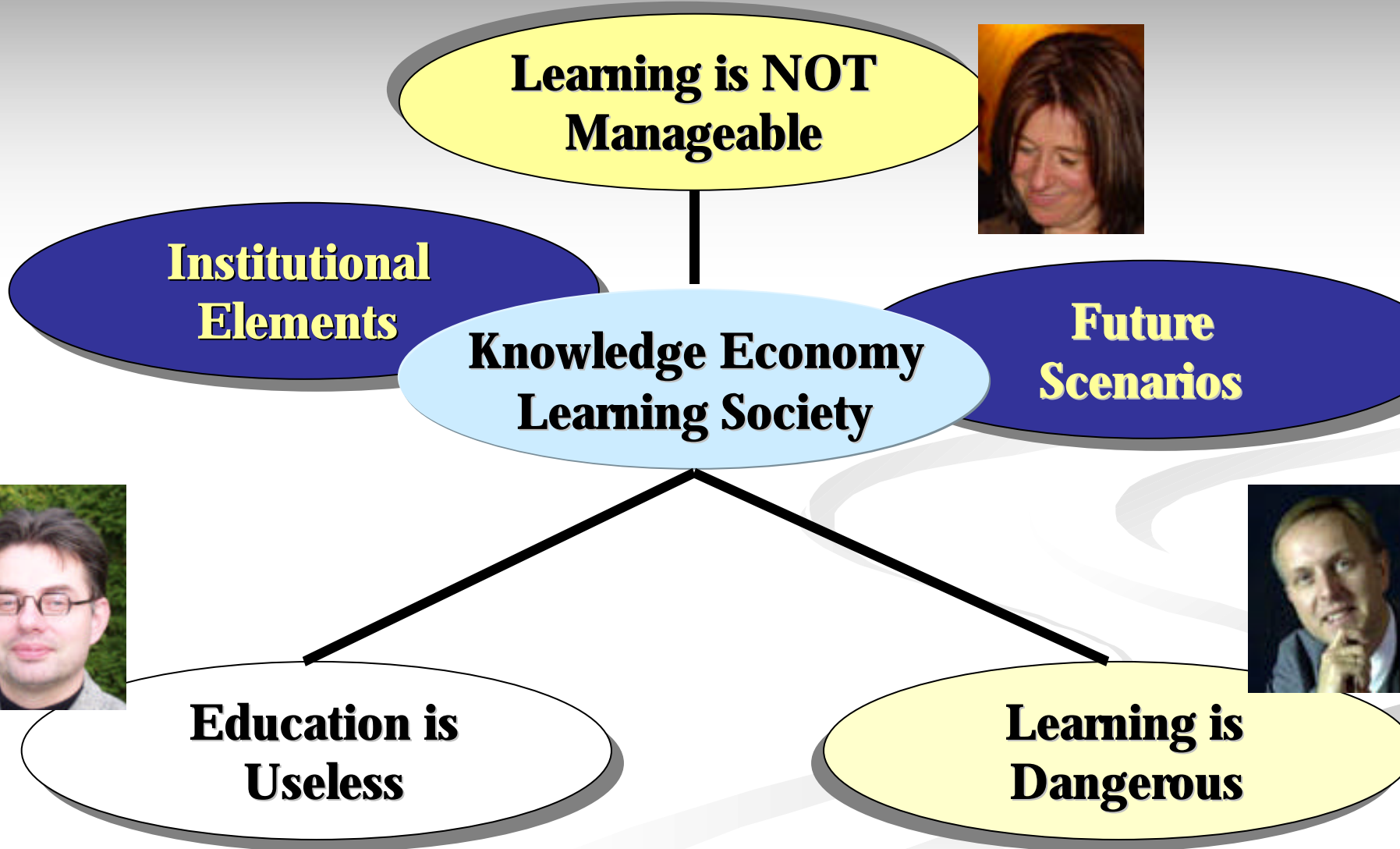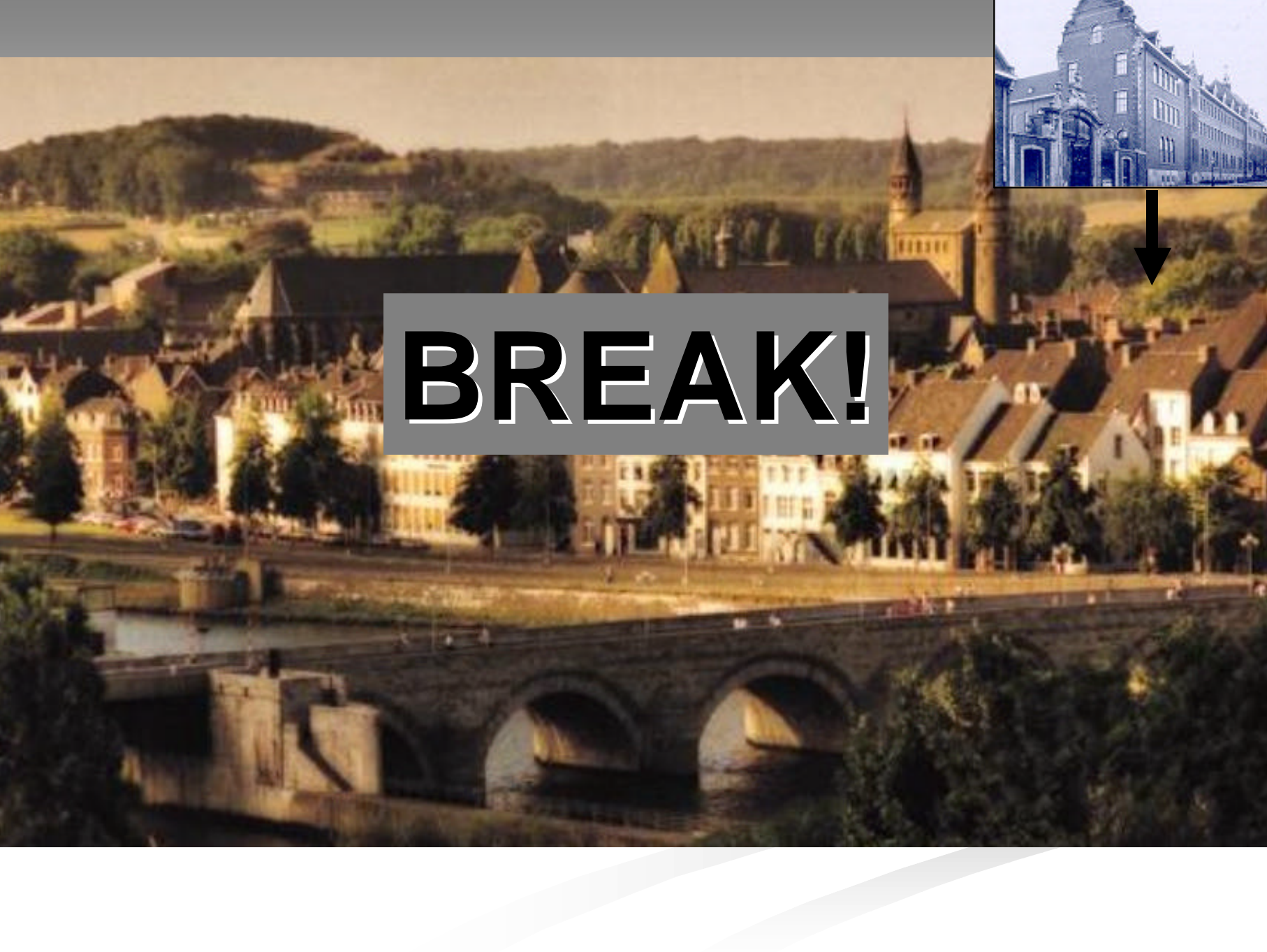# Future of Education & Learning

Prof. Dr. Wim Gijselaers (Maastricht University)

Associate Prof. Frank Lekanne Deprez (Director Zero Space)

Prof. Dr. Mien Segers (Leiden University)
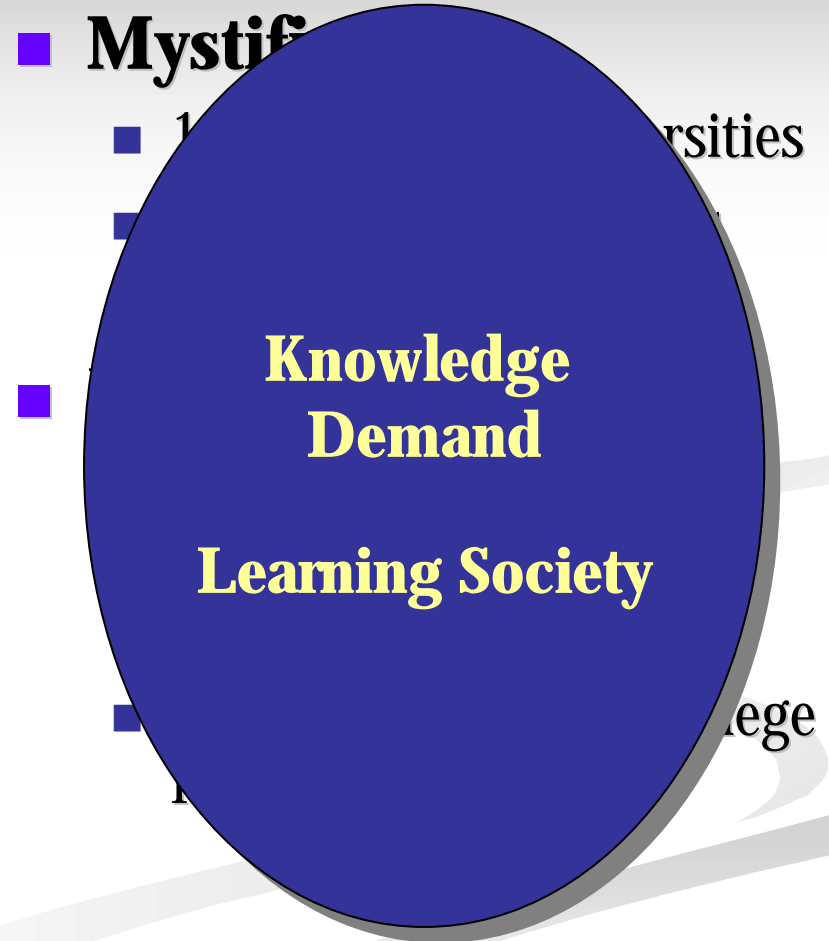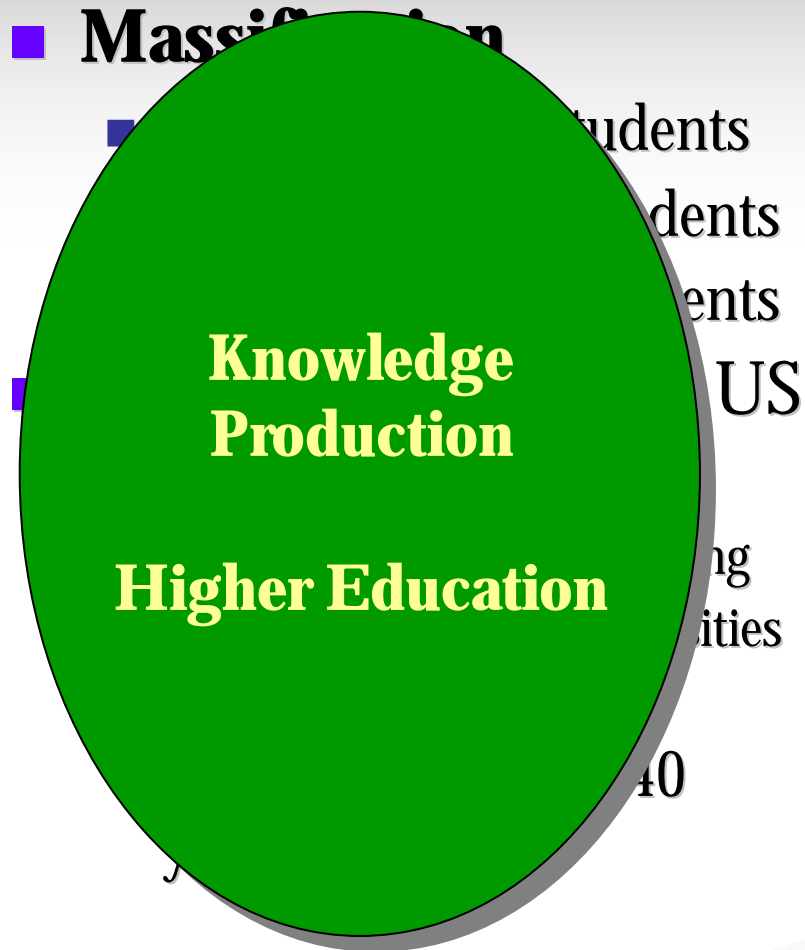
BREAK!

What Did You Learn at School?

The Learning Economy

- *"Sectors that use knowledge inputs such as R&D and skilled labor most intensively, grow most rapidly."*

- *"New Economy is knowledge-based. The main function of non-production workers is to introduce or cope with change."*

- *"UK labor market data show that learning is more intensive and extensive in the top than in the bottom of organizations."*

- *"Learning is more important in sectors characterized by frequent innovation."*

    - OECD (2000). Knowledge Management in the Learning Society

Education is Useless: the Big Gap

- … "MBAs did not outpace non-MBA's in five critical areas: Helping others, initiative, leadership, relationship, and sense making."
    - Kretovics (1999). Assistant Dean, Colorado State University
- 141 CEOs and senior executives rated non-business school graduates as better than MBAs in commitment to hard work, oral and written communication.
    - (2002) Financial Post, Canada
- "Without a larger clinical or practice component, it is not clear that business schools ever will impart much lasting knowledge that affects graduates' performance."
    - Academy of Management (2002).

Massification & Mystification

- **Massification**
  - tudents
  - dents
  - ents
  - US
  - ng
  - ities
  - 40

Knowledge Production

Higher Education

- **Mystif...**
  - 1 rsities
  -
  - ...ege

Knowledge Demand

Learning Society

Massification

Your admissions counselor.
Your questions answered.

University of Phoenix
ONLINE

Advantage | Tuition | Admissions | Programs

N YOUR
STER'S IN
MONTHS
R LESS.

TAKE ADVANTAGE OF OUR FAST TRACK DEGREE
OPTION. PROGRAM AVAILABILITY IS LIMITED —
CONTACT US TODAY FOR DETAILS!

ou contact us, you'll also receive our comprehensive program

Together, your counselor and program catalog will cover everything

d to know about getting started at the leading online university -

g degree information, tuition assistance and the application process.

Connect with an enrollment advisor

To receive your catalog and speak with an enrollment advisor, complete this brief form.

Program
select a program

Country
select your country of residence

Are you or your spouse eligible for U.S. Military education benefits?   <optional>
if yes, select military branch

Will you be 21 or older upon enrollment?
⚪ yes   ⚪ no

First Name
Last Name
Street Address
Address Type   ⚪ Home   ⚪ Business
City
State/Province
<or> Other
Zip/Postal Code
E-mail
Employer

ript:navigateForm('default.asp');

Internet

Mystification

MOTOROLA
intelligence everywhere

Making things smarter and life better

About Motorola · Products and Services · Shop   Search

rola
versity

view

Six Sigma Services

History

Experience

Instructors

ram Calendar

ster Now!

arning

nership Program

t is Six Sigma?

s

er Resources

act Us

IX SIGMA
6σ

➤ Welcome to Motorola University!

Spreading Six Sigma® around the globe

As Motorola's corporate change agent and a world-renowned corporate university, ==Motorola University brings time-tested and highly refined business improvement practices to leading organizations around the world.==

Most notably, as the inventor of the Six Sigma methodology for continuous improvement, Motorola University offers a variety of Six Sigma services designed for speed, results, and sustainability -- whatever the size or nature of your business.

This site is for you if you're looking for...

- Business process improvement services tailored to your organization's needs
- Customized Six Sigma launch support
- Open enrollment Six Sigma Black Belt and Green Belt programs

To learn more about our customizable programs, explore
Our Six Sigma Services.

New Program

Six Sigma
for Software and IT
Learn more...

Just Released!

Our e-Learning
Foundations program
Learn more...

🌐 Asia Visito

Enter here for region
specific information

New **Six Sigma**

Connection Between Graduates and Work

- Traditional liberal conception
  - Reflexive capability, intellectual capacity to think holistically and critically, imbued with values associated with scholarship and discipline
    - … "what professional men should carry away with them from a University, is not professional knowledge, but that which should direct the use of their professional knowledge, and bring the light of general culture to illuminate the technicalities of a special pursuit."
      - John Stuart Mill (1867).
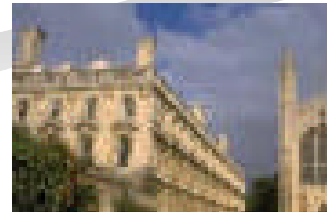
Changes in the Nature of Work

- Labour processes in the 21st century
  - A growing number of jobs with blurred boundaries of

Crisis of Confidence.
… Massive expansion of HE is a naïve human capital approach. Students perversely wanted to engage in esoteric studies (sociology), and the expected transfer of general intellectual capability to economic verve and dynamism did not meet the fast evolving requirements of new work processes…
- *Saunders & Machell (2000). Higher Education Policy*

Why Education is Useless
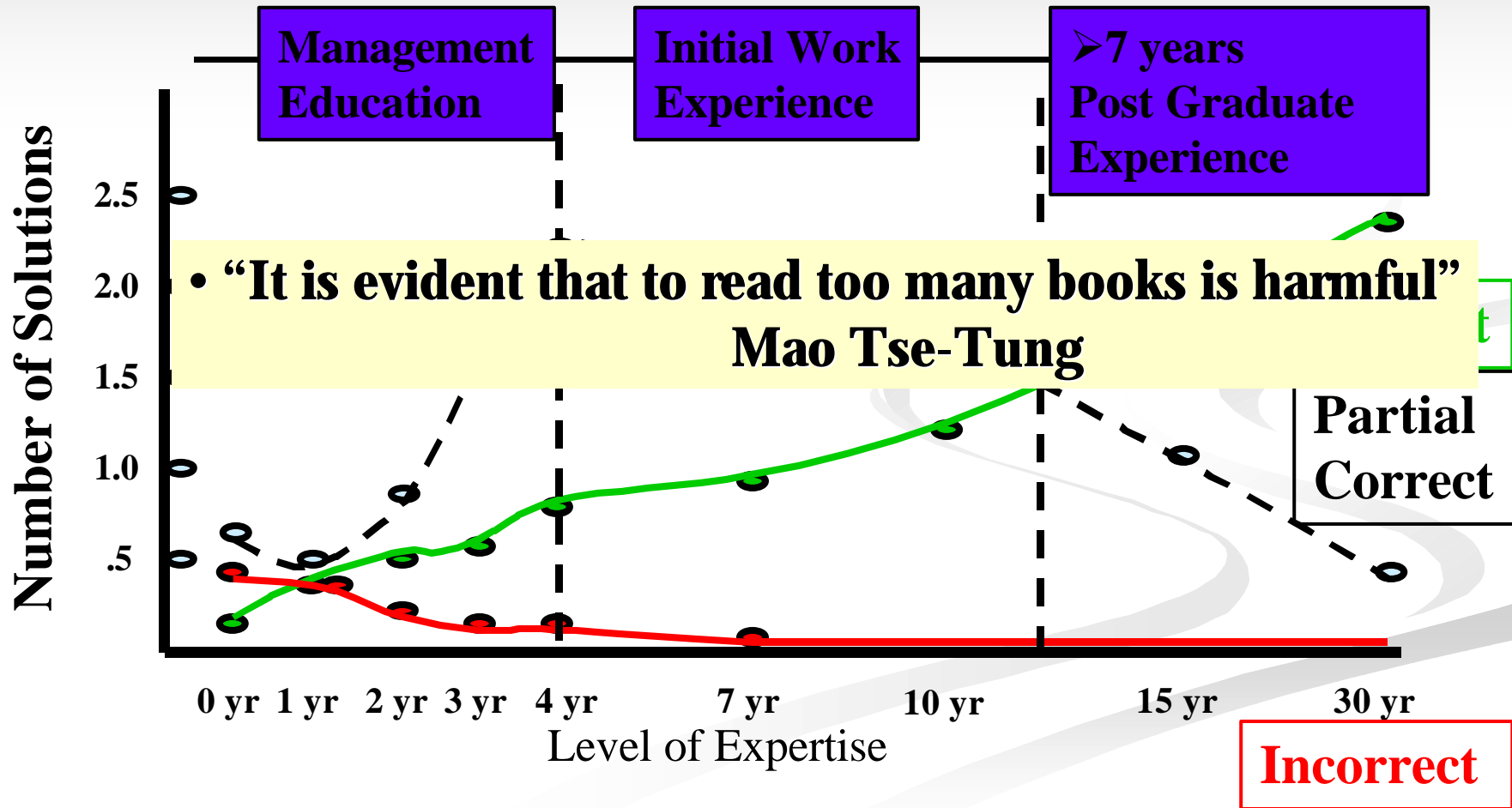
Four Different Kinds of Knowledge

- **Know-what**
  - Facts & Information
- **Know-why**
  - Principles and laws in nature: Science-based areas. Public knowledge within the borders of High. Ed.
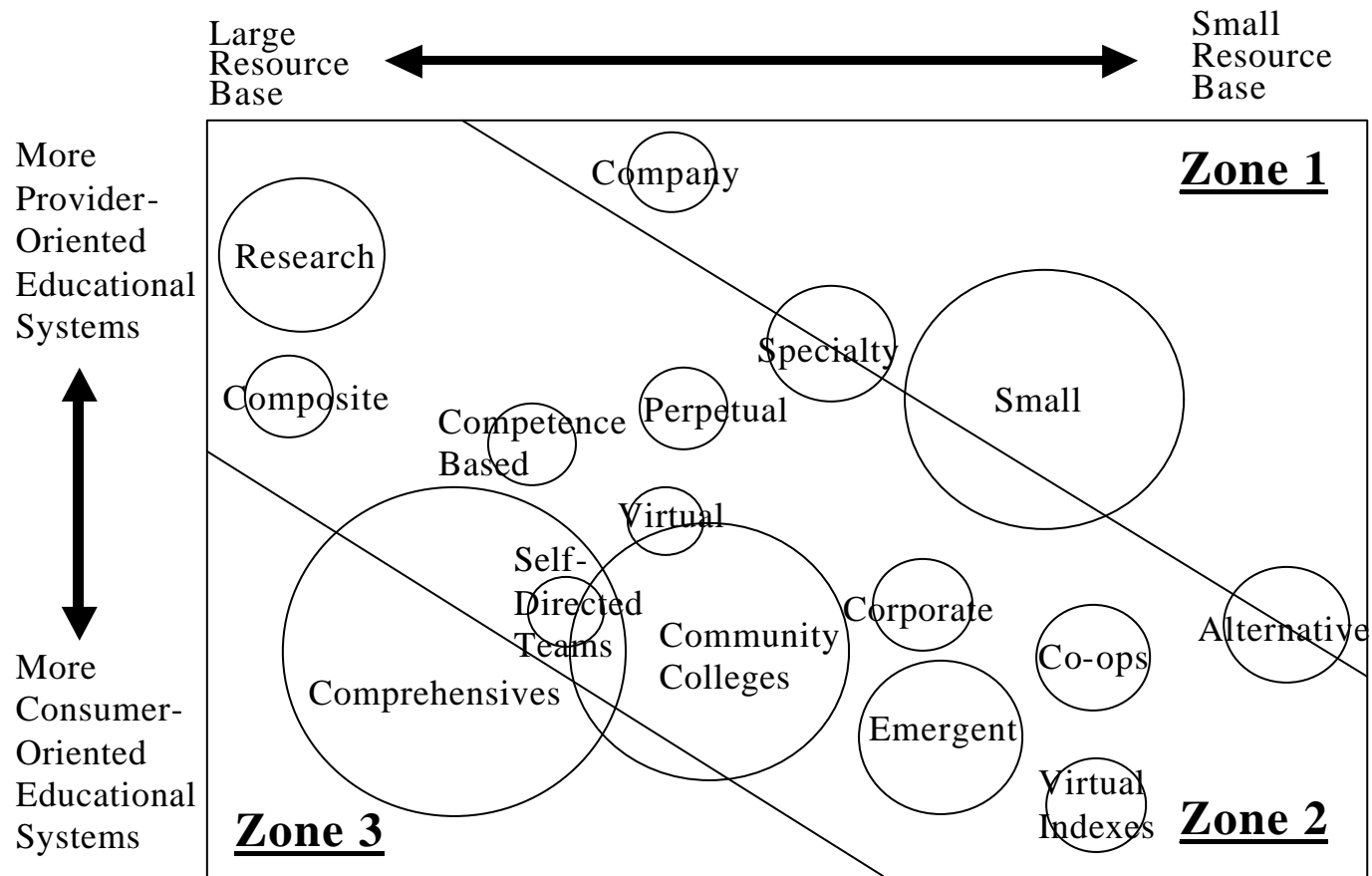- **Know-how**
  - Skills that play a role in important economic activities. Kept within the borders of a firm.
- **Know-who**
  - Social ability to co-operate and develop a composite knowledge base.

A View of the Future

Strategic Positioning of Information Age Colleges and Universities

Large Resource Base

Small Resource Base

More Provider-Oriented Educational Systems

More Consumer-Oriented Educational Systems

Zone 1

Company

Research

Specialty

Small

Composite

Competence Based

Perpetual

Virtual

Self-Directed Teams

Corporate

Alternative

Co-ops

Community Colleges

Comprehensives

Emergent

Virtual Indexes

Zone 2

Zone 3

5 Principles For the Design of Future Learning and Education

- Provide strong grounding in knowledge development
- Emphasize skills development:
  - "people skills", problem-solving skills, …
- Design curricula so that students can learn
- Encourage students to learn by doing, and do it at the workplace
- Design Higher Education to meet these Demands
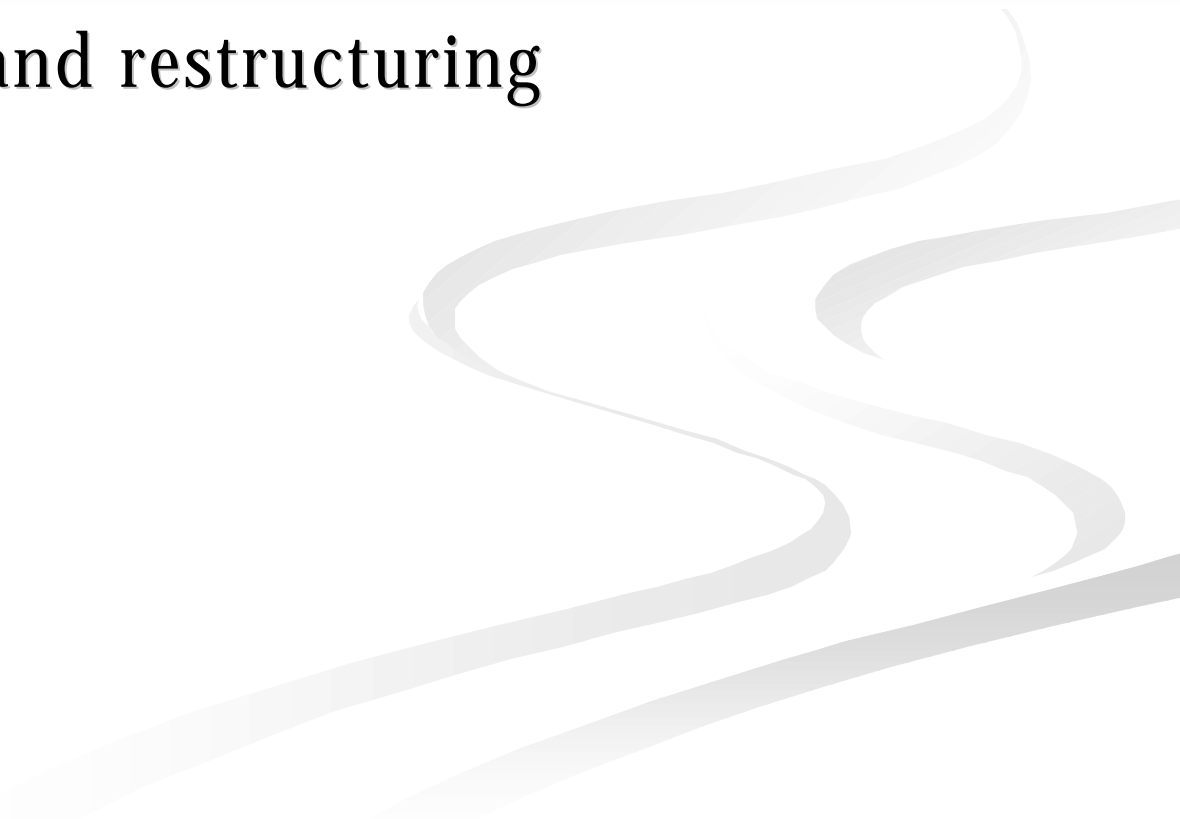 - Profiled, accessible, user friendly, top quality, alliances with the workplace

Learning is not manageable

Prof. Dr. Mien Segers

University Leiden

School of Educational Sciences

Case of the Flemish textile industry

- Competition with low salary countries
- Technological innovations
- Closing down and restructuring

Training programs

Some statistics

Figure 5: Participation in work-related courses by educational level (16-65 years, employed)
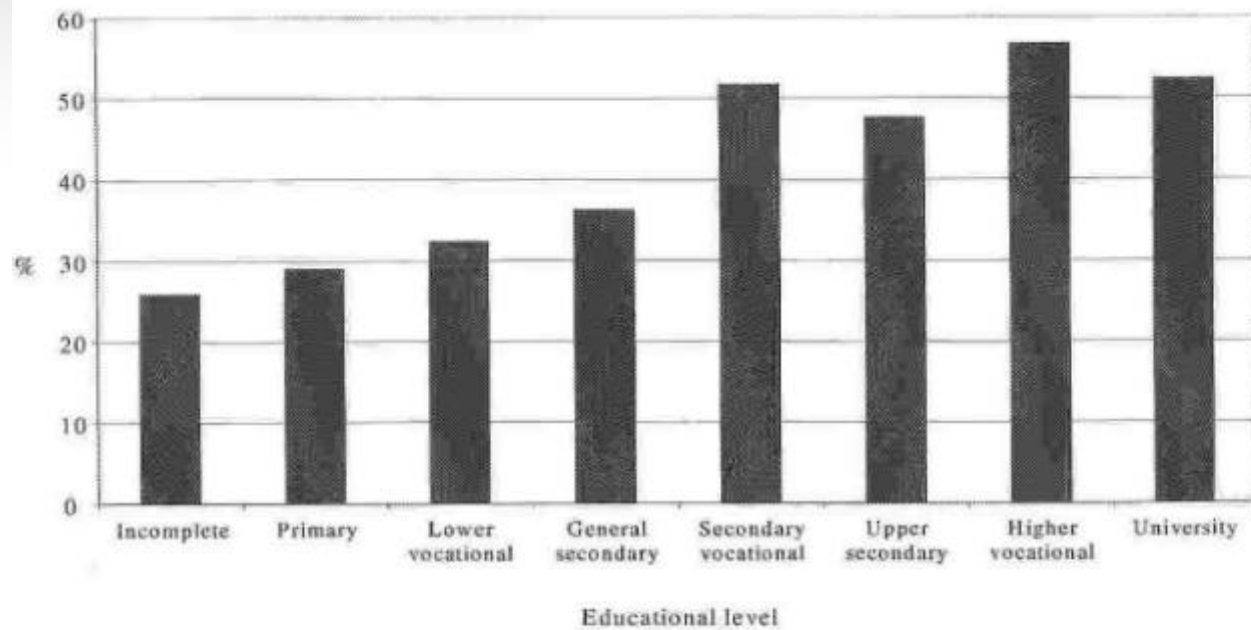
Educational level

Table 5   Percentage distribution of situational, institutional, dispositional and other barriers to participation in adult education or training, 1997[1]

	Male	Female	Total
Situational	64.9	63.8	64.3
Too busy at work	62.2	56.9	59.4
Other family responsibility	14.6	26.1	21.1
Lack of child care	3.6	16.7	11.0
Lack of employer support	8.6	6.5	7.5
Institutional	70.6	72.0	71.4
Program offered at an inconvenient time or location	41.3	41.3	41.3
Too expensive/have no money	37.2	42.7	40.3
Program not offered	10.3	8.7	9.4
Lack of sufficient qualifications	4.2	2.9	3.4
Dispositional	4.9	8.6	7.0
Health	3.5	7.6	5.8
Language	1.4	1.0	1.2
Other barriers	9.2	8.8	9.0

1. Estimates were based on the respondents representing adult population aged 17 and over, excluding all regular, full-time students aged 17 to 24 except 1) those subsidized by employers; 2) full-time students over 19 enrolled in elementary or secondary programs and 3) full-time students over 24 in post secondary programs.

TWO MESSAGES

WHAT IS GOOD ALWAYS BECOMES BETTER

CAST PEARLS BEFORE SWINE

Learning in Organizations

- Two urban teaching hospitals
  - Which organization learns better and why?
    - Compared eight nursing teams
    - Correlated error rate of teams (as a measure of learning) in their treatments of patients with team leadership performance, stability and morale, and personal satisfaction level of each nurse.
- Research Question:
  - Teams with better leadership make fewer mistakes?
    - Edmondson (1996). *Journal of Applied Behavioral Science*

Failure & Learning

- "The more positively nurses rated their team's relationships and the level of coaching and goal setting they received from their managers, the more errors their team reported."
    - Teams with higher error rates worked in open atmosphere
    - Teams with low rates were led by authoritarian managers

Conclusion

- "Management may be filled with MBAs, PhDs and hoards of other supposedly accomplished and intelligent individuals, but this will not help them to share what they know, or provide them with the necessary thinking skills for effective knowledge management."

  - (Goldberg, 1999)

- "Medical programmes may need more emphasis on performance, not just competence, especially in the later years. This might be achieved by ensuring learning occurs in the right context so that acquired skills and knowledge can immediately be related to the 'real world'.

  - Med.Ed. (2002). *Transitions out of medical school*

Future of Education & Learning

Prof. Dr. Wim Gijselaers (Maastricht University)

Associate Prof. Frank Lekanne Deprez (ZeroSpace Advies BV)

Prof. Dr. Mien Segers (Leiden University)

Learning Is Dangerous: Managing Organizational Forgetting in the Knowledge Economy

Frank Lekanne Deprez

Associate Professor/

Director ZeroSpace Advies BV

Club of Amsterdam

18 February 2004

Part 1

Thinking for a Living

1. Information is like…

> *In the Industrial Age,*
> *information was like gold.*
> *In the Digital Age,*
> *information is like milk,*
> *use it quickly.*

Information Strategy, 1998

1. A short journey…

- Knowledge:
  - resides in the 'heads' ('stock': directly available, but today's knowledge may already be out of date)
  - circulates among people ('flow': exclusive, it updates organically)
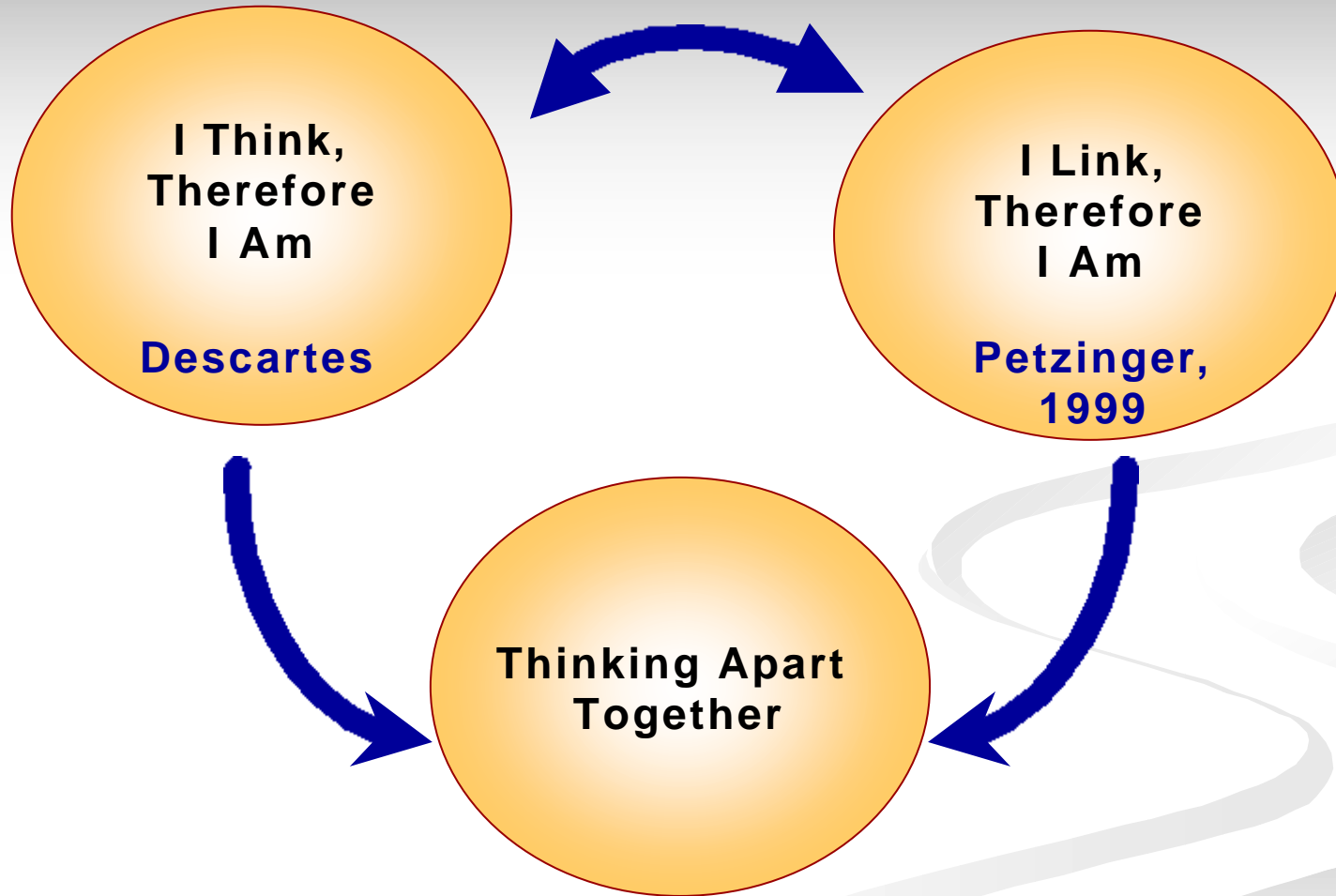 - is difficult to organize
  - must be turned into action

"…companies become eunuchs in the business harem: they know what to do, they've seen it done a thousand times, but they can't do it themselves (Lekanne Deprez & Tissen, Zero Space, 2002)."

1. Are Knowledge Workers Becoming a Commodity?

- When workers were laid off in the industrial era, they no longer had the means or the resources to be productive ("…bodies were as replaceable as light bulbs").

- In the Knowledge Economy, knowledge workers are finding that they take the most valuable resource with them when they are laid off: knowledge; their network and competences

- Nowadays, a global white collar migration is happening: Any function that does not require face-to-face contact is now perceived as a candidate for offshore relocation. At the moment 14 million knowledge worker US jobs are vulnerable to offshoring (University of California, 2004)

A cubicle can be replicated overseas as easily as a shopfloor can!

1. Knowledge Worker's Competencies

I Think, Therefore I Am

Descartes

I Link, Therefore I Am

Petzinger, 1999

Thinking Apart Together

Part 2

Organizational Forgetting

2. Learning is to stay within the lines

- Learning, whether at school or within organizations, is generally regarded as a good thing

- But learning can be dangerous…

  Limited thinking and learning begins in kindergarten when we are given the same picture to color. "Stay within the lines", we are told!

"We learn that it's risky to show individual differences erupting from our creative minds, and thus we learn not to trust our own ideas"
Source: D.R.Smith, 1995.

2. Learning is …

- "Learning disabilities are tragic in children, but they are fatal in organizations. Because of them, few corporations live even half as long as a person – most die before they reach the age of forty"(P. Senge, 1992).

- "Every organization learns, despite the way they operate. Whether this learning will result in organizational improvement ('good learning') cannot be assessed beforehand"(Marleen Huysmans, 2000).

2 How many artists are there in the room?

Visiting an American elementary school in 2000:

"How many artists are there in the room? Would you please raise your hands. <u>FIRST GRADE</u>: *En masse* the children leapt from their seats, arms waving. Every child was an artist. <u>SECOND GRADE</u>: About half the kids raised their hands, shoulder high, no higher. The hands were still. <u>THIRD GRADE</u>: At best, 10 kids out of 30 would raise a hand, tentatively, self-consciously. By the time I reached <u>SIXTH GRADE</u>, *no more than one or two kids* raised their hands, and then ever so slightly, betraying a fear of being identified by the group as a 'closet artist.'

The point is: <u>*Every school I visited was participating in the suppression of creative genius.*</u>"

Gordon MacKenzie, *Orbiting the Giant Hairball: A Corporate Fool's Guide to Surviving with Grace*

Source: Tom Peters, Reimagine, page 278

2 The best teacher has…

- no problems with colleagues
- no problems with parents
- no problems with students

We desperately need 'creative tension' in schools.

The average never wins. It never has and never will!

2. Lifelong Learning : No Thanks!

During a presentation on learning organizations /lifelong learning a student stood up and said:

"For me lifelong learning means lifelong imprisonment. I can't imagine myself doing this stuff all my life. Please, what's the alternative!"

2. Lifelong __Un__learning for the Knowledge Era part 1

"Why does 'lifelong learning' sound so much like 'life sentence' to me?"

(Adapted from Tom Peters, 2003)

2. What Do These Words Have In Common?

- Stress

- Burnout

- Break down

2. Are We Trapped in a Prison of Our Own Making?

- Nelson Mandela reportedly said that although his political opponents could imprison his body, they could never imprison his mind.

- And yet many of us in business allow our minds to be imprisoned in 'old-time' industrial age , machine-like thinking.

Source: Lekanne Deprez & Tissen, Zero Space , page 4

2. School Holidays: An Inferno from the Agrarian Age?

School holidays are a function of an agrarian society, where schools were needed during the long summer growing and harvest season.

School vacations are a proof that it is much easier to perpetrate a vast revolution via the Internet than to get people to question the simple things that surround them.

Why should they make holidays an inferno, in terms of reservations, flight hassles and queues everywhere, just *because their kids are on an 1700s harvest schedule!*

Source: Ricardo Semler, 2003.

2. Lifelong <u>Un</u>learning for the Knowledge Era

"The problem is not to get new, innovative thoughts into your mind, but how to get the old ones out"

(D. Hock, former CEO of VISA)

2 Managing Organizational Forgetting

- Organizations without practical mechanisms to remember what has worked and why, will have to repeat their failures and rediscover their success formulas over and over agian.

- Organizations must forget old habits in order to learn new and more appropriate ways of doing things.

2 Three Modes of Organizational Forgetting

■ First, organizations can fail to successfully integrate knowledge transfered from another organization, or created internally, into its memory system

■ Second, knowledge is successfully integrated into memory, but it is lost due to a failure of the memory system

■ Third, knowledge that has made its way successfully into the memory system, but is purposively forgotten

Source: de Holan & Phillips, 2003

2. Managing Forgetting Consumes a Surprising Amount of Time and Effort:

- To forget things that needed to be forgotten
- To avoid forgetting things that shouldn't be forgotten
- To recreate critical knowledge that was forgotten

"While learning is critical for organizational success, forgetting plays an equally important role."

Source: de Holan & Phillips, 2003

2. To Thrive in the Knowledge – based Economy, questions are more important than answers…

"Whereas answers reflect the past, questions deal with the future."