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ELEARNING'S MANY FACES, ISSUES, AND POTENTIAL

Abstract

With evolving patterns of eLearning now ubiquitous across the world, the challenges related to rapid change, differing technology formats, and greater access, are cast in the light of recent forecasts by an array of practitioners. This paper examines them through the critical lens of those individuals as presented in two separate documents: *The Future of the Internet II* (Anderson, Rainey, et al, 2006), and to a larger extent, *The Aspen Symposium 2005: Exploring the Future of Higher Education* (Devlin, et al, 2006),

Introduction

The pedagogy of technology use is quickly moving into increased use of group processes to achieve mastery learning. These technologies have evolved through social discourse that often relies on the use of systemized software programs, many of which had their origins in the public and commercial arenas. Some, such as course management systems like Blackboard© and its counterpart new partner, WebCT©, require considerable upfront investment by institutions. These investments are now commonly seen in selected nations around the world.

Open source providers, Linex, etc., have stepped up to provide similar kinds of programs, free and readily available to those who wish to use them. In addition, instant messaging systems such as MSN, Yahoo, and Skype, all of which are available at no charge, add to the emerging list of resources now available to nations engaged in eLearning activities.

Finally, the ubiquitous cell phones, PDA's, and Blackberry-type hand-held devices are now being added to the learning resources arsenal as are I-Pods and other evolving media-based devices.

Indeed, the world of information has now become instantly available to students and their teachers (to say nothing of also parents, and, increasingly, grandparents). If this is true, what then of pedagogies available to assist all in maximizing the use of such resources? Who will teach the teacher (and others) to teach and reach the students? Sessions such as these being held at our ICEM Congress in Hungary will posit that, if information for all, equity of access, and universal acceptance of the new technologies is to occur, significant changes will be needed.

Change implies change agents on one side and "changees" on the other. Both play stakeholder roles. There must be a willingness to want to change as well as those skilled in perpetuating change with minimal disruption.

Social changes in how we communicate are doing much to ameliorate the process as millions of world citizens have rapidly adapted to the use of cell phones and instant messaging. The stage for acceptance has been set and the young among us are eager to embrace it. Not so readily can we find adults, especially those who teach, who are also ready to accept many of the changes described during this Congress, myself included, but clearly not my former students now present.

We look at social discourse, enhanced through the use of technology, as being the foundation for our thesis. We look, as well, to those radicalized movements away from the conventional lecture and toward group involvement, a major departure for traditional educators.

Today researchers are examining the phenomena from a plethora of angles to observe which strategies might prove more effective. Previous presentations by my colleagues have examined the effect of task type on virtual team interaction in computere-supported collaborative learning (Pan, et al); the influence of active reminder systems on student performance in eLearning (Tsai); and English vocabulary learning via a mobile game (Chien).

In each presentation the authors departed from traditional methodologies while incorporating the formation of student groups to then examine the results and lessons learned in having done so. They describe their work in terms of research questions to be answered, protocols employed, evaluation criteria used, and finally, shared their results.

It is our hope that, perhaps in a small way, what my colleagues have presented may help induce change that is both welcomed by teachers and simultaneously offers evidence of mastery learning by their students.

The examples cited imply a futurist orientation, trying out methods that may someday become routine within education and this we find encouraging. Of some question, however, are the opinions of others around the world who, when examining the impact of a major technological format that most of us use, the internet, raise serious questions about its efficacy in the coming two decades. In raising this concern, I suggest we consult a new document created under the auspices of the Pew Internet and American Life Project; that it be read very carefully – *The Future of the Internet II* (Anderson, J.Q., Rainey, L. & others, 2006).

In this document some 742 acclaimed technology experts were asked to offer their own answers to a series of questions and scenarios. The respondents, while representative of many different nations, were, in this author's eyes, mainly those interested in the future of the internet from the point of view of creators, suppliers, managers, and government entities rather than of a significant population of educators.

Regardless of who they were, it is worth noting the questions asked, analyze an overview of their grouped responses, and then juxtapose these questions against an education practitioner background to speculate how the contents of this report might be directed toward the benefit of we who teach. This will, with excerpts taken from the 2005 Aspen Institute's *Exploring the Future of Higher Education*, constitute the remainder of my comments.

The Pew Project's Questions/Scenarios

Author's Note: The following sections were taken verbatim from the report produced on September 24, 2006 by Janna Quitney Anderson, Elon University and Lee Rainie, Director. Permission to include this information was granted by the Pew Internet and American Life Project.

Summary of Findings

How Respondents Assessed Scenarios for 2020

Source: Pew Internet & American Life Project Survey, Nov. 30, 2005-April 4, 2006. Results are based on a non-random Web-based survey. sample of 742 internet users recruited via email. Since the data are based on a non-random sample, a margin of error cannot be computed. The scenarios are given first with this author's comments following each.

Exact prediction language, presented in the order in which the scenarios were posed in the survey was Agree, Disagree, or Did not respond

1. A global, low-cost network thrives: By 2020, worldwide network interoperability will be perfected, allowing smooth data flow, authentication and billing; mobile wireless communications will be available to anyone anywhere on the globe at an extremely low cost. Agreed 56% Disagreed 43% Did not respond 1%

As educators we wonder how widespread this global network will be, who will administer the interoperability policies, how will such data flow be made smooth, who will authenticate and bill the user, and what types of infrastructure will be required to reach these untold billions of users?

We also celebrate the possibilities, assuming that the goals might be reached.

2. English displaces other languages: In 2020, networked communications have leveled the world into one big political, social and economic space in which people everywhere can meet and have verbal and visual exchanges regularly, face-to-face, over the internet. English will be so indispensable in communicating that it displaces some languages. Agreed 42% Disagreed 57% Did not respond 1%

At least four issues give cause to speculate – what language will be *the one* that eventually could conceivably replace English (Chinese, Spanish, Arabic?) Will a universal synchronous electronic translation system evolve by 2020 that makes language specificity irrelevant? If one of the emergent target languages does begin to dominate, will language educators be prepared to teach them? We might also ask if elder citizens, those academically challenged, and those with physical disablements

will be able to learn such languages or to use such sophisticated translation programs?

3. Autonomous technology is a problem: By 2020, intelligent agents and distributed control will cut direct human input so completely out of some key activities such as surveillance, security and tracking systems that technology beyond our control will generate dangers and dependencies that will not be recognized until it is impossible to reverse them. We will be on a “J-curve” of continued acceleration of change. Agreed 42% Disagreed 54% Did not respond 4%

While a majority of those polled felt that autonomous technology systems will over run society

(shades of Hal), there are many who feel that we are already well along the path toward handing over control to intelligent systems, thus ensuring that human foibles will not destroy „progress in the making.” Is Orwell’s *1984* already enveloping our society or nearing to do so. What can educators do to reverse or control such „progress?”

4. Transparency builds a better world, even at the expense of privacy: As sensing, storage and communication technologies get cheaper and better, individuals' public and private lives will become increasingly “transparent” globally. Everything will be more visible to everyone, with good and bad results. Looking at the big picture - at all of the lives affected on the planet in every way possible - this will make the world a better place by the year 2020. The benefits will outweigh the costs. Agreed 46% Disagreed 49% Did not respond 5%

Again there were many who disagreed with this „better world” being built. Yet, all one need do is to examine the spreading popularity of „Facebook,” „My Space” and other such programs to see that increasingly, citizens (at least the younger ones) have little compunction about sharing details that few of their parents would ever think of revealing. Can educators instill in their students the wisdom of being oneself without the need to share every detail of their existence? What of cultures that decry such self-promotion? What of the increasing spam that glorifies/deifies the individual’s rights over those of society at large?

5. Virtual reality is a drain for some: By the year 2020, virtual reality on the internet will come to allow more productivity from most people in technologically-savvy communities than working in the “real world.” But the attractive nature of virtual reality worlds will also lead to serious addiction problems for many, as we lose people to alternate realities. Agreed 56% Disagreed 39% Did not respond 5%

That a majority of respondents felt virtual reality, with its many attendant variations, was a positive aspect of our wired future, educators are also well aware of the explosion of gaming, simulated realities, and see, in such innovations, other sides to

such a bright future. They see students coming to school weary from lack of sleep, the previous night having been spent engaged in mutual electronic gaming in nether worlds that represent graphic images, elevated sound levels, dischordance at every turn. Nowhere was there mention of the potential for Virtyual Reality experimentation, left unsupervised, to wreak mental havoc on those with psychotic illnesses. To get a look at one intriguing example, go to a program called Second Life: <http://secondlife.com/community/downloads.php>. I went there recently, and took on a whole new persona – as Ruicha Taiyang.

Yes, there are medical possibilities, those related to military and/or corporate gaming and simulation that, in their own virtual worlds, are making massive strides within those arenas. Educators need to become familiar with the many aspects of this form of program so they can better guide their learners, one way or another.

6. The internet opens worldwide access to success: In the current best-seller *The World is Flat*, Thomas Friedman writes that the latest world revolution is found in the fact that the power of the internet makes it possible for individuals to collaborate and compete globally. By 2020, this free flow of information will completely blur current national boundaries as they are replaced by city-states, corporation-based cultural groupings and/or other geographically diverse and reconfigured human organizations tied together by global networks. Agreed 52% Disagreed 44% Did not respond 5%

Agreement increased when the respondents related internet use to the development and operation of business and industry, as well as by governments. Indeed, being a long-time reader of Friedman's writings, I have seen the light through his reportage from around the globe. I have also seen his words of caution, especially of late as seen in his *New York Times* columns, that global access to technology does not automatically beget peace, harmony, or financial success. Educators who follow Friedman's writing seem favorably impressed with his objectivity, clarity of expression, and often caustic commentary. Indeed, he is a refreshing voice in an otherwise media-blitzed world.

7. Some Luddites/Refuseniks will commit terror acts: By 2020, the people left behind (many by their own choice) by accelerating information and communications technologies will form a new cultural group of technology refuseniks who selfsegregate from "modern" society. Some will live mostly "off the grid" simply to seek peace and a cure for information overload while others will commit acts of terror or violence in protest against technology. Agreed 58% Disagreed 35% Did not respond 7%

There was little question that the Pew respondents saw the potential for chaos and terrorism run amuck as they fomented about the potential for technology to fall into the hands of those bent on revenge, hatred, seeking power, or simply needing to destroy what „man hath wrought.” There appears to be a growing sense of concern

that, with little technological know-how, those intending to destroy technological infrastructures can have their way with little chance of discovery. Over the past decade or less, there has been ample evidence of such destructive behaviors. Educators, however, have a clear responsibility to teach coping skills to their students, who can be objective in their assessment of such potential dangers, and offer psychological intervention that hopefully will sustain their students during such times of crisis. As Americans discovered, they simply girded themselves against future events like 9-11 by continuing living much of their day in ways that allowed them to function.

The charge to educators is to instill in each of their students that there can truly be a better world but that accomplishing this will take every living being on our earth and helping many of those less fortunate may be one way in which such tragedies can be reduced, possibly eliminated over time. Hope does indeed, „spring eternal” or, at least, it should.

The severity of how things are was articulated by Ronald Sugar, CEO of Northrup Grumman on October 24th when he noted that „...conventional wars as we knew them, such as in World War I, World War II, and into the Cold War era have changed...we are now in a period of *information warfare* (Sugar, 2006).”

8. We asked a separate question about setting priorities for future investments in communications technology. Most respondents identified building network capacity and technological literacy as the first or second priority for policy makers and technology leaders to pursue. Another top priority was the creation of a “legal and operating environment that allows people to use the internet the way they want, using the software they want.”

Respondents were asked: If you were in charge of setting priorities about where to spend the available funds for developing information and communications technologies (predominantly the internet) to improve the world, how would you rank order the following international concerns?

Respondents said building network capacity and technological knowledge should be top priority. Setting Priorities for Development of Global Information & Communication Technologies

Given that the majority of those responding seemed to be representative of business and industry/government, it is not surprising that building network capacity won out as being their top priority. It was encouraging to note that building technological literacy was right up there with that first priority.

Some nations now require that basic computing skills be integral to what is taught in schools from early elementary years on to high school and adult education. Others have been too absorbed with more fundamental concerns for their populace...such as providing food, clothing, housing, and medical care. Indeed, while we at the ICEM Congress laud UNESCO’s Education for All and concern for equity of access, the idea of setting up a computer center in impoverished areas of the world

has taken a back seat with survival being paramount. Guess it comes down to a matter of priorities and teachers in both developed and lesser developed nations have to continually answer the questions of their students – those who have and those who have not.

Comments from the Aspen Symposium 2005

In the fall of 2005, with the funding assistance of EDUCAUSE, an invitational symposium in Aspen, Colorado was convened, named the *Forum for the Future of Higher Education*.

The Forum for the Future of Higher Education is a community of academic leaders and scholars from across the country who explore new thinking in higher education. The Forum facilitates shared inquiry and collaboration on issues likely to influence the future of higher education, primarily in economics and finance, institutional strategy, and new learning media and technology. The Forum is also exploring the role of higher education in the global political economy, advances in the cognitive and neurosciences, and the connection between campus and community. The Forum sponsors and creates research, presents scholarships at annual Aspen symposia, and disseminates findings throughout higher education. The Forum is an independent nonprofit organization resident at MIT. Previously, the Forum was resident at Yale, Stanford, and Columbia Universities (Devlin, publisher's imprimatur, 2006).

While neither time nor space allow a complete review of the report, a number of comments by selected contributors to the work do relate to our topic; they appear in the following pages and the reader is urged to consult the entire document for additional illumination of current thinking related to higher education.

In her introduction, Maureen Devlin states:

On a global scale, the level of academic inequality is staggering. More than 1 billion people are living in extreme poverty in the world today. Approximately 8 million people will die this year because they are simply too poor to get the basics they need to stay alive (Devlin, p. ix)

It is the author's belief that this single statement should set the tone for any discussion we might have related to the integration of emerging technologies in education globally.

Devlin, like some of her co-contributors, also is concerned with what, if anything, can be done to repair the dwindling respect the United States has in the eyes of others in the world: She quotes

Stephen Walt of Harvard who examined American power from the point of view of foreign leaders:

The task we face now is to rebuild the trust, admiration, and sense of legitimacy that the United States once enjoyed, so that the rest of the world turns from looking

for ways to tame American power and focuses instead on the benefits that U.S. primacy can create. Higher education can help accomplish this broad task in many ways. At the grass roots level, more than half a million foreign students study at U.S. colleges and each year. Generally, upon returning to their native countries these students are likely to have a more realistic and at least somewhat more favorable view of the United States than if they had not studied here. Former Secretary of State Colin Powell said in 2001 he could „think of no more valuable asset to our country than the friendship of future leaders who have been educated here (2005, Walt, as quoted by Devlin, p. xi).

Devlin quotes Brown with regard to emerging technologies:

John Seely Brown, formerly of Xerox PARC, describes a productive new learningscape grounded in the availability of learning resources on the Internet and driven by the growing importance of continuous learning. He points to the digital multimedia vernacular of today’s students and presents several ways to take advantage of their familiarity and comfort level with technology to create learning models based on „learning to be” rather than „learning about,” that is, shifting from lecture-based teaching to activity-based learning (2005, Brown quoted by Devlin, p. xiv).

There are a total of twenty different authors whose theses span critical elements of how American higher education can evolve with more positive directions and results. The ultimate aim of the foregoing presentations and follow-on documents is to encourage us all to take a hard look at what has gone before us, what is now, and what the future holds. Not just for America but for our world!

References

- Anderson, J.Q., Rainie, L. And others. (2006). *The Future of the Internet II*. Washington, DC, The Pew Internet and American Life Project.
http://www.pewinternet.org/PPF/r/188/report_display.asp
- Brown, J.S. (2005). New learning environments for the 21st century. In Devlin, M. (Ed). (2006). *Aspen Symposium 2005 Exploring the Future of Higher Education*. Cambridge, MA: Massachusetts, pp. 4.1–4.54 <http://www.educause.edu/forum>
- Devlin, M. (Ed). (2006). *Aspen Symposium 2005 Exploring the Future of Higher Education*. Cambridge, MA: Massachusetts. <http://www.educause.edu/forum>
- Sugar, R. (2006). Interview on CNN, October 24, 2006.
- Walt, S. M. (2005). The global response to American power. Can higher education help? In Devlin, M. (Ed). (2006). *Aspen Symposium 2005 Exploring the Future of Higher Education*. Cambridge, MA: Massachusetts. Pp. 2.1–2,25.
<http://www.educause.edu/forum>