from http://chronicle.com

Irvine, M. (2003). The emerging global e-education industry. In E. Pittinksy (Ed.). *The wired tower: Perspectives on the impact of the internet on higher education* (pp. 65-109). Upper Saddle River, NJ: Prentice Hall.

Keller, G. (2001). Governance: The remarkable ambiguity. In P. Altbach, P. Gumport, & D. Johnstone (Eds.). *In defense of American higher education* (pp. 304-322). Baltimore, MD: Johns Hopkins University Press.

Levine, A. (2003). Higher education: A revolution externally, evolution internally. In M. Pittinsky (Ed.), *The wired tower: Perspectives on the impact of the internet on higher education* (pp. 13-39). Upper Saddle River, NJ: Prentice Hall.

Markoff, J. (2000, August 7). It takes the Internet to raise a Cambodian village. *The New York Times*. Retrieved August 7, 2000 from http://www.nytimes.com

Moore, M., & Tait, A. (2002). *Open and distance learning: Trends, policy and strategy considerations.* Paris, France: United Nations Educational, Scientific and Cultural Organization.

National Center for Education Statistics. (2005). *Distance education courses for public elementary and secondary school students: 2002-03.* U.S. Department of Education.

Newman, F., Couturier, L., & Scurry, J. (2004). *The future of higher education: Rhetoric, reality, and the risks of the market.* San Francisco: Jossey-Bass.

Oblinger, D.G., Barone, C.A., & Hawkins, B.L. (2001). *Distributed education and its challenges: An overview.* Washington, DC: American Council on Education.

OECD. (2003). *Education at a glance: OECD indicators 2003.* Paris, France: Organization for Economic Cooperation and Development.

Population Explosion! (2005, November 3). *ClickZ.* Retrieved April 8, 2006 from
www.clickz.com/stats/sectors/geographics/article.php/5911_151151

Spaeth, A. (2005, October 3). Bernard Krisher: A can-do yank in Cambodia. *Time Magazine.*

Statland de Lopez, R. (2000, August 24). A Massachusetts college finds hunger for distance
education in Mexico. *The Chronicle of Higher Education.* Retrieved August 24, 2000 from
http://chronicle.com

Telecottages in Hungary. (1998, November 12). A report prepared by the Center for Tele-
Information, Technical University of Denmark. Retrieved August 7, 2000 from
http://www.itu.int/ITU-D-UniversalAccess/casestudies/hun_mct.htm

Telecottages in Hungary. (2003, September). *European Rural Development by means of
Education.* Retrieved March 31, 2006 from
http://www.globalvillages.info/index.php/ERDE/HungarianTelecottageAssociation

The World Bank. (2002). *Constructing knowledge societies: New challenges for tertiary
education.* Washington, DC.

Thomas, J. (2000, July 25). Let them eat laptops. *Slate: International Papers.* Retrieved July
25, 2000 from http://www.slate.com

Van Hook, S.R. (2005). Themes and images that transcend cultural differences in international
classrooms. *Education Resources Information Center.* (ERIC Document Reproduction
Service No. ED490740)

Weigel, V.B. (2000, May 19). Free degrees? It's only a matter of time. *The Chronicle of Higher
Education.* Retrieved July 21, 2000 from http://chronicle.com

World Factbook. (2006). Central Intelligence Agency, United States of America. Available at
www.cia.gov/cia/publications/factbook/

Worldwide Internet Users. (2006, January 4). Computer Industry Almanac. Retrieved April 8,
2006 from http://www.c-i-a.com/pr0106.htm

Young, J.R. (2006, January 30). United Nations backs MIT effort to build $100 laptops for
children in developing countries. *The Chronicle of Higher Education.* Retrieved January 30,
2006 from http://chronicle.com

Young, J.R. (2005a, November 16). MIT researchers unveil a $100 laptop they hope will
benefit children worldwide. *The Chronicle of Higher Education.* Retrieved November 16,
2005 from http://chronicle.com

Young, J.R. (2005b, November 4). Stanford U. makes podcasts of lectures available through
Apple's iTunes. *The Chronicle of Higher Education.* Retrieved January 4, 2006 from
http://chronicle.com

Young, J.R. (2005c, March 4). 'Open courseware' idea spreads. *The Chronicle of Higher
Education.* Retrieved January 4, 2006 from http://chronicle.com