Aalto University
School of Electrical
Engineering

PED-131.9000 Teaching assistant as a learning instructor

Day 2

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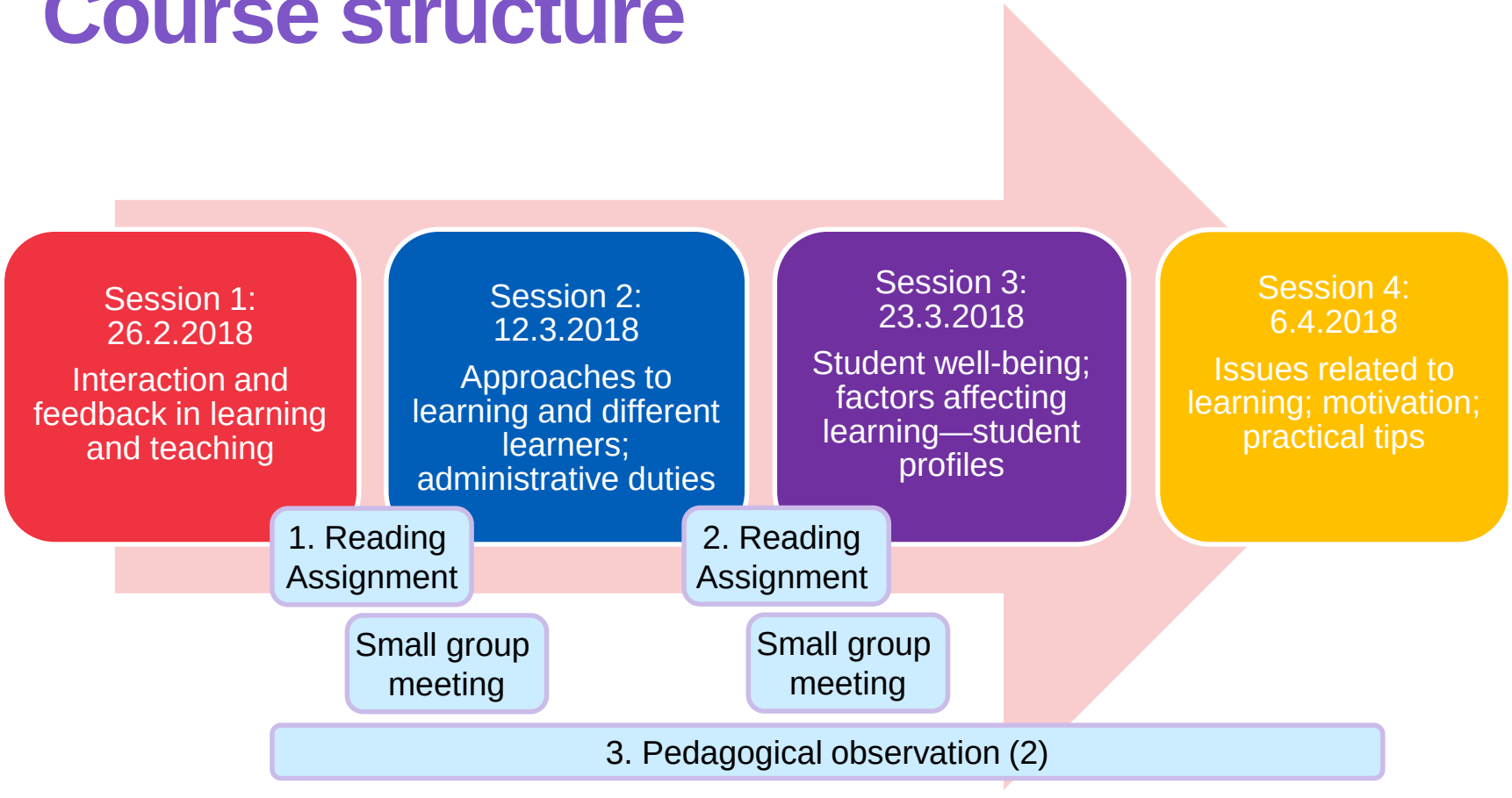
Today’s schedule

9:00–9:10	Getting started
9:10–10:00	Approaches to learning and levels of thinking about teaching: group work
10:00–10:10	Break
10:10–11:05	Wrapping up the group work
11:05–11:15	Break
11:15–11:45	Student administration
11:45–12:00	Learning assignments

Course structure



Learning outcomes of this session

After this session you

- **recognise different ways that students learn**
- **understand the different levels of thinking about teaching**

Group work:
Learning and teaching at the university

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Topics for the group work

1. Different levels of thinking about teaching
2. Surface approaches to learning
3. Deep approaches to learning

Gallery walk, instructions: phase 1 (time: 20 min)

- Work in a group of 3–4 people.
- Discuss your theme—what do you think about it?
- What kind of examples regarding the theme arose from your experiences as a student and/or as a teacher?
- Make a poster of the given topic.
- Be prepared to present the poster to a new group—**everyone in the group will teach/present the topic to a new group**.

Gallery walk: phase 2

- Attach your poster on the wall
- New groups
- Each group goes from poster to poster (~10 min/poster). The teacher will signal when the time is up.
- The poster is presented by a member of the group who has produced it. Others may comment/add ideas.
- Wrap-up of the gallery walk

Short break!

Wrapping up:
Levels of thinking about teaching

Biggs & Tang (2011): Teaching for quality Learning at University, pages 16–29.

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	LEVEL 1 Blame the student	LEVEL 2 Blame the teacher	LEVEL 3
FOCUS	What the STUDENT is	What the teacher does	What the student does
TEACHER'S ROLE	Expert of the content	Expert of the content	Expert of the content Learning facilitator
TEACHING	Transmitting information Lecturing Assessment Teaching as selective activity: good and poor students. Teacher-centred	Transmitting information Teaching is carefully planned Various teaching methods More management than facilitating learning Teacher-centred	Support learning Clear learning outcomes Teaching and learning activities Student-centred
STUDENT'S ROLE	Attend lectures Listen and take notes Read Pass the exam Memorise—surface approach to learning	Attend lectures Listen and give answers Pass the exam Give feedback Memorise and understand	Active approach to study Responsible for their own learning Understand—deep approach to learning

Your expectations: where is the focus?

Note: all are relevant and important

Broad questions

The context of teaching and learning

-teaching style of Aalto

-learn on teaching/learning culture in engineering sciences in general

Teacher assistant development

- ways to construct TA development

- to be a better assistant

-fix the mistakes in my current teaching approach

Focus on teaching

- teaching methodology, tools for teaching, basic skills for teaching

- how to organize lecture content, explain complex content interestingly

- how to design assignments

- how to make the lecture lively, teach effectively

- tips for challenges such as stage fright, ways of talking, slides

- to get experience of the use of interactive media in lecture class room and other teaching methods (best practices)

Focus on students and learning

- how to support students learning and team formation

- how to make students understand

-why certain behavior/certain things in class help students understand, learn, and probably raise their motivation/make them eager to do this and to reach certain goal

- how to encourage students to learn more and to ask help when needed

- identifying strategies to overcome and avoid key obstacles to change

- to recognize the problematic cases in advance (?)

How to support learning?

- awareness of learning objectives (intended outcomes)
- the need to achieve the outcome (“the art of teaching to communicate this need”; “motivation as a product and a prerequisite”
- free to focus on the task
- collaboration and dialogue
- Biggs & Tang p. 23

+ continuous assessment, different modes of assessment and feedback of learning etc. etc.

Wrapping up: Approaches to learning: theoretical findings

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Background

- **Lot of research on learning approaches has been done in universities worldwide since the 1970s**
- **Approaches to learning were developed when trying to understand and explain *why* students' *learning outcomes* differed so much**
- **The approaches were initially considered to be stable and immune to differences. Today they are understood to be situational: changeable and influenced by the learning situation (teacher, subject, group, requirements,...)**
  - This means that we approach a learning situation in certain way (depending on our previous experience, self-image, interest, motivation,…) BUT we also react to the situation and behave (consciously or unconsciously) in a certain way

Deep learning

Typical motivation	To understand and follow one's own interest
Learning strategies	Knowledge building; finding similarities and differences between theories and concepts; understanding the bigger picture (not forgetting the details)
Difficulties	Knowing one's own limits and what is enough; getting things done "well enough" and proceeding to other tasks; knowing when to give up when stuck with (or finding and answering) questions that are too difficult (might get frustrated or dissatisfied with one's own behaviour)
Support provided	Find relevant extra information; encourage to share interest with other students; set the "well enough" goals; explicate the allocated workload; give positive feedback on what's sufficient for learning efforts

Surface learning

Typical motivation	To pass the course (reasons for not setting higher objectives can vary from not-interested to no-chance-to-succeed)
Learning strategies	Rote learning, seeks hints, passive receiving
Difficulties	Concentrating on what is important to learn; to start doing things and trust one's possibilities to succeed; finding one's own interests; proactively creating links between course contents so that knowledge does not seem to be fragmented and full of irrelevant details
Support provided	Help believe in one's own skills; positive feedback on things already done; help build bridges between the contents; set goals; find appropriate (basic enough) exercises; help to start working

Compiled from Biggs (1999), Entwistle (1988) and Ramsden (1992))
http://exchange.ac.uk/learning-and-teaching-theory-guide/deep-and-surface-approaches-learning.html

Organised learning

Typical motivation	To optimise and get ”good results” (grades); interest in practical matters: skills and knowledge that can be used in the future (in work)
Learning strategies	Being aware of course requirements and assessment criteria; monitoring and planning one’s studies, but being dependent on the teacher’s goals
Difficulties	Optimising grades, but forgetting one’s own interests and learning; sometimes overestimates one’s own skills
Support	Help to concentrate on learning and to find meaning; challenge to set ”deeper” goals

Entwistle (1988); Marton & Säljö (1976)

Approaches to learning

Entwistle (1988); Marton & Säljö (1976)

Orientation	Objective	Action	Consequence
Deep	To understand for oneself	Processes actively	Actively interested (gets deeply engrossed)
Surface	To achieve the pass criteria	Simply reproduces content to pass the course	Difficulties in understanding, and anxiety
Organised (strategic)	To obtain good grades	Systematically plans activities	Aware of performance criteria

Short break!

Learning assignments for the next session (1/3)

1. **Reading assignment**
2. **Teaching observation**
3. **Group meeting**

1. **Reading assignment: DL 23.3.2018**

   Go to MyCourses→Day 2, and find the link for the book:

   Hemminki, M. Leppänen, M. & Valovirta T. 2013: *Get inspired! A guide for successful teaching*.

   Read **Chapter 5, "How do I teach?", pp. 39–49.**

   Read the text so that you can discuss it with your peers in your group and in class.

Learning assignments for the next session (2/3)

2. Teaching observation. DL 23.3.2018

- Observe an exercise class. If possible, visit a class of your group members or your course mates.
- Focus on **the students** and note down at least the following: What do the students *do*? How does the teacher *motivate* them? Add reflections and insights of your own. You may give constructive feedback to the teacher (ask first); if you do, be specific, be positive.
- Use the feedback form from MyCourses→Day 1 for this. Submit your observations and reflections to the submission box in MyCourses→Day 2.

Learning assignments for the next session (3/3)

3. **Group work: reflect on the teaching session and the reading assignment. DL 23.3.2018**
   - Arrange a meeting with your small group (do it now).
   - In the meeting, plan your teaching observation and discuss the article.
   - Submit your notes and reflections in MyCourses (Day 2):
     - *What did you discuss?*
     - *What did you observe?*
     - *What did you think about the article?*