



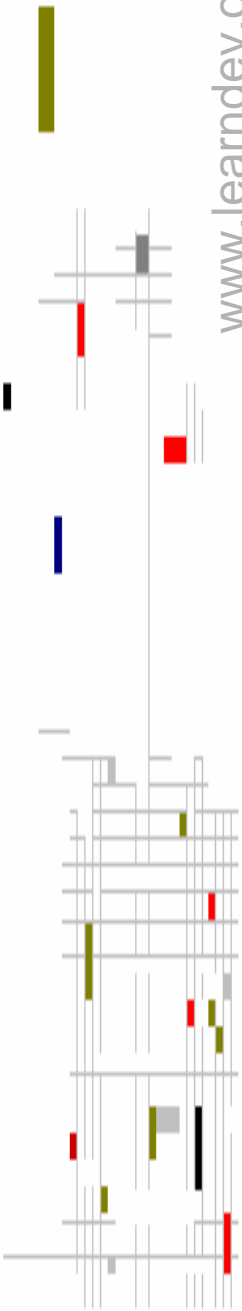
BORN IN A CONNECTED, COMPLEX, TURBULENT
AND UNCERTAIN WORLD:

GROWING UP AT THE START OF THE THIRD MILLENNIUM

Karachi - April 3, 2006

Learning Development Institute
www.learndev.org

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Rediscovering childhood



Childhood

- ❑ A state of being human that we are born with, which accompanies us throughout life.
- ❑ If we are born with it, something must have been there before we were born.
- ❑ It is best fully developed while we are young.
- ❑ It should not be suppressed but instead nurtured further as we grow older.

Walk upstairs, open the door gently, and look in the crib. What do you see? Most of us see a picture of innocence and helplessness, a clean slate. But, in fact, what we see in the crib is the greatest mind that has ever existed, the most powerful learning machine in the universe. The tiny fingers and mouth are exploration devices that probe the alien world around them with more precision than any Mars rover. The crumpled ears take a buzz of incomprehensible noise and flawlessly turn it into meaningful language. The wide eyes that sometimes seem to peer into your very soul actually do just that, deciphering your deepest feelings. The downy head surrounds a brain that is forming millions of new connections every day. That, at least, is what thirty years of scientific research have told us.

Source: Gopnik, A., Meltzoff, A. N. & Kuhl, P. K. (1999). *The scientist in the crib: Minds, brains, and how children learn*. New York, NY: William Morrow and Company, Inc

The 21st century:

A time of opportunities, challenges and dangers, requiring deep reflection.

Question:

What does it mean to be a **good human being**, to **live responsively and responsibly**, to play a **constructive role** in and be a **harmonious part** of the evolutionary history of a **diverse species** that has a unique opportunity to **elevate its shared consciousness to the next higher level**?

The way we prepare the conditions for all of us to learn in that world, starting with the very young, has everything to do with the search for intelligent answers to the above question.

Key changes:

Complexity rather than linearity.

Uncertainty rather than relative certainty.

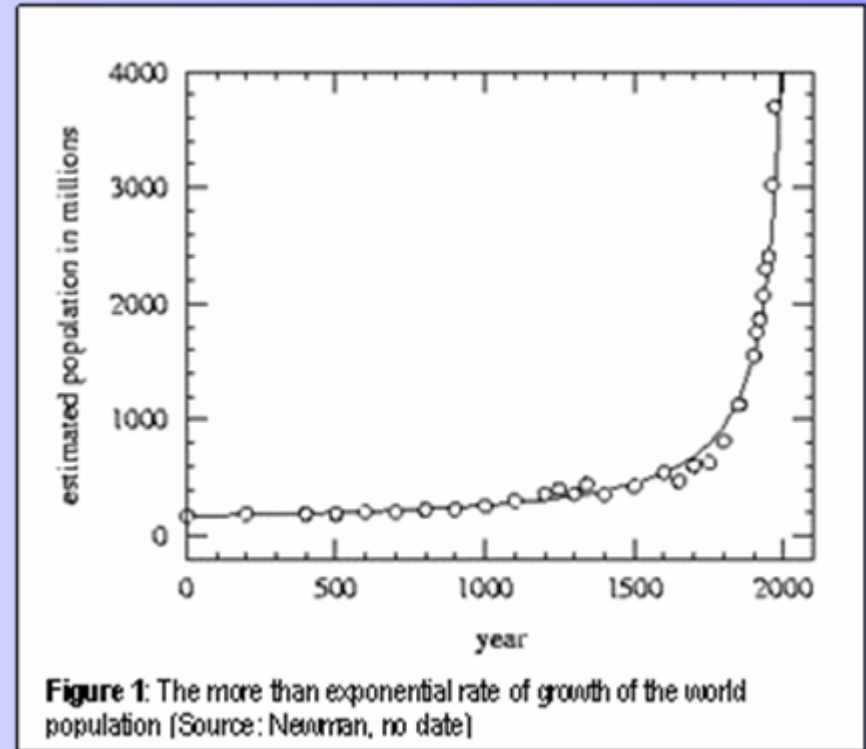
Interconnectedness challenging the ways we care for our creative diversity.

Science and Technology challenging our perceptions of what it means to be human.

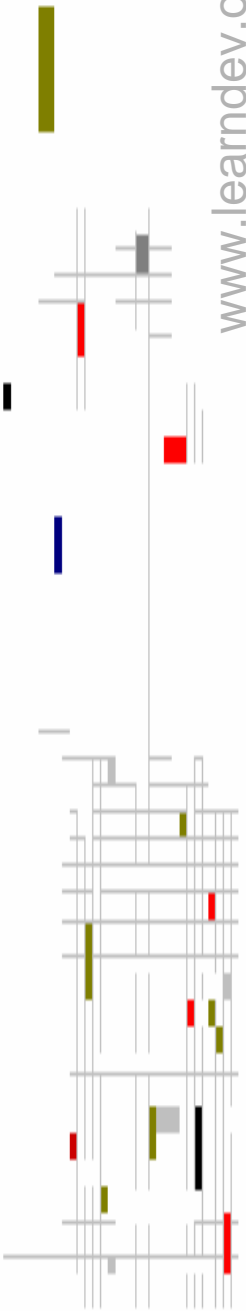
Power of destructive intervention at increasingly individual/small scale community level.

The **agricultural revolution** 10000 years ago has led to consequences that become apparent now.

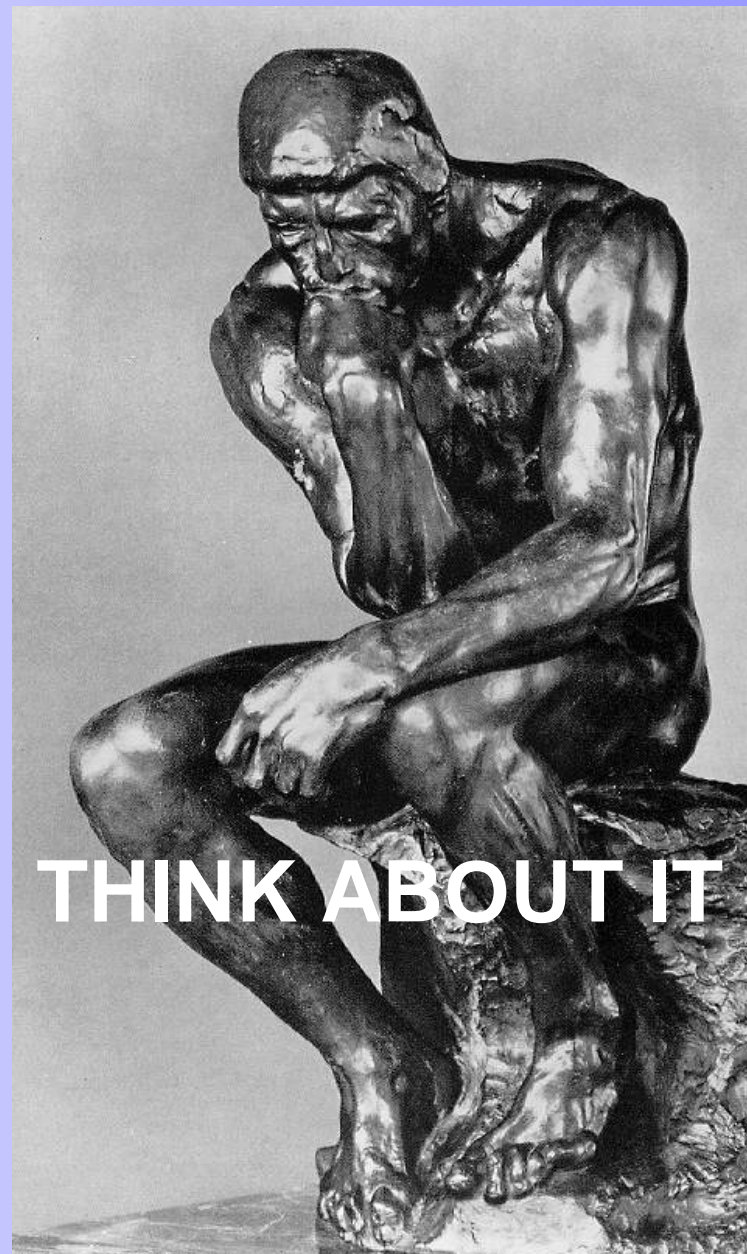
8000 BC	8 million
0	250 million
1600	500 million
1800	1000 million
1960	3041 million
2000	6082 million
2006	6525 million

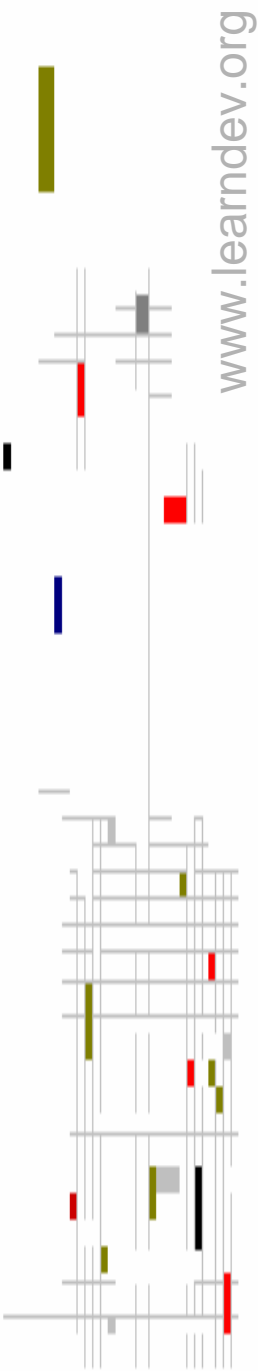


- ❑ Throughout history we have been forced to become ever more inventive in order to deal with the consequences of our inventiveness.
- ❑ Our ability to reflect on and foresee the possible consequences of inventiveness develops at a slower rate than inventiveness itself.
- ❑ We must catch up, i.e. elevate our level of deep consciousness.



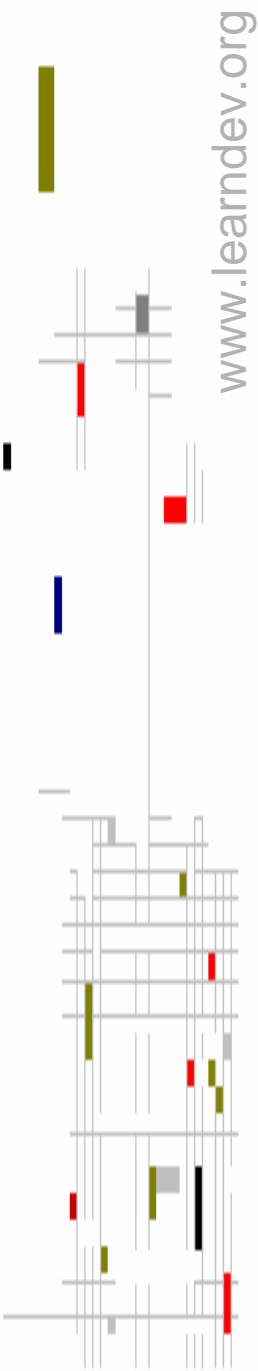
So,
What is learning?





The little we know





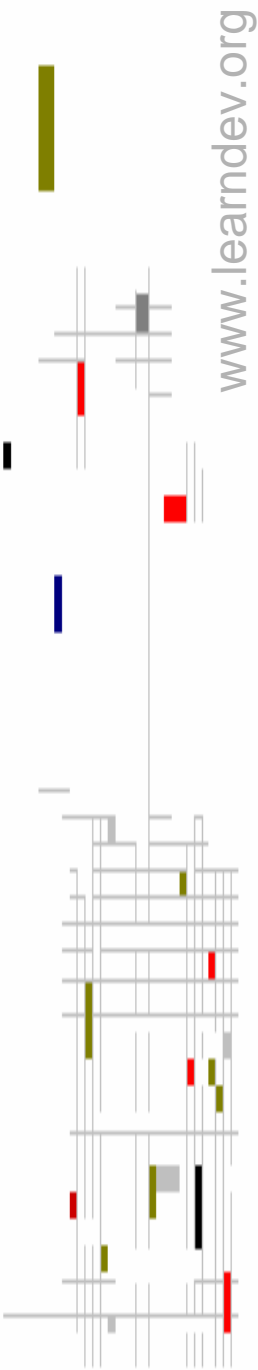
Putting the picture together





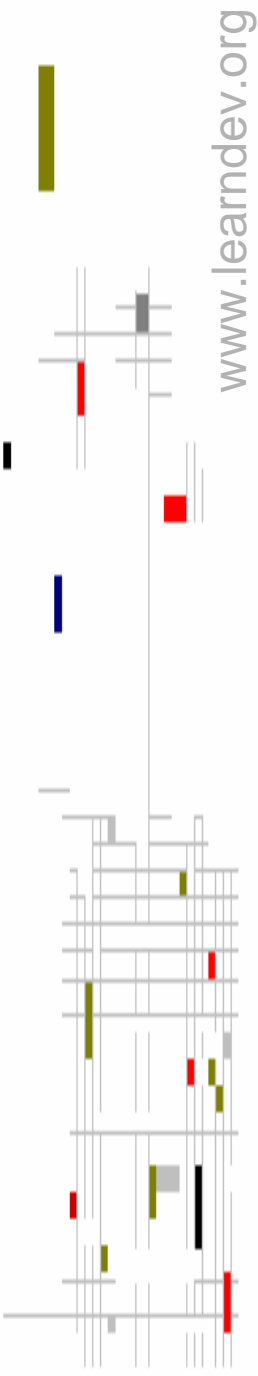
Placing things in context



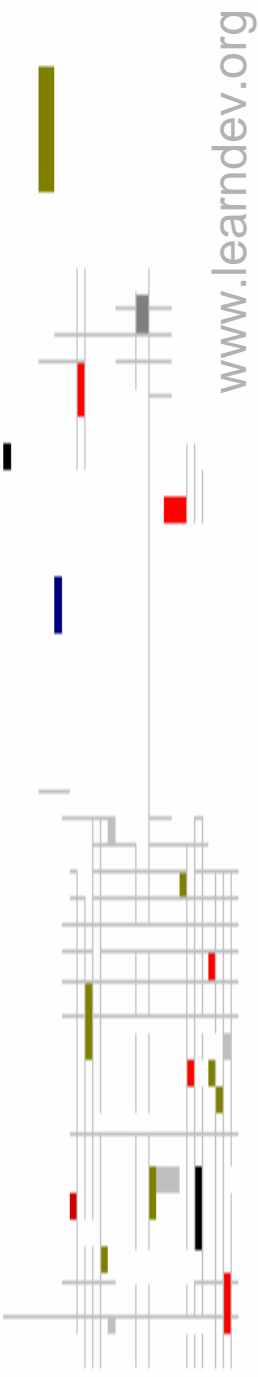


Four levels of adaptive behavior

- Level 1:** Interaction with threats and opportunities in the environment through genetically transmitted preprogrammed responses, e.g. fight and flight responses.
- Level 2:** Acquisition of essential environment-specific abilities, such as mastery of the mother tongue, driven by an inherited predisposition to do so.
- Level 3:** Deliberate acquisition of specific skills, knowledge, habits and propensities, motivated by individual choices or societal expectations, usually by exposing oneself to a purposely designed instructional – or self-instructional – process.
- Level 4:** The development and maintenance of a lifelong disposition to dialogue with one's environment for the purpose of constructively interacting with change in that environment.



A major problem in developing learning is that 'learning' is not what most people think it is.



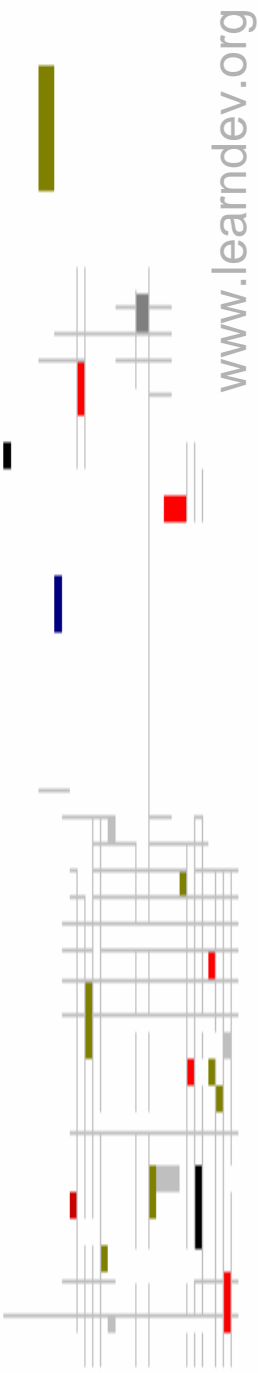
*Correcting the
problem requires a
fundamental change
of mind.*

The Trouble with Learning

Most currently held beliefs are out of touch with today's reality.

- Linked to school or instructional settings
- Linked to particular age group
- Acquisition paradigm
- Seen as individual activity
- Takes place in the heads of people
- Empty vessel metaphor
- Preparation for life
- Reaction to change
- Disciplinarity
- Compartmentalization of knowledge
- Limited slice of the intelligence spectrum (seen as fixed)
- Limited to specific space-time frames
- Favoring only certain learning styles
- Extrinsically motivated

(This list can be continued)



What it mostly looks like

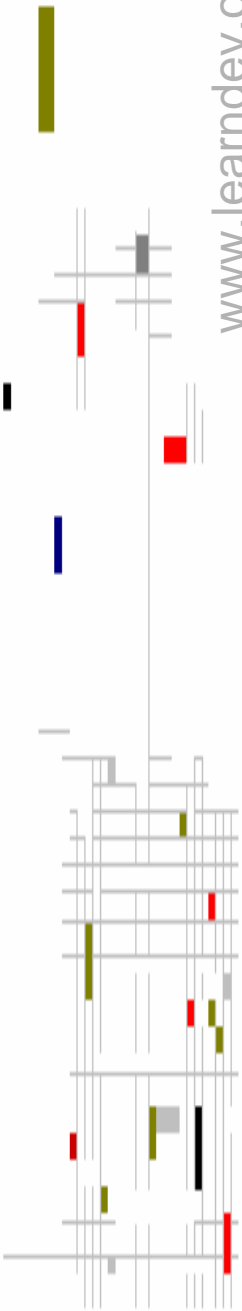
CULTURE OF SCHOOLING

What it should look like

CULTURE OF LEARNING

CULTURE OF SCHOOLING

How can we all contribute to bringing about a change in culture?



This is not a pipe.

Ceci n'est pas une pipe.

René Magritte

La Trahison des Images (The Betrayal of Images)

THIS IS NOT A METAPHOR!

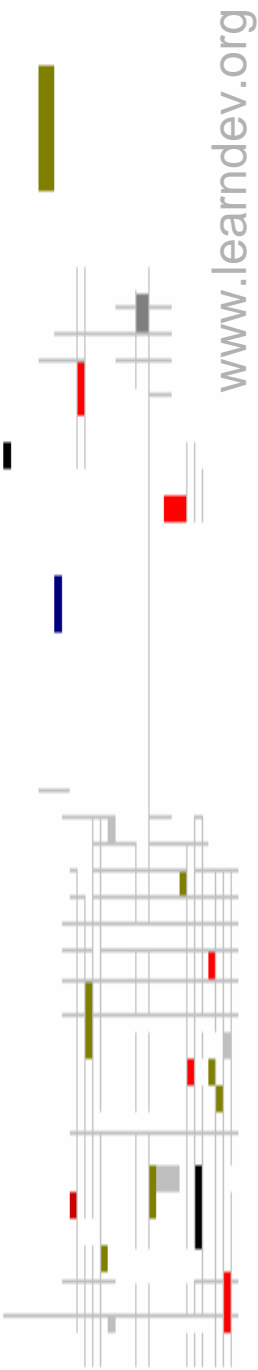
Learning is an ecology

- ❑ **Ecology:** A branch of science concerned with the interrelationship of organisms and their environments, esp. as manifested by natural cycles and rhythms, community development and structure, interaction between different kinds of organisms, geographic distribution and population alterations.

Webster's Third New International Dictionary

- ❑ The word ecology...comes from the Greek ***oikos***, meaning 'household, home, or place to live.'

Encyclopaedia Britannica, 1999



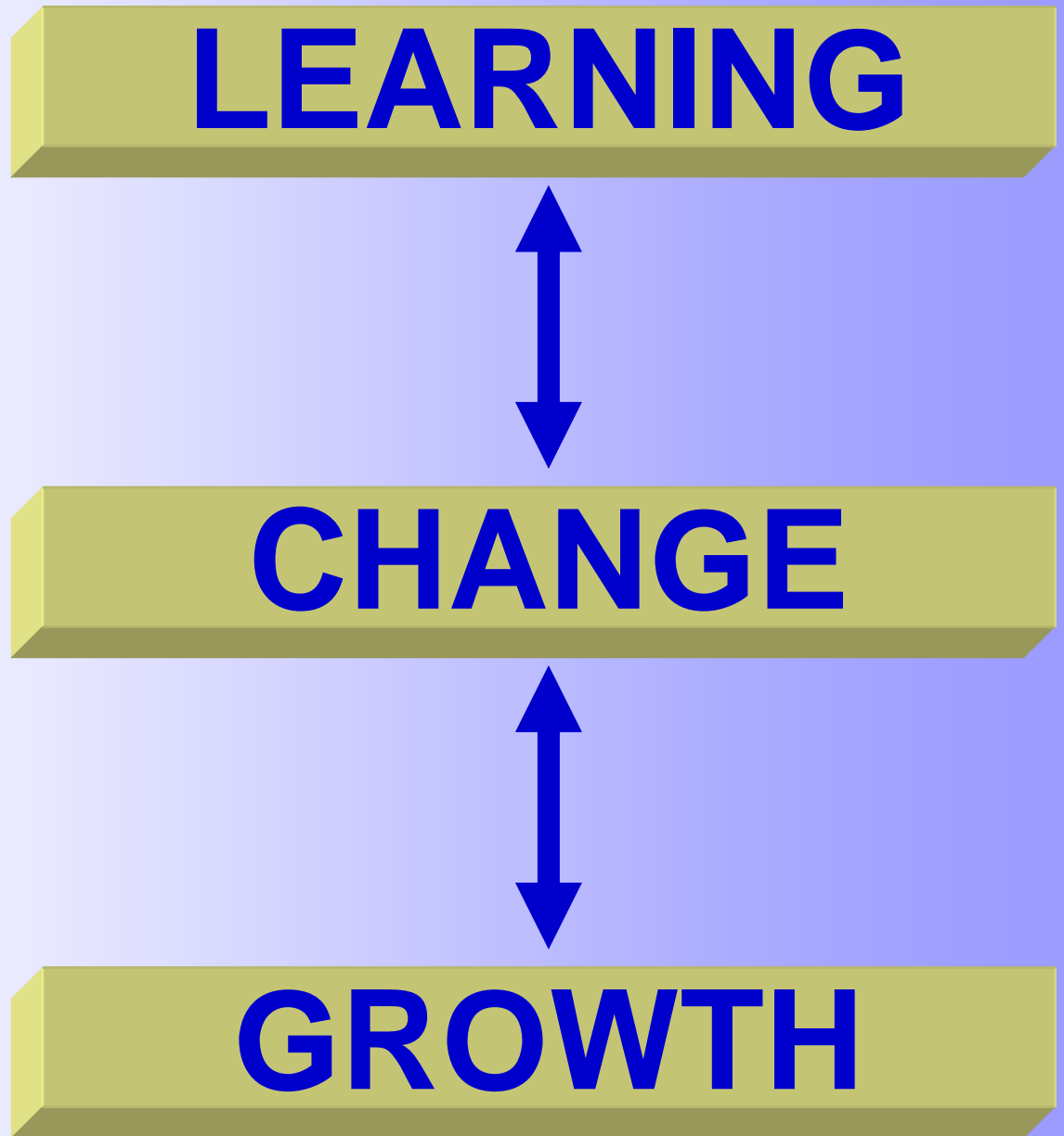
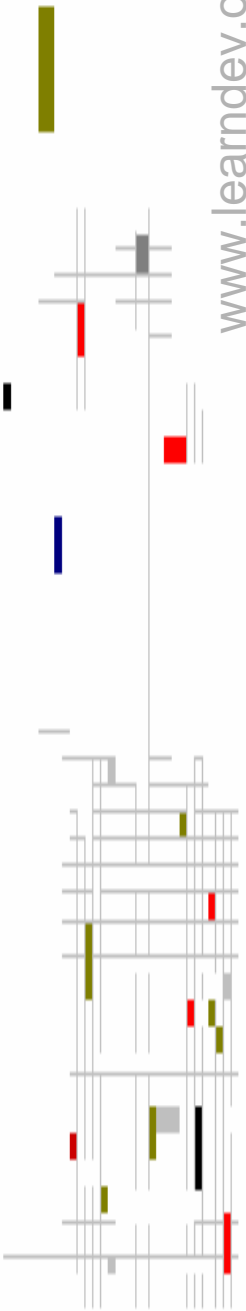
Complex cognition is an evolutionary phenomenon

“Ecological interactions take place within an evolutionary context and in turn shape the ongoing evolutionary process.”

Simon Levin (1999)

Fragile Dominion: Complexity and the Commons.

Reading, MA: Helix Books

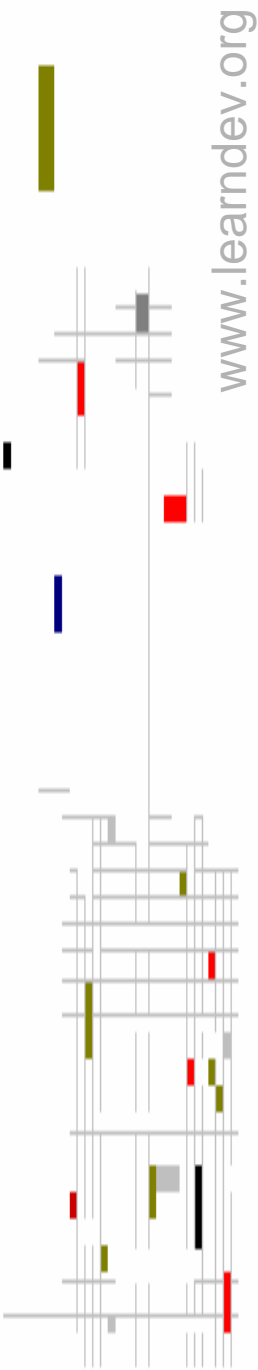


The Reinvention of Learning

Need to change beliefs, research, policy and practice in line with today's reality.

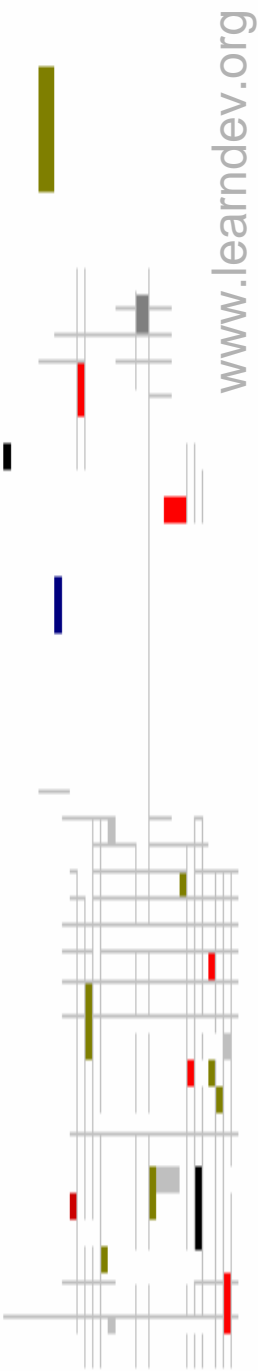
- Conceive of school or instructional settings in wider context
- Learning as lifelong disposition
- Participation paradigm
- Seen as individual and social activity
- Mainly takes place outside the heads of people
- Is dialogic
- Inherent feature of life (humans prepare for lifelong learning)
- Constructive participation in change
- Disciplinarity, multi-, inter-, and transdisciplinarity
- Consilience
- Multiple intelligences that can develop
- Multiple space-time frames
- Accommodating different learning styles
- Intrinsically motivated (motivation awakened through dialogue)

(This list can be continued)



Human learning

- ❑ Starts nine months before we are born and continues until we die (and it extends beyond our physical existence to the extent that we are all part of the social and historical process of the continual development of human knowledge)
- ❑ Occurs in multiple contexts
- ❑ Has multiple dimensions
- ❑ Is engaged in by individuals and social entities (collectives of people who share a purpose)



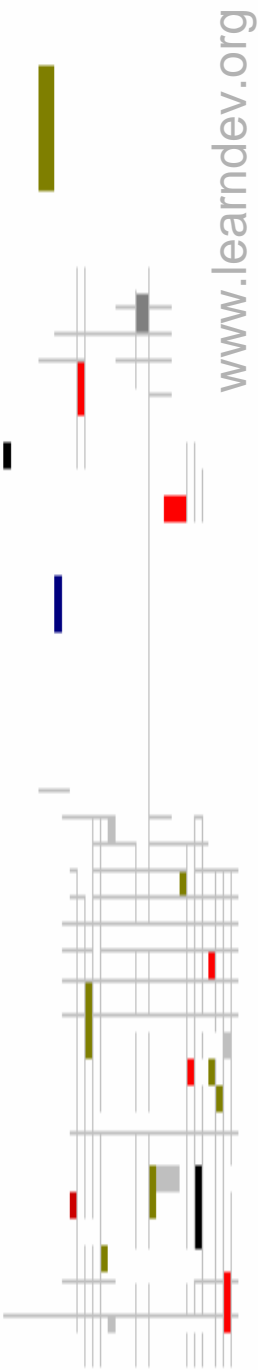
Why we learn – as seen from the perspective of our current circumstances



Explosive change

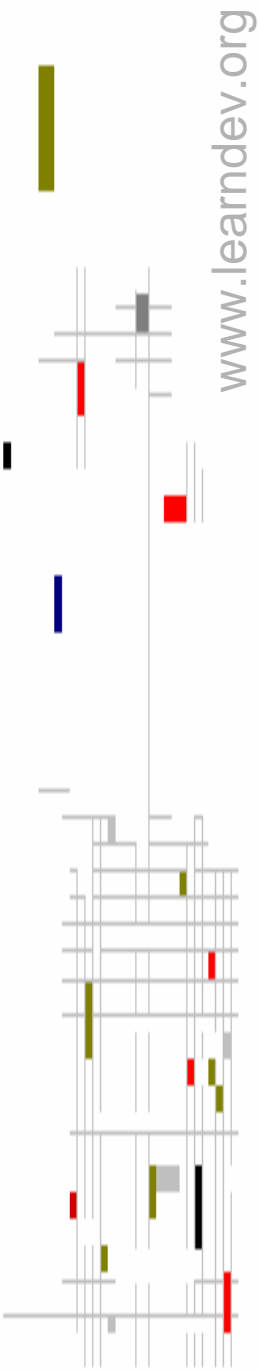


Increasing complexity



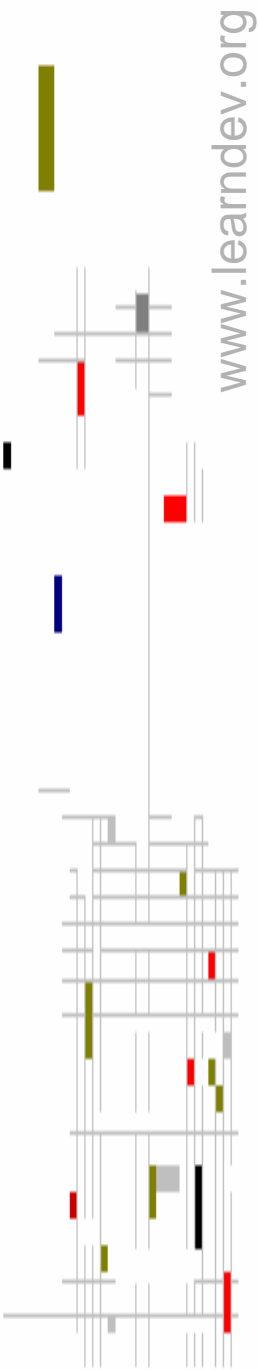
Explosive change , that has become faster than the pace at which human generations change

Everyone, at any age, is in need of learning, and continuous development of the capacity to learn has become more important than the learning of specific competencies in the early stages of life.



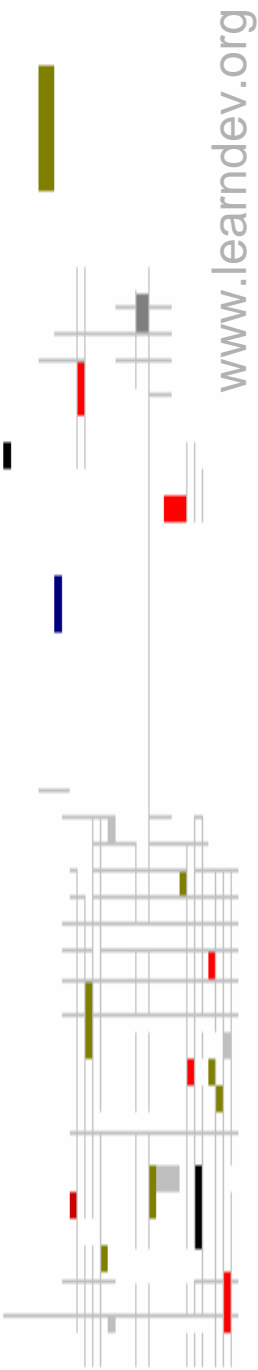
The growth from $8 \cdot 10^6$ to $6 \cdot 10^9$ or the problems of solutions that generate problems that require other solutions that generate the next set of problems...

There is...a great urgency for us not only to learn to live together, but first and foremost to learn to learn together, having in mind the dynamic relationship between where we come from and where we are going.



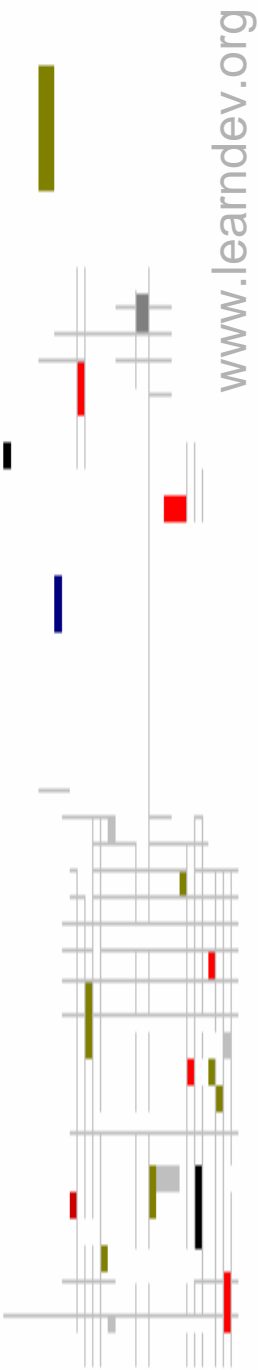
The complexity of our problems:
The impact of what we do is potentially global; yet, our world is a local one.

For our increasingly planetary society to work, we must be aware of the world as a whole while, as individuals and local communities, we must focus on the interaction with our immediate environment.



Our time – Not only in the perspective of our time, but also that of historical and evolutionary perspectives

...there is a need to reinstate in our thinking about learning a concern with ultimate values.



We and our knowledge and technological capability:

The need to pass to the next level of consciousness

...develop meta-learning abilities that allow us to ask pertinent questions, to set responsible goals and to use technology wisely in the pursuit of those goals.

The kind of learning we need

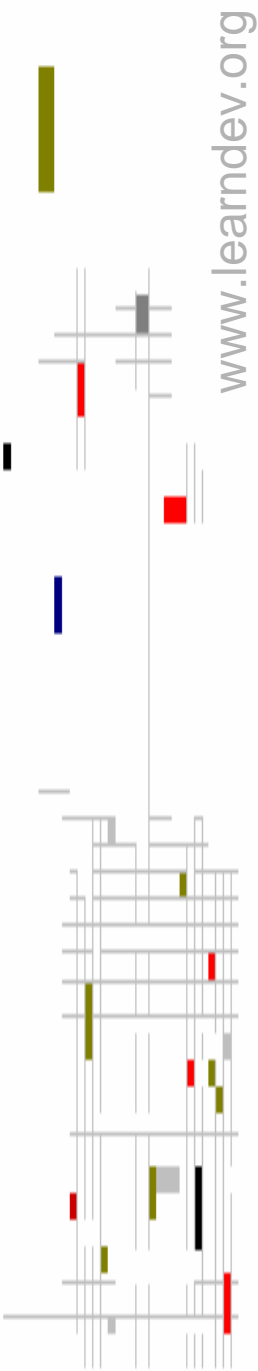
- *If there is such a thing as “preparation for life,” then it must be a preparation that allows us to cope with the unpredictable.*
- *Need to learn beyond disciplines; to enhance our ability to problematize; to work on problems creatively and collaboratively.*
- *Need to perceive of learning as an ecological phenomenon: Learning is generative; no learning stands on its own.*

At a societal level we must be aware of the need to develop “learning environmental policies” that can ensure that learning becomes mutually reinforcing in the different, though interconnected, parts of the learning ecology.

Learning undefined

*“Human learning is the **disposition** of human beings, and of the **social entities** to which they pertain, to engage in continuous **dialogue** with the human, social, biological and physical environment, so as to generate intelligent behavior to **interact constructively with change.**”*

Visser (2001). Integrity, completeness and comprehensiveness of the learning environment: Meeting the basic learning needs of all throughout life. In D. N. Aspin, J. D. Chapman, M. J. Hatton and Y. Sawano (Eds), *International Handbook of Lifelong Learning* (pp. 447-472). Dordrecht, The Netherlands: Kluwer Academic Publishers.



To be an educated person...means

to be able to take charge and give direction to one's life; to do so while being fully aware that "one's life" is inseparably interwoven, in space and time, with the lives of others (humans and non-humans) and with nature in general; and to enhance our common humanity through the active dialogue that ensues.

THANK YOU



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