



Multiple Intelligences and ...

MIAPP-Meeting
FORTH, Greece: 16.-17.06.2005



Education and Culture

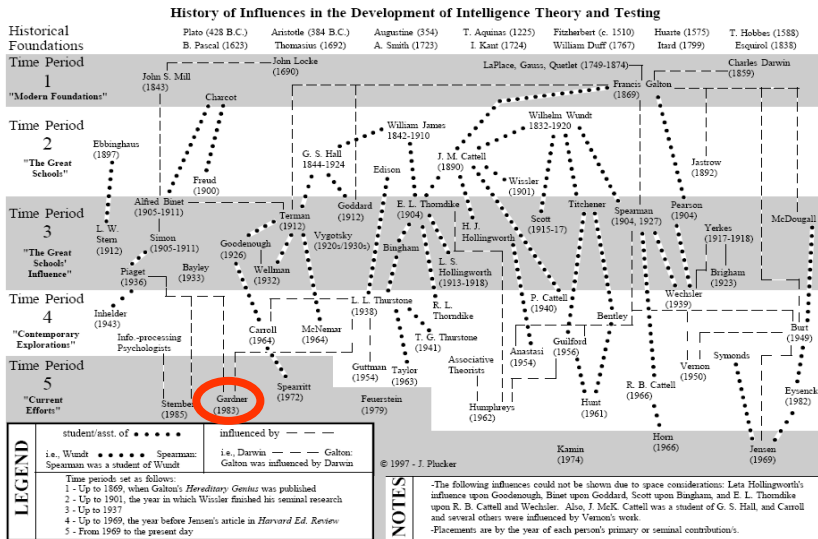
Leonardo da Vinci

The Miapp project is co-financed from the Leonardo da Vinci Programme (PT04/PP/11/24/458).
This document represents opinions of the partners participating in the project. European Commission takes no responsibility for the use of this information.

© Robert Freund, M.A.
Finkenweg 6
D-35099 Burgwald
Germany
Tel: +49 6451 71290
Fax: +49 6451 71291
Mobile 0172 6635776
info@RobertFreund.de
www.RobertFreund.de

1. Multiple Intelligences and IQ

Intelligence Theory and Testing - History



Robert Freund

Source: Indiana University

Intelligence = IQ-Test



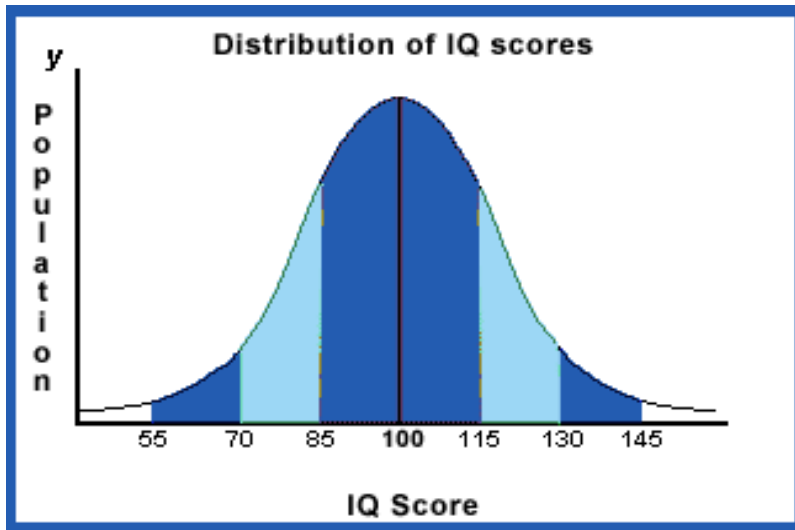
Alfred Binet

The test was soon used as the basis for the psychometric measurement of individuals' general capabilities or intelligence

Intelligence tests have defined how we define intelligence

Robert Freund

The Bell Curve



Robert Freund

2. Multiple Intelligences - Basics

Multiple Intelligence



Intelligence is the biological potential to process information in certain ways that can be activated in a cultural setting to solve problems or make products that are valuable in a culture



Howard Gardner

As human beings we have many different ways of representing meaning,
many kinds of intelligence

Robert Freund

The „Bell Curve View“ of Intelligence

1. Intelligence is a single entity
2. People are born with a certain amount of intelligence
3. It is difficult to alter the amount of our intelligence – it’s “in our genes” so to speak
4. Psychologists can tell you how smart you are by administering IQ tests or similar kinds of instruments

Robert Freund

Source: Gardner (2004)

Intelligence by Gardner

I define an intelligence as a biological potential to process specific forms of information in certain kinds of ways. Human beings have evolved diverse information-processing capabilities – I term these “intelligences” – that allow them to solve problems or to fashion products. To be considered “intelligent”, these products and solutions must be valued in at least one culture or community. The last assertion of “being valued” is important (Gardner 2004, p. 29-30)

Robert Freund

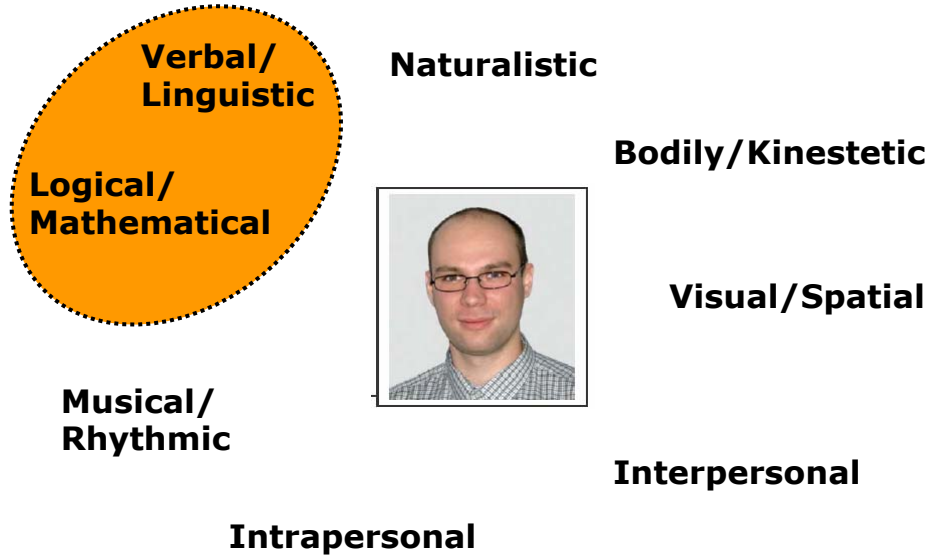
Distinguishing Features of MI-Theory

- Definition of intelligence based on real-world intelligence
- Pluralistic view of intelligence
- All 8 (or more) intelligences are universal
- Unique profiles of intelligence that develop and change
- Each intelligence involves subabilities or different manifestations
- Intelligences work in combination, not isolation

Robert Freund

Source: Project AMI (2000)

Gardner 's Multiple-Intelligence-Theory



Robert Freund

3. Contextualized Multiple Intelligence and Contextualized Multiple Thinking

Contextualized Multiple Intelligence

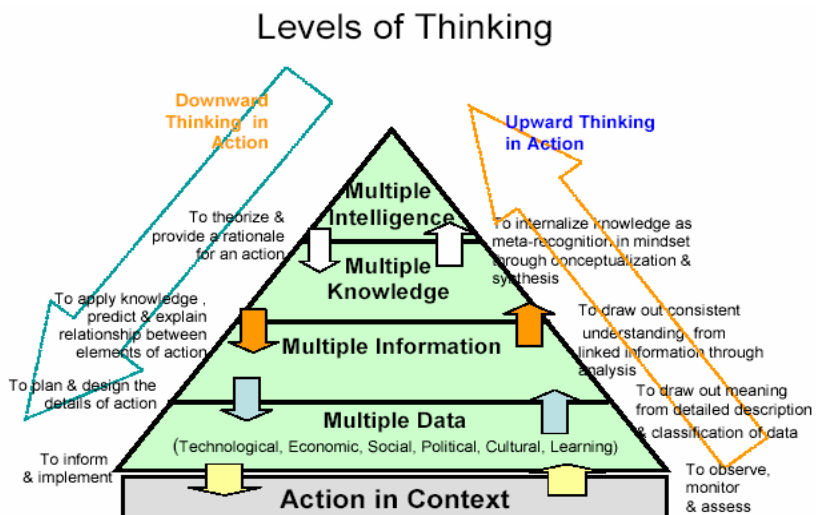
In other words, the interactions of learners' action with its related contexts can be considered and analysed from six important perspectives such as

- *technological,*
- *economic,*
- *social,*
- *political,*
- *cultural,* and
- *learning perspectives.*

Robert Freund

Source: Cheng (2004, p. 6)

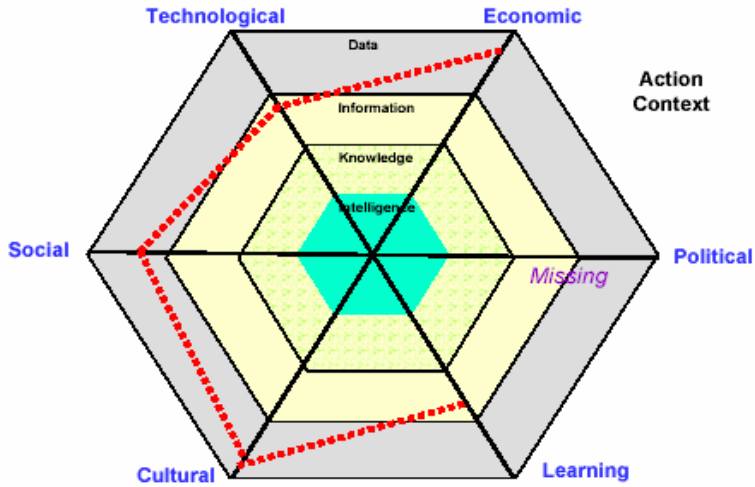
Levels of Thinking in Action Learning



Robert Freund

Cheng (2004): Learner Centered Approach...

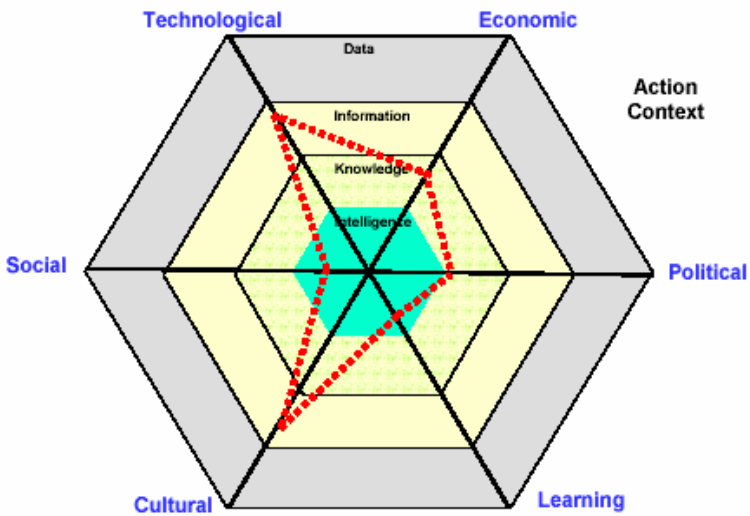
Profile of Superficial Multiple Thinking Style



Robert Freund

Cheng (2004): Learner Centered Approach...

Profile of Deep Multiple Thinking Style



Robert Freund

Cheng (2004): Learner Centered Approach...

4. Multiple Intelligences and Learning Styles

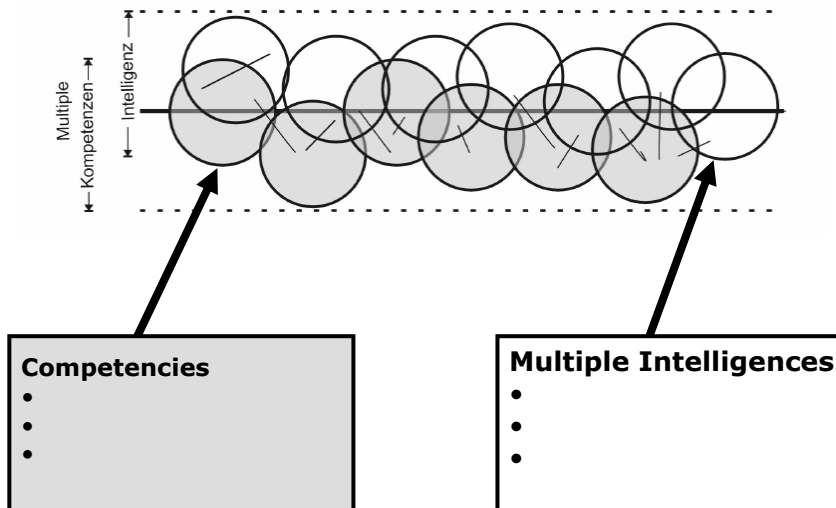
Multiple Intelligences and Learning Styles

- Allinson and Hayes' Cognitive Styles Index (CSI)
- Apter's Motivational Style Profile (MSP)
- Dunn and Dunn's model and instruments of learning styles
- Entwistle's Approaches and Study Skills Inventory for Students (ASSIST)
- Gregorc's Style Delineator (GSD)
- Herrmann's Brain Dominance Instrument (HBDI)
- Honey and Mumford's Learning Styles Questionnaire (LSQ)
- Jackson's Learning Styles Profiler (LSP)
- Kolb's Learning Style Inventory (LSI)
- Myers-Briggs Type Indicator (MBTI)
- Riding's Cognitive Styles Analysis (CSA)
- Sternberg's Thinking Styles Inventory (TSI)
- Vermunt's Inventory of Learning Styles (ILS)

Coffield et al. (2004): This report examines 13 models of learning style and concludes that it matters fundamentally which model is chosen. Positive recommendations are made for students, teachers and trainers, managers, researchers and inspectors.

5. Multiple Intelligences and Competencies

Multiple Competencies



6. Multiple Intelligences and Education

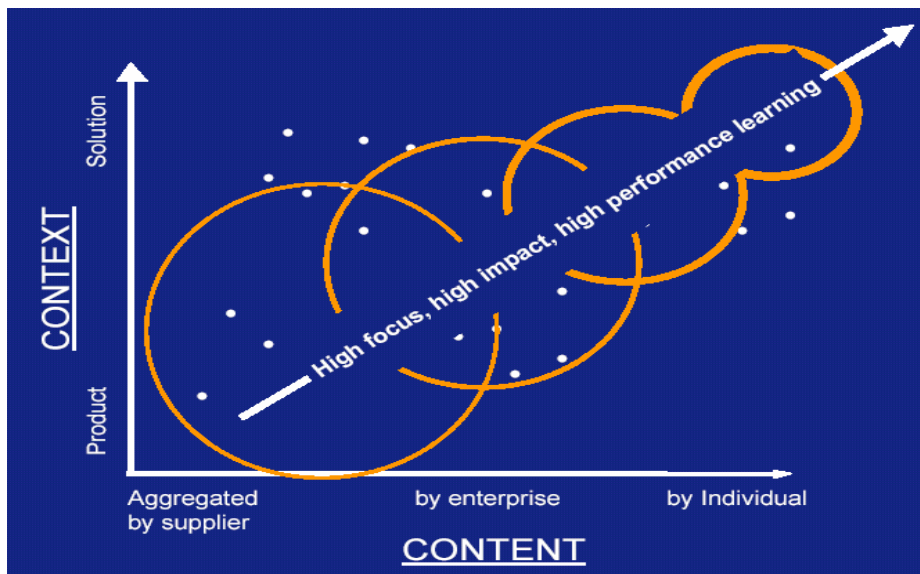
Multiple Intelligences and Education

The screenshot shows a web browser window with three overlapping pages. The top-left page is the Project Zero website, featuring a colorful illustration of a dinosaur and the text: "Project Zero's mission is to understand and enhance learning for the arts, as well as humanistic and scientific disciplines, at levels". The top-right page is the Project SUMIT website, with the heading "Project SUMIT" and text: "Project Zero's Project SUMIT was set up by the Charles B. Dodge Foundation and the Harvard Graduate School of Education". The bottom-right page is titled "Adult Multiple Intelligences" and contains text about a collaboration between Project Zero and the New England Literacy Resource Center (NELRC) at World Education, the Adult Multiple Intelligences (AMI) Project, and the AMI Study.

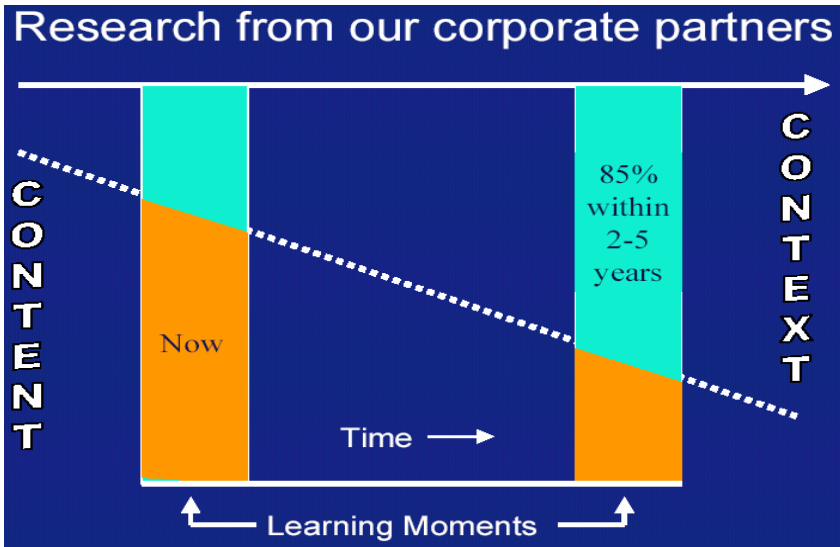
Robert Freund

7. Multiple Intelligences and E-Learning

Skate to where the „puck“ will be



Content is king - Context trumps



Robert Freund

Levy, J.: A new model of elearning for global leadership, Keynote ElearnChina2003

Personality differences

It makes sense to take personality differences into account when designing a system (Schank 2002)



To personalize means "to make something personal or individual; specifically: to mark as the property of a particular person" (Webster Dictionary 2003).

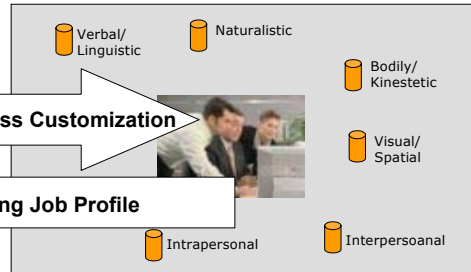
Robert Freund

Multipe-Intelligence

(1) Personal Multiple Intelligence Profile

| Intelligence | Result | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
|---------------|--------|---|---|----|----|----|----|----|----|----|----|----|
| Verbal | x | | | | | | | | | | | |
| Logical | x | | | | | | | | | | | |
| Musical | x | | | | | | | | | | | |
| Visual | x | | | | | | | | | | | |
| Bodily | x | | | | | | | | | | | |
| Interpersonal | x | | | | | | | | | | | |
| Intrapersonal | x | | | | | | | | | | | |
| Naturalistic | x | | | | | | | | | | | |

(2) Multiple Intelligence Job Profile



(3) E-Learning and Mass Customization

(3) Adapting Job Profile

Martin 2001

Martin 2001

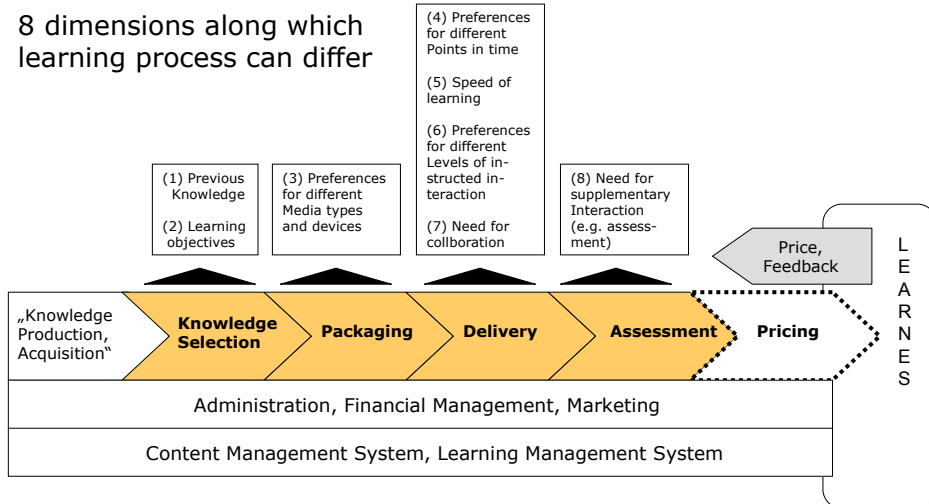
(4) Learning Relationship and Life Long Learning

Robert Freund

Freund 2003

Customization along the „value chain“



8 dimensions along which learning process can differ



Robert Freund

Huttschenreuter 2002

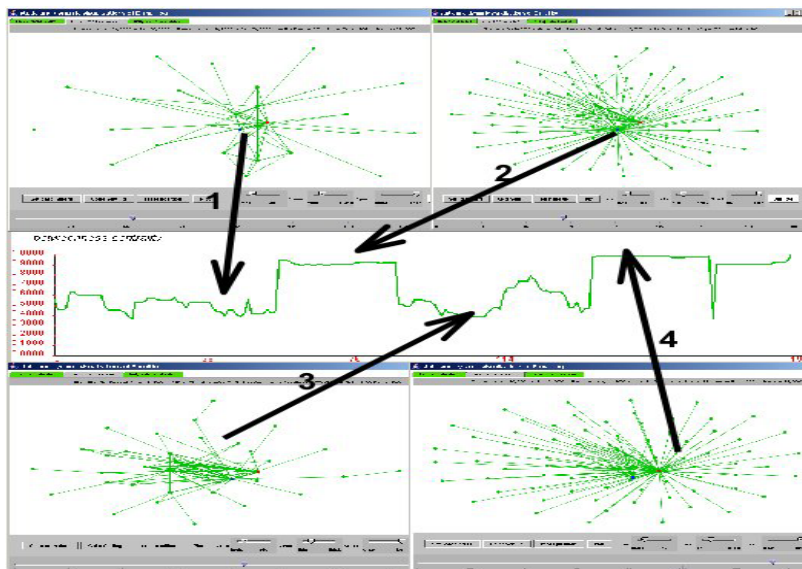
Relevance of mass customization and low-scale customization (including collaboration)

| | | | |
|----------------------------|---------------------|--|---|
| Organizations | Mass Customization | Customization | Customization |
| | Mass Customization | Mass Customization | Mass Customization |
| Demand initiated by | Mass Customization | Combination of explicit and tacit knowledge | Combination of explicit and tacit knowledge |
| Individual Learners | Mass Customization |  Customization |  Customization |
| | Specialized Modules | Basic Programs | Advanced Programs |

Robert Freund

Hutzschenreuter 2002

Learning Pattern: Information dissemination



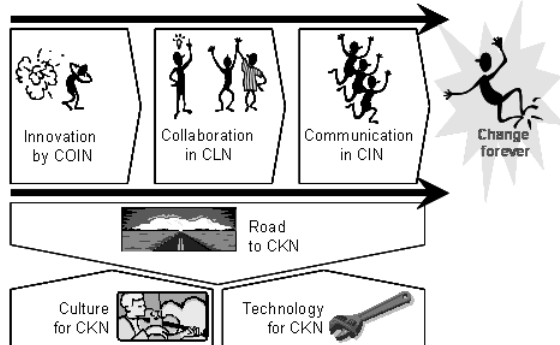
Robert Freund

Source: www.iCKN.org

Social Patterns of Innovation

Collaborative Innovation Networks (COINs)

are self-organizing groups of highly motivated individuals working together towards a common goal not because of orders from their superiors, but because members of a COIN share the same goal and are convinced of their common cause.




People in COINs usually assemble around a new idea outside of organizational boundaries and across conventional hierarchies.


Robert Freund


Gloor, P. (2004)


8. Multiple Intelligences and Career Development

Multiple-Intelligence-Job-Profiles

 Verbal/
Linguistic

 Naturalistic

 Bodily/
Kinesthetic

 Logical/
Mathematical



 Visual/
Spatial

 Musical/
Rhythmic

 Intrapersonal

 Interpersonal

Robert Freund

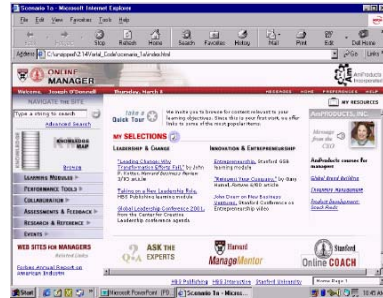
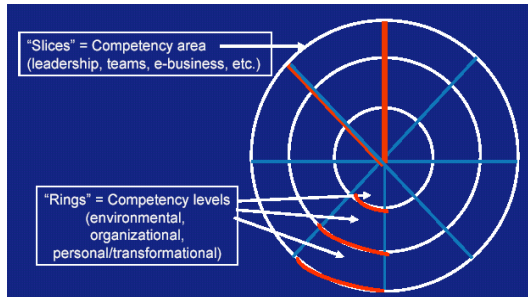
Intelligence and Occupation

| Intelligence | Occupation |
|------------------------|---|
| Verbal / Linguistic | Archivist, attorney, author, call center operator, comedian , copywriter... |
| Logical / Mathematical | Accountant, actuary, analyst, astronomer, auditor, banker, biologist, bookkeeper ... |
| Musical / Rhythmic | audio-video technician, band member, choir or choral director, choreographer, conductor ... |
| Bodily / Kinesthetic | Acrobat, actor, actress, aerobics instructor, architect, artistic painter, assembler ... |
| Visual / Spatial | Advertiser, architect, artist, builder, carpenter, cartographer, chess player ... |
| Interpersonal | Administrator, anthropologist, bartender, businessperson, chess player ... |
| Intrapersonal | Politician, psychiatrist, receptionist, salesperson, self employed person ... |
| Naturalistic | Agricultural engineer/worker, astronomer, beachcomber, biologist, botanist ... |

Robert Freund

The Dynamic Competency Map

Personal competency-mapping linked to corporate business metrics provides opportunities for dynamic gap analysis plus company-wide data-mining, knowledge-management in real time



Harvard Business School and Stanford University

Robert Freund

Levy, J.: A new model of elearning for global leadership, Keynote ElearnChina2003

9. Multiple Intelligences and Testing/Assessment

Multiple Intelligences and Testing

The problem of „testing“ Multiple Intelligences

- MIDAS => German Translation in the near Future?
- RIMI (Keith Rogers)
- Joyce Martin Tools

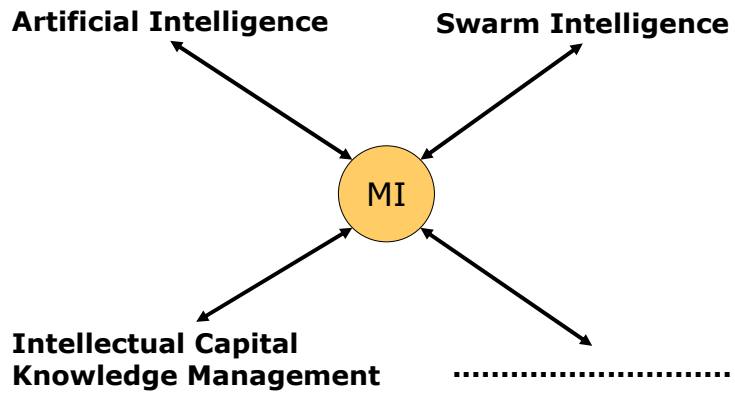
Some Links

http://www.virtuaaliyliopisto.fi/palvelut/iq/iqform/index_en.html
<http://www.apa.org/monitor/feb03/intelligent.html>
http://www.jobsetc.ca/toolbox/quizzes/mi_quiz.do?sessionId=7606825554EDFF2781243590229D708B.jvm10?lang=e
http://www.freenet.de/freenet/wissenschaft/testarea/igttest/startseite_igttest/index.html
<http://www.ldrc.ca/projects/miinventory/miinventory.php>
<http://www1.chapman.edu/soe/faculty/piper/teachtech/miquiz.htm>
<http://www.thirteen.org/edonline/concept2class/mi/index.html>
http://www.eltabb.com/downloads/Multiple_Intelligenz.pdf
<http://www.miresearch.org>
<http://www.quarks.de/dyn/11890.phtml>
<http://www.indiana.edu/~intell/intelligenceTests.shtml>
<http://www.angelfire.com/oh/themidas>
<http://www.mitest.com/o7inte-1.htm>
<http://www.personal.psu.edu/staff/b/x/bxb11/MI/MIQuiz.htm>
<http://www.stanford.edu/group/Urchin/TA7IB.htm>

Robert Freund

10. Multiple Intelligences and other aspects

Multiple Intelligences and ...



Robert Freund