

**Videoconferencing in Surveying Education Programmes Needs New Institutional Capacity**  
 - From One-campus Activities to Multi-campus Functions

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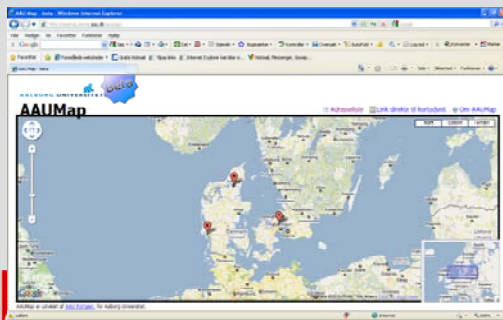


**Aalborg University**

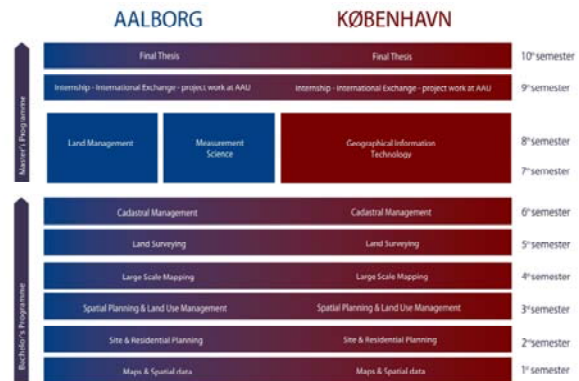
- Founded in 1974 and all curricula: Problem Based Learning in studentgroups (collaborative teams).
- Full Range University (B/M/PhD)
- Faculties for Humanistic, Social, Law, Engineering, Nature and Medical Science.
- 14.000 Students, 2000 staff (1200 Scientific).
- Member of European Consortium of Innovative Universities (ECIU).

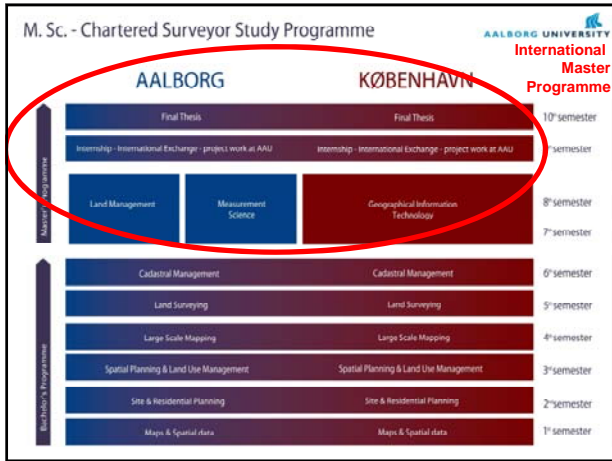


**Campus in 3 danish cities:**  
 Esbjerg, Aalborg and Copenhagen,.



M. Sc. - Chartered Surveyor Study Programme





### Learning infrastructure:

- Spatial Data Libraries
- Student always wired
- High level of ICT-skills
- Problem Based Learning
- Blended Learning
- Collaborative Learning



### Learning infrastructure:

- Modern/smart surveying.
- 3D modelling
- e-Governance and -ment



### Status

At the Bachelor/Masterprogramme for cadastral surveyors **realtime videofacilities to run courses at the same time at two campuses.**

Right now for 1st, 2nd and 3rd year.

Experiences are done.

**Team of student-coaches** have been selected at trained for the job **to guide the teachers.**

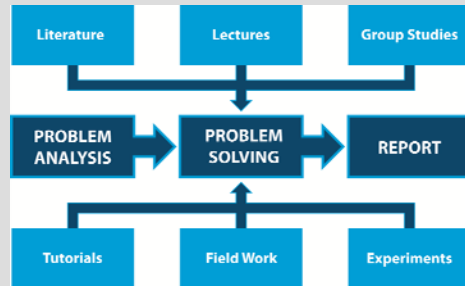


## The method

- Never finished - always along new roads
- Play and Learning 😊
- "Mudling through"
- Listen to and learn from students
- Enjoyable collaboration E-LearningLab

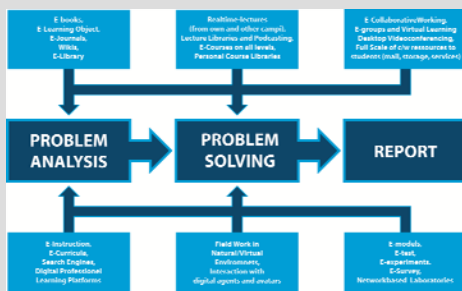


## AAU Learning Model - Classic



Enemark og Kjærdsdam, 1994

## AAU Learning Model - 2.0



Esben Munk Sørensen, 2009

## AAU Learning Model - 2.0

- The model integrate moderne ICT and represent also blended learning.
- The pedogogical model has shown value.
- Model for future learning
- Learning on courses and projects integrate Internet-resources.
- The model means permanent innovation of courses and projectwork



## AAU Learning Model – 2.0



## Developing Learning Lab Geomatics at Aalborg University



## Major challenge for universities.


- Real-time video conferencing and video streaming will mean dramatic changes in the university environment around the world.
- Technology ready: Media Integration, IP standards and R / W broadband.
- Innovation needed: Competence, pedagogy and organization - and the economy.

## Master of Technology Management


geoinformatik og matrikulær informatik



We have done it since 1996






Videokonference between Melbourne and Aalborg . 1997 (- and First Class).




IP-mode is MUCH cheaper ( 0€/hour) and with same quality as ISDN-mode (1000 €/hour)

Videoconference between Aalborg University (DK) and Melbourne University (AU)

ISDN-mode (1996-04): IP-mode (2004-future):

The challenge with CIT

Cross Campus Networking and communication

Aalborg  
Esbjerg  
Copenhagen





Courses on twin-campi





Courses on twin-campi



Courses on twin-campi



Courses on twin-campi



Courses on twin-campi





Courses on twin-campi



FIG



Essential tutors! !!



FIG



Discussions!



Discussions!



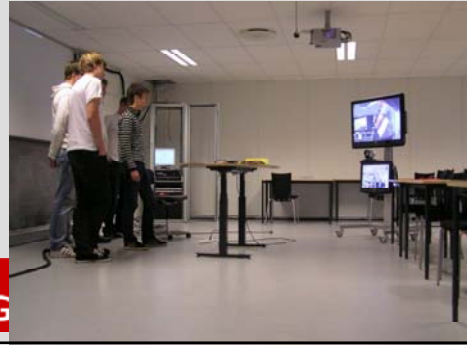




Examination and seminars



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### Examination and seminars



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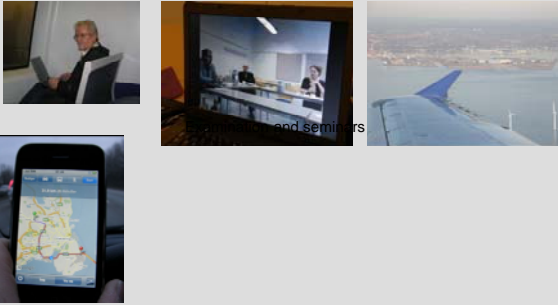
### Examination and seminars



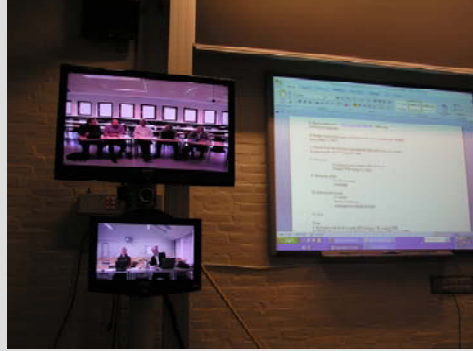
### Examination and seminars



### Along the way, other experiences



### Along the way, other experiences



### Common lectures by key-persons



### More spin-off activities. Opening workshop -juni 2008



## Main recommendations

- Promote adaptability for the involved.
- Motivate for learning.
- Create environment for development and change of learning methods – resource centers.
- Use students as assistants.
- Prepare for using streaming technologies for still more of the lecturing.
- Interact with other Information and Communications technologies for individual and collaborative learning



## The purpose of the VC may differ.

### Awareness on:

- One-to-one.
- One to many isolated individuals.
- One to both near-class and distance class.
- Isolated individuals to isolated individuals
- Group to group communication.

### Real-time versus asynchrony communication

Real-time is for interaction!



## Lessons Learned



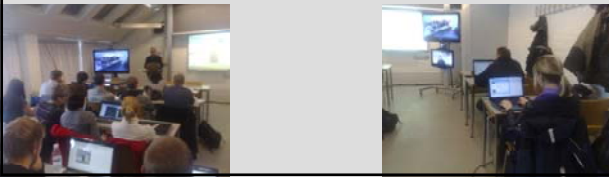
## Strengths

- Lecture and study without travelling long distances
- Integrate teachers from abroad and from long distances
- Distance students can be real-time active.



## Weaknes/Challenges

- The sound cannot be good enough.
- Distance students to feel presence
- Difficult to feel contact with distancestudents
- Teachers may not be prepared enough
- Technical challenge to manage the system



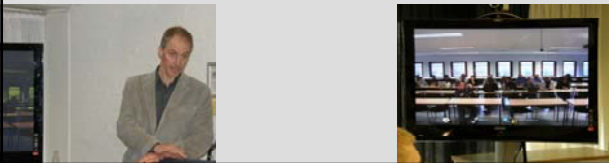
## Basics

- The lessons has to be planned.
- Focus on interaction and screenplays
- A new/different way of managing courses



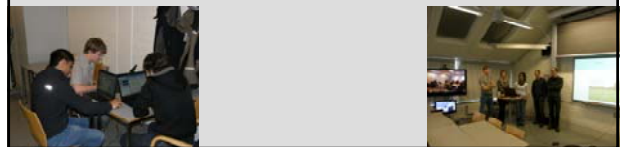
## Awarenes on:

- Be polite.
- Don't let students disturpe
- Tell what you are doing about delays, surprise, interactions.
- Be aware of not leave the screen.
- Communicate with persons.



## Focus on interactions

- Variate paedagogical methods
- Groupworks with tasks, solutions and presentations.
- Prepared discussions onlines – and off-lines,
- Breaks with actions, pauses.
- Let students be active in front of the others – and the camera.





## Variations

- Internet-interaction.
- Show videoclips, demonstrations.
- Write on the boards – smarts and old blacks.
- Brainstorms
- The audience to be active.
- Digital Hands-outs to the audience by mail when starting



## Start softly – learn to use the systems.

- If possible – create IRL-meetings for the different audiences - near and distance
- Focus on contact to the distance students – visit the distancestudents
- Look directly into the camera – not on the screen.
- Comment on things to the distance students.
- Promote small-talk and questions from the distance students.
- TEST the equipment and start EXACTLY on time.



Thanks for attention.



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