Pedagogical reflections on distance education

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Important factors in campus as well as distance education

- Structure/Organisation
- Motivation
- Communication
- Feedback

But often more important in distance education

- Assessment
- Evaluation

Important factors in distance education - DISC

According to research good e-learning is about:

Structuring the learning activity and

- Promote DIALOGUE
- Secure INVOLVMENT
- Provide SUPPORT
- Enable learner CONTROL

Stephenson, 2001

Trends in distance education – 1850 - 2005

- **Letter-based** — Slow and low possibility to feedback and communication!
- **Radio-based**
- **Televison/video-based** — Faster transfer of information **but no** communication
- **PC-based** — Fast transfer of information **and** fast communication

- ***PDA and Telephone-based?***

E-learning & pedagogy

	Knowledge = Information	K = I x Processing
Theory of learning	” Behaviouristic”	Constructivism → Individual / Socio-cultural
Role of teacher	“Clear”	“Complex”
Role of student	”Passive”	”Active”

Distance education –
Components of modern courses

- Printed material
  - Books
  - Papers
- Internet material
  - Texts
  - Pictures
  - Multimedia (Simulations, Video and 2, 3-D animations)
- Communication

Pedagogical challenge:
Find a balance between
- material and
- communication?

Strategy:
- Depends of type of course and
- the theory of learning used

Trends in education & ICT

There has been a shift in the way computers are used in education from;

- mainly information providers

- To also support collaborative learning e.g. PBL- and Case-methodology

Trends in education & ICT

1960 - 70 Behaviouristic tradition *(K = I)*

- **CAI** (**C**omputer **A**ided **I**nstruction)

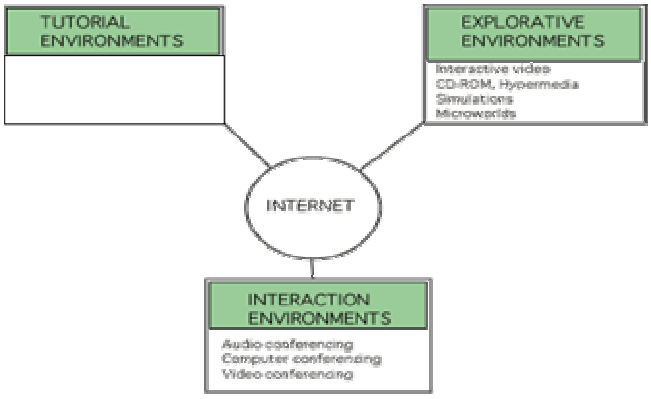
1980 – 90 Constructivism – individual *(K = I x P)*

- **ITS** (**I**ntelligent **T**utoring **S**ystem)
- **Discovery based learning** (e.g. Simulation models)

2000 Constructivism – Socio-cultural

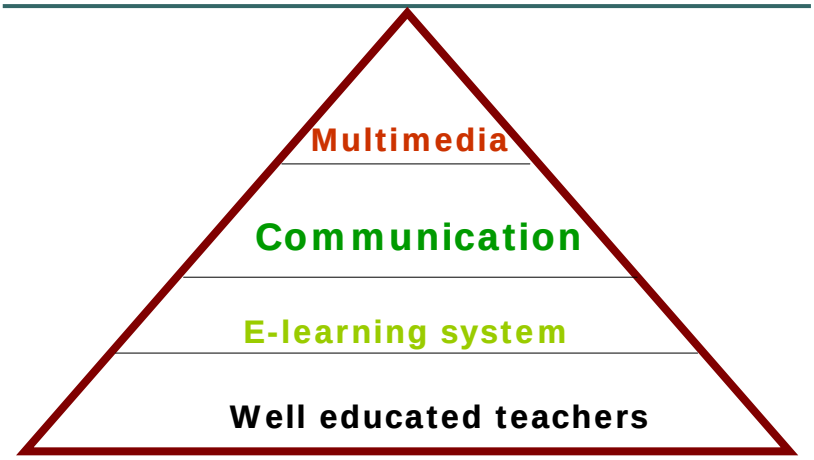
- **CSCL** (**C**omputer **S**upported **C**ollaborative **L**earning)

Summary –
Ways to Use ICT in education

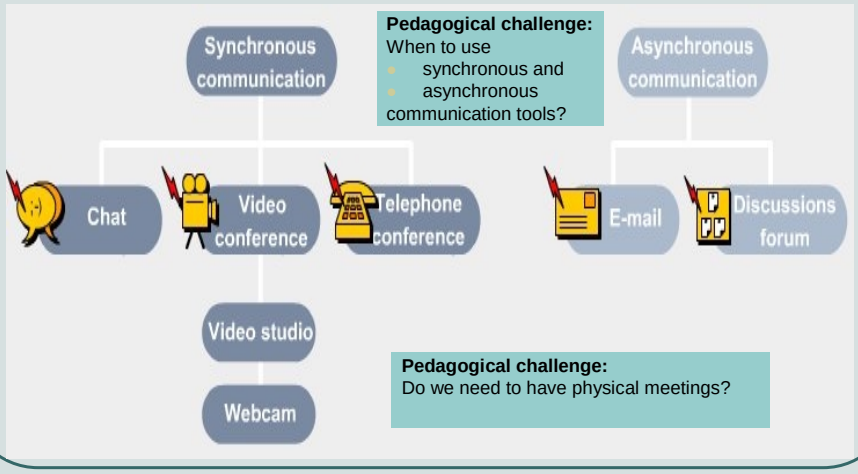


Potential for synergy through the Internet between the three environments (modified from Elen & Clarebout, 1998, p. 81).

Distance education



2. Distance education – Communication & Collaborative methods



Advantages of synchronous systems

- **providing motivation** to distance learners to keep up with the others and continue with their studies
- **telepresence** - real time interaction helps to develop the group and the sense of being part of a learning community
- **good feedback** - synchronous systems provide quick feedback on ideas and support consensus and decision making in group activities
- **pacing** - synchronous events encourage students to keep up-to-date with the course and provide a discipline to learning which helps people to prioritise their studies.

Mason (1998)

Advantages of asynchronous systems

- Allow time for **”reflection”** and **”quality feedback”**

- Facilitate interaction for those using their second language.
- **Allow time for reading** messages slowly and composing a response with the aid of a dictionary.
- **Simple**: many people worldwide can access text-based system using a personal computer and telephone line from their home.
- **The equalizing effects** of textual communication - the concentration on what is said rather than who says it (text-based systems do not remove bias and 'advantage', they merely shift it around a bit).

Mason (1998)

Distance education – Communication & Collaborative methods

- Communication is important in all education
- Using collaboratively metods with e.g. “brain-storming” creates a need for partly different ICT- support than is needed for in more “**traditional**” distance education.

Research on PC-based video conferencing for brainstorming on the web

- It was possible to work collaborative and have very **effective brainstorming activities** on-line
- the approach seems more suitable for on-line PBL courses than just using asynchronous text-based groupware
- The ability to **share applications** and documents was one of the most important features
- The **asynchronous communication between the meetings** was clearly important according to the participants

Pettersson & Aspengren 2005, in prep.

Communication on-line?

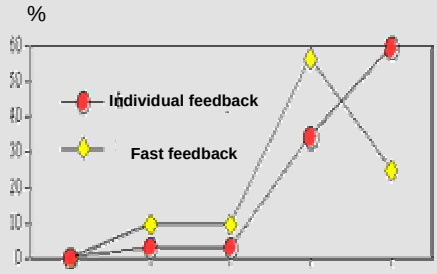
"*the trend is towards combining synchronous and asynchronous media in an attempt to capitalise on the evident benefits of both modes*"

Mason (1998)

Also in our study, the asynchronous communication between the meetings was clearly important according to the participants

Pettersson & Aspengren, 2005, in prep.

3. Distance education – Feedback



Pedagogical challenge:
To give all students a feeling of being seen, give quick feedback, and at the same time survive the work load.

Strategy:
Use the strength in collaborative methods i.e. the students should give feedback to each other first before you answer them.

DUKOM-Report 1997

4. Distance education – Globalization

- National education
- Global education

Pedagogical challenge:
Intercultural communication
and differences in teaching practice?

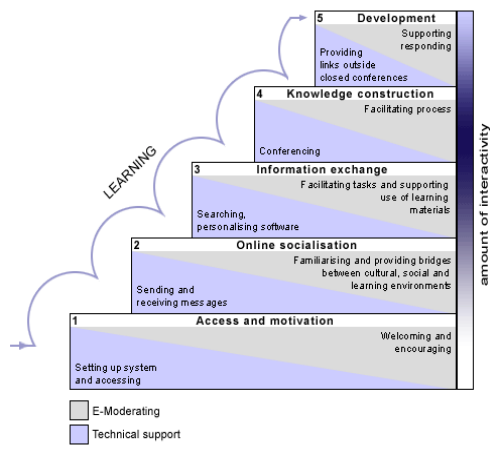
My examples:
- Towards a Sustainable Europe
- Food in Europe
- Global Seminar (Europe, USA, Latin America)
- Global Nutrition (Africa – Asia)

Results:
- Students
- Teachers

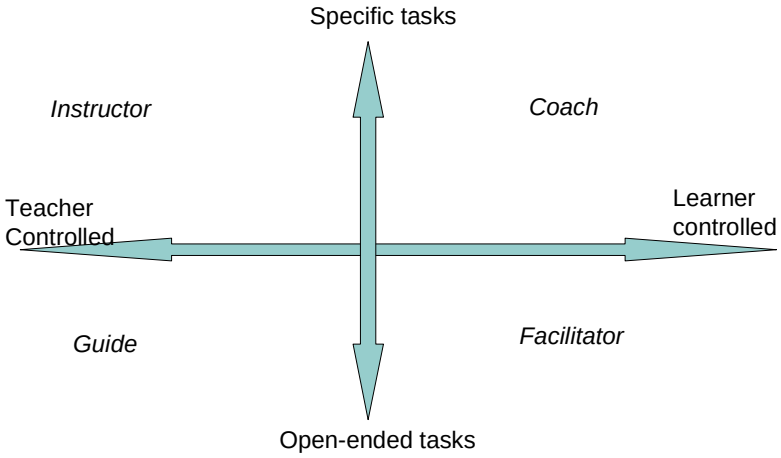
5. Distance education – Role of teacher

- Lecturer?
- Examinator?
- Supervisor?
- Facilitator?
- Guide at the side?
- PBL-instructor?
- Technical support?
- Course designer?

Gilly Salmon's 5-step model



The paradigm grid for e-learning



Stephenson, 2001

Role of teacher -
a course team needed?

- Course manager
- Lecturer
- Subject expert
- Pedagogical consult
- Learning technology consult
- Librarian
- Media producer
- Technical support

Pedagogical challenge:
Not to create frustrated and bad teachers!

Strategy:
• Educate teachers in distance pedagogy
• Realize that teaching is a team work

6. Distance education –
Educational multimedia

- Potentially it **may** increase the pedagogical quality
- Stimulate several sences at the same time
- Repeatable even from home
- Focus on understanding not practical skills

Pedagogical challenge:
Create educational media with high interactivity and in some cases also on-line collaborative assignments *(as in on-line PC-games)*

Risks:
• Less contact between students
• Less "real life" laboratory experiments
• Practical skills may be less
• A bad but cheaper way of doing experiments etc.

Strategy:
Always have a debriefing after virtual labs
Give collaborative assignments
Train practical skills separately

6. Distance education – Assessment

Pedagogical challenge:

Create assessment methods testing understanding not only facts
Design assessments that reduce the risk of cheating!

Risks:

• Multiple choice and computer corrected answers is simple and cheap
• Who is who?
• Cheating

Strategy:

• Follow the whole learning process in collaborative assignments
• Try to use more oral presentations (Video-conference)

Distance education – Summary

- Focus on good communication & feedback
  - teachers - students
  - students – students
- Use a simple Learning Management System, LMS
- Take courses in distance pedagogy
- Assess the whole learning process
- Use collaborative methods
- DISC
- Some physical meetings may be advisable
- If possible create
  - interactive multimedia (with a pedagogical value)
  - course teams

Distance education – Summary

ICT (Information and Communication Technology) can

- support a range of individual learning styles
- overcome restrictions of time and place
- take away barriers of classroom walls

However, distance education is still often dominated by quite traditional educational concepts

Major problems with e-learning

1. Human resistance
2. Lack of bandwidth
3. Lack of interactivity

(Forrester Research, 1999, but still valid)

End

Thank you!