

Book of Problems

or what we don't know about learning

a follow-up

Learning Development Institute (LDI)
WWW.LEARNDEV.ORG

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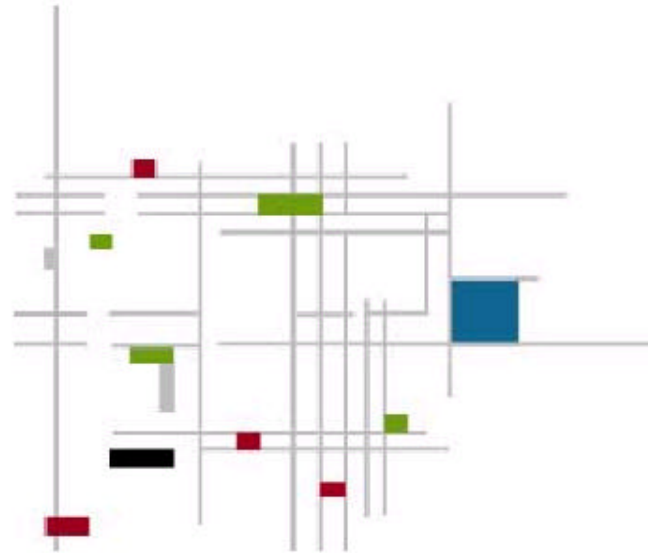
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Learning Development Institute



A Transdisciplinary
Networked Learning
Community Devoted
to Excellence in the
Development and
Study of Learning

Click here for your direct link to the following current and future events:

[*Innovación Educativa apoyada en Tecnologías*](#) (Universidad Autónoma San Luis Potosí, México, 15-21 de octubre de 2003)

[*Critical reflection on learning and development in the light of learning stories from Mozambique*](#) (AECT, Anaheim, CA, October 2003)

[*Ambiguity, cognition, learning, teaching, and design*](#) (AECT, Anaheim, CA, October 2003)

[*Criação de capacidade para o desenvolvimento do ensino a distância em Moçambique*](#) (Agosto de 2003 até Junho de 2004)

[*3e Rencontres Internationales Science et Conscience - Transdisciplinarité, un chemin vers la paix?*](#) (Strasbourg, France, mai 2003)

[*Meaningful learning in the Democratic Republic Congo*](#) (Since January 2003)

[*The Book of Problems \(or what we don't know about learning\)*](#) (AECT 2002) - *Special Session and Workshop* at AECT 2003 in Anaheim, CA, October 2003.

Click here for a:

[*Full Overview of Major Events Since February 2000*](#)

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Overview of Major Events

Since February 2000

Click the items below for your direct link to the following events (listed in reverse chronological order):

2003

- [Innovación Educativa apoyada en Tecnologías](#) (Universidad Autónoma San Luis Potosí, México, 15-21 de octubre de 2003)
- [Special Session and Workshop on the Book of Problems \(BOP\)](#) at AECT 2003 in Anaheim, CA, October 2003
- [Critical reflection on learning and development in the light of learning stories from Mozambique](#) (AECT, Anaheim, CA, October 2003)
- [Ambiguity, cognition, learning, teaching, and design](#) (AECT, Anaheim, CA, October 2003)
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- [Meaningful learning in the Democratic Republic Congo](#) (Since January 2003)

2002

- [De l'idée d'apprendre sans frontières à la notion du développement de l'apprentissage](#) (Montréal, Québec, Canada, 6 décembre 2002)
- [The Book of Problems \(or what we don't know about learning\)](#) (AECT 2002).
- [Mind over Competency](#) (AECT, Dallas, TX, November 2002)
- [Critical Thinking and Discourse in Distance Education and Traditional Education](#) (AECT, Dallas, TX, November 2002)
- [Construyendo la Universidad de Sabiduría para el Siglo XXI](#) (Guadalajara, agosto 2002)

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BOOK OF PROBLEMS

Presidential Workshops and Interactive Discussion Sessions
at the
International Conferences
of the
Association for Educational Communications and Technology
Dallas, Texas, November 12-16, 2002, and
Anaheim, California, October 22-25, 2003

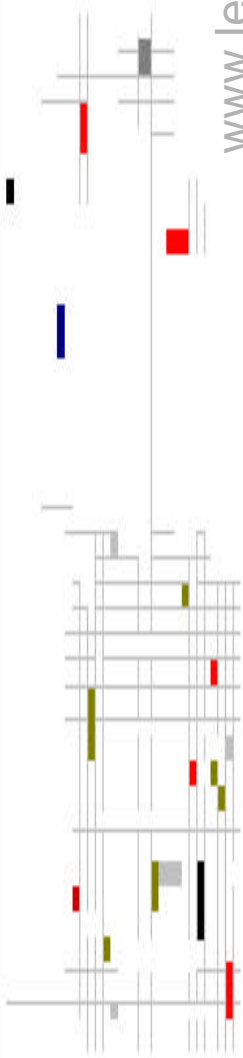
- [Introduction](#)
- [Workshop and Interactive Session at the AECT 2002 International Conference](#)
- [The "Book of Problems" community of scholars](#)
- [Inputs into a collaborative dialogue](#)
- [A short report on the 2002 meeting in Dallas, TX](#)
- [Special Panel Session and Workshop at AECT 2003 \(Anaheim, CA\)](#)

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INTRODUCTION

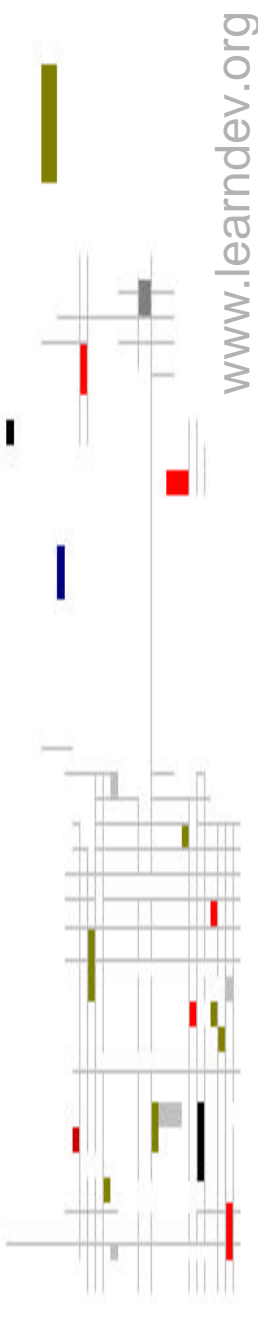
In re mathematica ars proponendi quaestionem pluris facienda est quam solvendi.

The above motto, on the front page of Georg Cantor's thesis, is cited in Stanislaw Ulam's (1991) autobiography "Adventures of a Mathematician." Cantor's affirmation that "in mathematics the art of asking questions is more commonly applied than that of solving problems" is more than a statement of fact. For someone who, like Cantor, the creator of Set Theory and discoverer



The Scottish Café in Lwów





**In re mathematica ars proponendi
quaestionem pluris facienda est
quam solvendi.**

(Georg Cantor)

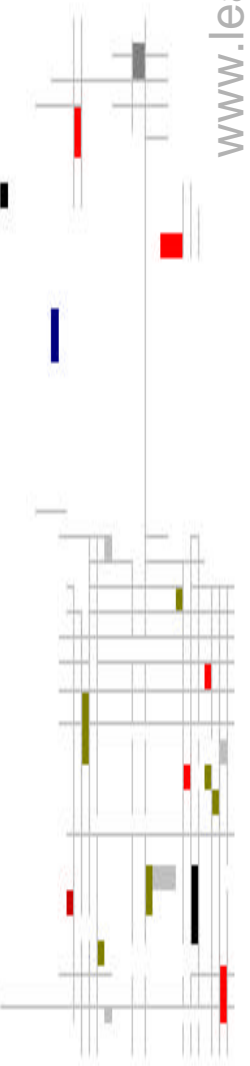
If

“in mathematics the art of asking questions is more commonly applied than that of solving problems,”

then

why should those who advance our knowledge about human learning not similarly get excited about our unsolved problems, rather than about the trade of producing more and more answers that often largely confirm what we seem to know intuitively anyway.

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24 Oct 2003

BOP FOL

Last year's Presidential Session

- See report in TechTrends Volume 47, Number 1, pages 5-8 [Online version: <http://www.learndev.org/dl/TalkingAboutTheUnknown.pdf>]

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Talking about the unknown

by Jan Visser & Muriel Visser

Any scientist . . . who wants to make important discoveries must study important problems. Dull or piffling problems yield dull or piffling answers. . . . The problem must be such that it *matters* what the answer is.
Peter B. Medawar, 1979 (p. 13)

From Lwów to Dallas

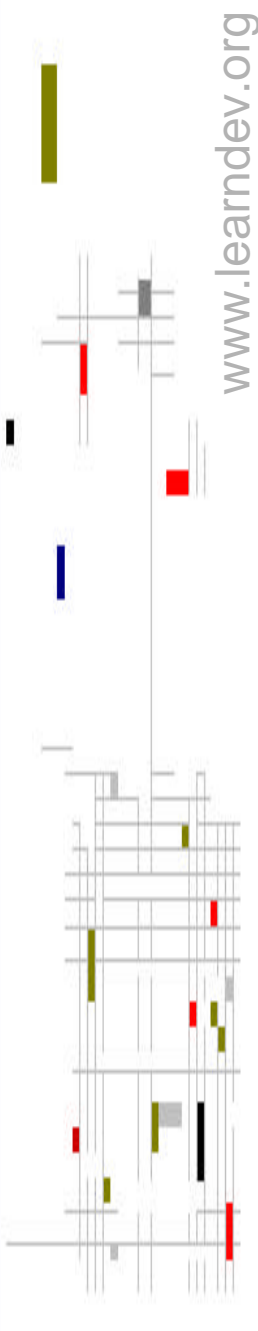
Consciousness about what we don't know is a major condition for the advancement of any science. Thus, in the first half of the 20th century, Polish mathematicians, who used to gather in the cafés and tearooms of places like Lwów to discuss the defining questions of their field, developed a handwritten book in which they inscribed – and

excerpt of the book can be found at <http://www.icm.edu.pl/home/delta/delta2/dlt0209.html>.)

So far about mathematics, though. The remainder of this article is not about mathematics but about the science of learning and about an initiative of the Learning Development Institute (LDI) called the *Book of Problems (or what we don't know about learning)*. This initiative – called the BOP initiative

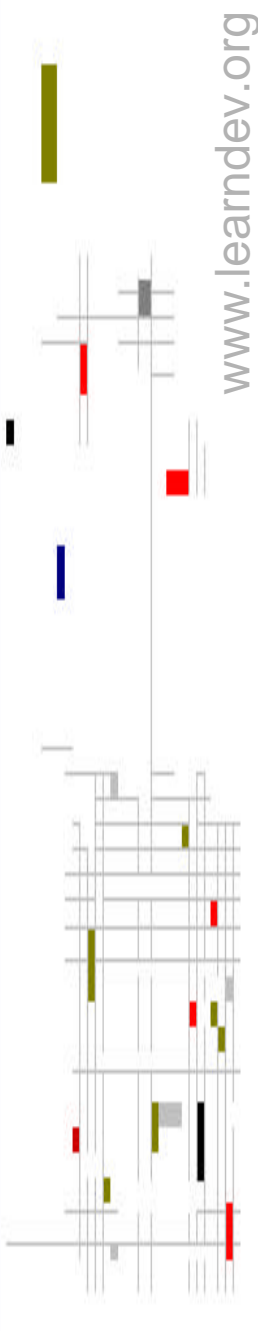
handle on the issue of learning, particularly in so far as we are able to create in a deliberate fashion the conditions necessary for generating, through instruction and training, specifically formulated learning outcomes. However, such a conclusion is merely correct to the extent that one defines learning as the consequence of instruction. As soon as one is willing to look at learning as something more broadly defined

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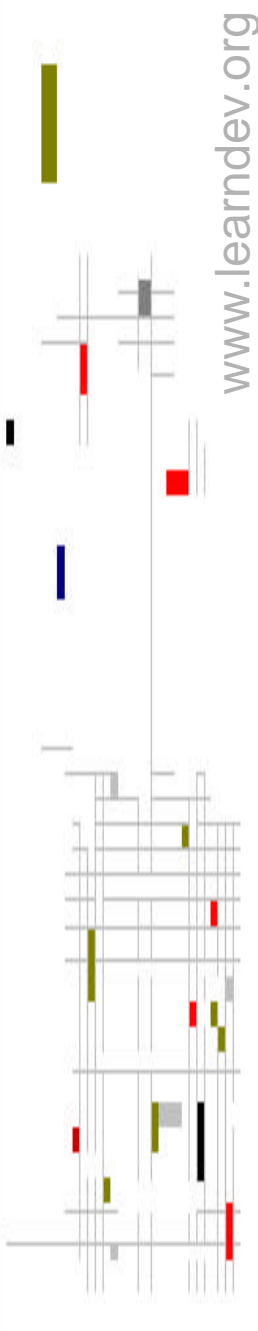
Decontextualized snapshots

- How would our understanding of learning be transformed if its purpose were joint discovery and shared knowledge rather than competition and achievement?
- What makes socialization and acculturation so effective and how could their "active ingredients" be incorporated into instruction?
- Can we know too much? And how can we possibly construct a dossier of misconceptions, of "natural" assumptions that must be viewed with suspicion. How can one develop the ability to recognize and delete the irrelevant knowledge which blocks creativity?



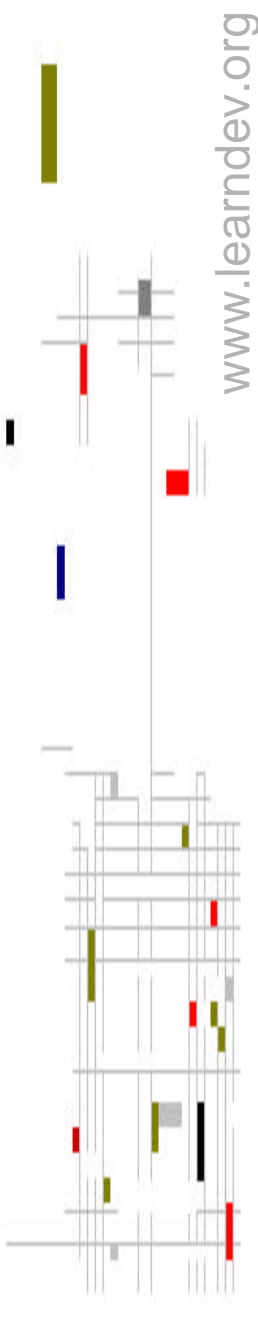
Further decontextualized snapshots

- ❑ What is there in our genetic instructions that itself leads us to be able to overcome those same genetic instructions and routinely invent radically new forms of behavior and interaction?
- ❑ Can we imagine that, in the future, learning through initiatives outside formal institutional settings will be more important than inside them? How can one help the development of such an evolution of learning?
- ❑ What is the practical role of the included middle (paradox, oxymoron, etc.) in the process of learning? How could this build transcultural and transreligious attitudes?



Results so far:

- Some 25 statements by contributors (see BOP page at learndev.org)
- Book project
 - Question: What kind of book? → Develop collective generative conceptual framework → contributions → iterative further development of both the framework and the contributions → conclusions.
 - Audiences.
 - Purposes.
 - Format.
- Continued collective thinking process, hopefully also affecting those that not formally pertain to the BOP community.



Prompts to discussion

- ❑ Does learning matter? Why and in what ways?
- ❑ Through learning we have affected the planet in such ways that it now requires that learning be redefined at the next higher level to help us live with our own ingenuity.
- ❑ What do we do about the rigidity of belief systems?
- ❑ What does it mean to be human in a world in which humans become an evermore integrated part of their technological extensions?
- ❑ Learning is intimately associated with growth and change. However, the establishment that claims to promote and facilitate it is among the most conservative and resistant to change ever created by human beings. How can the contradiction be solved? (Organizational clock speed.)

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