Specialization Module

Speech Technology

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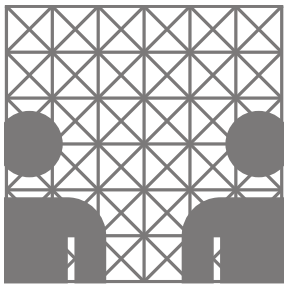
UNIVERSITÄT HAMBURG, DEPARTMENT OF INFORMATICS
NATURAL LANGUAGE SYSTEMS GROUP



Today

1. Brief overview of structure and formalia of the course
2. What and how to study in a specialization module
3. Speech as a Communication System
4. Lab project proposals
   → please take a look at the Lab projects before next week

https://nats-www.informatik.uni-hamburg.de/SLP16

on the website:

- up-to-date information, revisions of the original plan
- workload breakdown: ⅓ lecture, ⅓ seminar, ⅓ lab projects
- desired learning outcomes (more on this later)
- session breakdown:
  - we will have lecturing blocks and seminar talk blocks
  - lab time at your own group's discretion
  - no class on 18. May 2016
    (reading assignment related to the conference that I'm attending)
  - other imporant dates

about the instructor

- Timo Baumann (baumann@inf..., F-406)
  - 2001-2007: studies in Hamburg (CS, phonetics, linguistics, ...)
    - intermittent studies in Geneva and Granada
  - 2007-2013: PhD in computational linguistics
    (Potsdam, Stockholm, Bielefeld, Hamburg)
    Topic: Incremental Spoken Dialogue Processing
  - since 2011: PostDoc in Hamburg
    Arbeitsbereich Natürlichsprachliche Systeme (NATS)
- main interests:
  - speech technology for interactive applications
  - teaching computer science and SLP

how about you?

how about you:

where do you want to be in 5 years from now?

what do you have to do to get there (and stay there)?
how does this class contribute? → write 5 simple requirements

learning outcomes: revised Bloom's taxonomy

- different dimensions of knowledge: factual, conceptual, procedural, meta-cognitive
- different cognitive processes: remember ... create

	remember	understand	apply	analyze	valuate	create
facts						
concepts						
procedures						
meta-cognitive knowledge						

- there is no inherent qualitative ordering: understanding how to remember facts is not better than remembering facts

Desired Teaching Outcomes

	remember	understand	apply	analyze	valuate	create
facts						
concepts						
procedures						
meta-cognitive knowledge						

Desired Teaching Outcomes

- students have an overview of the speech technology field: tasks, challenges, foundational techniques
- students are able to analyze and classify central problems of speech processing and are able to deliberate about solutions and their alternatives

	remember	understand	apply	analyze	valuate	create
facts						
concepts						
procedures						
meta-cognitive knowledge						

Desired Teaching Outcomes (II)

	remember	understand	apply	analyze	valuate	create
facts						
concepts						
procedures						
meta-cognitive knowledge						

Desired Teaching Outcomes (II)

- students are able to explain and discuss selected aspects of speech processing in detail and to illustrate their consequences for applications
- in group projects, students have developed skills in using and experimenting with existing speech technology and the corresponding evaluation methodology

	remember	understand	apply	analyze	valuate	create
facts						
concepts						
procedures						
meta-cognitive knowledge						

Desired Teaching Outcomes (III)

	remember	understand	apply	analyze	valuate	create
facts						
concepts						
procedures						
meta-cognitive knowledge						

Desired Teaching Outcomes (III)

- students are able to reflect on their scholarly behaviour
- students are able to autonomously study specialization areas that are similar to speech technology (in AI, CS, or linguistics), find and digest relevant scientific literature and discuss findings and further questions with colleagues

	remember	understand	apply	analyze	valuate	create
facts						
concepts						
procedures						
meta-cognitive knowledge						

The Ultimate Desired Teaching Outcome

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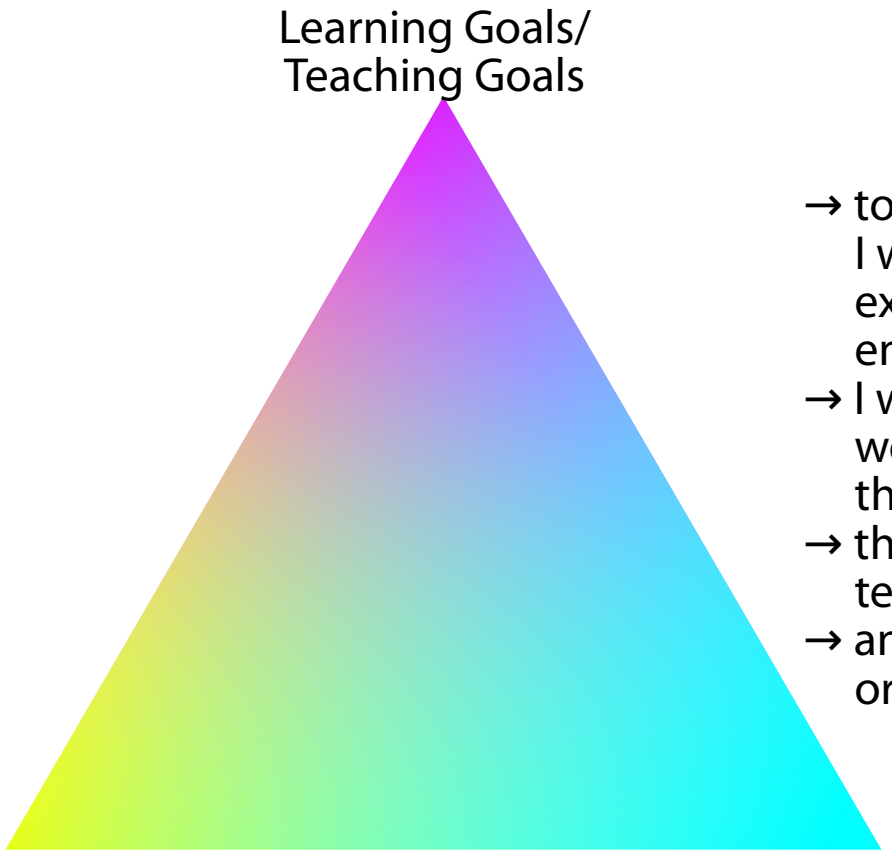
by the time you've worked through three Specialization Modules in your studies, you should not need any more. You will be able to study further specializations by yourself.

(It's left to you to study in a way that enables this goal.)

Constructive Alignment

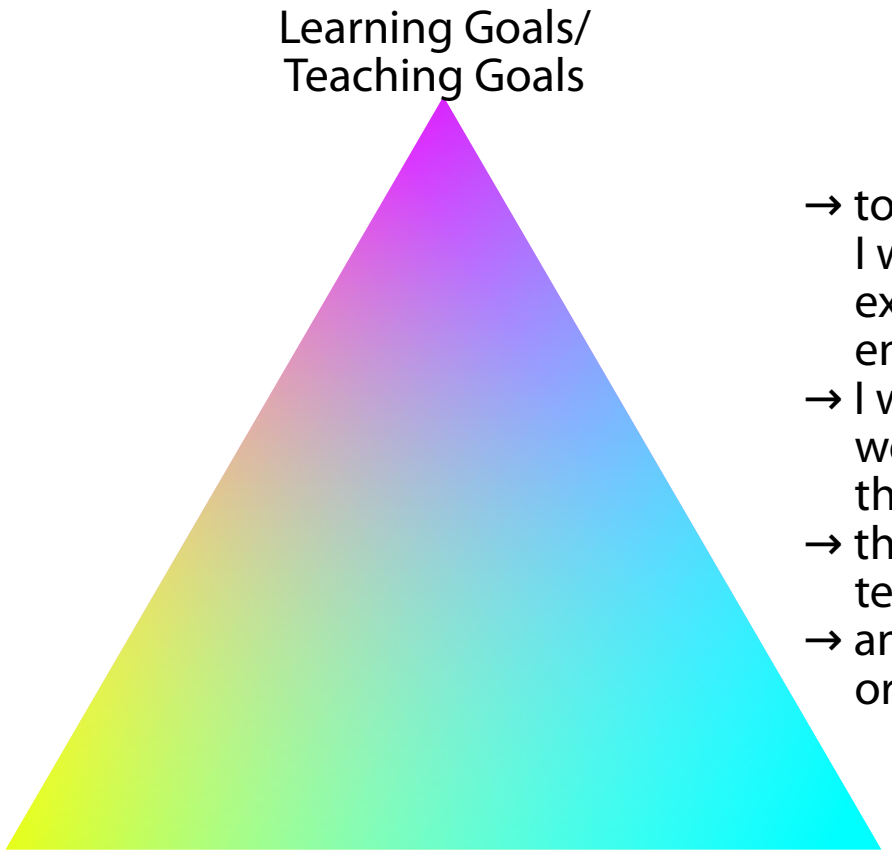
Constructive Alignment



→ to ascertain alignment, I will ask you to develop exam questions at the end of every lecture.
→ I will collect these on the website and comment on them wrt. our alignment status
→ this way, I hope to better teach what you want to learn
→ and avoid surprises in the oral exam

→
Seminar talk
Term paper
Lab project
Oral exam

Constructive Alignment



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Seminar talk
Term paper
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Oral exam

room for questions
and for the coffee break

Thank you.

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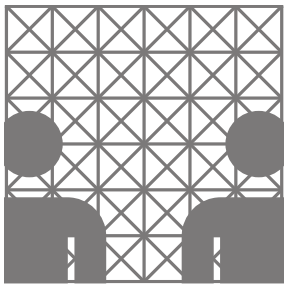

Further Reading

I do not expect you to read up on the learning taxonomy topics.

Notizen

- ca. 70 minutes with lengthy discussion of the webpage contents (10+ minutes) and introduction round (20+ minutes)

Desired Learning Outcomes

- students have understood the formalia and structure of the planned coursework and the evaluation of their performance
- students have thought about their own goals wrt. to the Speech Technology specialization
- students know the different kinds of knowledge (facts, concepts, procedures, meta-cognitive) and depth of learning (remembering ... creating)
- students do not resort to surface-learning
- students understand that their feedback is crucial for the alignment with the instructor and the contents of the course