

Leadership and Education for a Sustainable Future in the 21st Century

McGill World Platform
Health and Economic Convergence
Nov. 18-19, 2009

“Sustainable Places and Communities” Theme

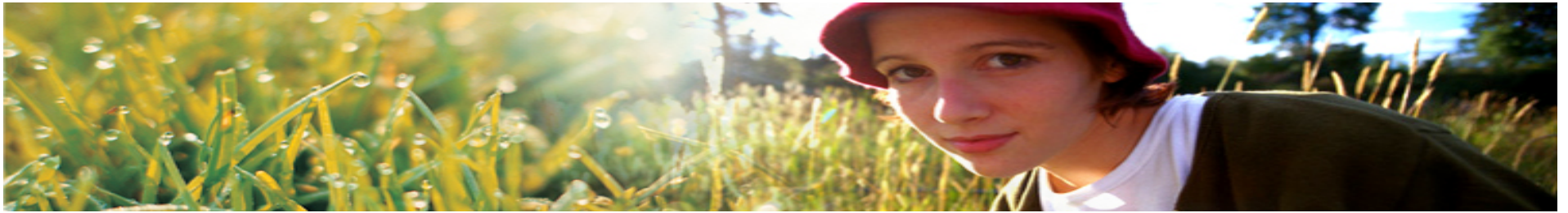
David V. J. Bell PhD, Chair



MWP Quotes:

- We need to change mindsets
- We need a new paradigm
- We need to rethink
- We need to reinvent ourselves
- I didn't know about this growing up in Vancouver
- We need to change the conversation
- We need to change the culture





LEADERSHIP & EDUCATION: Changing Views

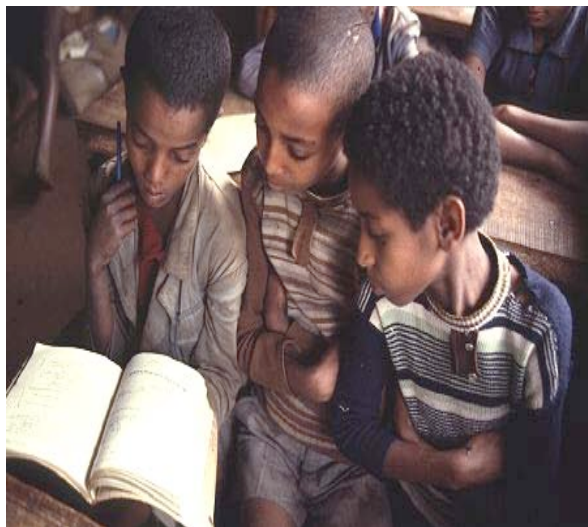
Leadership

- Flattening the hierarchy
- From power and authority to influence
- From command and control to visioning, engagement and collaboration
- From leader as hero to leader as enabler, supporter

Education [*e-ducere*: “to lead out”]

- From teaching to learning
- From “depositing” information to problem posing, action learning etc
- From teacher as expert to teacher as coach, facilitator, resource person
- From pupil to student to learner

Educating? Or Learning?



- Not all education results in learning
- Much learning occurs outside (formal) education. (*What have we learned from the global financial crisis??*)
- Increasing role of internet, instant communication
 - *3000 books will be published today!*
 - *31 billion Google searches are performed each day [10-fold increase since 2006]*
 - *“Shift Happens”*
- “Social Learning” (and networking)
- Life-long learning
[but vast ignorance remains]



The Challenge of Sustainability and the “Crisis” of the 21st Century

- Can humankind **learn to live differently** on this planet so current and future generations can have a (good) life?
- We are now on a path that is clearly unsustainable (*climate change, social equity, waste, overconsumption, health etc*)



What is to be done?

- “We are one people, living on one planet. We have a few short years to change the way we organize and conduct global civilization.” (Al Gore)
- “The pressure on ecosystems will increase globally in coming decades unless *human attitudes and actions change*” (Kofi Anan)



How Can We Do This?

If you are thinking a year ahead, sow a seed,

If you are thinking ten years ahead, plant a tree.

*If you are thinking one hundred years ahead,
educate the people.*

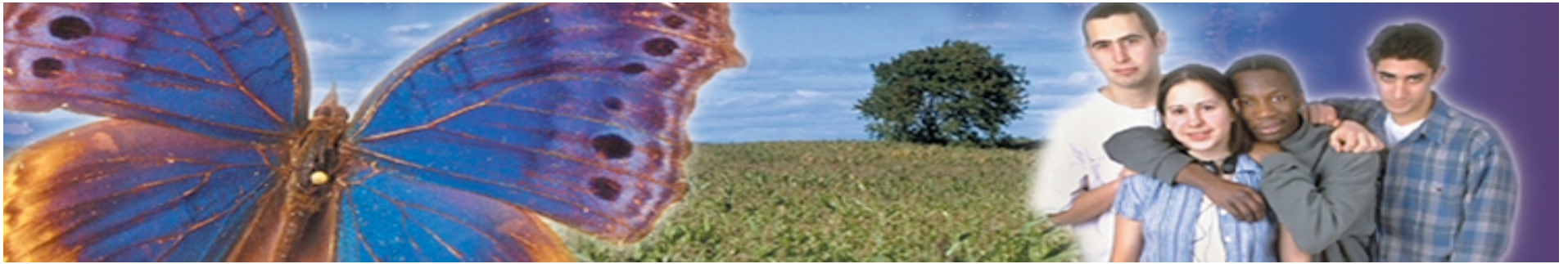
Confucius c. 500 B.C.



Looking Back 100 Years: How Different the world was in terms of...

- population (about 2 billion)
- global governance (few countries, numerous empires)
- technologies (automobile & telephone new; no electronic communications)
- business and finance primarily national
- miniscule “civil society sector”
- no concept of global climate change, pollution health impacts
- no concern about biodiversity, deforestation
- no image of earth from space





Looking Ahead 100 years: How can we learn to change the way we live on this planet to:

- meet basic needs for food, water shelter, and energy of 9 billion people?
- stabilize the climate by reducing GHG emissions globally by more than 60%?
- reduce proportion of the world's population living on US\$2 per day or less (currently nearly half - 3 billion)
- achieve a “factor 10” (or greater) economy
- shift from linear “take-make-waste” production cycle to “closed-loop, cradle-to-cradle” (*There's no waste in Nature*)
- shift from 20th century capitalism to 21st century sustainable enterprise
- achieve a less violent, more peaceful world?

What will this require?

- ESD as necessary (but not sufficient?) general education for the 21st century
- Reorientation of all professional and technical post-secondary education
- Improved **non-formal** ESD in all sectors (especially governments?)
- Strengthened **informal** ESD including in advertising, internet, social networks





Education for Sustainable Development

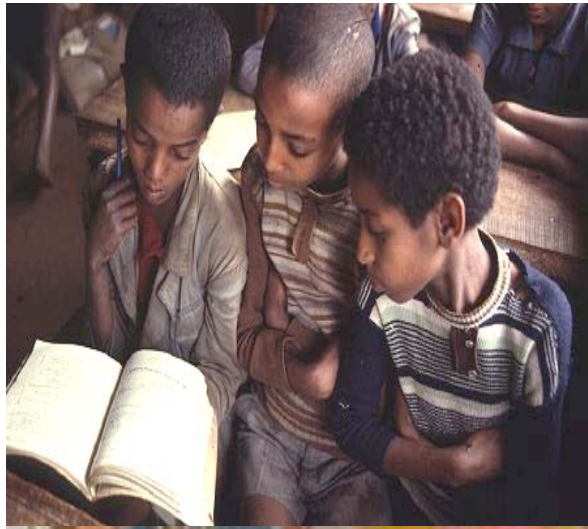
United Nations Decade (2005-2014)



Global Educational Challenges

- Nearly a billion people (mainly women) are illiterate
- 75 million school age children (mainly girls) lack access to primary education
 - In Latin America ave. educational attainment is Grade 4
 - In parts of Africa it is measured in months (hence MDG of “Education for All”)
- The world’s 60 million teachers must be engaged





Education for Sustainable Development (ESD) is Education for the 21st Century

ESD must:

- be experiential, inquiry-based, place based, and action-oriented
- teach students to think in systems terms
- explain inter-relationships between ecosystems and social systems *(including the economy, culture etc)*
- inspire concern for fellow humans and for the biosphere *(which makes all life possible)*
- strengthen capacity to think and act for the future and not only for the present





What is Leadership?

“Leadership ... is about energizing other people to make good decisions and do better things... It is about helping to release positive energy that exists naturally within people. Effective leadership inspires more than empowers; it connects more than controls; it demonstrates more than decides.”

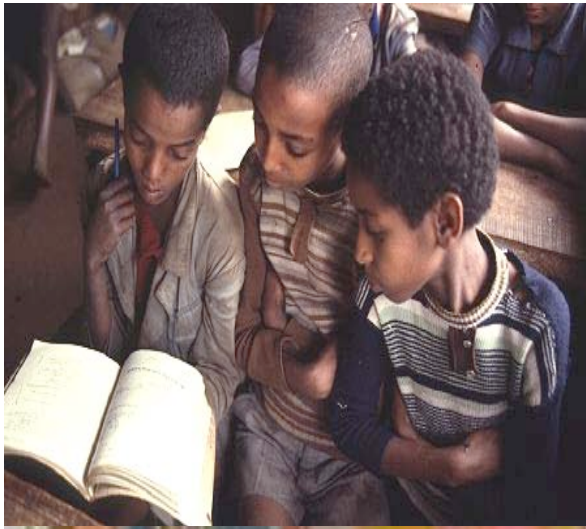
- Henry Mintzberg



Moving Beyond the Cult of Leadership to “Community-ship”

“What should be gone is this magic bullet of the individual as the solution to the world’s problems. We are the solution to the world’s problems, you and me, all of us, working in concert. This obsession with leadership is the cause of many of the world’s problems.”

- Henry Mintzberg



What is sustainability leadership?

“The model of sustainability leadership does not assume that any single individual has the answers or “knows the way”.

“Instead, the model assumes that ordinary, everyday people—some in formal positions of power, others not—seek to expand their understanding of the challenges they see and share with others and develop a shared view of a viable pathway to create the future they want.”

www.sustainabilityleaders.org





Technologies for sustainability leadership

- facilitation (leader as facilitator)
- collaborative decision making
- vision-based strategic **action** thinking and planning
- scenario planning (including computer modeling of future scenarios)

Conclusion: Can education lead us out (e-ducere) of the present crisis?

- A sustainable future requires transformed leadership throughout society
 - Public sector
 - Private sector
 - Voluntary sector/civil society
- All aspects of education are implicated
 - Formal education (from Pre-K to Post Doctoral)
 - Non-formal education (ie training and professional development in workplaces)
 - Informal education (public “awareness” affected by media, the internet, and social networking)
- *NOTE: We are at the mid-point of the UN Decade for Education for Sustainable Development (2005 – 2014)*





Should we be Optimists??

“A pessimist is an informed optimist.”

– Russian proverb

“...most of the environmental movement has been spreading the wrong message. The news must be turned on its head.... It’s time for us to shift from despair to dreams.

– Peter Gorrie on Chris Turner’s Geography of Hope.
The Star, Oct 27, 2007.

“I am an evidence-based optimist.”

– Sir Michael Marmot

Implications for MWP

- Connect to UNDESD initiatives in your own country/institution/organization
- Add your expertise to the efforts to transform education (formal, non-formal and informal) to support sustainability
- Strengthen the conversations about the business/economic dimension, especially for K-12 formal education

Bonn Declaration Excerpt

Through education and lifelong learning we can achieve lifestyles based on economic and social justice, food security, ecological integrity, sustainable livelihoods, respect for all life forms and strong values that foster social cohesion, democracy and collective action. Gender equality ...is critical for enabling development and sustainability. Education for sustainable development is immediately necessary for securing sustainable life chances, aspirations and futures for young people.

The Aboriginal Thanksgiving Address

Finally, we acknowledge one another, female and male. We give greetings and thanks that we have this opportunity to spend some time together.

We turn our minds to our ancestors and our Elders. You are the carriers of knowledge, of our history. We acknowledge the adults among us. You represent the bridge between the past and the future.

We also acknowledge our youth and children. It is to you that we will pass on the responsibilities we now carry. Soon, you will take our place in facing the challenges of life. **Soon, you will carry the burden of your people.**

Do not forget the ways of the past as you move toward the future.

Remember that we are to walk softly on our sacred Mother, the Earth, for we walk on the faces of the unborn, those who have yet to rise and take up the challenges of existence.

We must consider the effects our actions will have on their ability to live a good life.



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Shift Happens!

- “We are currently preparing students for jobs and technologies that don’t yet exist ... in order to solve problems we don’t even know are problems yet.”
- In 2006 the US graduated 1.3 million people from college (university)
 - India graduated 3.1 million
 - China graduated 3.3 million
- Top 10 in-demand jobs for 2008 did not exist in 2004
- Today’s learners will have had 10 – 14 jobs by the time they reach age 38



Education for Sustainable Development

United Nations Decade (2005-2014)



ESD: formal, non-formal and informal education

UNDESD 4 thrusts:

- Public Awareness
- Access to Quality Education
- Reorienting teacher education
- Training

“Education is a key and vital element
in moving sustainability forward...”

Report of the UN Secretary General



ESD Vision For the Region

ESD develops and strengthens the capacity of individuals, groups, communities, organizations and countries to make judgments and choices in favour of sustainable development. It can **promote a shift in people's mindsets** and in so doing enable them to make our world safer, healthier and more prosperous..



ESD Canada

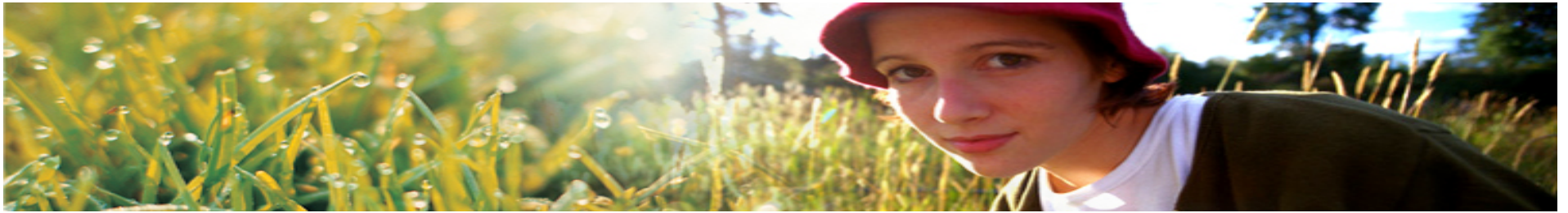
Mission:

Promote a Canadian culture of sustainability by developing and strengthening collaboration and leadership in education and training.

Goals:

- 1. Strengthen, promote & communicate ESD**
- 2. ESD leadership, innovation**
- 3. Address gaps**
- 4. Disseminate ESD research**
- 5. Monitor & report on ESD progress**
- 6. Funding**





Canada's ESD Strategic Initiatives

1. ESD Canada

- ❖ National Council
- ❖ Provincial/Territorial ESD Working Groups

2. Canadian Sustainability Curriculum Review Initiative

3. Youth Taking Action Forums

4. Sustainability Model School Project

5. Sustainability Education Academy

6. The ESD Resource Database



Traditional Education

- For Employment
- Information Transfer
- Textbooks
- Passive
- Contrived
- In the classroom with a teacher

ESD Education

- For Responsible Citizenship
- Information analysis; skill development; values clarification
- Real world sources
- Active
- Authentic
- Beyond the classroom, in the in the community



ESD Instructional Practices

- Hopeful and positive
- Interdisciplinary
- Application of action competencies-experiential
- Inquiry –problem or project based
- Involves negotiated teaching
- Supported by modeling

If today is the typical day on planet earth, humans will:

- add 15 million tons of carbon to the atmosphere
- destroy 115 square miles of tropical rain forest
- create 72 square miles of desert
- eliminate between 40 - 100 species
- erode 71 million tons of top soil
- add 2700 tons of CFCs to the stratosphere
- increase the population by 263,000.



David Orr, Ecological Literacy, 1992





Over his or her lifetime, a typical Canadian will:

- Use 125,000,000 litres of water
- consume the equivalent of 600,000 cubic meters of natural gas, 1,100,000 kgs of coal, or 575,000 litres of crude oil
- travel 700,000 kms in motor vehicles
- generate 40,000 kgs of garbage
- produce 1,300,000 kgs of greenhouse gases
- use 7,000+ kgs of pesticides & fertilizers

David Boyd, Sustainability Within a Generation: A New Vision for Canada, 2004