

Learning Without Frontiers Workshop

GHANA COMPUTER LITERACY AND DISTANCE EDUCATION CONFERENCE
May 20 – 22, 1998

RE-CONCEPTUALIZING LEARNING ENVIRONMENTS FOR SUSTAINABLE HUMAN DEVELOPMENT: THE POTENTIAL OF ICTS

FACILITATOR'S INSTRUCTIONS

I. INTRODUCTION OF FACILITATORS AND LEARNING WITHOUT FRONTIERS (15 minutes)

- A. Jacqueline Lemoine to introduce UNESCO
- B. David Berg to introduce LWF
- C. Manish Jain to give overview of workshop

TRANSPARENCY SLIDE: "Once a technology is admitted into society, it plays out its own hand; it does what it is designed to do. Our task is to understand what that design is." Neil Postman

Overview of Session

- I. FRAMING THE REFERENCE POINTS FOR SUSTAINABLE HUMAN DEVELOPMENT (45 minutes)
- II. EXPLORING THE IMPLICATIONS OF LIVING IN A TECHNOLOGICAL WORLD (1.5 hour)
- III. TECHNOLOGIES TO TRANSFORM EDUCATION SYSTEMS (1.5 hours)
- IV. TOWARDS AN AGENDA OF CRITICAL APPROPRIATION (2 hour)

II. FRAMING THE REFERENCE POINTS FOR SUSTAINABLE HUMAN DEVELOPMENT (45 minutes)

A. What is 'development'?

Ask each participant to spend a few minutes thinking about this question and to draw a picture illustrating some key aspect/feature of 'development'. Go around the room and ask each participant to introduce themselves and their drawings.

Follow-up questions:

- *Is there any tension between these different visions of development*
- *Is development always positive?*
- *Does a 'developed society' exist today? If so, where?*
- *Where have the reference points for 'development' come from? In other words, who is defining the development agenda today? How do these groups control the development agenda?*

B. What lessons have been learned about development? In other words, what is new about the paradigm of 'sustainable human development'?

Large group brainstorm and write down on flip chart.

C. Does more or more advanced forms of technology mean that a society is more developed?

TRANSPARENCY SLIDE: "Over the century since the Industrial Revolution, wave after wave of techno-utopian visions have so immersed us in positive expectation that they have solidified into a paradigm that new technology is virtually synonymous with the general advancement of society. It is only after technology has entered into general production and may have gained an important role in everyday life that we begin to perceive its adverse effect upon humans or nature. Even then, the proposed solutions usually consist of creating new generations of technology designed to fix the problems of old. Thus the wave rolls on to the next generation."

Jerry Mander, "Technologies of Globalization"

*** SITUATING THE TECHNOLOGIES WITHIN AN EXPLICIT FRAMEWORK OF DEVELOPMENT IS KEY TO THEIR SUCCESS**

III. EXPLORING THE IMPLICATIONS OF LIVING IN A TECHNOLOGICAL WORLD

(1.5 hour)

TRANSPARENCY SLIDE. The new technologies are profoundly influencing our identities, priorities, lifestyles, values, institutional structures, the processes by which we share ideas, our modes of reflection, the ways/scales in which we build community, our perceptions of time and change. They are creating new demands and learning needs as people must learn to adapt to and anticipate this increasingly complex changing world.

A. *What specific problems in your country do you foresee information and communication technologies solving?*

Large group brainstorm and write down on flip chart.

A. *Are technologies 'neutral'?*

BREAK INTO SMALL GROUPS TO DISCUSS CASE STUDIES (20-25 minutes)

- * Whittle Communications, companies bring commercials to the classroom
- * Violence in the media
- * Dene Indians and cultural homogenization
- * Iberians and the collapse of social institutions
- * Cutting art and music programs for technology in classrooms
- * Information overload/info-glut, false and unethical information on the Internet

C. *What concerns do you have about the introduction/expansion of new technologies in Ghana and other parts of Africa?*

Large group brainstorm and write down concerns on flip chart.

Follow-up Question:

- *Is information "free"? Who, if anyone, controls the new information and communication technologies? What are the implications of this?*

TRANSPARENCY SLIDE.

In North America, there are:

- 7 major movie studios and more than:
- 1,800 daily newspapers
- 11,000 magazines
- 11,000 radio stations
- 2,000 TV stations
- 2,500 book publishers

However, out of these, 23 corporations own and control over 50% of the businesses in each medium; in some cases they have a virtual monopoly.

D. OPEN GROUP DISCUSSION QUESTIONS

- *What kind of solutions from around the world have you come across to address these concerns?*

- *Do communities in developing countries have the power to say 'no' to the new technologies?*

TRANSPARENCY SLIDE. Traditional Amish communities in Pennsylvania, USA, often misperceived as technologically naive or backward, have pioneered popular deliberative processes for screening technologies based on their cumulative social effects. A piece of technology is kept out of an Amish settlement if it is seen as a threat to the cohesion of the community or seen to potentially contaminate the cultural values. Television, video games and computer/Internet connections are just a few examples of banned technology. Anyone caught violating a ban risks excommunication. Prior to their widespread adoption or rejection, new technologies are brought into the community under one-year probation, in order to discover empirically what their social effects will be.

IV. TECHNOLOGIES TO TRANSFORM EDUCATION SYSTEMS (1.5 hours)

TRANSPARENCY SLIDE: New technologies can help to empower individual/collective learners and to transform weak and inappropriate learning environments.

“Organisms do not experience environments. They create them.”

R.C. Lewontin, Geneticist

*** THIS QUOTE IS CRITICAL TO HOW WE SEE THE LEARNER IN THE LEARNING ENVIRONMENT**

A. What is ‘learning’?

Large group brainstorm and write down on flip chart.

Follow-up Questions:

- *Where does learning occur? Is it only in the school?*

A. Based on the discussions that we have been having, what kinds of learning needs/skills and learning attitudes can we anticipate for the 21st century?

Large group brainstorm and write down on flip chart.

Follow-up Questions:

- *Can schools in their current form provide for this vision?*

*C. Is technology the right answer for improving education? **LEARNING DOES NOT NECESSARILY INCREASE BECAUSE OF THE TECHNOLOGIES***

TRANSPARENCY SLIDE: “The possibilities of using this thing poorly so outweigh the chance of using it well, it makes people like us, who are fundamentally optimistic about computers, very reticent.”

Sherry Turkle, MIT Media Lab

TRANSPARENCY SLIDE: In reviewing the experience of distance education with teacher training from several developing countries, the World Bank describes that “research findings are notably undramatic”:

- Distance education has been reasonably successful in reaching out to a large number of teachers
- High completion and examination pass rates have been reported particularly where teachers have gained promotion or pay upon completing a course or gaining a certificate
- Less evidence is available on learning gains; the research is moderately positive though limited
- Very little evidence exists on changes in the attitude and behavior of teachers

TRANSPARENCY SLIDE: In reviewing the numerous studies evaluating computers and student achievement, the Atlantic Monthly writer found that most of the studies are ‘undependable’, ‘worthless’ and ‘inconclusive.’ “Many are more anecdotal than analytical. Some lack the necessary scientific controls to make solid conclusions possible. The circumstances are artificial and not easily repeated, results are not statistically reliable, or most frequently, the studies did not control for other influences, such as differences between teaching methods.” This last factor is critical, as one researcher concluded, “what students learned had less to do with the computer and more to do with the teaching.”

D. Why are these reviews so critical? What lessons have you learned from your own experiences about how the technologies should not be used?

Large group brainstorm and write down on flip chart.

*** SITUATING THE TECHNOLOGIES TO GOOD PEDAGOGY IS KEY TO THEIR SUCCESS**

TRANSPARENCY SLIDE: Looking at Technology through School-Colored Spectacles - “School is so deeply ingrained in people’s thinking that when they look at technology to discuss its relation to computers, they see it in a particular and very narrow way dominated by the nature of school as they’ve known it. So it’s not surprising that the discussion, the serious research and the large amounts of money and people’s time being expended on technology and education. . . consist of injecting technology into an otherwise unchanged school system and then coming to the conclusion that it’s not going to change school very much.”

Dr. Seymour Papert, MIT Media Lab

E. What 'glasses' should we look through? How must education change for the future?

*** THE INDUSTRIALIZED MODEL OF 'MASS SCHOOLING' IS BECOMING INCREASINGLY INADEQUATE AND INAPPROPRIATE IN LIGHT OF EMERGING RESEARCH ON LEARNING AND SUSTAINABLE DEVELOPMENT AS IN RELATION TO THE NEW TECHNOLOGIES.**

TRANSPARENCY SLIDE: TECHNOLOGY AND FORMAL EDUCATION ON A COLLISION COURSE.

ICTs are raising serious questions around:

- the boundaries of the classroom/school
- the role of the teachers
- the role of the learners -- who are learners?
- teaching vs. learning
- the nature of information/knowledge
- authority structures

TRANSPARENCY SLIDE: "The illiterates of the future will not be those who cannot read or write but those who cannot learn, unlearn and relearn."
Alvin Toffler, 1996

TRANSPARENCY SLIDE: see TABLE – LEARNING TO LEARN PARADIGM.

F. *How can we use technologies to transform education and support the emergence of the learning to learn paradigm?*

BREAK INTO SMALL GROUPS OF 2-3 TO DISCUSS CASE STUDIES (25 minutes)

- REDEFINING TEACHERS
- DISTRIBUTED ENVIRONMENTS
- VIRTUAL LEARNING COMMUNITIES
- LOCAL PRODUCTION/CRITICAL MEDIA LITERACY
- TRANSFORMING SCHOOLS

G. OPEN GROUP DISCUSSION QUESTIONS

- Do you have experiences to share about where you have seen positive cases of using the technologies to support learning and to transform education systems?

- What aspects of the technologies should we try to bring out and emphasize when developing new education projects?

Large group brainstorm and write down on flip chart.i.e. towards mixed media distributed environments which emphasize Specificity, Flexibility, Interactivity/Dialogue, Asynchronicity and Information Generation and Sharing

- What are the questions we need to be asking about technologies when evaluating their effectiveness or usefulness in education?

- Is the foundation underlying most distance education approaches any different than mass schooling? What thinking/sets of concerns is driving the growth of distance education?

TRANSPARENCY SLIDE: Distance education has traditionally been seen as the educational act of 'packaging' and 'delivering' knowledge or information to somewhere else. Conventionally, the act and concept of distance education is about producing and delivering/transmitting information and knowledge from a 'center' to locations at a physical distance from the center. The notion of distance education is premised on an absence of proximity. The conventional conception is one of 'knowledge centers' being involved in 'outreach', 'delivering' a commodity or a product, called education, to people who have the 'misfortune' of not being located at, or in proximity to, the center. Distance educators talk about 'preparing learning packages', 'delivery systems', 'learning systems' and such.

*** WITHIN THE CONTEXT OF THE LEARNING TO LEARN PARADIGM, WE WOULD LIKE TO PROPOSE A SHIFT AWAY FROM TALKING ABOUT DISTANCE EDUCATION TO THINKING ABOUT CREATING MIXED MEDIA ENVIRONMENTS**

V. TOWARDS AN AGENDA OF CRITICAL APPROPRIATION (2 hours)

A. *Break into small groups of 5-6 to focusing on design issues to building a learning environment of the future (1 hour)*

Hand out Insider Information sheets to different groups 30 minutes into the exercise

B. *Presentation of a few of Group Projects*

Follow-up Questions:

- *What will be the critical factors that influence success/failure of such pilot projects?*
- *Might we expect any resistance to these projects? What kind? How will you deal with these?*

TRANSPARENCY SLIDE: Empowerment involves individuals and communities confidently engaging in learning processes in which they create, appropriate and share knowledge, tools and techniques in order to change and improve the quality of their lives and societies.

TRANSPARENCY SLIDE: Regaining Control: Humanizing the Technologies

- Technology as a means -- define the ends
- Local cultural production of content -- creativity
- Critical media awareness
- Participatory processes and capacity building
- Creating enabling learning environments
 - modular, multimodal, multilingual hardware/software
 - developing dynamic mix of old and new technologies
 - distributed learning resources
 - increasing social interaction and collaboration
 - 'connectedness' to other learning environments
 - institutions of reflection – wisdom

- *What are the critical questions we need to be asking about technologies?*

TRANSPARENCY SLIDE: In "Technologies of Globalization", Jerry Mander raises the questions we need to ask as a society:

- * How does the technology change work, family life, leisure, art?
- * How does it alter our experience of everyday life?
- * How does it change our concepts of self, community, politics, nature, time, distance?
- * How does it influence how we learn, what we know and what we are capable of knowing?
- * What are its implications for human health and disease, and the environment?
- * How does it reorganize power arrangements in society? For instance, does it centralize power or decentralize it?
- * Does it serve to homogenize cultures or, on the contrary, to maintain diversity?
- * Who gains and who lose?

C. *Closing Thoughts. Towards an Agenda of Cooperation: The Story of Technical Cooperation in Colonial America*

D. *Workshop Evaluation Form*

UNESCO Learning Without Frontiers

CRITICALLY APPROPRIATING ICTs TO CONSTRUCT OPEN LEARNING COMMUNITIES: A SIMULATION EXERCISE

“Educational institutions which used to have control over knowledge and over its dissemination now find themselves in mediatized environments where education [viz. schooling] is simply one of many different cultural experiences.”
Ron Burnett, 1996

You are a high level international consultant. Your team has been asked to submit a proposal to UNESCO and the International Telecommunications Union (ITU) on the design of an integrated rural community learning and empowerment project for several African countries. UNESCO, ITU and the African governments are particularly interested in exploring the potential of information and communication technologies to stimulate the learning to learn paradigm and participatory and sustainable development in the African context. They realize that these technologies are still in their nascent stages and that much experimentation is still required. Your team’s first assignment is to design a pilot activity that will test out applications for the country of Ghana. You are to work together and draw upon your diverse expertise and experiences from around the world to prepare a strategic project proposal.

I. In framing your Strategic Project Proposal, please develop a shared vision statement in which you might consider addressing some of the following questions:

- a. How has the present education system in Ghana been ‘successful’? How has it ‘failed’? In what ways does the system need to change for the 21st century?*
- b. What is your vision of learning? Where and when does learning occur? What kinds of learning needs/skills and learning attitudes will your project seek to address?*
- c. What is the vision and goals of development guiding your project?*

II. The second part of the Strategic Project Proposal should lay out key strategies and activities for enabling learning environments and learning communities. Your proposal may wish to address among other things:

- *Potential technologies and tools and their applications*
- *Potential user groups and participatory processes to be used*
- *Potential local, national and international partners and their roles*
- *Research methodologies and research questions (what do you hope to learn from this project?)*
- *Capacity building requirements*
- *Key policies required*
- *Scale of the project*
- *Timetable for the project*
- *Evaluation strategy and indicators to assess ‘success’*

III. The final part of the Strategic Project Proposal should lay out potential pitfalls of the project. How will you deal with these?

INSIDER INFORMATION #1

You have learned through inside sources that the reviewers of the proposals will be particularly interested in evaluating the proposals with the following issues in mind:

- *What might be the design specifications for the technologies? How will the technologies need to be modified to fit the local cultural context and limited resource context, i.e. one computer but many users?*
 - *What technologies currently exist? How will you leverage on and integrate these existing technologies and local media?*
 - *How will you support community participation in the design and planning?*
 - *How will you deal with issues of technological obsolescence and maintenance?*
-

INSIDER INFORMATION #2

You have learned through inside sources that the reviewers of the proposals will be particularly interested in evaluating the proposals with the following issues in mind:

- *What local information and communication channels currently exist?*
 - *How will you support the development of local information infrastructure? How will this be linked to the national and global information infrastructures?*
 - *How will you build local capacity to use the technologies to solve local problems?*
-

INSIDER INFORMATION #3

You have learned through inside sources that the reviewers of the proposals will be particularly interested in evaluating the proposals with the following issues in mind:

- *How will the project support individual learning needs, styles, intelligences, paces, languages, interests, motivational levels, experiences and aspirations?*
- *How will the project support collaborative forms of learning and the development of creativity?*
- *How will the project enhance cultural diversity and building of local knowledge systems?*
- *How will the technologies be connected to the informal economic, social and political structures and activities?*

CASE STUDY #1

“Loneliness may be the real disease of the next century, as we live alone, work alone, and play alone, insulated by our modem, our Walkman, or our television.”

Charles Handy

Richard Sclove (1995) describes how the introduction of a very simple technology transformed village relations: “During the early 1970s running water was installed in the houses of Ibieca, a small village in northeastern Spain. With pipes running directly to their homes, Ibiecans no longer had to fetch water from the village fountain. As families gradually purchased washing machines, fewer women gathered to scrub laundry by hand at the village washbasin. Arduous tasks were rendered technologically superfluous, but village social life unexpectedly changed. The public fountain and washbasin, once scenes of dynamic social interaction, became nearly deserted. Men began losing their sense of easy familiarity with the children and donkeys that formerly helped them haul water. Women stopped gathering at the washbasin to mix scrubbing with politically empowering gossip about men and village life. In hindsight this emerges as a crucial step in a broader process through which Ibiecans came to relinquish the strong bonds -- with one another, animals, and the land -- that had knit them into a community. . . Like Ibiecans, we acquiesce to seemingly benign or innocuous technological changes. Ibiecans opted for technological innovations promising convenience, productivity, and economic growth. But they didn’t reckon on the hidden costs: deepening inequality, social alienation, community dissolution and political disempowerment” (p.85).

DISCUSSION QUESTIONS:

- Did the introduction of piping make the village ‘more developed’?
- Do you feel that the piping should have been introduced into this village? Was this technology of piping ‘appropriate’? Were there any other alternatives that could have been considered?
- What kinds of information do you think was shared at the village well? Was it a place of learning?
- What processes would you have introduced to regulate/reduce the ‘hidden costs’?
- Do you know of similar cases involving different technologies from your own country? Please discuss these.

CASE STUDY #2

“Our minds are being addressed by addictive media serving corporate sponsors whose purpose is to re-arrange reality so that viewers forget the world around them.”

Paul Hawken

When it was introduced in 1990, Channel One gave new meaning to the term captive audience.

Channel One beams its news and advertisements for candy bars, fast food and sneakers directly into junior and senior high school classrooms for 12 minutes a day (10 minutes of news and 2 minutes of commercials) in more than 12,000 schools in the United States. The school is lent a TV set, satellite dish and video equipment for each classroom in exchange for their agreement that Channel One will be shown on at least 90 percent of the school days to 90 percent of the children. Teachers are not allowed to interrupt the show or turn it off.

Launched by the flashy publishing entrepreneur Chris Whittle, Channel One reached some eight million students in 350,000 classrooms. A study in 1993 demonstrated that Channel One is most common in schools that serve poor and African-American students. Overburdened classroom teachers have been shown to be particularly fond of the programs as it provides them with a daily break from their students.

Corporations like Procter & Gamble and Reebok International pumped an estimated \$100 million into advertising on the 12-minute ‘newscasts’ in 1996. A study by professors from Vassar College and Johns Hopkins University concluded that “The program is light on news and heavy on advertising and ‘filler’ material, and carries subliminal messages that could be harmful to the student viewers.” The findings were disputed by Claudia Peters, a Channel One spokeswoman, who said the program has received more than 100 educational and journalism awards, including a Peabody in 1993 for a segment on a young woman with AIDS.

Another survey found that most of the students thought that since Channel One was shown in school, the products advertised on it must be good for them. However, groups like Citizens for Media Literacy are trying to fight Channel One by subverting it – they are developing programs to teach critical media viewing skills.

DISCUSSION QUESTIONS:

- Would you support the introduction of Channel One into schools in Ghana? Why or why not?
- Do schools in Ghana have the power to say ‘no’ to these types of offers? If you were negotiating on behalf of schools in Ghana, what terms would you demand from Channel One?
- What measures would you have introduced to regulate/reduce potentially harmful side effects of the programming?
- Do you know of similar cases involving different technologies from your own country? Please discuss these.

CASE STUDY #3

“The architects of the corporate global vision seek a world in which universalized symbols created and owned by the world’s most powerful corporations replace the distinctive cultural symbols that link people to particular places, values and human communities. Our cultural symbols provide an important source of identity and meaning; they affirm our worth and our place in society. When control of cultural symbols passes to corporations, we are essentially yielding to them the power to define who we are.”

David Korten

Cultural activists around the world are enraged that the most influential teachers of the next generation are MTV, Hollywood film studios and global advertising agencies. They argue that new technologies are facilitating various processes of cultural homogenization and social destruction.

Consider the case of the twenty-six communities of Dene Indians and Eskimo peoples living in Mackenzie Valley in the Arctic Circle. In the 1970s, the Canadian government offered each of the communities free satellite dishes and television sets. These communities were first pleased about having TV. The Dene and Eskimo communities are often hundreds of miles from each other, without any connecting roads.

Communication between villages was difficult: only through dog team, radio and airplane. Most communities had been self-sufficient for centuries but since things in the government were changing so fast, leaders felt it was critical to know what’s going on. However, the people soon began to feel several harmful side effects, particularly since more than 60% of the programs were coming from the US.

One community leader described, “ There’s only one hour per week of local shows, and rarely does that have to do with Native people, though we’re the majority population here. . . We can already see that TV has had a devastating effect. People are sitting in their log houses, alongside their frozen lakes with dog teams tied up outside, watching a bunch of white people in Dallas standing around their swimming pools, drinking martinis, and plotting to destroy each other or steal from each other or get their partners’ wives into bed. . . The effect has been to glamorize behaviours and values that are poisonous to life up here. Our traditions have a lot to do with survival. Community cooperation, sharing, and nonmaterialism are the only ways that people can live. But TV always presents values opposite to those.”

Schoolteachers in Mackenzie Valley also reported big changes in their communities. The children immediately lost interest in the Native language. The young people didn’t want to be Indians anymore; they wanted to be Canadians or Americans. The children wanted new things like cars, yet most of the communities had no roads. The children no longer wanted to learn how to fish on the ice or go hunting. Most adversely affected were the relationships between the young and the old. Children sat in front of the TV between 3-4 hours per day and ignore their elders. TV had put an end to the storytelling tradition in which the old would share with ancient stories about life in the North with the young, and, in the process, pass on a connection to their Native Indian roots.

Additional concerns around cultural homogenization are being voiced today in countries across Asia, Africa and Latin America, as artists, social critics and politicians worry that the massive penetration of consumerizing Western culture will not only foreclose employment opportunities for local artists but will sweep away hundreds, perhaps thousands of years of traditional art forms and local modes of expression. Other artists also worry that their local art and knowledge is being bastardized to sell to the vulgar tastes of the global pop culture market.

DISCUSSION QUESTIONS:

- Did television make the Dene communities more developed?
- Would you have introduced television into the Dene communities?
- Do you believe that different technologies are facilitating cultural homogenization around the world?
- What measures would you have introduced to regulate/reduce potentially harmful side effects amongst the Dene communities?
- Do you know of similar cases involving different technologies from your own country? Please discuss these.

CASE STUDY #4

In the past year, children around the United States have armed themselves with guns and shot and killed students and teachers at their schools. The toll: 11 killed and 25 wounded. Is the media responsible for this?

Statistics show that by age 11, the average urban child is exposed to over 100,000 acts of violence on TV alone. This figure increases even more dramatically if one factors in video games, comic books, etc. Over 1,000 studies confirm that media violence can lead to aggressive behavior and anti-social behavior in children. Other studies have demonstrated that viewing violent television can also lead to lower tolerance and greater frustration, less self-control, and a decrease in children's ability to share and cooperate. Furthermore, doctors argue that children lose track of what's real and what's not as they immerse themselves in violent videos and computer fantasy games. A noted psychologist remarked, "There's a high price we pay for this high technology. The more realistic it gets, the fuzzier the line becomes between fantasy and reality. The people who are marginally unstable can start down that slippery slope and not see it as a real thing." The impact on children is exacerbated by the fact that media violence often fails to show the consequences of violence. As a result, children learn that there are few, if any, repercussions for committing violent acts. Experts also note the copycat effects of violent acts produced through the media. "Once these things are publicized, you have other children reading about it, seeing it and fantasizing about doing it themselves."

Some argue that the issue of media and violence in society runs much deeper than this. They argue that entertainment industry leads to a collapse of traditional family and the atrophying of civic life which encourages anti-social behavior. Mass media culture leads acts as a sponge to soak up spare time and energy that in earlier times might have well been devoted to nurturing and instructing children or to participating in political, religious, civic or community activities or to crafts, reading, or other hobbies. Vicarious experiences via TV and computer are increasingly becoming a substitute for civic life and community. People are more concerned with their virtual relationships than their real ones. The glitz and status of the technologies are making it more difficult for families and teachers to compete with the global media in terms of communicating with and facilitating the development of values and healthy social relationships in the next generation.

DISCUSSION QUESTIONS:

- Do you believe that the new technologies are contributing to increased violence in society? Why or why not?
- What kinds of additional learning needs are being raised by this case?
- What measures would you introduce to regulate/reduce potentially harmful side effects of the technologies?
- How might we use the technologies to rebuild the decaying social fabric?
- Do you know of similar cases involving different technologies from your own country? Please discuss these.

CASE STUDY #5

The growing pressure to introduce state-of-the-art technology programs to schools without significantly increasing their budgets is creating a tremendous strain on schools. And it is forcing them to make serious decisions about their educational priorities. One analysis estimates that one multimedia, Internet-connected computer for every two to three students in the USA will cost 94 billion dollars of initial investment and 28 billion per year in ongoing costs.

To offset the high costs of high technologies, some schools are receiving financial support from the local business community. While this partnership has been welcome, it can foster an unsustainable high-tech habit. Once a school's computer system is set up, the companies often drop their support. This saddles the school with heavy long-term responsibilities: maintenance of the computer network and the need for constant software upgrades and constant teacher training -- an amount which can cost far more than the initial hardware and software combined. Other schools are not so fortunate to have corporate sponsors at all.

One option frequently being considered as a solution to rising technology costs is cutting other school programs. For example, a school in California cut its music program to hire a technology coordinator. Another school in California replaced its librarian with computers. In Massachusetts, administrators dropped proposed teaching positions in art, music and physical education to buy computers. A school in Virginia converted its art room into a computer laboratory. In other schools, industrial arts classes, with their tradition of teaching children building skills with wood and metal, have almost entirely been replaced by technology education programs. The U.S. National Information Infrastructure Advisory Council further recommends reducing field trips in order to shift resources into computers.

While some believe that these trade-offs are necessary in the computer age to ensure that children are computer literate, many specialists in childhood development have voiced strong concerns against these trends, particularly when they involve children at impressionable ages. They consider it important to give children a broad base -- emotionally, intellectually, and in the five senses -- before introducing something 'as technical and one-dimensional as a computer.' They also worry because no one really knows what the effects of the computer are on the development of the human brain.

Other groups argue against cutting hands-on programs because they believe that the human and physical world holds greater learning potential than the computer-mediated world: "No computer can teach what a walk through a pine forest feels like. Sensation has no substitute."

DISCUSSION QUESTIONS:

- Would you support the cutting of art, music, industrial arts, field trips, to support technology programs in your schools? Why or why not?
- What other options exist for financing technology programs in schools/communities? Do you think that developing countries should take on more debt from international lending agencies to finance technology programs.
- What can schools do about technology obsolescence and the constant pressure to upgrade?
- Do you know of similar cases involving different technologies from your own country? Please discuss these.

CASE STUDY #6

“We are driven to fill our lives to ‘access’ information. For what purpose, or with what limitations, it is not for us to ask; and we are unaccustomed to asking, since the problem is unprecedented. The world has never before been confronted with information glut and has hardly had time to reflect on its consequences.”

Neil Postman

The emergence of the Information Society raises many questions about the nature of information and its relationship to our lives; it forces us to think beyond the challenge of ‘reducing the information gap.’

A surplus of information, which in decision-making may be no less dangerous than too little information, is becoming increasingly common. With a billion or so interconnected computers around the world within a decade, and with each computer carrying a few thousand to a few million pieces of information, we will be surrounded by a mountain of data which are so poorly indexed and titled that it will be virtually impossible to make meaning or sense from them — somewhere between a trillion and a quadrillion files, programs, notes, lists, and other material. We will have to search through mounds and mounds of irrelevant data for the few nuggets of useful information that will help us in the pursuit of our desires and goals. We will be inundated with so much information that we will be unable or unwilling to devote our lives to sorting through it all. Technology users have already begun to suffer from stress due to information overload which disorients them and gives rise to a morbid state termed ‘information fatigue.’ The Marshall McLuhan Center describes, “We are pushing ourselves to speeds beyond which it appears we were designed to live.”

One of the most vivid consequences of info-glut is a culture awash in histrionics. People have discovered that to get their message across, they increasingly must wrap them in provocative or titillating packages. In the immediate sense, ‘pumping up the volume’ is an extremely effective solution. More broadly, though, it becomes part of the problem as *information and truth do not always recognize each other when passing on the Electronic Highway*. Teachers and parents are worried that the internet’s wealth of unregulated, unfiltered information raises troubling questions from concerns about efficient time management to plagiarism to sites that might be unreliable, unsafe or unsuitable for children. It is often difficult for students and teachers to gauge the integrity, quality and authenticity of the material one finds on the Internet, or to make sense of conflicting pieces of information. *Can we trust information if we do not know the context in which the document was created? Is it possible that the document has been tampered with? Have the facts and figures presented been carefully and rigorously researched?* Cases of info-fraud are becoming increasingly common and take on many shapes. For example, ‘infomercials’ and ‘advertorials’ are two public relations’ hybrid buzzwords which refer to advertisements disguised to look like journalism, with the intent of eliciting from the consumer the kind of trust that they would normally place in a newspaper article or TV news segment. Pornography, voices of hate, specification on how to build a bomb are among the kinds of information that can be easily located on the Internet.

Info-glut also has severe environmental consequences. While many people speak of a paperless society, the reality is that more paper is being consumed with the ever-increasing amounts of information. Many appeals have been voiced that we follow the example of the curtailment of our toxic emissions in the physical world: we all should be more economical and ethical about what we say, write, publish, broadcast, and post online.

DISCUSSION QUESTIONS:

- Do you believe that info-glut is a real problem for society to think about? Have you experienced it in your own life any way?
- Which channels of information in your own lives do you trust and why?
- Do you foresee other problems in your countries in relation to the Information Society?
- How should we prepare people to deal with the challenges of the Information Society? What additional skills, frameworks, values, etc. do people need to learn?
- Do you think rural or low income communities really ‘lack information’? What kind of informal information channels already exist in these communities? How can we encourage more relevant information to be generated and shared at the local level?
- How can a mutual two-way connection be built between the global and national information infrastructures and the local information infrastructure?

QUESTIONS FOR TRANSFORMING EDUCATION CASE STUDIES

- Do you think that the technologies are really transforming education in this project? If so, how i.e. different roles, relationships, processes, structures, philosophies, etc.?
- What are the lessons to be learned from this project?
- What kind of difficulties might one anticipate with trying to set-up and run these projects?
- What criteria would you set up to evaluate whether this project was successful or failed?
- If you were developing this project, how would you develop it differently?
- Do you think that this project would be relevant to Ghana? If so, how? If not, why not?
- Do you know of other innovative educational projects involving technologies? Please describe them. What has made them successful?

REDEFINING TEACHERS AND TEACHER TRAINING

In the Olympia School District in the State of Washington in the USA, children are taking the lead in facilitating the learning of their teachers. The Generation WHY (Worldwide Horizons for Youth) project (<http://kids.osd.wednet.edu/genwhy/index.html>) consciously focuses on today's new generation of youth as partners - and often leaders - in bringing technology to the classroom. The foundation for Generation WHY is the extensive involvement of students in collaboration with teachers, the local community, and corporate sponsors to assist in the restructuring of education through telecommunications.

The backbone of the Generation WHY model is the Generation WHY course. Students from grades 6-12 spend 18 weeks learning information literacy, research, lesson planning, presentation, mentoring and leadership skills. They use these skills to mentor and collaborate with one of their regular school teachers to infuse technology into their classroom instruction. Class members will communicate over the Internet with students from other 14 high tech districts throughout the USA to provide the teachers with a wide variety of resources and opportunities. The course focuses on:

1. Technology Skills: e-mail, web forums, Netscape, copyright, netiquette, searching, newsgroups, listservs, and software integration.
2. Presentation and Communication Skills: in-house TV, web page development, PowerPoint, Hyper Studio, scanning, digital photography, and Claris Works.
3. Teaching Skills: lesson plans and objectives, resource management, research, assessment, and mentoring.

Generation WHY graduates are then chosen to work with elementary schools, administrators, classified personnel, pre-service teacher training institutions, and the community to use the power of technology to improve learning and teaching. Corporate sponsors help prepare expansion districts with the necessary hardware, software, and bandwidth to become a Generation WHY site.

During the Spring of 1997, 160 Generation WHY students in grades 6-12, mentored 160 teachers to conduct 160 projects to incorporate technology into the curriculum in a wide variety of areas. The web site lists a Genetic Traits Project, English/Reading Projects, Social Studies Projects, Art Related Projects, Science Projects, Math Projects, Health/PE Projects, and Foreign Language Projects.

Olympia School District has successfully used a model of extensive involvement of secondary school students to build and maintain networks, to support teachers in the use of technology in the classroom and develop contacts and collaboration with people remote to their schools. This model is being refined, documented and extended to other school districts (expansion districts). It has become a unique strategy in teacher support and training.

REDEFINING TEACHERS AND TEACHER TRAINING

Tech Corps is a US-based non-profit organization whose mission is to recruit, place and support volunteers from the technology community to assist those communities without access to technology, particularly children in schools. It began as a way of transforming and opening schools by allowing dedicated technology professionals, community members, teachers and pupils the chance to interact around technology and its uses in furthering learning opportunities. In the United States, 8.4 million Americans are listed as being information technology professionals but 70% of them have no children of school-going age. Their precious knowledge has no means of being shared while, at the same time, most schools severely lack expertise about new technologies. It is this situation of "haves" and "have-nots" that is being challenged by Tech Corps.

Tech Corps operates with a small headquarters staff who set its agenda and has a structure of state chapters, which work autonomously, to identify and match volunteers to local projects according to interest, skill and school district priorities. Tech Corps' volunteers work primarily with secondary school teachers and school administrators in their local communities to provide assistance in technology planning, technical support, advice, staff training and classroom instruction. Volunteers have several ways of operating in and around local schools:

- ◆ by conducting teacher training seminars, giving demonstrations and lectures;
- ◆ by mentoring students and staff, helping with homework, intervening on specific issues;
- ◆ by repairing and installing computers;
- ◆ by participating on technology planning teams;
- ◆ by working side by side with teachers in the classroom, tackling everyday problems;
- ◆ by assisting teachers with the integration of technology into the curriculum;
- ◆ by supporting a wide variety of local technology activities involving the community.

Tech Corps is funded through contributions from the private sector, primarily corporations and foundations. Volunteers are generally from the technology and telecommunication industries but also from hospitals, banks, government offices, insurance companies, colleges, consulting firms etc. Some are former teachers, some are retired professionals. They all share a desire to make a difference and share their knowledge with those whom they feel need it or who could exploit it to the maximum.

UNESCO Learning Without Frontiers

REDEFINING TEACHERS AND TEACHER TRAINING

The Learning Networks for African Teachers pilot project is being carried out to see how the emerging power of information technologies can contribute to resolving two of the central issues which are crippling African education systems today, namely: 1) the lack of access to necessary information and learning resources, which considerably lessens the chances of building up the existing formal system's capacity and 2) the lack of opportunities for communication among key players in the learning process (students and their parents, educators, researchers) and education officials (planners, policy makers and curriculum developers) which often results in a bureaucratic and top-down approach to the provision of learning with isolated or disconnected teacher training colleges.

The Learning Networks for African Teachers pilot project was set-up by UNESCO in Zimbabwe in 1997 with the aim of establishing a network of continuous learning among teachers through the linking up of teacher training colleges (and eventually schools) to the Internet. Easy access to a wealth of learning resources, low threshold communication facilities, as well as the possibility to publish material (lesson materials, experiences, school prospectus) on the Web were expected to trigger local initiatives and collaborative activities between the involved parties.

To make the pilot a useful experience for potential adaptation and expansion, five participating teacher training colleges were selected. Key policy and research partners such as the Ministry of Education, the University and other institutions were also linked up. Two teacher's colleges for primary school teachers as well as three secondary teacher's colleges were provided with equipment and Internet connectivity. From each of the five colleges, two teacher trainers (with some level of computer literacy) participated in a course in April 1997 on how to use the Internet in education. In May, the five computers (one per college) arrived, which were installed in the colleges during the summer. The availability of new equipment outside the administrator's offices (without the administrators having access to such resources) has, in itself, been a dramatic innovation.

Problems with lacking appropriate classroom set-ups and the non-availability of telephone lines caused the project to have a slow take-off. The dilemma of providing free access to the equipment versus security of the equipment caused school administrators to be cautious. Two colleges managed to get up and running straight from the start. The other three faced serious problems with their equipment, connectivity and software. Several interventions from local 'experts' (state owned telecommunication company and private sector), national experts from the University and in one case the hardware provider in South Africa, had to be arranged to solve the problems. In a few cases, colleges were helped by colleagues from one of the other colleges in solving problems.

Despite these problems, staff at the three colleges did continue to put effort in communicating with the other colleges. Some training efforts were undertaken in all colleges to provide hands-on experience for other teachers. One of the colleges is successfully using the facility to enrich the curriculum by including material (on-line simulations for example) from the WWW in science classes. Many ideas on how the facilities could be used came from the different sites, of which, some have been realized (setting up web-sites with prospectuses of the colleges, training of other colleagues, use of resources). The intention to use the network for curriculum development has not yet been realized in any substantial way. However, the Ministry of Education is working on making the wide collection of audiovisual materials accessible through the project's website (catalogue and ordering procedures).

Informal dialogue among the colleges is taking place, however, this exchange has mainly involved technical questions regarding the hardware and software (no surprise given the many problems). The barrier to communicate with planners in the Ministry of Education has also been reduced. One of the colleges is looking into possibilities to open up the facility to students in the distance education programme of the University of Zimbabwe in the surrounding community.

CREATING DISTRIBUTED LEARNING ENVIRONMENTS

The London Docklands Development Corporation joined forces with the National Literacy Association in 1995 to fund an innovative project in a two-year effort to increase standards of literacy and basic skills in over 600 low income immigrant children, aged 7 to 8, in 15 schools of the area. "The London Docklands Learning Acceleration Project," aims to break a vicious cycle of underachievement by working with families, communities and schools to raise the status of literacy and learning activities through a new medium of technology: a pocket-size, easily-understandable computer entrusted to each child to carry out individual and collective learning activities. Furthermore, schools are also equipped with larger, multimedia machines to run a more general programme to create a computer-literate and learning environment in schools conducive to creativity and child development.

Each child is given a Pocket Book computer which contains a Thesaurus, a dictionary, a spell checker, a calculator, a database for collecting information and a world map. Very often, children do not have these in book form at home or do not have sufficiently advanced literacy skills to be able to search in a public library. Work on the pocket computers normally starts with a piece of writing which is then taken home for the family to help with. Time is spent on a range of homework tasks from writing stories which develop wordprocessing skills to, for example, logging the number of insects in the garden, etc. This would involve talking to the adults about the ideas contained in the piece, developing a grammatical use of language and checking with the spell check and new words in the thesaurus. With the Pocket Books, children have the freedom to take time going over their work, changing, rechanging or adding pieces here or there. They can take the work back to school to print it out or download onto the desktop machines in the classroom. If their work is not finished, it can be put back on to the Pocket Book and taken home again. It is a whole process that reflects the learning stages of writing and presenting logical sequences of ideas. The language the children use is particularly rich and creative as they have easy access to a thesaurus and a spell checker. The children are given direct responsibility for their machines and are proud of having them.

Home computers are not a common feature in the area, so the Pocket Books often bring together family members. Children soon become experts in their manipulation and are able to teach others within their immediate family or community. This raises their self-esteem and the expectations of others in what they can do. Reading, writing and oral work can become communal activities and have a distinct purpose. Literacy becomes a focus of the home as well as the school as all are using or working around the technology. Many parents have gone beyond assisting in the child's interest in using the Pocket Book and take part in after-school sessions using all kinds of technology to improve their basic skills.

Individual hand-held computers cost about US\$116. The desktop computers with accompanying software range from US\$ 870 to US\$1160 each. The total cost of the computer software has been US\$232,000.

CREATING DISTRIBUTED LEARNING ENVIRONMENTS

Set up in 1987, the Paroo Mobile Project provides services to isolated and disadvantaged groups (aborigines, disabled children and isolated farming communities) in Australia's vast hinterland. The project uses several equipped vehicles to bring educational and healthcare services directly to remote communities where a stand-alone service or centre is not viable. Mobile teams also interact with and provide support to other services on the ground such as Health, Welfare, Information, Disability services, etc.

The project's philosophy is to provide a flexible, responsive and innovative service for children and families who are experiencing social, geographic, cultural or economic isolation. It does this by promoting and putting in place adapted ranges of educational, social and recreational activities for children of all ages.

A significant characteristic of the project is that it brings learning to people rather than people to education centers. It is, above all, about mobility. The project vehicles often have to stop and create learning spaces for children out of virtually nothing. Walls, playgrounds or even seating are a luxury of better-equipped communities. The vehicles take over spaces such as old buildings, parks, even sheds or, if lucky, school grounds. When the mobiles arrive in a given place, children are given the priority in literacy, numeracy and other learning activities but it is the concern of staff that the whole family is involved. Activities focus on play sessions, art, early-intervention programmes and information groups. Most vehicles are equipped with materials like books, toys, posters and video and tape machines and libraries. For those children who do, at times, go to more conventional schools the Mobiles offer after-school sessions and help in school work. Working parents find time to join in, taking advantage of the parenting skills imparted. Those who otherwise would have to travel great distances for services (up to 300 kms) are particularly responsive to the Mobile Project. They use workers as confidential sounding boards, seek advice regarding their children's education, and obtain valuable information regarding Government resources and openings. Paroo Mobile also attempts to develop a contact service linking children and family workers, services and service users.

The mobile staff are made up of teams of professional people prepared to work under harsh conditions: driving vast distances, long hours and coping with problems and lack of facilities. They typically have a background in child development and community networking. In 1994, the Mobile Services moved to self-management with an elected community-based parents' committee. It is run by Contact Incorporated, in close collaboration with the Bernard van Leer Foundation and the Australian Government.

CREATING DISTRIBUTED LEARNING ENVIRONMENTS

The Fatih Park project was started by the Turkish Education Foundation in 1995 in an abandoned Byzantine cistern (25,000 square meters) in Istanbul. The project has been developed as a distributed learning environment which is totally open and flexible to the needs and interests of each individual learner. It was primarily targeted at low income urban youth but operates under a model of intergenerational learning in which adults and youth are encouraged to attend and learn together. The following learning resources are available for learners to access: computer, multimedia and video rooms; foreign language and biology labs; chess, music and arts rooms; sewing, handicraft, calligraphy and pottery courses; open theatre and garden chess; library and study rooms; basketball, volleyball and tennis courts; dance and aerobic exercise rooms; painting and sculpture halls; and, courses in first aid, family hygiene, child psychology, traffic rules, and overcoming drug/alcohol addiction. The developers of the park believe that it is important to balance real and virtual activities and to encourage the full range of developmental needs among learners.

There are several rooms in the Park with computer/CD-I players and video equipment. There is a library of learning software and learning videos in Turkish and English. Internet connections are also available. Learners can enter any room whenever they want to and can check out any software or videos that they are interested in. Sometimes they are using the materials to supplement a school lesson or to complete a school project; other times they are just there out of their own motivation to learn something new. Each room is staffed by a learning facilitator to assist the learners. The learners often work together in pairs. The Park is working closely with local software designers to produce more relevant learning materials in Turkish.

The Park currently has 17,000 members. The membership charges are about \$1.00 per month for the individual and an additional \$.10 for each additional family member. Each member is given an electronic access card to enter the Park. Revenues are also raised from corporate advertisements on billboards and on the computers/start-up software. The developers are finishing another park in a run-down part of Istanbul and it is planned that three more parks in three other cities will be running by the end of 1998.

LOCAL CONTENT PRODUCTION/CRITICAL MEDIA AWARENESS

The Summer Institute of Linguistics (SIL) has assisted in the establishment of 20 Literacy and Awareness Publication (LAMP) centers in each of the 20 provinces of Papua New Guinea (PNG). These centers, fitted with desktop publishing equipment, create literacy materials and opportunities for training in local languages.

Local languages in PNG are under threat. Their preservation, continued use and employment in literacy programmes is, today, the mandate of the LAMP centers. Empowering and strengthening local cultures implies preserving local languages. This requires writing oral languages down with their accompanying regional histories, accounts, sounds and tales. The objective of the LAMP centers is to produce literacy and awareness materials in the 850 or so languages of PNG, taking into account that very few, literacy materials exist in the majority of the local languages.

The LAMP centers' policy is to use oral knowledge, and the need to write it down, as an entry point to develop literacy materials. The centers also aim to nurture a literate environment in and around the centers where the written word becomes an active part of the everyday setting. The literacy texts, produced by the LAMP centers, cover subjects such as healthcare (mother and child, food preparation, disease prevention), hygiene and preservation of the environment. The computer equipment is available for use by local people but priority is given to producing and preparing literacy materials for the Tokples Prep Schools (TPS), adult literacy classes and elementary schools (which are part of a wider national network). The LAMP centers produce two forms of material, one created by local people in the local language and another, more general, article created outside the language group which can be adapted to each context. The latter is a model or "shell" which contains pictures and stories and is already prepared and formatted for computer use. In this way, the story can be easily adapted and translated, new pictures scanned and captions adapted to suit the appropriate environment. Often, centers actually produce shell books themselves which they offer or suggest to other centers for adaption in other contexts. The sharing between centers allows for a wide variety of shell books to evolve. LAMP center operators are able to see what other centers are doing, how they have created materials and what subjects they are tackling.

Many centers also produce their own material specifically for their local language and context in response to direct local demand. Local people, in this case, actually take part in the elaboration of documents, offering their opinions, taking part in meetings and deciding on issues of topical relevance. Communities are also directly involved in selecting members for their centers, deciding on common concerns and organising events in and around the center.

Each center is equipped with a LC III Macintosh computer, a dot matrix printer, a four-inch hand-held lightning scanner, a Risograph RC 6300 digital duplicator and support items like desks and cabinets. SIL provides the training for one trainer per province, who then trains two local operators for each LAMP center.

LOCAL CONTENT PRODUCTION/CRITICAL MEDIA AWARENESS

With the assistance of FAO and UNDP, the Government of Mali has established a national center, the *Centre de Services de Production Audiovisuelle* (CESPA), in Bamako which specializes in the production of audiovisual learning materials. The CESPA has successfully built a base of indigenous learning materials and local media producers. Since its foundation, the CESPA has collected over a thousand audio cassettes covering regional and local music, rural experiences, legends and traditional knowledge. It has also produced more than 500 video cassettes covering various aspects of training, awareness raising and literacy. The center houses six video editing suites with three cutting and montage units, two recording studios and a training room for workshops and other sessions.

The CESPA's prime aim is to reach disadvantaged rural communities who have little or no access to conventional forms of education (e.g., shepherds, river fishermen or subsistence farmers). The project started with the recognition that new forms of learning, which were of relevance and immediate value, had to be created to bring learning resources to remote and rural populations. CESPA's philosophy is to encourage people to take part in their own development programmes by responding to their specific needs.

The CESPA animators, trained in the use of video and other media (see reverse), travel to rural areas where they inform, train and assist communities through multimedia on matters of hygiene, income-generation, agriculture, literacy, etc. The CESPA works on the basis of "training contracts" with village communities, associations, NGOs, individuals and co-operatives in which the CESPA is requested to visit a specific village. Once the animators are in the villages, they work with their various materials (video machines, cassette players and charts) in informal sessions and collaborative activities. These sessions are purposely informal to recreate a reflection of village ties and social relationships within a learning experience. Booklets and field guides accompanying the training sessions are also important as they permit continued learning, group discussion and become reference points for work.

The animators' material is contained in a single box which can be easily transported from community to community. However, particular concerns such as health, environmental or literacy issues may interest one village more than another, so animators have to be prepared to adapt and respond directly to learners' questions and needs. The villagers are encouraged to participate in choosing which training aspect most interests them according to their local needs.

Training sessions have had to be modified as the CESPA develops. The learners themselves have been and continue to be demanding in what they expect from the training sessions. For example, in some villages people felt that they needed further training or longer sessions. Video spots and film literacy programmes have had to be cut or worded in such a way as to be logical, forceful and understandable to people with little conventional education backgrounds. In many communities, people have begun to express the desire to master the technologies themselves and create their own learning materials.

Centre de Services de Production Audiovisuelle (CESPA)

As the rural animators are the main force behind the CESPA, their development is of the utmost importance. It is they who have to go out into the field, confront very localized problems, overcome obstacles and help assess a community's learning needs. The training of animators is a rigorous process. For each session, the number of participants varies from 3 to 15 people. Sessions can last anything from a week to 56 working days and take place in workshops. In all, there are 10 modules, each with a specific theme and content. In every module, the aim is to allow the trainee to visualize the communication skills required for effectively supporting the empowerment of disadvantaged communities. Each module or theme can be taken separately or in conjunction with another. The ten different modules are as follows:

Theme 1: Communication for development (5 working days)

Theme 2: Training through audiovisual media for development (5 working days)

Theme 3: Writing of scripts and technical editing (6 working days)

Theme 4: Taking camera shots and sound, constructing a sequence of images (10 working days)

Theme 5: Making of a film (20 working days)

Theme 6: Video montage techniques (10 working days)

Theme 7: Audio-visual pedagogy - creation and making of documentaries for training (65 working days)

Theme 8: Shot taking techniques in photography (5 working days)

Theme 9: Videos for training purposes, use of material and pedagogical approach (10 working days)

Theme 10: Dialogue and exchange between people, managing a group session (10 working days)

LOCAL CONTENT PRODUCTION/CRITICAL MEDIA AWARENESS

“Systems of education, mass media, and other major cultural institutions should be reformulated so that these are not a form of cultural control but of cultural articulation.”

Ron Burnett, 1996

Founded in 1985 in Harlem (New York), Rise & Shine Productions (**Error! Bookmark not defined.**) is non-profit organization dedicated to empowering young people and their communities through the creative use of language, media literacy, the arts, and multimedia technologies. It is Rise & Shine’s belief that critiquing the media, gaining quality representation in the media, and creating one’s own media must be a part of any effective youth and community empowerment agenda.

Whether in school, after-school, or in intergenerational community workshops, Rise & Shine Productions offers students (of elementary, middle and high school age) and older community members access to modern technologies while exposing them to the wonder of traditional, non-electric fine art forms. By creating thematic interdisciplinary curricula that infuses the arts throughout the core 'subject' curriculum, students and community members apply these skills throughout their daily life. Rise & Shine Productions’ focus on intergenerational collaborations has had the additional benefit of successfully strengthening fragile family and community relationships.

Rise & Shine runs several projects including the *Family Video Workshop* (FVW) and *The Real Deal*: 1) The FVW project brings together people of all ages to produce their own cable programming that airs monthly on local access television. Families learn to discuss and critically process information received through the media while gaining the tools necessary to demystify and better deconstruct mainstream media messages. The videos produced by FVW participants have been extremely effective tools for direct social advocacy, for justice and specific community action while creating a constructive discourse around issues facing their children and families.

2) Another project, *The Real Deal*, is an after-school and summer employment program where 50 students from diverse communities are trained to be media activists and artists with the social and academic support in place to ensure academic achievement, college preparation and leadership development. Samir Vural (1996), a youth producer for *The Real Deal* cable TV show describes the project:

“Since 1991, when I was 14 years old, I have worked with scores of other teenagers researching, writing, storyboarding, directing and editing videos where we get a chance to manipulate media from our point of view, with images that counter the stereotypes of youth, race, class and gender. At Rise & Shine, we not only learn about cameras, editing and all the technical stuff, we also learn about society, our diverse history and cultures. We learn how to deconstruct the media, and how to develop our individual artistry through poetry and visual experimentation so we don't just copy what the mainstream does. We also give workshops to other youth, show our videos, discuss the issues, and strategize on how to act in our communities and how to critique and use mainstream media for ourselves.”

VIRTUAL LEARNING COMMUNITIES

The emergence of different and effective modes of electronic communication is rapidly expanding our possibilities for dialogue, collaboration and learning, offering the chance to break down barriers of time, space and circumstance but also the walls that have kept information out of the reach of many. This has led to the establishment of virtual learning communities, in the form of Internet Web sites, e-mail-connected classrooms and list-servs, which aim to develop ways of stimulating learning among people of different ages. Virtual learning communities can either take place in collaboration with the classroom activities or can be an informal place for people to meet, discuss, share ideas and learn new things. These virtual learning communities have tremendous potential for creating environments to support innovative forms of learning, assisting teachers, and in accompanying individual learners in their quest for dialogue and the sharing of ideas beyond their own families, regions or country.

Global Internet classrooms, such as KIDLINK, have given many children around the world the chance to discover culturally diverse opinions and develop a global dimension to their work. Founded in 1990, KIDLINK attempts to facilitate communication on the Web for students aged 10 to 15 around the world. It describes itself as “a world where kids can join together and talk.” To subscribe students, generally aged 10 to 15, have to answer 4 basic questions for example: “How do I want the world to improve?” and “What can I do now to make this happen?” 37,000 children from 71 countries have subscribed to this particular project which is also accessible in various languages from English, Spanish, Japanese, Swedish, French and Portuguese. One example of a girl's reply from Brazil typifies this project. In Portuguese she describes why she has joined thousands of children to create a more just world: *"My name is Gabriela. I am 14. I want to be a doctor. I don't want there to be any more thieves or bloodshed in the world. To make this happen I will educate my family and friends to respect others."* Other learners in different countries also collaborate on the web site on year-long curriculum projects in which information and resources are shared in a similar fashion.

KIDPROJ is a forum enabling teachers and youth group leaders to provide projects for children through the KIDLINK network. KIDPROJ was set up for the exchange, among schools and youth groups, of curriculum based activities and other projects of an educational or informative nature. The site has a particularly interesting subject which reveals its global character. Called *"How people live,"* it seeks to compare and share experiences of children from different countries. Children can describe how they live and discover the differences or similarities of their way of life with others. If children take part in this programme in schools, the teacher is asked to help with vocabulary and steer the subjects towards dialogue. The programme is written in a variety of languages and children can provide their own translation for others.

VIRTUAL LEARNING COMMUNITIES

The web site Voices of Youth (<http://www.unicef.org/voy/>) was developed by UNICEF to create a nurturing environment for children and adolescents to take part in discussions on current global issues and concerns. The site therefore seeks to be interactive. Youths from around the world are encouraged to speak up and are asked to discuss how the world could become a better place where the rights of each and everyone, particularly children, are exercised - that is, the right to live in peace, to have a decent shelter, to be healthy and well-nourished, to have clean water, play, go to school, and be protected from violence, abuse and exploitation.

Electronic discussion on this site has enabled thousands to interact, adding their opinions to others from around the world. Children's opinions are shared on-line with many adults who consult the site for research or who use the links and information presented. Write-ups on events, selections of key opinions and the documents are contained on the site and updated regularly. The site is also a chance for UNICEF to keep in touch with adolescents' opinions, stress the notions of dialogue and concertation in their work and see what trends and ideas are emanating from children from diverse backgrounds and countries. The site is divided into three main fora:

- The meeting place: in this forum children think about and give their opinions on current global issues, particularly in the light of how they affect children worldwide. Internet users are asked to see in which ways they themselves can take action in their community in favour of children.
- The learning place: here a series of interactive global learning projects are carried out by learning groups, schools or volunteer groups.
- The teachers' place is a further forum where teachers and others can find and share useful material for their pupils.

In each of these three fora there is the chance to discuss and respond to others. For example, in the meeting place, the user is confronted with several choices – “The Girl Child”, “Children's Rights”, “Children and War” and “Cities and Children.” Each of these sub-sections contains information on the subject and asks questions for answer in the response boxes. Here are some examples of what children have said to one another in the Children and War section:

Luciano, from Argentina:

Young people must read a lot and study different opinions and cultures to be open-minded when they grow up, and in that way, respect all human beings and realise that the only solution in conflicts is to talk. Long life to peace in the world.

Maya, from Japan:

Hi Luciano, I agree with you. Us, young people don't know much about war in our countries. We tend to think it doesn't have much to do with us. Especially in my country. Few of us try and read and learn about war. But I think we should be taught about it as one of the subjects required at school. Without knowing absolutely anything, we don't know how to think, or how to look up about it. I first became interested in finding books and things when I learnt about war in our own country, in the history lesson. But we were taught nothing about war in the world now. We aren't taught how the children feel, what is being done in their country, and how they are suffering. My love to everyone in the world.

VIRTUAL LEARNING COMMUNITIES

The Globe Programme (<http://www.globe.gov/ghome/invite.html/>) is a worldwide network of students, teachers and scientists working together to study and preserve the environment. On-line students gather data from their environments near their schools, in their countries and report their research back to the project through Internet. Scientists use the data in their own research and provide students with feedback to enrich their work. Each day, particular images of subjects are posted on to the site to allow students to visualise environmental issues. The project has established agreements between countries to retrieve and study scientific data. It has 55 countries with 4,000 members.

Intercultural E-mail Classroom Connections (<http://www.stolaf.edu/network/iecc/>) provides worldwide e-mail connections for children and college students. Individual students can request a pen-pal from a specific country or whole classrooms can link up to work on joint research projects. This site also contains an extensive list of other current international e-mail projects and the possibility for teachers to announce or request help with specific classroom projects that involve e-mail, internationally and cross-culturally. One project to connect teachers holds 29,555 subscribers for 47 different countries. It holds discussions on topics of direct relevance to teachers such as integration of e-mail into classrooms, success stories in learning with technology and updates in pedagogy.

TRANSFORMING SCHOOLS

Since its inception in 1988, the Leo Ussak Elementary School in Rankin Inlet, Canada, has sought to include the community in its activities at every opportunity. Rankin Inlet is a community of approximately 2,000 people, remotely located on the west coast of Hudson Bay in the Canadian Arctic. The area is very isolated as the only viable transportation link to the community is by air. About 80% of the population is Inuit indigenous peoples.

Local leaders have used the opportunity of information and communication technologies to transform their school into a Community Access Centre. The center became known as Igalaaq, which means 'window' in Inuktitut. It was to be a technological 'window to the world' for the citizens of Rankin Inlet. The Centre is staffed by students from Maani Ulujuk High School who are paired with one of thirty adult volunteers from the community. Igalaaq is open on Tuesday and Thursday nights from 7:00 until 9:00 PM and on Sundays from 2:00 until 4:00 PM. A special computer club for preschoolers is held on Saturdays from 2:00 until 4:00 PM. To date Igalaaq has seen more than 3,000 visits in less than a year, all without theft, vandalism or disturbance to the computer lab or the school facility. Today, more than 400 people in Rankin Inlet have established e-mail accounts through Igalaaq.

Students at Leo Ussak Elementary School are also using the new technologies in creative ways. They use the technologies to record and share information about Inuit culture and modern Arctic life with the rest of the world. Students from grades 3 to 6 have their own e-mail accounts and are also producing their own web pages. They are able to receive electronic feedback from the world that their culture is something to be valued and cherished. Students are volunteering and some have been hired to work at Igalaaq for wages. They are given an introduction to object-oriented programming with MicroWorlds LOGO. They are introduced to simple robotics with LEGO/DACTA Control Lab system hardware and software. They are creating multimedia projects with Hyperstudio. All students have access to the Internet in every classroom throughout the school.

Among the special materials available at Igalaaq are: 20 Macintosh multimedia computers, all with CD-ROM drives on a high-speed Ethernet network. There are two workstations which have high quality 17" professional monitors, scanners, two ZIP drives and a digital camera. These stations are used for intensive graphics work. The high speed Ethernet network has been extended to the entire school which means that all students and staff can access the Hewlett-Packard 5MP LaserJet Printer and the Internet. While Igalaaq was initially funded by a grant from Industry Canada, the center's success has been made possible through the private support of Sakku Arctic Technologies and many other "Partners in Education" from the business community.

TRANSFORMING SCHOOLS

Leaders in Malaysia are taking the opportunity of new technologies to develop a new vision for learning and to catalyze a radical transformation in education. Malaysia has set up a Multimedia Super Corridor (MSC) which will be the regional launch site for companies developing or using leading multimedia technology. One of the components in the flagship application of the MSC is the implementation of the Smart Schools. The aim of the Smart Schools is to prepare individuals for the Information Age and foster the development of technologically literate, critically thinking and creative workforce to meet the challenges of the 21st Century. To this end, the Smart Schools initiative offers an ideal opportunity to reassess the current schooling system, identify problems and create potential solutions.

Transforming the education system will entail changing the culture and practice of Malaysia's primary and secondary schools. This will involve a move away from memory-based learning designed for the average student to a system that stimulates thinking, creativity, and caring in all students, caters to individual abilities and learning styles, and is based on equitable access. It will require students to exercise greater responsibility for their own learning, while seeking more active participation by parents and the wider community. The school will be equipped with various technology tools and equipment, including computers, to allow new possibilities for accessing information and creating knowledge.

The most distinctive feature of the Smart Schools will be a teaching and learning environment built on the best international research in education. This entails aligning the curriculum, pedagogy, assessment and teaching-learning materials in a mutually reinforcing, coherent manner:

- With the aim of achieving overall balanced human development, the curriculum will offer multidisciplinary and thematic learning and will focus on inculcating moral and religious values, adaptability, teamwork characteristics, emotional stability and multiple intelligences.
- The pedagogy will seek to make learning more interesting, motivating, relevant, collaborative and meaningful. Learners will be encouraged to work at their own pace with the guidance of their teacher.
- The assessment shall be element-based and criterion referenced to provide a more holistic and long term perspective on student's performance. Teachers, students and parents will be able to access on-line assessment items.
- There will be a mixture of conventional and electronic teaching-learning materials designed for the wide range of teaching strategies appropriate to the different subjects and grade levels. The learning materials will be available over a network.

The Smart Schools effort will be piloted in 90 schools in January 1999. Since these 90 schools selected are made up of different kinds of schools, the pilot applications will also be tested to determine their suitability for the varying needs of each school. Strategic efforts are being made to allow the Smart Schools to evolve over time continuously developing their professional staff, educational resources, and administrative capacities in response to changing conditions.

The Smart School concept was prepared by a joint Industry-Ministry of Education taskforce. In addition, the Smart School Project is built on five Concept Requests for Proposals that invited the private sector to offer solutions to one or more of the following areas: Teaching-Learning Materials, Assessment System, School Management System, Technology Infrastructure and Systems Integration.

TRANSFORMING SCHOOLS

Recognizing that the use of new information and communication technologies to support learning is still in its nascent stages particularly within different cultural contexts, and much work remains to be done on developing their applications, CONEXIONES has been conceived of as an action-research project in Colombia. It seeks to collaborate with schools to create a new virtual meeting place for learners of different ages, economical, geographical and socio-cultural contexts, to engage in real dialogue to develop constructive ideas around social, ecological, ethical, scientific and technological issues.

With a view towards improving the quality and equity of Colombian Education, the project seeks to develop the new technologies' potential to support individual self-paced learning in a less structured and more open manner; to enable collaborative learning; to allow various learning strategies to be incorporated within one system; to encourage the learners to develop different perceptions of themselves and their surroundings; to make learning more specific and relevant to the learners; and to allow teachers more flexibility. Underlying Conexiones is also a clear research agenda which seeks to investigate the pedagogical and social impacts of using various, information and communication technologies. The project started in 1996, by the research group of "Education & Informatics," at Computer Science Department of "Universidad EAFIT" Medellin - Colombia. The two-year initial project aims to connect 60 schools, public and private, located at the metropolitan and rural areas of Antioquia State.

The design and implementation of the educational network follows an incremental approach in which each school is connected one by one, not all at the same time. Some schools have a computer laboratory, with 15 to 20 PCs, but the project begins by working with one PC per group, usually a Pentium (486 or even 386 works well too) with multimedia and modem connection. Only one class in every school is selected for the formal application of the project. The project tries to install the computer directly in the classroom. The project has assigned a strong emphasis on the formation of leader schoolteachers. These are to be leaders not only in the pedagogical use of the technological tools, but also in supporting the merger of these tools into an integrated curriculum, in which the efficient use of technology takes place. New curricular activities utilizing the new technologies often take the form of "collaborative projects." Collaborative projects take place in the context of the local social and cultural environments, and focus on issues such as ecology and community values. One such collaborative project is "Story telling": after reading the stories of a relevant author of their community, children of a school construct together a story about issues of their region and share it with other interconnected schools.

A major challenge has been to develop a user-friendly learning environment which makes users feel at ease with their computers and then linking educational contents to this user-friendly interface. The PachaMama interface has been developed as a beautiful, open, easy and intuitive tool, with a carefully grassroots history behind, based on pre-Columbian myth and ecological vision, that allow teachers and students access to any tool they need: software of content areas, e-mail, Internet, text or graphic processors.

Planned and constant support during the starting period is also critical. Besides a project professional, who is responsible for a group of institutions, two final year university students are assigned to each school, one in the pedagogical and the other in the computer area. The creation of Friends of Information Technology and Communications Clubs (CATICI for its name in Spanish) is encouraged at each school.

The nature of the project has raised complex evaluation needs: permanent self-regulation of the processes as well as impact on the school and social environments. There are currently no proven methodologies available to evaluate projects of this kind. The project has created a Multiple Case Study strategy, trying to get an holistic comprehension of changes in schools and their environments, using multiple information sources: documentation (including video and audio registrations), archival records, interviews (open-ended and focused interviews), direct observation, participant-observation, physical artifacts (constructed by students).

**TOWARDS AN AGENDA OF APPROPRIATION:
TECHNICAL COOPERATION IN COLONIAL AMERICA**

*Excerpts from “Remarks Concerning the Savages of North America,” a pamphlet
by Benjamin Franklin published in 1784*

At the Treaty of Lancaster, in Pennsylvania, *anno* 1744, between the Government of Virginia and the Six nations. . . the Commissioners from Virginia acquainted the Indians by a Speech, that there was at Williamsburg a College with a Fund for Educating Indian youth; and that if the Six Nations would send down half a dozen of their young Lads to that College the Government would take care that they be well provided for, and instructed in all the Learning of the White People.

[The Indian’s spokesman replied:]

“We know that you highly esteem the kind of Learning taught in those Colleges, and that the Maintenance of our Young Men, while with you, would be very expensive to you. We are convinced, therefore, that you mean to do us Good by your proposal; and we thank you heartily.

“But you, who are wise, must know that different Nations have different Conceptions of things; and you will therefore not take it amiss, if our Ideas of this kind of Education happen not to be the same with yours. We have had some Experience of it; Several of our young People were formerly brought up at the Colleges of the Northern Provinces; they were instructed in all your Sciences; but, when they came back to us, they were bad Runners, Ignorant of every means of living in the Woods, unable to bear either Cold or Hunger, knew neither how to build a Cabin, take a Deer, or kill an Enemy, spoke our Language imperfectly, were therefore neither fit for Hunters, Warriors, nor Counsellors; they were totally good for nothing.

“We are however not the less oblig’d by your kind Offer, tho’ we decline accepting it; and, to show our grateful Sense of it, if the Gentlemen of Virginia will send us a Dozen of their Sons, we will take Care of their Education, instruct them in all we know, and make *Men* of them.”

Workshop Evaluation Form

This form will help to improve the workshop for the future. Your detailed comments are appreciated.

1. What were your expectations for this workshop? What did you hope to learn from it?

2. To what extent did this workshop meet your expectations? Please circle one.

Very much

Somewhat

Not at all

3. Which parts did you find to be most useful? Why?

4. Which parts did you find to be least useful? Why?

5. What concepts and ideas will you take away from the Workshop and try to apply in your own working environment?

6. Do you have any suggestions to improve this Workshop for future occasions?

7. Would you or your institution like to be further involved in developing Learning Without Frontiers? How can we contact you?

8. Any further comments:

Please return this completed form to:

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THANK YOU FOR CONTRIBUTING TO LEARNING WITHOUT FRONTIERS.