Constructing Open Learning Communities
to Inspire a Changing World

A Simulation Game

Learning Without Frontiers

April 2, 1998

This document contains the revised version of the simulation game as played during the Global Knowledge Conference in June 1997, also with input from several colleagues and others.

Please feel free to adapt, share, distribute. Learning Without Frontiers would very much appreciate to receive your feedback, experiences, and revised versions of the game (to the address below, and on the LWF home page at http://www.education.unesco.org/lwf).

1) Facilitator’s Instructions
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11) Role Profiles:
   • Media/Technology Entrepreneur
   • Social Philosopher
   • Educationist
   • Anthropologist
   • Community Activist
   • Knowledge Economist
FACILITATOR’S INSTRUCTIONS

I. Introduction 30 minutes.
1) Welcome the players, ask them their background, hand them a packet of introductory materials with a character that is somewhat related to their background, and assign to table. Note that the participants should be divided into three separate groups (6 per group)
2) Play tape of news broadcast.
3) Give overview of game.
   * The goal of the game is to encourage vision building, critical reflection, and creative action on the world of learning and development.
   * Much of what we have been doing and continue to do in education contradicts what we know from research and experience and what we anticipate for the future.
   * There is a lot of imagination in creating new technologies, and now increasingly in finding ways for people to access them. However, a great deal of imagination and effort is still required in thinking about how to use them in supporting learning and development. This might involve rethinking some of our basic goals, assumptions, institutions, policies, relationships, processes.
   * The game also has a social agenda in terms of facilitating the building of communities and equitable social relationships.
4) Tell them that there will be three rounds. The game will last for approximately 4 hours.
5) Ask players to go around table and introduce their characters. Make sure that they write their imaginary names on their nametags.
   * Players are strongly encouraged to elaborate their character’s role (both in terms of ideas and in terms of behavior) based on their own knowledge and experiences. However, whatever they add should in some way be consistent with their character.

II. Round 1: Envisioning the Future (2 hours)
1) Give players Terms of Reference for Round 1. Tell them to read.
2) Give micro-scenario infosheet to players. Each group of six will receive a different scenario (one will get the village, another the city, and the third the regional scenario).
3) Encourage groups to start discussing. Tell players to take their own individual notes for Round 1 Strategic Action Plan.
4) Inform players when there is 15 minutes left.

III. Round 2: Coalition Building (1 hour)
1) Hand out Round 2: Terms of Reference.
2) Encourage the players to get up from their seats and interact with other players. Remind them that they are now functioning in their individual player capacities and can form their own groups with others.
3) Inform players when there is 15 minutes left.

IV. Round 3: Reflection and Action for the Real World (1 hour)
1) Presentation by largest coalition to group of 18. (Not more than 5 minutes)
2) Hand out Round 3: Discussion Questions.
3) Facilitate discussion among larger group of 18.
PLAYER’S RULES: READ THIS FIRST!!!

Please sit at Table ________.

Please find enclosed:
1) a description of the character you will play for the duration of the simulation game;
2) a nametag;
3) a summary set of national background social, cultural and economic indicators for Hoth and Milarepa.

I. Please read the description of the character now.

* When you are finished reading your role, please give your character an imaginary name. This is the name other players will refer to you as for the duration of the game. Write this name on your adhesive nametag.

* You should have fun playing the character.

* You are strongly encouraged to elaborate the character’s role (both in terms of ideas and in terms of behavior) based on your own knowledge and experiences. However, whatever you add should in some way be consistent with your character.

II. Please review the overview of social, cultural and economic statistics for Hoth and Milarepa.

III. Stay tuned for further briefing.
TRANSCRIPT OF RADIO BROADCAST


After years of intense negotiation, the countries of Hoth and Milarepa have signed a historic peace agreement, ending decades of low-intensity conflict, soaring military expenditures and heavily patrolled borders. The region has two main ethnic groups, the Ambo and the Degaba; historically, the differing religious and cultural philosophies of these groups have led to sporadic bloodshed.

The federal governments have declared a state of emergency, and to demonstrate their sense of commitment to the people have called for an Inter-nation Policy Roundtable. The agenda of the Roundtable includes efforts to reverse the rapid economic deterioration, cultural dislocations, breakdown of families and communities, and burgeoning environmental problems of the Hoth/Milarepa region.

It is anticipated that many of the efforts at the Roundtable will focus on the educational systems of both countries. A multi-disciplinary task force on human potential, learning and development has been assembled at the Policy Roundtable with a mandate for sweeping change.

We take you now to an interview that was held earlier today with the President of Hoth.

Reporter 1: Mr. President, what was the most important consideration in the creation of the peace agreement, the free trade zone, and the Policy Roundtable?

PH: In a word, hope. For decades we have been neglecting the needs of our people and spending vast amounts on a bloated military against an adversary with whom we have more in common than with the rest of the world. Opportunity beckons in this dawning information age. It is becoming clear that “hard power”, or military force, is increasingly obsolete in a world where “soft power”, information, is the key to strength.

Reporter 1: Isn’t it true that the government is bankrupt, with soaring debts, and that the International Monetary Fund forced you to the negotiating table in return for guaranteed loans?

PH: As I said, our past governments have misused our resources. We wish to move forward and form partnerships with the global community to create a better future for our people. We must begin to address the social ills of our time: violent crime and corruption, alcohol and drug abuse, and, most importantly, ethnic and religious intolerance. We must rediscover our values.

Reporter 1: Is it true that education reform is a central aspect of the conference?

PH: Not education reform but rather educational transformation. We are committed to doing whatever it takes to respond to the learning needs of the people.

Reporter 1: What will be the nature of this so-called educational transformation?

PH: That is for the task force to advise us on. However, I can assure you that whatever comes out will allow both Hoth and Milarepa to economically compete with the rest of the world in a sustainable way.

Announcer: We now take you to a press conference in progress with the newly appointed Milarepa Minister of Education.
**Reporter 2:** Mr. Minister, many people seem to agree that the education systems in both Hoth and Milarepa have failed. In what ways do you think the system has failed in your country?

**MME:** This is a complex question and there are many different points of view on this. We have very few people interested in sending their children to school as they find it irrelevant to their needs. Hundreds of thousands of young people have dropped out of school with no opportunities for the future. Millions of adults are unable to read and write. We have an education system which privileges the elites in the cities and boys over girls. While trying to attend to access and participation, we have forgotten quality of education. Schools do not have enough reading materials, teachers are inadequately trained, examinations still favor rote learning, there is no support for the learner. The system has therefore to a large degree served to maintain the status quo for the previous governments. The few graduates that we do produce are devoid of creativity, critical thinking and teamwork skills. It is very clear that doing more of the same in education will not be enough given both present crisis and the anticipated needs and opportunities of the future. Next question please.

**Reporter 3:** Mr. Minister, what are your expectations for this taskforce on human potential, learning and development?

**MME:** We have a great window of opportunity before us. The new peace dividend will be used in supporting the development of relevant and socially constructive learning environments in both of our countries. What is required is a combination of creativity and pure guts. Are we willing and able to think beyond a development model centered solely on industrialization and economic growth? How can we link the dynamic process of sustainable human development to a new vision of lifelong learning? How can we move beyond a rigid model of mass schooling and build a flexible framework dedicated to developing the full potential of each and every human being and to promoting trust, collaboration and partnership among and between communities? There will be a real challenge in trying to integrate the two different education systems that currently exist in Milarepa and Hoth while providing a certain degree of autonomy to the local communities. These are some of the issues which I hope the task force will address in its deliberations.

**Announcer:** We will be keeping you updated as further developments occur at the Inter-nation Policy Roundtable. Good night.
SELECTED SOCIAL, CULTURAL, AND ECONOMIC INDICATORS

Prior to the roundtable an international fact-finding team was sent to the region to gather data for the taskforce. The following is an overview of the general findings concerning both Hoth and Milarepa.


- **HOTH**: total population 52 million
- **MILAREPA**: total population 31 million

*Population growth rate in Hoth is 3.6% (incl. migration)  
*Population growth rate in Milarepa is 2.4% (incl. migration)

<table>
<thead>
<tr>
<th></th>
<th>HOTH</th>
<th>MILAREPA</th>
</tr>
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<tbody>
<tr>
<td>Number of Major Cities</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Number of Small Cities</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Number of Villages</td>
<td>225-250</td>
<td>300-325</td>
</tr>
<tr>
<td>Largest City/Population</td>
<td>West York/11 million people</td>
<td>East York/4 million people</td>
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Note: The city of York straddles the Hoth/Milarepa border. The Hoth side is known as West York, and the Milarepa side is known as East York. The city has recently been opened up as a free-trade zone.

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<tbody>
<tr>
<td>Life Expectancy at Birth (years)</td>
<td>63</td>
<td>61</td>
<td>56</td>
<td>58</td>
</tr>
<tr>
<td>Total Fertility Rate (births per woman)</td>
<td>4.0</td>
<td>2.6</td>
<td>7.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Infant Mortality Rate/1000 live births</td>
<td>78</td>
<td>69</td>
<td>120</td>
<td>90</td>
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</table>

**DEPENDENCY RATIO**

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<tbody>
<tr>
<td>0-14 years</td>
<td>69 %</td>
<td>65 %</td>
<td>80 %</td>
<td>77 %</td>
</tr>
<tr>
<td>65 and over</td>
<td>9 %</td>
<td>11 %</td>
<td>6 %</td>
<td>7 %</td>
</tr>
</tbody>
</table>

*Percentage ratio of the population in each age group to the population aged 15-64.
### Ethnic/Religious Distribution, percent of total population (1996)

**HOTH**
- Degaba: 44%
- Ambo: 26%
- Other: 26%

**MILAREPA**
- Degaba: 30%
- Ambo: 11%
- Other: 67%

*The national language of Hoth is Ambish

*The national language of Milarepa is Degabi

### Distribution of Total Government Spending: Military v. Education (1996)

**HOTH**
- Military: 40%
- Education: 53%
- Other: 7%

**MILAREPA**
- Military: 7%
- Education: 37%
- Other: 54%

*According to the Peace Agreement, both governments have committed to reducing their expenditures on military to 10% of total government expenditure by the year 2001.


**HOTH**
- Formal: 50%
- Informal: 50%

**MILAREPA**
- Formal: 20%
- Informal: 80%
### GNP per capita (millions), 1996

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<thead>
<tr>
<th></th>
<th>HOTH</th>
<th>MILAREPA</th>
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<tbody>
<tr>
<td>US$</td>
<td>$1840</td>
<td>$670</td>
</tr>
<tr>
<td>PPP (International Dollars)</td>
<td>$5890</td>
<td>$2970</td>
</tr>
</tbody>
</table>

### Natural Resources

<table>
<thead>
<tr>
<th>HOTH</th>
<th>MILAREPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>copper, coal, diamonds,</td>
<td>suspected oil deposits, zinc,</td>
</tr>
<tr>
<td>iron ore, uranium, tin,</td>
<td>gold, diamond, tin, lithium, hydro-electric power potential</td>
</tr>
<tr>
<td>lead, oil, gold</td>
<td></td>
</tr>
</tbody>
</table>

### Agricultural Production

<table>
<thead>
<tr>
<th>HOTH</th>
<th>MILAREPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>millet, sorghum, peanuts,</td>
<td>bananas, sugar-cane, coffee,</td>
</tr>
<tr>
<td>livestock, fish</td>
<td>rice, tobacco, vegetables, livestock, fish</td>
</tr>
</tbody>
</table>

### Percentage Voter Turnout of Eligible Voters in National Elections (1996)

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<tr>
<th></th>
<th>HOTH</th>
<th>MILAREPA</th>
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<tbody>
<tr>
<td>per thousand inhabitants (1996)</td>
<td>33%</td>
<td>12%</td>
</tr>
</tbody>
</table>

### Number of Daily Newspapers

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<thead>
<tr>
<th></th>
<th>HOTH</th>
<th>MILAREPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Daily Newspapers</td>
<td>27</td>
<td>3</td>
</tr>
</tbody>
</table>

### Number of Radio Receivers

<table>
<thead>
<tr>
<th></th>
<th>HOTH</th>
<th>MILAREPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Radio Receivers</td>
<td>524</td>
<td>229</td>
</tr>
</tbody>
</table>

### Number of Television Receivers

<table>
<thead>
<tr>
<th></th>
<th>HOTH</th>
<th>MILAREPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Television Receivers</td>
<td>149</td>
<td>55</td>
</tr>
</tbody>
</table>

### Number of Telephone Main Lines

<table>
<thead>
<tr>
<th></th>
<th>HOTH</th>
<th>MILAREPA</th>
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</thead>
<tbody>
<tr>
<td>Number of Telephone Main Lines</td>
<td>59</td>
<td>22</td>
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</tbody>
</table>

### Anticipated Growth in Internet Users

![Anticipated Growth in Internet Users](image)

### Educational Indicators

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<tr>
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</thead>
<tbody>
<tr>
<td>National Literacy Rate</td>
<td>45%</td>
<td>55%</td>
<td>18%</td>
<td>26%</td>
</tr>
<tr>
<td>Children enrolled in Primary School, net</td>
<td>58%</td>
<td>41%</td>
<td>29%</td>
<td>20%</td>
</tr>
<tr>
<td>Pupil to Classroom Ratio</td>
<td>68:1</td>
<td>61:1</td>
<td>96:1</td>
<td>82:1</td>
</tr>
<tr>
<td>Pupil to Textbook Ratio</td>
<td>8:1</td>
<td>3:1</td>
<td>6:1</td>
<td>5:1</td>
</tr>
<tr>
<td>Tertiary School enrollment</td>
<td>2%</td>
<td>1.4%</td>
<td>1.8%</td>
<td>1.1%</td>
</tr>
</tbody>
</table>
Micro-Scenario 1: The Degaba Village of San Deep

The Degaba village of San Deep is situated in rural Milarepa, about 300km from the city of York and the Hoth/Milarepa border. The village is situated about 1km of the national highway. It is partially electrified with frequent power cuts.

The rich culture and traditions of the Degaba dominate life in the village. The Degaba have traditionally been an agrarian society, and most families have raised livestock and crops in a sustainable manner for generations. There are two wealthy families, who own most of the property and money in the village. Although a formal local government structure exists, real power over decision making is controlled by a council of elders comprised of these landlords and local religious priests.

The Degaba are devoutly religious people, and much of their time outside of daily work is occupied by religious prayer and related activities. These events, such as temple gatherings, weddings, funerals and other celebrations or ceremonies, provide opportunities for the Degaba to interact socially with one another. Additional socializing also occurs during daily work, such as at the village water well and during market days – this is particularly the case for women. Over the past five years, listening to radio shows broadcast from in the evenings has also become a popular pastime. However, this activity is frowned upon by village elders as they feel people should either be engaged in their daily work or in religious activities. Maintaining cultural integrate has become of particular concern in the past five years, when San Deep has seen increasing seasonal migration of men to West York. Husbands and sons go to York in order to earn additional income, and return during harvesting season etc. to help their families with the crops. The Degaba elders try to discourage such practices, as they feel that these materialistic attitudes, as well as the imported goods and culture, will permeate and corrupt traditional society. They also try to ensure that traditional Degaba practices are still performed in order to maintain their culture. Both female and male villagers have a great deal of faith in rituals, particularly those tied to rites of manhood/womanhood such as female circumcision.

Some facts:

- San Deep: 90% Degaba, 10% other ethnic/religious groups.
- The surrounding region is becoming heavily deforested, and access to potable water is a growing problem.
- There is a subsistence agricultural economy, with primary crops being rice and sugar-cane. Activities that contribute to the village economy include farming, raising livestock, minor cottage industry, all performed by men and women. Women are also responsible for the household labor and household management. Young boys help with tending the livestock.
- There is one government school in the village, and attendance rates are lower than national averages.
- Non-formal education traditionally took place in religious schools. The majority of the students still attend these up to class 7.
- Micronutrient deficiency has been assessed in many village children by urban health authorities.
- Urban authorities have also classified San Deep as having a sanitation problem.
- There lives a strong oral/story telling tradition among the Degaba. Very few books are available in the village. There is not much of interest in simple literacy courses.
- There is also virtually no connection between the school and nature/ ecology.
- There are several radios shared by the community. The two wealthy families and a few others own a television set and a telephone. There are two public telephone booths in the village.
- Electricity is available for four hours per day, and is largely provided by generators.
- Extended family structure is strong in the village. There is a strong trust between families.
- The village well is a common place for gathering and socializing, particularly for women while they are drawing water.
The ratio of traditional village healers to allopathic physicians has doubled during the past ten years. Local knowledge surrounding medicinal properties of many plants is quite high among the population.

There was an income-generation scheme for women started with a local NGO, but it had limited success and the programme stopped.

**Interview with a Degaba leader in recent village meeting:**

“These so called peace agreements with the corrupt and greedy Hoth will be the ruin of Milarepa, not its salvation. See what is happening in York! Nothing than trouble since the borders opened. Their formal institutions, especially their schools, mean nothing to us.-We should continue to boycott them for the simple reason that sitting in a box made of cement and having foreign ideas and Western products crammed into our heads is offensive to us. Our young people are being seduced by York. They move there, go to their schools, and come back as strangers, doing drugs, dressing like movie stars, behaving like fools. Then they find no jobs and become frustrated – they are embarrassed to work with us in the fields. They belong nowhere. Is this what you would bring here?”

**“An old man dies, a library is lost”** - Degaba Proverb

**Daily Activity*: men (1996)**

- 25% Religious Activities
- 20% Work Burden
- 15% Family Activities
- 40% Leisure

**Daily Activity*: women (1996)**

- 50% Religious Activities
- 25% Work Burden
- 25% Family Activities
- 40% Leisure

*based on local survey

**Survey conducted in San Deep (1996): “What is the most reliable source of information?”**

- 40% Family/elders
- 40% Religious Leaders
- 15% Radio/other media
- 5% School/books
Micro-Scenario 2: The City of York

The sprawling city of York straddles the border of Hoth and Milarepa. During the decades of mutual hostility between the two nations, the city was divided and heavily defended on each side; however, there is an ancient connection between both sides that dates back to before colonial times. Hoth side was called West York and the Milarepa side was called East York. Now the border is open, and free, but the two sides retain many differences and are still known as West and East York. Since the dividing wall came down, there has been an even greater shift away from the traditional Ambo and Degaba cultural heritage of the region.

There are increasingly militant religious and ethnically based movements who seek to overthrow the government. This unrest is transferred down to the youth of York, who are observing the adults and forming their own gangs. Gang violence and drug trafficking is on the upswing, as well as vandalism. The two main languages in York are Ambish and Degabish. However, English is quickly becoming the most frequently heard throughout the city as the youth think they will have more professional opportunities when they speak English. The traditional art, music and dance of the Ambo and Degaba is difficult to find in York, and has been replaced by American culture. Most people spend their leisure time in dance clubs, at tea stands, watching movies and television, or shopping. Traffic congestion has become a serious problem in York, and consequently air-pollution has reached near-toxic levels. Shanty towns ring the city, and are increasing in number and size. They have no electricity, clean water, or schools.

Some facts:
- City population: 15 million (East and West combined) and growing
- York is by far the largest city in the area with a host of urban problems, exacerbated by movements from the rural areas into York.
- West York is much larger, more densely populated, free-wheeling, modern, and boasts three skyscrapers.
- West York has three times the number of televisions per thousand inhabitants than East York.
- Crime in West York increasingly violent, and spilling over into East York.
- East York is smaller, and historically more ‘controlled’ but continues to draw immigrants from rural areas.
- Entire city facing water shortages, and access to clean water is now a luxury.
- HIV cases in York: 350,000, and the growth rate during the last five years has been 300%.
- An estimated 50% of the population is active in the ‘Informal Sector’ of the economy.
- Recently appointed York School Chancellor accused of “gross embezzlement” by local press.
- Unemployment rates have been steadily rising during the past four years.
- Number of women’s collectives has grown by 500% over the past ten years.
- Historically, the region was at the cross roads of international trade and York, the main urban area, was the hub of this activity.
- Consumer spending has doubled over the past ten years, with people spending increasingly on movies, dining out, clothes, cigarettes, and general entertainment.
- Single family households are increasing.
- Rap music is quite popular.
- Several government schools exist in the city, but these have deteriorated badly in the past 10 years. Most people are considering private schooling and tuitions to be the only option available for them.

Mayor of York, excerpt from recent press release: “The walls which divide are gone. Our city united, our countries blessed with precious peace. Promise and hope, not fear and hate, will rule in the minds of our citizens...We must do whatever is necessary to preserved the peace.”
Excerpts from Interview with York Youth and Parent, by YNN (York News Network)

YNN: What are your impressions of your education?

Youth: School sucks. The teacher just lectures to us from some textbook about England. She speaks Degabi all the time and half of us are Ambo. We don’t understand what she is saying and then we get punished for it. Plus, we are forced to sit all day in a crowded, smelly room with no sunlight. There are no places to play.

YNN: What about your future?

Youth: Future? You mean what do I want to do when I grow up? I want to drive an awesome car like Hollywood movie stars, make millions of dollars, and be real famous. School is so boring...I hate it. Anyways, why do I need to go to school to get rich? The rich guys in my big brother's gang didn't go to school...they say that school can't teach you how to get rich and survive on the streets.

YNN: And as a parent, do you agree with this youth?

Parent: Of course not! I want my son to get an education, so he can get a good job in a nice office. I want him to have a wife and children, and live a nice normal life. If he doesn't go to school and get a good education, he'll end up having a hard life.

YNN: And what do you consider a 'good' education? Do you think the curriculum should be expanded to include more creative and innovative subject-areas?

Parent: I don't know about all this creativity and innovation. In my day, all kids needed to learn was math, language and a bit of science and history. I just want him to stay off the streets and learn a little discipline and understand what is right and wrong.

“The Ambo are tools of Western imperialism, they are stealing our children’s souls, they are the cause of all evil and are trying to enslave us . . .”

-Propaganda literature distributed in East York, 1996.
Daily Activity*: women (1996)  

York Survey (1996): “What do you find as the most reliable source of information?”
*Micro-Scenario 3: The Hoth/Milarepa Region*

The Hoth/Milarepa region is of strong geopolitical importance for both the surrounding powers and international superpowers. After years of colonial rule, however, maintaining political and military autonomy was at the top of the national agenda. The abundant human and natural resources in Hoth and Milarepa have led to increasing economic interest in the region as a potential market, and as a way for other countries to form economic - if not military - alliances with the region. The precursor to actual foreign direct investment and joint-venture in the region is the westernization and modernization sweeping the country; with the urban population more willing to spend and more desirous of Western media and goods rather than the local and traditional equivalents, the region is ideally positioned in the eyes of the international marketplace. The idea of maintaining the region's linguistic, historic and cultural integrity has not been voiced on the political level, as it is more urgent in the eyes of the administrations for the region to achieve economic stability first.

Some facts:

- Region originally comprised of princely states and tribes, and national boundaries drawn arbitrarily after independence from perpetual colonial domination.
- Region bordered by three powerful countries who each have different national languages; the constant power struggle has fueled an expensive arms race.
- Geographically the area includes a mountain range, a river basin, temperate rain forests, a coastal area, a plateau, and agricultural lowlands.
- Environmental degradation, including deforestation and air and water pollution are increasing problems.
- The two main religious/ethnic groups are the Degaba and the Ambo, but there are other ethnic minorities as well who are each clamoring for their own rights to have their languages, religions, cultures and histories to be recognized as distinct and relevant to the region.
- There has been a growth in NGOs and interest groups during the past ten years.
- Teacher’s unions are increasingly dissatisfied with their wages and have threatened to strike.
- Political decision to create a "supranational education system" to address regional needs.
- Quite a few locations have been designated as "Cultural Heritage Sites" throughout the region, with the oldest one dating back to 300 BC.
- The tourism industry in the region is promising and is forecasted to grow rapidly over the next ten years.
- The number of patents registered in the region during the last twenty years is 86.
- The region is being covered by radio and television satellites which will provide programming from the West.
- 50% growth in Ambish virtual communities on the internet over the past year.
- 1.1 million soldiers have been demobilized, and need to be re-integrated into society.
Economic Activity by Industry Sectors (1996)

Hoth

- Industrial: 33%
- Agriculture: 22%
- Service: 45%

Milarepa

- Industrial: 10%
- Agriculture: 15%
- Service: 75%

Land Use (1996)

- Arable Land: 31%
- Meadows/Pastures: 5%
- Forest/Woodland: 25%
- Other: 39%

Media Production: Local v. International (1996)

- Local: 78%
- International: 22%
ROUND 1: TASK FORCE TERMS OF REFERENCE

Af, indeed, we are headed towards a paradigm shift geared around glo-cal@knowledge societies, how must our learning systems be configured differently in order to empower individuals and communities to respond to the challenges of the present as well as to help shape a better world for the future?

Hoth and Milarepa Inter-nation Policy Roundtable

GOAL: Within the context of the specific scenario presented to you and through utilizing the various perspectives and experiences that you and your character role bring to the table, the Task Force is requested to formulate a Strategic Action Plan for supporting a new vision of learning and development for Hoth and Milarepa

TIME: Your group will have approximately 2 hours to prepare the first draft of the plan.

I. In preparing your Strategic Action Plan with the group, please develop your vision statement in which you might consider addressing some of the following questions:

   a. In what ways, have the present education systems in Hoth and Milarepa been successful? How have they failed?

   b. What is learning? Where and when does it occur? What kinds of societal learning needs exist in Hoth and Milarepa?

   c. How are the existing education system linked to a vision of development? How should learning systems and learning processes be linked to a larger vision(s) of development? What is your particular vision of development?
II. The second part of the Strategic Action Plan should lay out key strategies and priorities for developing learning environments and learning communities in these environments. It should specifically address how (the starting points) to engage in educational transformation. Your group may wish to brainstorm on among other things:

* Potential target communities and sub-communities

* Critical processes and approaches

* Key policies

* Potential technologies and tools and their applications

* Potential partners and participation

* Scale and level of interconnectedness of project interventions

* Further types of research and information required

* Indicators to assess success

* Emerging opportunities

* Potential constraints

* Human, financial and infrastructural resources required

* Anticipated timetable

Please take your own individual notes on the plan. The Strategic Action Plan that you prepare will provide the basis for your interaction with individuals from other groups as you seek to build partnership coalitions with them in Round 2.
ROUND 2: COALITION BUILDING

We face very real political and financial constraints in both Hoth and Milarepa. In order to move forward in a bold and dynamic manner while maintaining a transparent process with the people and potential funders, it is important that we have the support of key international and local leaders at the International Policy Roundtable. Any plan, if it is to be viable within the current political-economy, must have a wide and strong coalition of backers.

Hoth and Milarepa Inter-nation Policy Roundtable

GOAL: You i.e., the character you represent, will now interact with individuals from other groups to try to build a coalition of partners in order to garner a wider base of political and financial support around a revised Strategic Action Plan.

TIME: You will have approximately 1 hour to enter into a coalition and prepare a revised plan.

I. You must seek to form a coalition of at least 7 people around a Strategic Action Plan.
   * Through a process of sharing and negotiation, you should modify your initial Strategic Action Plan both in order to substantively improve it as well as to form partnerships with others.
   * You can enter only one coalition. This does not necessarily have to be the same group that you worked with in Round 1.
   * Your decision to enter a particular coalition should be consistent with the perspectives and experiences of your character.

II. In forming your coalition, you may wish to consider the following questions:
   * What are your character’s main priority areas and principles?
   * What interest groups does your character represent?
   * How can you negotiate in order to create win-win situations?
   * How open in terms of sharing ideas and information will you be with the other players?

III. At the end of the Round, the group with the largest number of coalition members will be asked to present its revised Strategic Action Plan to various political leaders, intellectuals, donors and public/private sector representatives at the Policy Roundtable.
ROUND 3: REFLECTION AND FUTURE ACTION

GOAL: We will come out of our roles and engage in reflection over the Strategic Action Plans as well as discuss implications for future action and research related to the real world.

* What are the strengths and weaknesses of the Strategic Action Plan that the largest coalition presented?

* In developing your own Strategic Action Plan, what were the points of immediate connection and cooperation with the interests represented by other players? What were the tensions points?

* To what extent does the Strategic Action Plan correspond to what you personally think and how does it compare to changes in education and development you see taking place in the real world?

* Do you know of cases where creative visions about learning and development are being generated and implemented in the real world? What is the impetus behind these efforts and what are processes supporting these efforts?

* Why are so many efforts to support learning focused exclusively on the institution of schooling?

* Why are we not able to put what we know in terms of research and experience into practice when attempting to transform education systems?

* To what extent do you think that plans like the ones developed while you played the game could be put into practice? What are the barriers that stand in the way? How do we remove the barriers? How do we move beyond these?

* What will you take away from this game? In other words, what have you learned? Will you do anything differently as a result of playing this game?

* What ideas of the game might be useful in terms of framing a future action-research agenda?

* Where do we go from here?
>>Your character: Media/Technology Entrepreneur<<

You are a dynamic and creative software designer and the president/founder of an extremely successful multimedia firm called Zeitgeist.

You are quite knowledgeable about emerging new information and communication technologies and believe that they are absolutely critical in assisting countries in leapfrogging into the 21st century. The key to solving the world’s problems is providing access to information and access to new technologies. An the new information age, people need to have better and faster information to survive -- the new technologies can provide you everything and anything you need to know at any time.

You disdain formal education systems, having dropped out in your first year of college. The only thing I learned in school was that I was no good in mathematics and that I couldn’t play soccer well. There was very little space for creative activity and exploration of personal interests. The teacher controlled the agenda and basically lectured us all the time.

You learned everything you know about technology and about business informally on your own. As a result you dislike formal programmes, formal institutions and formal credentials that, in your opinion, suppress “entrepreneurial spirit”.

You are extremely optimistic about the tremendous opportunities that new technologies present for transforming education systems particularly in terms of introducing more interactive and flexible pedagogical approaches and in terms of opening up rigid and conservative institutional structures. New technologies will transform how people learn, what they learn and who they learn with. A believe that the Internet is but the latest tool in creating a collective higher mind that spans continents and makes borders irrelevant. Just as advances in bio-technology made possible the green revolution, so will digital technology make possible a learning revolution.

Your dream is to put a wireless networked hand-held computer in the hands of each learner through which they could access the great libraries and museums of the world. We should try to develop learning environments as operating systems rather than as a specific application. Such environments must provide a forum for risk taking, novelty, experimentation, and challenge.

Favorite Quote: AThe Internet is a Philosophy.
Some of your current pre-occupations around the technologies include:

- You believe that new technologies can be quite effective in lowering the barriers (time, age, distance, circumstances) which prevent people from accessing existing and creating new educational opportunities. However, you are acutely aware that there is a global technology caste system forming with technology haves and have-nots; this adds a new dimension to the debate on equity between rich and poor, urban and rural, men and women.

- Efforts in technology should be focused on facilitating more hands-on, active and experiential opportunities for learning. Balancing this should be complementary approaches that focus on thinking and reflection.

- You are worried about governments making too many laws to control and restrict cross-border technologies such as satellites and the Internet. Existing intellectual property and copyright laws are too restrictive. You emphasize individuals own responsibility to benefit from modern technologies and to regulate its proper use.

- Currently you are studying the contribution of technologies to develop a spirit of entrepreneurship to promote informal economies.

- You are furthermore part of a group that is working on the development of universal interfaces and symbols to allow people to communicate across cultures.

Several new innovations, coupled with rapidly declining costs, are taking place which make information and communication technologies a reality for developing countries as well as industrialized countries.

Some facts:
* Satellites will provide 288 channels of radio coverage over each of the continents and reach the most remote areas; wind-up radios have been developed which require no electricity.

* Interactive television with two-way video and audio teleconferencing.

* Computers are no longer limited to a keyboard and mouse; they are increasingly equipped with new multimodal and multisensory options (e.g., voice recognition, touch screens, handwriting recognition).
* Around 30 countries in Africa have full Internet access. Other countries such as India are able to produce their own software.

* High speed fiber optic skynet are using high frequency radio with repeaters to carry high volumes of voice, video, and data through the air. There is no longer any need to dig up streets or plow through mountains to lay cable.

* The World Wide Web is doubling in size every 50 days and a new Web page is created every 4 seconds. The Web is now able to accommodate many different languages.

  • Virtual reality makes possible virtual communities, virtual classrooms/universities, electronic town halls, and virtual laboratories.
You are a philosopher and professor of comparative religions with a deep and profound concern for the destructive effects of modernization on society. You have spent your life trying to fuse Eastern and Western philosophies.

You have often questioned the primacy of economic growth and material development as the foremost goal of development, emphasizing instead, both the quality of social relationships and the sense of meaning and purpose that people have in their lives. “The real objective of human development should be to create an enabling environment for people to enjoy long, healthy and creative lives.” Learning to live together is key to maintaining peace. You worry that the vicious circle of deep-seated hatred which was pervaded between the two countries and basic lack of opportunities for dialogue and trust-building, poses a constant source of tension that violent conflict is looming in the background.

You are also deeply concerned that globalization and technologization is contributing to nihilistic materialism and consumerism coupled with social alienation and dislocation. You question mainstream claims to progress. “As we become more efficient, we become more dehumanized in terms of our self-of-self and social relationships. The agenda for the next millennium must be centered around rediscovering our sense of consciousness.”

You are furthermore critical of the mechanistic, bivalent (black-and-white), and reductionism approaches that have guided development planning. “Our mental models of the way the world works must shift from images of a clockwork, machinelike universe that is fixed and determined, to the model of the universe that is open, dynamic, interconnected and full of living qualities.” You argue for more of holistic way of thinking which moves beyond the compartmentalization of knowledge, seeing underlying structures and dynamic inter-relationships rather than linear cause-effect chains, and viewing change in terms of processes rather than as isolated snapshots.

You are convinced that the current model of schooling is counter-productive for society because not only has it failed to support individuals and communities in learning how to live together in peaceful ways, but also because it is inextricably linked to a model of development that is both inegalitarian and unsustainable. You believe that schooling contribute to sustaining corruption, competition, fear and mistrust. There is little space for cultural pluralism, as institutionalized schools are built around notions of homogeneous societies. In addition, schools are often isolated from the other social institutions that exist
in a community. Learners find little connection between what they learn in school and what they learn outside of school. Social conscience and responsibility remains a theoretical abstraction found in textbooks and repeated on exams, but rarely practiced. As a result, schools are unable to prepare for the required social transformation of today’s conflict-based society.

Favorite quote: “You will never solve a problem if you use the same thinking that created the problem in the first place.”

Albert Einstein

Some of your current concerns include:

- How can we move beyond seeing the world in terms of Adeveloped@ and Adeveloping@ as immutable, linear stages and build new approaches to development that are grounded in seeing development in terms of a more dynamic set of processes which are continually being invented and reinvented by people.

- All learning involves socially organized activity. People learn best through interactions with others, and these interactions strengthen both community and individuals. Learning is critical to negotiating conflict and building multicultural understanding. How can we create a dissonance of social contexts for people to interact with each other in constructive ways?

- How can we build new Ainstitutions of reflection@ which facilitate critical self-reflection, on-going dialogue and the construction of meaning and purposefulness in people’s lives? How do we create time and space for people to develop their social consciences?

- How can we encourage more long-term thinking?

- There is no such thing as an objective body of knowledge waiting to be uncovered. Knowledge does not lie around the world in some pure form; nor is there any reason to believe that it is stored in the human mind in such a form. Rather, people glean and assemble knowledge from observations of, and participation in, a myriad of situations and activities.

- How do we humanize new technologies? How do we regain control over the technologies? How to encourage more critical media awareness in order to counter infoglut, misinformation and exploitation?

- Religion is an important cultural, ethical and spiritual force in many people’s lives. How do we integrate it into the daily workings of a community rather than keep it isolated on the fringe?

- How do we facilitate the continued development of wisdom in society? AWe may know immeasurably more about the Universe than our ancestors did, and yet it increasingly seems that they knew something more essential about it than we do.@

- How do we develop human beings into responsible and caring citizens? How to rebuild a framework of moral values in a non-dogmatic manner? How do we stimulate people to feel and express compassion?
>>Your character: Educationist<<

You are an educationist with a background in cognitive science, learning theory, and psychology. You have previously held a position as Minister of Human Intelligence.

You have been very critical of conventional systems of education challenging some of the basic assumptions which have guided their development: human beings as programmable computers, the learner as tabula rasa (blank slate), intelligence as being a fixed entity. Education has become a ritualized activity. *We desperately need to figure out how to move away from a culture of teaching to a culture of learning.*

You believe that the institution of mass schooling has done a great dis-service to humanity by denying people the opportunity to reach their full individual and collective human potential. When pondering the vast untapped potential of the human mind, you argue that schools have actually repressed or stunted human creativity, exploration, and expression, particularly leaving those who have dropped out at various stages frustrated, feeling inferior, and without motivation. They have in a sense been turned off from learning. *We must move beyond the antequated notion of the mean=learner and begin to recognize and appreciate the diverse, complex, multifaceted nature of each human learner, who comes with his or her own different learning processes and styles, learning needs, interests, preferred learning environments, etc. Vast ranges in diversity characterize what it means to be fully human.* Finally, you question the way that schooling has framed learning in terms of an end stage after which one no longer needs to learn i.e., to be educated.

*Favorite Quote:* *Lifelong learning no longer refers simply to recurrent education or to a second chance for those who missed out in the first instance. Rather, it is a genuine lifelong endeavor, from the cradle to the grave.*

Some of the research areas that currently interest you include:

- Focusing our efforts on learning to learn involves developing oneself: to engage in critical reflection and creative thinking; to open up to other people’s ideas, attitudes, and feelings; to become aware of and access learning resources through a variety of media; to recognize and question one’s implicit assumptions; and to become less fearful of change.

- The theory of multiple intelligences describes that there are at least 7 forms of intelligence, or ways of understanding and making meaning: logical-mathematical, verbal-linguistic, musical-rhythmic, interpersonal, intra-personal, visual and spatial, and bodily-kinesthetic.

- Emotional intelligences involve abilities such as being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one’s moods and keep distress from swamping the ability to think; to empathize and to hope.
- How to challenge the belief that learning is a linear process starting with basic education? Higher order thinking (reasoning, arguments, problem-solving, and so on) should not be seen as some esoteric add-on after basic education. But rather, the two should be seen go hand-in-hand, i.e. children are already engaging in high-order thinking before they get to school.

- How do we build educational environments with thinking-centered learning, where students learn by thinking through what they are learning about.

- The brain/mind learns optimally - it makes maximum connections - when appropriately challenged in an environment which encourages taking risks. Positive emotions such as trust, love, tenderness and humor can facilitate learning. However, the brain/mind “downshifts” under perceived threat.

- Children typically enter formal schooling between ages 5-7. However, research shows that learning begins from birth, that neural pathways crucial to future development are created in the first three months of life.

- How to challenge popular thinking which believes that learning is the prerogative and responsibility of the young? The brain is remarkably elastic, constantly learning throughout the span of one life.

- Protein energy malnutrition and micronutrient deficiencies negatively affect a learner’s mood, memory, attentiveness and concentration.

- How to facilitate modalities of collaborative learning in which collaboration is seen as an act of shared creation and shared discovery?

- Technologies can play a fantastic role in terms of energizing the learning environment with resources and flows of information as well as with building communication linkages with other communities. However, currently there is a lot of focus on hardware with very little concern on the learning applications. For example, technologies that support collaborative learning (as opposed to teaching) are still in their nascent stages. New efforts should seek to place the tools directly into the inquisitive hands of active learners.
You are a social and cultural anthropologist specializing in indigenous knowledge systems. Shunning formal credentialism, you actively subscribe to the concept of a Barefoot Expert.

You are skeptical of the international development industry and its approaches in dealing with local peoples. Time and again international experts consistently ignore local ways of doing things. In agriculture, for example, such local practices are rooted in a deep understanding of the land and its nuances. Experts also ignore local power dynamics. I have seen dozens of development projects doomed to failure at the outset due to a real lack of understanding, and a unwillingness to really listen to the people.

When planning large-scale interventions, development agencies often ignore specificity of local context. Communities are discussed as generic entities with little attention given to the various subcultures in operation. Within each of these subcultures, there may be different languages, ideas, beliefs, customs, codes, institutions, tools, techniques, works of art, rituals, ceremonies, and so forth. Culture is also seen as something either to be overcome or to be preserved but seldom as something dynamic and evolving. Local knowledge systems are integrated into the life of communities and provide essential frameworks for living in harmony e.g., health and medicine, social security, management of resources, living with science and nature, link to history, community building, etc.

Local knowledge, about things like medicinal plants, is being stolen from people by companies without adequate compensation.

You are very critical of the cultural dimensions of modern formal education. The knowledge provided in schools has positioned itself as superior and oftentimes in opposition to local knowledge. Schools have been set up in many countries to cure people from their traditional attitudes and behavior. There is a strong bias in schools on reading, writing and numeracy which ignores the many other ways, such as oral traditions and storytelling, pictograms, body language, etc., that people communicate with others and express themselves. Schooling has left many people feeling alienated and disconnected from their communities. The devaluation of local knowledge systems is tantamount to destroying any possibility of constructing alternative frameworks for sustainable development. Ethnic and cultural diversity means many different relationships, many different approaches to the same problem. A diverse community is a resilient community, capable of adapting to changing situations.
Some of your immediate concerns include:

- Supporting processes of situated learning in which a culture of needs and practices gives the knowledge and skill being learned context, texture and motivation.

- Literacy is contextual. For example, the Aborigines in Australia have traditionally had Songlines, paths across the continent where individual objects, rocks, trees, etc... are sung aloud, names recalled as markers for the journey. By singing this knowledge to youngsters, these youth can follow paths clear across the continent, alone, without aid of map or compass. Sadly, this is being quickly lost.

- Intergenerational learning (between children, siblings and adults) is an important aspect of building strong social and cultural relationships. Apprenticeships are one historical example of this, but there are also cases such as with computers that adults can learn from children.

- Learning is oftentimes spontaneous and ephemeral. Learning can occur in many places in the community: religious sites/places of worship, the market, at work in the fields, at home, in apprenticeships, while playing, at cultural heritage sites, etc. This implies altering our spatial orientations by moving away from fixed models that focus on a centre for concentration and dissemination i.e., schools, community centers with one-stop shopping, libraries, etc. to approaches geared towards distributed learning resources such as kiosks, libraries on bicycles, etc.

- Learning is critical to building and advancing local knowledge systems. It is particularly relevant in constructing shared public knowledge.

- How to meaningfully respect and validate the knowledge that people come with i.e., recognition of prior learning?

- How to use various on-going participatory methodologies (asking people what they feel their needs are) to involve people in the conceptualization, design, implementation and evaluation of activities.

- New technologies must move away from importing programs produced for mass broadcast toward local content production which support cultural articulation and solving local problems.

- How to link needs and lifestyles of modern society to the values and relationships of traditional cultures?
Your character: Community Activist

Originally trained in natural resource management, you have recently acquired a second degree concentrating on gender and development. You have worked extensively with school dropouts, widows and single mothers, the elderly, and street children in Milarepa, and helped to involve them in income-generating activities. You recently wrote a book entitled Poverty: Hitting Women and Girls the Hardest.

You believe that development must follow a bottom-up approach with the involvement of the people. Human beings must be seen as active participants, not simply beneficiaries, in the development process. Women have been noticeably left out of most public decisionmaking processes. Real social change is built on personal responsibility, social compassion and economic justice.

You have fought very hard against current models of economic growth, arguing that they are environmentally unsustainable. The focus of economic policies should be geared towards conservation, not overconsumption. You are very worried about the onslaught of big multinational corporations in countries. You also question the usefulness of the nation-state model in many complex regional contexts and believe that power must be both redefined and redistributed with civil society institutions playing a much greater role.

Education has failed to facilitate real participation and empowerment of people for the various decisionmaking functions of society. Schools serve to reproduce socio-economic hierarchies and inequities. The focus has been on maintenance/ status quo education -- the acquisition of fixed outlooks, methods and rules for dealing with known and recurring situations. Minorities and women’s history and knowledge are often not reflected in curricula. The rigidity and inflexibility (in terms of schedules, pre-qualifications, etc.) of schooling make the institution even more inaccessible to the marginalized. Schooling is geared towards turning everyone either into a drop-out, a clerk or a university professor. It is irrelevant to most people’s lives. Furthermore, schools have served to breed a psychological dependence and impotence among people in relation to the dominant government structures – they are not linked to the needs of communities. They have suppressed the creative initiative of people and discourages them from wanting to radically challenge oppressive systems.

Favorite quote: A sustainable society is one that satisfies its needs without diminishing the prospects of future generations.

Some of the priorities that you are fighting for:

-Promoting sustainable human development which: generates economic growth and
distributes benefits equitably; regenerates rather than destroys the environment; empowers people rather than marginalizing them; enables people's participation in the decision making process; and expands their opportunities and choices.

- **Learning is a political process.** We must enable people to read the world as well as to read the word as part of *conscentization*. Authentic participation in learning leads to a *freeing*; it is an emancipatory experience.

- **Learning is about self-reliance, self-expression, self-definition, and self-realization.**

- **People must learn about their rights in order to avoid exploitation.**

- **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.**

- **How to challenge religious beliefs, cultural practices, and educational systems (both traditional and modern) that assign women and minorities to lesser status and power?**

- **How to build new institutions grounded in pluralism and respect for difference?**

- **It is important to encourage men and women to discuss unequal gender relationships in their communities and reduce the exploitation and workload of women (e.g., child rearing, payed labor, housework).**

- **How to provide more flexible opportunities for learning to respond to the needs and lives of socially and economically marginalized groups?**

- **How to increase access to local credit, e.g., credit schemes, savings associations?**

- **Looking beyond the classroom walls to the majesty of the nature which surrounds us.** *(You find it inhumane to lock children up in the concrete prisons known as schools.)*

  *Learning by doing can occur through reforestation projects, for example. Such environmental activities are not only vehicles for cognitive and social development, they serve to bring humanity back in harmony with nature.*

- **How to prevent the new information and communication technologies form increasing the gap between the haves and have-nots.**

- **How to unleash the tremendous democratizing power of the Internet - by giving voices to those who have been kept silent, by helping to identify oppressive relationships, and by connecting marginalized people in a common non-violent struggle for social change?***
>>Your character: Knowledge Economist<<

You are an economist and management theorist, with experience in both the public and private sector. You are fascinated with the notion of the emerging knowledge economy, in which, knowledge has become the key factor of production, replacing land, labor, materials, and energy. A Skill is now mental rather than manual. Not only will more people become knowledge workers, the knowledge content of all work will also increase. You envision a world in which knowledge and information -- not just scientific knowledge, but news, advice, entertainment, communications, services - will become the economy’s primary raw materials and its most important products.

Deeply concerned with poverty alleviation, you strongly believe that economic growth is the primary goal of development. The by-products of this economic growth will ultimately trickle down to the masses. You argue that a free market economy with strong policies of liberalization, decentralization and privatization is the model for all countries to pursue. You also believe that the key to achieving sustainable economic growth lies in human capital formation and intellectual capital. A intellectual capital is intangible. It is intellectual material -- knowledge, information, intellectual property, experience -- that can be put to use to create wealth. Successful individuals and countries will be those that learn how to manage knowledge and leverage intellectual capital.

You believe that the future economy will be a creature of globalization -- the very nature of work, leisure, and education will be transformed. Consumer sovereignty will rise but global markets will reduce worker sovereignty -- i.e., job security -- as will national sovereignty. Economic activity is spilling, as never before, across national borders. This has already reshaped the manufacturing industry. Many labor-intensive industries (e.g., shoes, clothing, electronics assembly) have shifted to low-wage countries. What now remains is a similar upheaval for the huge services sector. Any service that can be digitized -- computer programming, banking services, back-office operations -- can be produced and sold anywhere. It is expected that whole new industries will spring from the revolution in communications. Firms will subcontract more services -- design, data processing, marketing -- around the world. The economic transformation will be marked by shorter product life-cycles and quick obsolescence of skills, and therefore require greater flexibility.

Schools have failed because their design is woefully outdated--geared towards producing industrial workers and civil servants. Consider that by the year 2000, in every free-market developed country, industrial workers will account for no more than an eighth of the work force. The Industrial Age is gone, supplanted by the Information Age and yet schools have not changed in any significant way.

Favorite Quote: If the world flourishes, it won’t fight.”
Some of the issues that concern you include:
- Knowledge workers, independently or in teams, must plan, organize, and execute many aspects of their own work. How to promote abilities to shift through large volumes of information, critical and analytical thinking, self-directed and self-motivated learning, organization skills, and teamwork? Learning attitudes, creativity and flexibility matter more and experience and tradition matter less.

- There are some types of knowledge that are difficult to codify and exchange in a market e.g., tacit knowledge -- skills which often cannot be reduced to mere information - which are critical to handling knowledge. These include, for example, human capabilities such as intuition, insight, creativity and judgement, continuous learning to acquire new skills, and building relationships.

- The diffusion of knowledge to a wide range of economic actors is as critical as its creation. How to build knowledge networks between government, industry, academia and people to enable both effective gathering and usage of knowledge in supporting the process of innovation?

- New approaches to organizational design will supplant familiar bureaucratic and hierarchical models. There will be a growth in learning organizations -- organizations that are continually expanding their capacity to create their future by learning from interacting with the their environment. Are schools learning organizations?

- The fastest rates of growth in economic output are being recorded by high-technology manufacturing sectors, such as computers and aerospace, and knowledge based services, finance and communications for example.

- How to promote a country as a good place for foreign investment? It will be important to find optimal balances in developing physical and human capital -- investing in more infrastructure, power, telecommunications, technology, water supply, transportation and investing in R&D, computer software as well as investment in training workers. Also, important will be national policies which minimize the interference of government (e.g., heavy bureaucracy, corruption, excessive regulation, high taxes, rigid labor costs).

- The critical question is whether globalization is unstable. There are two aspects to this: political and environmental: 1) As countries with different cultures blend economically, will they develop the trust and cooperative institutions needed to sustain their interdependence?; 2) will surging demand trigger high prices for raw materials or environmental side effects that subvert growth?
Accountability and monitoring of activities is critical. Developments in the knowledge-based economy are difficult to assess by traditional economic statistics. There must be a strong effort to develop better indicators for knowledge inputs such as R&D and training expenditures, skills and competencies, flows of knowledge in the form of exchanges of ideas and diffusion of technology, and return to knowledge investments.