

# From Knowledge Acquisition to Innovation in Study Programmes and Consequent Challenges in University Teaching

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## Frameworks and innovation

- Bologna process
- Qualification Framework
- Focus in university teaching and learning
- Information or innovation
- Students' reflection, academic competencies
- Social competencies
- Exams and results
- Effective learning



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## The Bologna Process in Europe

- Progression Bachelor, Master, PhD
- Clear goals of education
- Assessment criteria
- Qualifications obtained
- Exam form
- Merit and comparison with international grading scales (ECTS)



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## 1) Explicit learning objectives

- Learning outcome: clear goals, learning objectives, diploma supplement
- Competencies -> new Danish Qualification Framework: *knowledge, skills and competencies*



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## 2) Alignment

- Lining up curriculum, instruction, standards and assessment
- Improved student achievement  
or
- Teaching to the test?



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## 3) New teaching and learning forms, new exam forms

- Establish conditions for developing the competencies wanted



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## Clear goals and alignment: Motivation or teaching to the test?

- A good teaching system aligns teaching method and assessment to the learning activities stated in the objectives (Biggs)
- All aspects of this system are in accord in supporting appropriate student learning
  - > better motivation and learning



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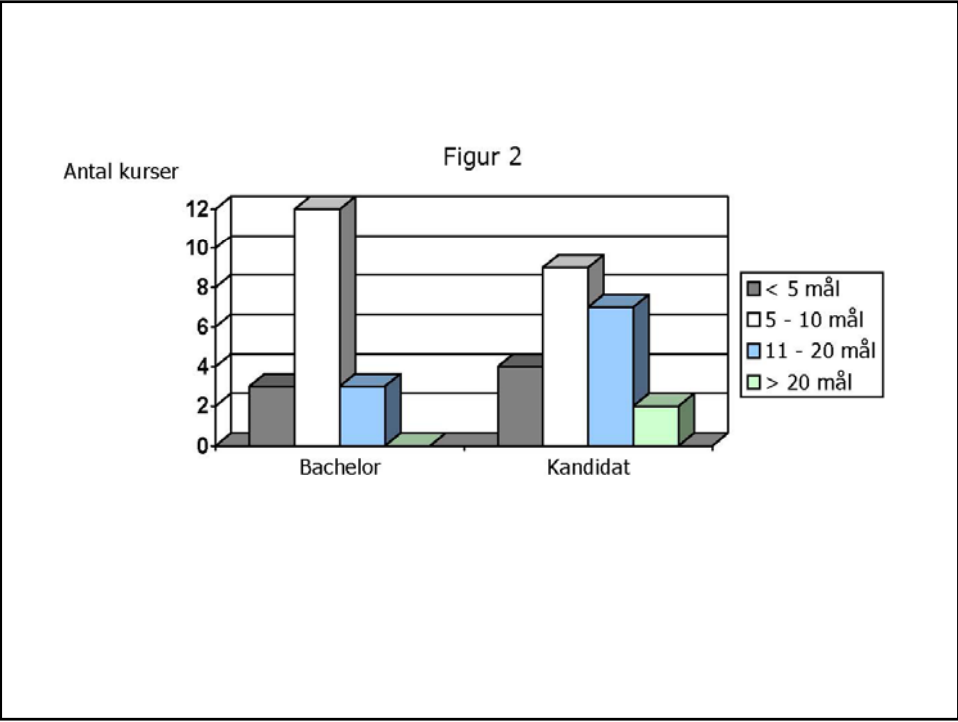
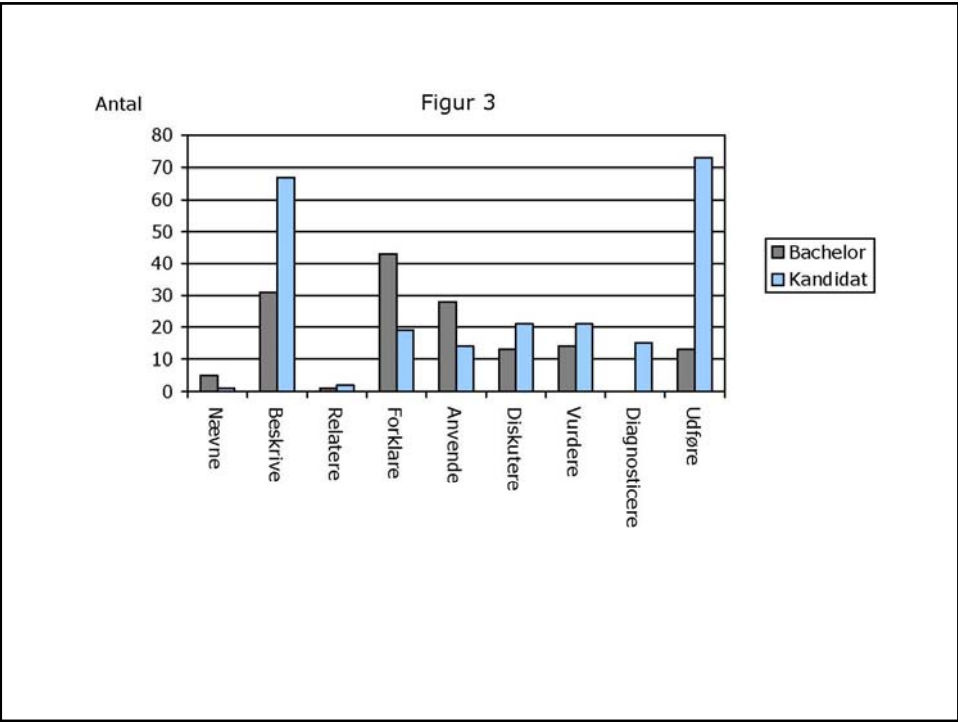
## Explicit learning outcome

- All courses at the medical education program at Aarhus University have reformulated their learning objectives according to the SOLO taxonomy verbs which explicitly express the expectation about what the students must be able to do and which constitute the basis for the assessment



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## Influence of assessment

- **“Assessment methods and requirements probably have a greater influence on how and what students learn than any other single factor**
- **This influence may well be of greater importance than the impact of teaching materials”**

**Boud 1988**



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## Wash back effects of assessment?

- **Even though wash back effects of exam forms are most wanted, changing descriptions in study programs and changing tests is not enough:**
- **You have to change teaching methods and teachers do not always do that and cannot always do that on their own**
  - **Cheng 2003, Luxia 2007**



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## Effects of clear learning objectives and aligned exam forms:

- good communication -> motivation
- or*
- treating both students and teachers as untrustworthy
    - > negative teaching and learning strategies
  - Too clear (closed) objectives, combined with criterion based assessment can affect motivation negatively
  - Nothing to add, nothing extra or exceptional to gain (A+, honours or just the feeling of influence on the teaching-learning situation)



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**“If you *can* measure it, it probably isn't *it* !” Phil Race, Aalborg 2007**

- We often end up measuring that which is easy to measure, rather than that which is important
- “Students can avoid bad teaching: they can't avoid bad assessment”

**Boud 1994**



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## We have to be aware of assessment forms!

- **Goal: not reduce complexity or commitment to personal vision, but educate critical creative global citizens willing to take risks in order to make a difference as the world of tomorrow's (research) leaders!**



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## Not uniform explicitation of predefined goals!

- **Avoid grade-driven motivation**
- **More and deeper contact**
- **Analytic and creative**
- **Reflection**
- **Interdisciplinary**
- **International experience**
- **Cognitive and affective learning**
- **Commitment to personal vision**



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## Is control and fixed curriculum ever a good idea?

### Put yourself at risk every day!

- An integral didactic approach
- Students very actively involved
- PhD students involved
- Learning from each other
- Taking responsibility
- Task forces in marketing, recruiting, administration, planning, organising, managing the Kick off, network, alumni and social events, annual party, IT and intranet

Klaus Diepold, Bayern, 2007



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## Learning theory

- The importance of knowledge creation
- -> learning in a constructivist sense
- From positivist, equilibrium-based models
- to notions of non-linearity, chaos theory, self-similarity and complex adaptive systems
- Not learning second hand



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## Learning organizations

- Survival and competitiveness
- -> learning communities as environments facilitating learning
- Open systems
- Open learning communities not established from outside
- Constructivist learning process
- Partners not always either learner or teacher
- Need of a facilitating open learning environment



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## Exam forms in a new learning environment?

- Teams and product working (cf. AAU, RUC, CBS, group project work)
- Entrepreneurial learning
- Collaboration with outside world
- Peer assessment
- Case competition
- Not just clear goals and text book experience!



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## Conclusions

- 1) Alignment is a good thing, but are we building a system of teaching to the test?
- 2) Are exam forms good enough, have they followed learning objectives?
- 3) Alignment is a good thing, but are exam forms authentic? Innovation in exam forms? The role of creativity in research and education



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