

GEO

Learning pyramids

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UWH

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National Geographic: Egypt Pyramids - Facts, Photos, Diagrams - Microsoft Internet Explorer

-2630

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EXPLORE THE PYRAMIDS

Click a pyramid for photos, diagrams, facts, and more.

Step Pyramid of Djoser
Egypt's First Pyramid

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Great Pyramid
Earth's Largest

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EXPLORE THE PYRAMIDS

Click a pyramid for photos, diagrams, facts, and more.

Pyramid of Pepi II
End of an Era

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Giza pyramids

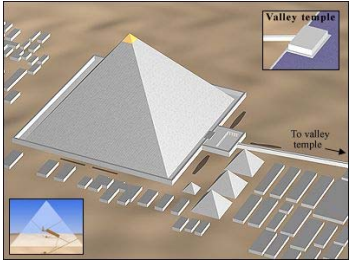


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Pyramid 3D

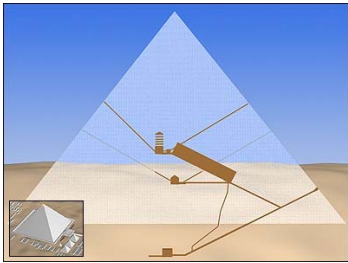


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Pyramid model



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Pyramids

- **DIKW**
- **Business**
- **Staff**
- **eLearning**
- **Bologna**

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Working Group 2.1 – Virtual Academy

Policy issues

- The movement from discrete computer assisted learning (CAL) tools towards an integrated virtual learning environment.
- Technical, political, legal, organisational and cultural problems.
- Copyright and accreditational problems
- The role of the lecturer and human communication in general.

Chair

- Prof. Esben Munk Sørensen (Denmark), e-mail: ems@i4.auc.dk

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Working Group 2.4 – Knowledge in SIM

A Joint Working Group with Commission 3

Policy issues

- To integrate the resources of the Commissions 2&3 using the experiences of professionals in knowledge transfer and the know-how of spatial information management (SIM)
- To analyse present status and trends of Information/Knowledge Management
- To outline the implementation of the results of Information/Knowledge Management in the Spatial World
- To define the necessary elements and routes of professional development in the rapidly changing area of SIM

Chair

- Prof. Bela Markus (Hungary), e-mail: mb@geo.info.hu

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DIKW

Ackoff's hierarchy

Wisdom: Understanding principles
 Knowledge: Understanding patterns
 Information: Understanding relations
 Data

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KM

- Data are simply pieces of information with no context.
- Data that can be viewed in context becomes information.
- Information that is analysed and can be applied is knowledge.
- When this knowledge is distilled, organized, stored and redeployed according to specific user needs, then a corporation is employing Knowledge Management.

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Data - wisdom

	?	Compassion Wisdom
2000's	Knowledge Ecology	Choice Intelligence
1990's	Knowledge Management	Predictability Knowledge
1980's 1970's	Information Management	Patterns Information
1960's 1950's	Data Processing	Unfiltered Data

Yield = Intellectual dividends per measure of effort invested.
 Examples: Increased clarity, deeper understanding.

<http://otec.uoregon.edu/data-wisdom.htm>

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KM

In Hungary educational institutions have multiple reasons for loss of essential knowledge: experienced teachers and tutors retire or change jobs.

By providing access to the global knowledge base, the consortium members become more effective and competent.

Source: a distributed global gateway, OneWorld, March 2000.

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Knowledge infrastructure

Knowledge management: knowledge
 Information infrastructure: networking
 Data infrastructure: data policy
 Data analysis: information
 Data management: database
 Data collection: data

Organisation Society People

WISDOM
 KNOWLEDGE
 INFORMATION
 DATA

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Business pyramid

Business Development
 Knowledge Development
 Self Development
 Organization Development

<http://www.mithya.com/home.html>

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Staff

Managers

Professional staff

Technical – Administrative staff

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Tasks

to answer

Why?
What?
When?
by whom?
how?
where?
Who shall learn?

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Why?

Human resources produce more profit than any other investment

Motivation

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What? Fit for use

Developer

Service Providers

Enterprise Suppliers

Users

Workers

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Who? - Target

whole **STAFF**

potential **USERS**

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When?

HALF-LIFE PERIOD OF KNOWLEDGE IN INFORMATION TECHNOLOGY IS 18 MONTH

„...more or less constant training of staff”

LIFE-LONG LEARNING

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By Whom ?

- **SELF-LEARNING**
 - TUTORIALS
 - CBT
 - RESEARCH
- **INTERNAL**
 - CORPORATE CULTURE
 - WORKSHOPS
 - EXCHANGE
- **EXTERNAL**
 - COMPANIES
 - ACADEMIC

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By Whom ?

APPLICATION

RESEARCH

EDUCATION

Workshops,
Seminars
Conferences
Internet, Intranet
Virtual meetings
Videoconferences

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CPD, FIG Publication, no 16, 1996 **How? - CPD models**

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4C

Communication	Co-operation
Competition	Co-ordination

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eLearning

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Global market

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ESRI Virtual Campus

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Projects – from ODL to eLearning

- OLLO
- DLG
- NKP
- PRONET
- UNIPHORM
- SDILA
- LIME
- PANEL-GI
- EMGISc
- NetCampus
- COST G9
- NODE

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The Three Generations of Distance Education: From Centralised to Decentralised Institutional Infrastructures

19th century ongoing
1st Generation
*Correspondence
Single-mode*

No study centres

Early 1970's ongoing
2nd Generation
*Industrial
Single-mode*

Re-active student support and facility centres

Late 1990's
3rd Generation
*Networked
Dual-mode*

Pro-active development and support centres

Adapted from Paul Baman's initial design of the Internet. (Source: "Where Wizards Stay Up Late")

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Lesson learned #1 – Learning resources > Active Learning > Knowledge, skills

- ❖ Metadata
- ❖ exist
- ❖ fitness for use
- ❖ available
- ❖ accessible
- ❖ format

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Metadata - levels

There are three main levels of metadata.

- **Collection** level metadata provides the user with a quick look at the learning resource. The user will be able to gain an overview of the contents and scope of the data set.
- **Data set** level metadata provides a fuller picture of what a learning resource will contain, describing the pedagogical attributes, the lineage (history) of the data set etc.
- **Feature** level descriptions provide very detailed descriptions (eg. literature, scenarios, review questions).

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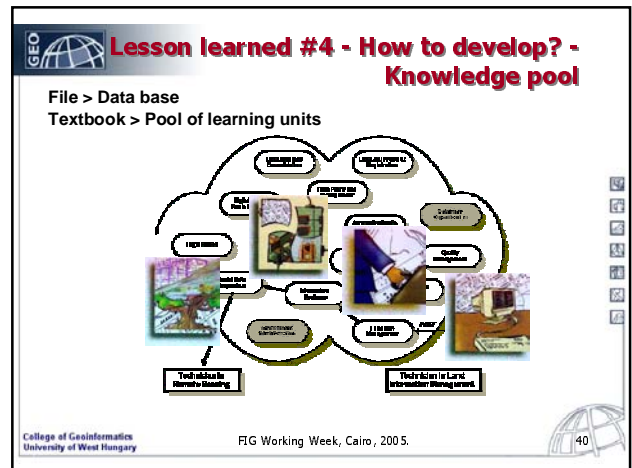
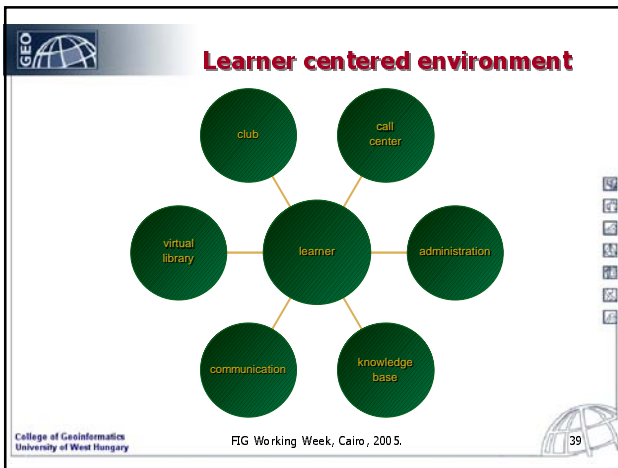
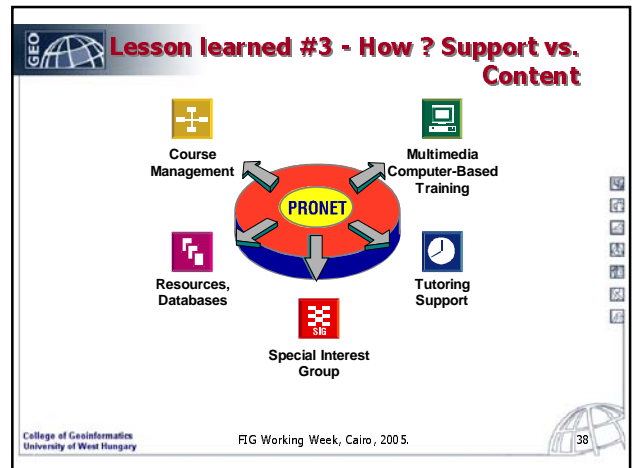
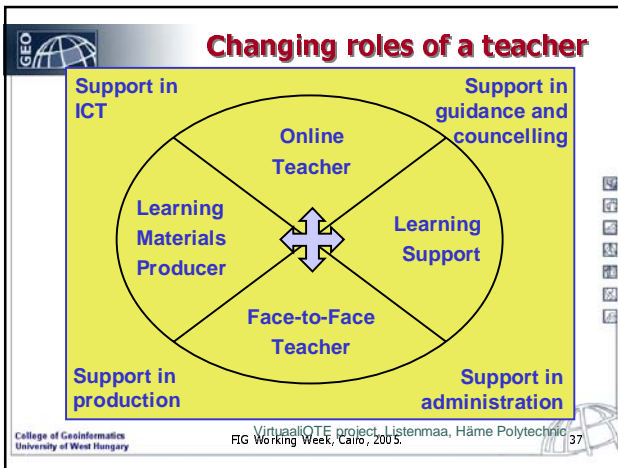
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Lesson learned #2 - How to deliver? - Evolution

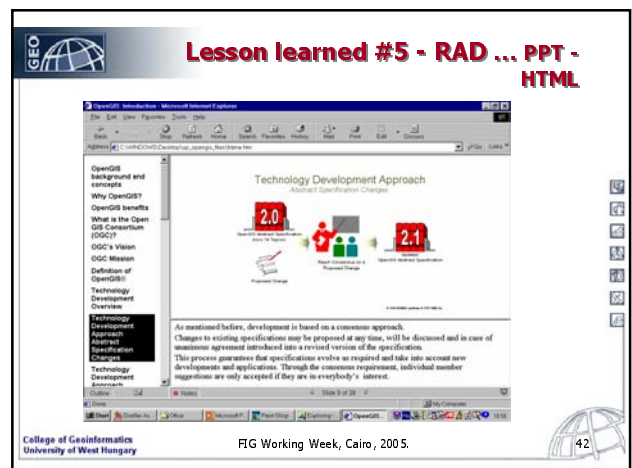
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- ### Topology?
- Spaghetti?
 - **Topological** metadata base – under development
 - Learning path
 - Overview
 - Detailed
 - Full
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Lesson learned #6 - How to organize? Knowledge map

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Lesson learned #7 - Learning assistant

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Distributed course delivery

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Gateway - organizational functions

- Marketing - Strategic needs analysis
- Authoring learning objects (metadata)
- Gathering - Knowledge mining
- KB (Content) management
- Interoperability
- KB analysis, evaluation
- Sharing knowledge units
- Accreditation, recognition
- Support PoLs / students
- Knowledge management
- Collaboration, Bottom-up approach
- Platform independency

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Gateway functions

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Looking back - ODL Trends

- 1994 – paper based DE
- 1996 – digital materials (floppy)
- 1998 – multimedia (CD)
- 2000 – Knowledge pool - Internet
- 2002 – Educational portal - services
- 2004 – Knowledge management
- 2006 – mLearning

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Bologna

PhD
Master
Bachelor

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Bologna objectives

- adoption of a system of easily readable and comparable degrees;
- adoption of a system essentially based on two main cycles, undergraduate (bachelor - BSc) and graduate (master – MSc);
- establishment of a system of credits – such as in the European Credit Transfer System (ECTS) - as a proper means to promoting the most widespread student mobility;
- promotion of mobility by overcoming obstacles to the effective exercise of free movement;
- promotion of European co-operation in quality assurance with a view to developing comparable criteria and methodologies; and
- promotion of the necessary European dimensions in higher education.

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GEO - branches

BSc (6 semesters - full time, 8 semesters – part time)

- Land surveying : 1972 –
 - Geoinformatics : 2001 -
- Land consolidation : 1975 –

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GEO - branches

BSc (6 semesters - full time, 8 semesters – part time)

- Land surveying : 1972 –
 - Geoinformatics : 2001 -
- Land consolidation : 1975 –
- Land administration : 2001 –

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GEO - changes

BSc in Lands (180 credits)

- Geomatics
- Land Consolidation
- Land Administration

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GEO - changes

BSc in Lands (180 credits)

- Geomatics
- Land Consolidation
- Land Administration

MSc specialisations (120 credits)

- Geoinformatics
- Land Development
 - Sustainable, Environment specific
- Land Management
 - Economics

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IACS – Best practices
International Summer School
12 – 19 August 2005, Szekesfehervar, Hungary

FIG
euromaster

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BEV BO UN

IT Trends

- Analog > Digital
- Manual > Automatic
- Local > Global
- Data > Information
- General > Customized
- Product > Service

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Recommendations

- **Metadatabase – extension of FIG Educational database**
- **Workshops**
 - Knowledge Management
 - Curriculum development and quality management
 - CPD experiences
 - eLearning – methods and platforms
- **Joint (MSc) courses**
- **Networking structure**
- **International Summer Schools**
- **Joint projects**
 - EEGECS
 - COST G9
 - MELA

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