

New Technologies and Social Change: Learning in the Global Cyberage

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Rapid technological change; social barriers breaking and re-forming; large scale immigration leading to a multicultural society; globalization of the economy; questions about the future of democracy; and major changes in literacy practices. Such a list comprises but a few of the touchstones for current discourse about the context of twenty-first century education. As we consider educational practices around the world we cannot avoid the conclusion that we are in a time of great change. Furthermore, we find ourselves questioning the traditional ways of teaching and learning, which seem outmoded in an age defined by the worldwide web, biotechnology, and globalization.

In this context, there is a need for learning that builds upon the diverse experiences of learners, is open to change, and extends beyond the walls of the classroom and the standard curriculum. Learning based on inquiry in the face of new phenomena is more appropriate in these times than learning with limited and pre-established goals. Fortunately, the new technological context not only challenges the educational system, but offers new opportunities for this kind of learning. In order to understand better both the challenges and the opportunities, it is helpful to turn first, not to the latest *Scientific American* or *Wired* magazine, but to events of a century ago.

A New World in the Early Twentieth Century

The changes we see before us today have remarkable counterparts in the period of the turn from the nineteenth to the twentieth century. In fact, a case can be made that that period represents not only a forerunner, but a more marked example of each of the changes itemized above.

During the late nineteenth and early twentieth centuries, technological change transformed American life. The industrial revolution brought factories, and in turn the growth of urban areas. The family farm transformed with the introduction of mechanical harvesters, plows, and other equipment. Railroads, and later the automobile, reshaped the landscape, bringing distant points together and changing the social order.

Although we talk of today as the era of changes in the arena of information and communication technologies, a good case can be made that the earlier period experienced more dramatic changes. The telegraph and telephone for the first time made nearly instant communication possible across long distances. New techniques for recording and transmitting audio and video were embodied in the phonograph, the radio, and motion pictures.

Corresponding changes occurred in every domain. For example, this was one of the greatest periods in the history of children's literature. As Lewis (1998), details, the reduction of social barriers, the advent of compulsory education, and changes in the technologies of publishing essentially established new forms of literacy:

Towards the end of the nineteenth century compulsory education for children, the invention of lithography, mechanical paper making and cloth binding coincided to enable the standardised mass production of books, which meant the possibility of greater quantity of any book and the consequent reduction of cost, the possibility of colour illustration and the wider attraction of books to a mass literate population.

The period of a century ago saw rapid social change as well along with these technological changes. The emancipation of slaves did not result in equality for African Americans, but it did begin the long, unfinished process of their inclusion in mainstream American life. The women's movement of that time paralleled the struggle of African Americans. Meanwhile, massive immigration, especially in the early twentieth century, redefined the mix of languages and cultures in the country. The rate of immigration then was more than double that of recent years in the US.

These changes occurred at a time when the US was very much a player on the global stage, much more so than it is today:

It is a great and misunderstood fact that globalization is a return to normal for the American economy. Between 1890 or so and 1914, America was the world's biggest trading economy except for Britain. A very large proportion of the economy was either imports or exports. There were massive direct investments, which dwarf the level of foreign investment you see now. (Smoler, 1998, pp. 65-66).

The combination of shifting demographics, new social relations, new technologies, and awareness of the international context led educators of that era to seek more appropriate means to support learning. Beyond the structural changes, which began the move toward compulsory education for all, educators recognized the need for learning that was more flexible and responsive to change. Mass literacy was seen as necessary for an technologically advanced economy that needed to interact with Europe, and increasingly, other parts of the world. The public library movement (Minow, 1997), enabled by Andrew Carnegie, grew, as people saw the need for learning for all. Schools grew and began to serve a larger percentage of students for a longer period of their lives. [1]

Meanwhile, pragmatism provided the philosophical basis for the commonsense views that knowledge is ever-changing and that the future consequences of our beliefs need to be considered as much as their antecedents. It led to the progressive movement in education, built in large part upon the work of John Dewey, who articulated an educational philosophy which saw the need to build a more inclusive society with methods appropriate to the new contexts for learning.

A Twenty-First Century Reprise?

A consideration of the US society at the start of the last century does not lend much credence to the view that we are in an unprecedented time of globalization, technological change, and societal disruption. Quite the opposite: The changes of today all have precursors, and in most cases, the evidence is that the early period was more tumultuous. There was more immigration, more significant inventions, more social change, and greater consequences for education.

Does that mean then that the millennial headlines are all hyperbole? That the era of a globalized, technologized society is nothing new or noteworthy? Not exactly. There are reasons to think that what we see today could presage even greater changes than those experienced a century earlier.

For example, no one can discount the enormous impact of the new modes of communication introduced around the turn of the last century. Having achieved near light speed, one might see further developments as mere embellishments. And yet, the world wide web may surprise us even more than it has already.

Through what is called *convergence*, the web/internet is now becoming the fusion of

all the communication technologies. Already we have print, graphics, databases, email, fax, radio, and video available through a web browser. The tools to access these technologies are becoming less expensive and more widely available throughout the world. Moreover, these technologies, once one-way, are becoming two-way, meaning that any individual or group can become a producer as well as a consumer. For example, one site [2] alone offers 29,119 radio stations from around the world through the web (as of Feb. 26, 2001). It already claims 75 million listeners.

Similarly, although the US is now more self sufficient economically, the trend of increased globalization appears irreversible. Already, multinational corporations act as supra-governments, controlling the movement of labor and environmental decisions. Work that was once tied to locale and culture can now be redirected overnight to sites around the world. This has led to the concept of umbrella cultures that transcend any local or nationally-based cultures:

...Asea Brown Boveri Ltd. is a \$36 billion-a-year multinational corporation divided into 1,300 companies in 140 countries; no one national group accounts for more than 20 percent of its employees...Barnevik [CEO] explains that his best managers are moved around periodically so that they and their families can develop "global personalities" by living and growing up in different countries. ABB management teams, moreover, are never composed of employees from any one country. Barnevik says that this encourages a "cross-cultural glue." (Kaplan, 1997, p. 72)

What will be the consequences of a world of "global personalities"? Will it lead to greater peace? To more global understanding? Or do its threats to the cultural strengths and diversities of the world challenge democratic societies? Going further, Kaplan (1997) asks whether democracy was just a moment in history that will be replaced by other political formations through continuing globalization.

Meanwhile, demands for *knowledge workers* (Drucker, 1994) or *symbolic analysts* (Reich, 1991) have led to a renewed interest in lifelong learning. The new worker will supposedly need to understand more of the work process and to see work as inseparable from continual learning and re-learning. In *post-capitalism*, work will be more meaningful and than in the *Fordist* economy based on assembly-line manufacturing. The extent to which this happens for the majority of workers remains to be seen (see critique in Gee, Hull, & Lankshear, 1996).

At the beginning of the last century we saw movements in education that served to open up possibilities for learners and to lay the basis for engaged citizenship. These very same movements also served to assimilate immigrant and rural workers into an increasingly mechanized and urbanized economy, by inculcating political and social values.

It is not surprising that at the beginning of this century we see similar conditions and a similar emphasis on education. The 2000 Presidential election saw that as one of its major themes. As in the previous era, the energy derives in part from a sense that a normalizing education is needed to maintain the social order against the 'disruptive' forces of immigration, new technologies, a changing economy, and new social relations. There are thus calls for restoring fundamental values in schooling and for increased accountability of students, teachers, and schools. A thorough account of how new technologies are re-shaping education on a global scale would need to explore the role they play in standardizing curricula and assessment for these purposes. Their major effect may be in reinforcing the normalizing function of schooling through online learning, computerized testing, and control of publication.

At the same time, the conditions of the present environment call for a renaissance in inquiry-based learning. The explosion in information now encompassing music, video, online databases, and other media demands new abilities to integrate knowledge from multiple sources. It also requires citizens to think critically about information that can be found nearly instantaneously throughout the world. New forms of collaboration are both enabled by and required by new communication and information technologies. Many say that the need now is not so much to solve problems, in the sense of solving well-structured puzzles of the kind seen in textbooks, but rather, to engage with a complex situation and to turn the messiness of that situation into a problem that can be solved—thus, to find problems rather than just to solve them. And the age-old emphasis on learning how to learn becomes ever more relevant in a rapidly changing technological and cultural environment. These soft skills (Murnane & Levy, 1996) will be increasingly important in today's internet world and have led to a renaissance of interest in inquiry-based learning.

In order to make our way through the complex and dynamic set of issues associated with the new information and communication technologies and their impact on education in this century, we will use the inquiry cycle described above. Four examples, one each of Investigation, Creation, Discussion, and Reflection show how learners are making use of new resources in response to the new challenges of the twenty-first century.

Inquiry-Based Learning Through New Media

The fact that new information technologies have created bounteous opportunities to learn about the most obscure phenomena is now a commonplace. Most people in the US are now familiar to some degree, for example, with the variety of resources offered by the World Wide Web. But Internet content is considerably more diverse and much more extensive than most users realize. For one thing, the web (HTTP protocol) is only a subset of Internet content. Other protocols include FTP (file transfer protocol), email, news, Telnet and Gopher. (BrightPlanet, 2001)

More Than You Know

Considering the web alone, we can see a remarkable number of documents—text files, data sets, images, audio, and video. By some measures, the web is approaching the size of the 20 million volumes of the Library of Congress, although within that total are many duplicates and broken links. The web currently contains an estimated 1 billion documents, a figure growing at the rate of 1.5 million documents per day (Inktomi, 2000). The search engines cannot keep up: The largest in terms of indexed files is Fast [3], which claims to list 300 million documents.

But what has been called the *surface web* is only a part of the story. The *deep web*--information that is accessible through the Internet, but not through HTTP, is considerably larger. A study by BrightPlanet (2001) found that "public information on the deep Web is currently 400 to 550 times larger than the commonly defined World Wide Web... A full 95% of the deep Web is publicly accessible information--not subject to fees or subscriptions." A few of the largest of the deep web sites identified in the BrightPlanet study are shown below:

National Climatic Data Center (NOAA) <http://www.ncdc.noaa.gov/ol/satellite/satelliteresources.html> -- satellite images of the earth showing hurricanes, fires, volcanoes, snowstorms, and more

Alexa <http://www.alexa.com/> -- a web navigation tool that provides price comparisons, links to similar web sites, address and phone number for sites, traffic ranking, news related to the site. and reference search on Merriam-Webster Dictionary and Thesaurus, Encyclopedia Britannica, Yellow Pages, White Pages

Right-to-Know Network (RTK Net) <http://www.rtk.net/> -- "free access to numerous databases, text files, and conferences on the environment, housing, and sustainable development. ... you can identify specific factories and their environmental effects; analyze reinvestment by banks in their communities; and assess people and communities affected."

MP3.com <http://www.mp3.com/> -- access to thousands of compressed digital audio files using the MPEG3 format; music of every country and genre

Terraserver <http://terraserver.microsoft.com/> -- images of every location in the US and many in other parts of the world

US Trademarks <http://www.uspto.gov/tmdb/> -- "more than 2.9 million pending, registered and dead federal trademarks."

US Patents <http://www.uspto.gov/patft/> -- "Full text of all US patents issued since January 1, 1976, and full-page images of each page of every US patent issued since 1790."

JSTOR Project <http://www.jstor.org/> -- online access to over 100 journals

What this massive collection of information means is that resource-based learning, long advocated by many educators, can become a practical reality for students throughout the world.

Learning About Sarawak

Consider just one example: Suppose we wanted to learn about Sarawak, that strip on the northwest coast of Borneo, which is a state of Malaysia. We could go to just one site, that of the Sarawak Tourism Office [4] and learn:

[Sarawak's] rainforest...houses the world's richest and most diverse ecosystem. It is also home to the world's largest flower, the Rafflesia, the size of a coffee table, squirrels and snakes that fly, deer the size of cats, plants that eat insects (and small mammals) and species of flora and insects still waiting to be discovered....[It] is home to 27 ethnic groups; people each with their own distinct language, culture and lifestyle. ..[It also has] the world's most extensive cave system, 310 kilometers of passages.

The visitor to the site can take a virtual tour of cities and towns in Sarawak, or make an online visit to each of the many national parks. For example, we learn that

"Lambir Hills [Park] is the world's most ecologically diverse area. Just a sample 52 hectares of the park's 7,000 hectares revealed 1,050 different species of tree, and each tree supports 1,000 species of insect life... Its forest is home to gibbons, tarsiers, bearded pigs, flying squirrels, deer and 157 types of bird."

At Niah National Park we learn that

"Humans inhabited Niah Great Cave 40,000 years ago. Today, local Penan tribesmen venture into the cave to collect edible birds nests and the guano dropped by the myriad swiftlets and bats that live there."

From the site, one can link to various online newspapers as well, such as the *Sarawak Tribune* [5], the *Borneo Post* [6], or *The Star* [7]. Students could spend days studying the information on culture, history, and people of Sarawak, without even leaving this one site, and could discover additional opportunities to learn if they were to follow the links from there to other sources. For example, there are photos showing the making of Pua Kumbu - the famous double-ikat blanket. This is considered the most prized of Sarawakian handicrafts:

"Traditionally woven by Iban women, acclaimed as the finest weavers in all of Borneo, Pua Kumbu is made from individually dyed threads on a back strap

loom. It is a unique form of weaving, not only in technique, but also in design. The manufacturing of tie and dye materials is known as kayau indu, or 'women's war'."

Although one could explore this single site for a long time, the beauty of the web is that one can quickly access additional sources. For example, you could go to the *Rengah Sarawak* site, [8] which has similar images of cultural production, supplemented with videos. You can see Sarawak images and listen to Besati meh, a Sarawak community song. [9]

Rengah Sarawak is a Penan language phrase meaning "Sarawak News", but although its site is an online paper, there is no link to it from the Sarawak Tourism site. That may be related to their mission statement:

This Web site contains stories and information about and related to the various struggles in Sarawak, one of the two East Malaysian States in the northern part of the island of Borneo... This site is the result of a combined efforts by several Sarawak NGOs and communities to bring views and information on and about the people's struggles directly to the internet community and beyond... We aim to give you an accurate and alternative picture of what is happening here - mainly stories from and about communities, as well as those from NGOs.

One of the articles on the site (Joe, 2000) shows images of people, not unlike those on the Tourism Office site. But it also talks of the political struggles currently underway:

Developmental projects such as roads, mining, logging, mono-crop plantations, dams, airports and golf courses have led to the loss of land and resources among most indigenous communities not only in Sarawak. At the same time, the traditional social, religious and political systems have undergone great stress as systematic proselytisation, centralised government decision-making, centralised education systems and the mass media have imposed themselves in obvious and subtle ways.

These two sites, Sarawak Tourism and *Rengah Sarawak*, are similar in many ways. They both help a web visitor gain some understanding of the geology, biology, history, culture, economics, language, politics, art and music of Sarawak. The images and videos, though no substitute for the direct experience of a physical visit, do provide a feel for a fascinating region. Even a brief exploration raises all sorts of questions about rain forests, economic development, and cultural representation, any of which might be pursued through endless other sites and non-web resources. Investigating through the web in this way reminds us that the vision John Dewey and Lucy Sprague Mitchell had of geography as the organizing frame for the curriculum is potentially more powerful than ever before.

Telling Sarawak's Story

Our brief look at a couple of web sites about Sarawak reminds us that it is important to assess the author's purpose when interpreting any information. The importance of this principle is only amplified when we look at the web as a whole. The diversity of stories it holds provides a strong reminder that different purposes lead to different constructions of meaning. It is also increasingly evident that the stories of people throughout the world are not always told by the people themselves (Bruce, 1999).

In the case of Sarawak, we see this pattern in the extreme. Consider the highland village of Bario, which

... has no phones or, for that matter, public electricity. When researchers polled 140 villagers a year ago, only one had even heard of the Internet, while fewer than 30 had heard of computers. The only way to get to the village is by a daily 20-seat flight, or by trekking through the jungle for a week (McFarland, 2000).

Bario is of course not alone. There is less than one telephone for every 1,000 people in most rural areas throughout the world. All the developing countries of the world put together own only 4% of the world's computers. Tokyo alone has more telephones than the entire African continent (Harris, 2001).

These realities show that the worldwide web is far from worldwide, either in terms of access to the information it contains or in terms of the ability to create and influence the information that is there. But there are various projects underway to extend internet access. Universiti Malaysia Sarawak (UNIMAS) has one in Sarawak in which they are pioneering waterborne Net surfing. They will provide a boat, an Internet boat, which will cruise the Rajang River, docking at villages every few hours to teach residents how to use computers and the internet (Reuters, 2000).

In another project, UNIMAS is creating E-Bario (Eagar, 2000; Harris, 2000). This will be a center in which the local community can gain access to the Internet, telephone, fax and other facilities. Equipment will have to be carried in by plane or on the backs of water buffaloes. The aim is to promote economic and social development, through increased access to information on government, health, education, recreation, entertainment, and agricultural practices. In addition, the center will provide opportunities to create content. This will enable the ability to engage in electronic business and to develop new industries. There is also a crucial cultural component. Developers and Bario citizens see the chance to promote Kelabit culture and to create an electronic record on all things Kelabit, from genealogies to recordings of traditional songs and dances, as well as, stories and adat (tribal law). E-Bario thus exemplifies the contrasts of local/traditional and global/new that Friedman (2000) describes in his survey of globalization trends.

Part of E-Bario will be to create a *Malaysian smart school (MSC)* [10] there. The smart school project is a country-wide effort to create a technology-supported education system, which will in turn produce an IT-literate population. It is hoped that this will establish Malaysia as a developed nation by the year 2020 and give it a competitive edge in the global economy. Each smart school will have at least a computer lab with student work in four subject areas.

The E-Bario project and the Internet boat are examples of attempts to make the Internet accessible to the majority of people in the world, not just to those in economically-privileged nations. They still have a long way to go toward providing anything approaching equal access. But they do open the door, not only to finding resources, but to making it possible for ordinary people to create resources, and thereby allowing people to tell their own stories to the world.

Inquiry-based Learning in Contexts of Change

The expanding diversity of mainstream American society, brought about both by immigration, and by opening doors to minorities and women who had been excluded earlier, put pressure on schooling to become more democratic, both in means and ends. It also highlighted the age-old fact that learning begins with the learner. The learner's previous experiences and needs are not just constraints on what can be taught well; they are the very foundation for learning.

The Cycle of Inquiry

This reality for teaching and learning is further articulated in Dewey's (1956) description of the four primary interests of the learner: investigation--the child's natural desire to learn; communication--the propensity to enter into social relationships; construction--the pleasure in creating things; and expression, or reflection--the desire to extract meaning from experience. Dewey saw these as the natural resources, the uninvested capital, "upon the exercise of which depends the active growth of the child." Figure 1 places these primary interests of the learner in the framework of a cycle of inquiry. For any question or problem, one may then think of activities of Investigation, Creation, Discussion, and Reflection as means for its resolution.

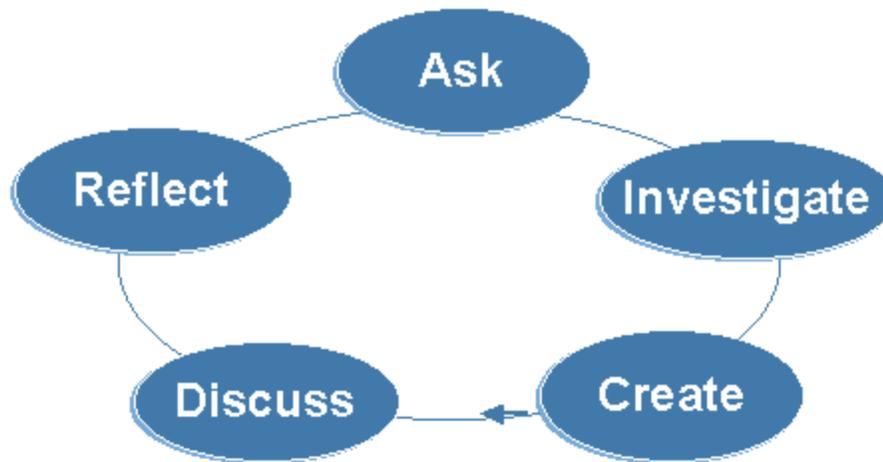


Figure 1. The cycle of inquiry.

Although there are many nuances we might consider, for the purposes of this paper, *inquiry-based learning* indicates a broad set of practices in which learners extract meaning from experience as they engage in efforts to address questions meaningful to them. These practices were central for progressive educators in their conception of the rapidly changing social fabric as both a challenge and an opportunity for democracy. They understood that democracy means active participation by all citizens in social, political and economic decisions that affect their lives. Inquiry was then not simply the process whereby an individual learns, but the means for a democratic society to continually renew itself:

The education of engaged citizens, according to this perspective, involves two essential elements: (1) *Respect for diversity*, meaning that each individual should be recognized for his or her own abilities, interests, ideas, needs, and cultural identity, and (2) the development of *critical, socially engaged intelligence*, which enables individuals to understand and participate effectively in the affairs of their community in a collaborative effort to achieve a common good. These elements of progressive education have been termed "child-centered" and "social reconstructionist" approaches, and while in extreme forms they have sometimes been separated, in the thought of John Dewey and other major theorists they are seen as being necessarily related to each other (University of Vermont, 2001).

In the work of the progressive educators, these elements aimed toward fostering an attitude toward life that was experimental, questioning, and built more upon actual experiences than on tradition, authority, or established curricula. Lucy Sprague Mitchell, one of the founders of Bank Street College expressed this well:

Our aim is to help students develop a scientific attitude towards their work and toward life. To us this means an attitude of eager, alert observations; a constant

questioning of old procedure in light of new observations; a use of the world as well as of books as source material; an experimental open-mindedness; and an effort to keep as reliable records as the situation permits in order to base the future upon actual knowledge of the experiences of the past. (Lucy Sprague Mitchell, quoted in Bakken, 1999)

It is not difficult to see why the critical, socially-engaged intelligence that progressive education sought to foster could be threatening to the established order. As a result, the ideas that grew out of a reconstruction of traditional philosophy, and which called for a new moral and social order, were often reduced to no more than a set of methods which would allow the romanticized inner child to develop.

Inquiry Learning Today

The examples from Sarawak exemplify a way of thinking about curricula in relation to learning that Dewey articulated a century ago, but which may be even more relevant today. Rather than thinking of knowledge as static and the learner as an empty vessel whose job it is to absorb as much as possible of that pre-defined material, he saw the learner as an inquirer, learning through work on problems that were meaningful in the present circumstances. At the same time, the resources--objects, books, web sites, curricular materials--that the learner uses are themselves representative of inquiry. As he did for so many other dichotomies, Dewey argues that books, curricula, disciplines, and technologies should be seen as representations of on-going inquiry, based on collective and historically-based understandings, but not fundamentally different from that of the individual learner. This is known as "psychologizing the curriculum". Aspects of curricula, even the driest textbook, can then be viewed not in opposition to the learner or to inquiry, but rather as another point on a continuum of inquiry.

The web sites about Sarawak are then not material to be learned, but material in the process of being learned as they are created. As Dewey and Bentley (1949) might say they represent a "knowing" rather than "knowledge". Those who write these sites, where "write" means to produce text, images, sound, video, and interactive elements in hyperlinked documents, as well as those who read them, where "read" means to observe, study, and interact with them, are engaged in processes of investigating, creating, discussing, and reflecting, all the elements of the inquiry cycle shown in Figure 1. Learners today can be a part of these activities, and not merely passive participants destined to do no more than absorb the work of others. The web is not a necessary technology for that shift in roles, but it invites it in a way traditional media do not.

The Inquiry Page

A site that makes the inquiry cycle more explicit is the Inquiry Page [\[11\]](#). It is designed to help teachers weave a learner's interests with those of society by

supporting them in sharing their successes and collective expertise (Bruce & Davidson, 1996; Bruce & Easley, 2000).

One aspect of the site is a tool for online creation of Inquiry Units by teachers (or by students). Each unit starts with a guiding question and provides a space for activities of Asking, Investigating, Creating, Discussing, and Reflecting. The user fills out a web-based form. When the unit is called up again by the same, or another user, it can be used as a guide for inquiry. A second teacher can *spin off* a copy of the unit, modifying to fit new circumstances. Students can also do that, thus using the curriculum Inquiry Unit as a place for their own work. In this way, the site elides the lines between pre-established knowledge and knowledge-in-creation, between curriculum and student work, and between teacher and student, framing all of these as ongoing inquiries. The cycle presented in Figure 1 and employed in the Inquiry Page unit generator presents an idealized model for inquiry, not to constrain our account of inquiry, but rather to serve as a reminder of the range of activities that might be supported in a successful learning environment.

Conclusion

As Dewey recognized, schooling is not just about the individual. It is the coming together of the child's interests with those of the society, as manifested in the disciplines of the academy. These disciplines represent centuries of collective thought as well as the interests of the larger community in maintaining itself by communicating its knowledge and values to the next generation. Today, "society" or "the larger community" has come to mean the entire world. It is no longer viable to structure curriculum around a static and parochial view of the world.

The globalization we see today in the economy, in cultural transformation, and in education has been accompanied by major technological changes. Whether these changes will someday be accounted as significant as those of the late nineteenth century, or as some say, comparable to that of mass printing, remains to be seen. Nevertheless, the changes are major, and have been both part and parcel of globalization.

These changes raise a number of important questions: What skills/knowledge /attitudes are needed in an environment seemingly changing along every dimension? What new forms of social arrangement will arise? What are the emerging alignments of power, communication, work? What are the new opportunities for learning? What kind of critique is needed? An article by Lester (2001), is telling here. Just as there is widespread agreement that personal privacy has eroded because of new technologies, such as video surveillance, monitoring of web surfing, and data mining, there are signs that other new technologies are making it possible to maintain privacy at more secure levels than ever before. Zero-Knowledge,[12] for example, offers a tool suite to guarantee anonymous email and web surfing.

It is a daunting task to consider questions such as these, not only because of their complexity, but because conditions, particularly those associated with new technologies, change in unpredictable ways. Just as learners today need opportunities to develop their critical faculties through engagement with the dynamic complexities of new social relations and changing technologies, so do we in our efforts to assess and predict these changes and their implications for education. Rather than playing out well-established scripts, we need to frame those efforts as ongoing inquiries.

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Notes

[1] These movements were not solely in service of greater democracy. Libraries and advanced education also tended to shore up the class system by delineating the educated elites. Although new libraries and extended education for the masses created new learning opportunities, they also had a crucial function of fashioning 'civilized' production workers (see Bowles & Gintis, 1976, 1980).

[2] <http://www.live365.com/>

[3] <http://www.alltheweb.com>

[4] <http://www.sarawaktourism.com/>

[5] <http://www.jaring.my/tribune/>

[6] <http://www.borneopost.com/>

[7] <http://www.thestar.com.my/>

[8] <http://www.rengah.c2o.org/sarawak/>

[9] <http://www.rengah.c2o.org/ram/besati-meh.ram>

[10] <http://www.ppk.kpm.my/smartschool/>

[11] <http://inquiry.uiuc.edu/>

[12] <http://www.zeroknowledge.com/>

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