

Teaching Portfolio

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Teaching Experience

2021-> Introduction to C++, 2nd semester bachelor, role: Teacher
2019-> Semester project, 3rd semester bachelor, role: Teacher
2019-> Machine Vision, 3rd semester diploma, role: Teacher
2016-> Uncertainty propagation in 3D reconstruction, 7th semester master, role: Guest lecturer
2015-2017 Robotics and Vision 1 & 2 (vision part), 7th-8th semester master, role: Teaching assistant

Supervision

2021-> Diploma, Bachelor & Master projects
2020-> Advanced Robotics Projects, 8th semester master
2019-> Semester projects, 1st, 2nd & 3rd semester bachelor/diploma

Formal Pedagogical Education

2023: University of Southern Denmark's Lecture Training Program, including the following elective courses
- Supervision - roles and relations
- How to design, produce and use videos for learning
2015: Ph.D course: Introduction to University Pedagogy

Conferences

2022 TAL2022 - Teaching for Active Learning, Poster presentation

Fundamental Pedagogical View

My fundamental pedagogical view is founded on the idea of cognitive constructivism. I believe that every student has their own internal framework of knowledge and that learning is the integration of new knowledge into this framework. The integration is an active process, which requires the student to reflect on new knowledge and actively put it into the context of their existing framework, possibly rectifying the framework if inconsistencies between new and existing knowledge arise. The teacher's role is to facilitate this active learning process. The following four points express what I believe is most important for facilitating active learning.

1. Choice of curriculum and decomposition of topics

Since the students need to integrate each new concept into their existing framework of knowledge, each new concept must be manageable on the basis of existing knowledge. On a small scale, the teacher must identify difficult topics and partition every topic into multiple adequately simple concepts, such that these concepts become manageable for the students. On a large scale, it is the teacher's responsibility to devise a curriculum that meets the students where they are in their education.

2. Providing intuition and setting knowledge into context

Books are an excellent medium for conveying information in a precise and accurate manner. A teacher should not be seen as a competing medium of knowledge transfer, but instead as a catalyst for the integration of information into the learning framework. Since the teacher is knowledgeable of the context in which the students are learning, they should focus on providing intuition of difficult concepts and setting these concepts into the context of the wider education or technical field.

3. Providing motivation

One of the key factors for successful learning is motivation. An entire education consists of many courses, many of which are compulsory. As the students, especially in the first semesters, do not yet have a comprehensive understanding of the content of their education, it can be difficult for them to appreciate the relevance of concepts that an experienced practitioner sees as essential. Therefore, the teacher should motivate the students by either explicitly or implicitly highlighting the relevance of the concepts which they are learning.

4. Encouraging independency and responsibility for own learning

While the earlier points focus on facilitating active learning of a defined curriculum, it is also important that the teacher encourages creative thinking and problem-solving such that the students are equipped to tackle problems on their own. Well-defined requirements and clearly defined exercises are excellent, but teaching should also leave room for students to

find their own path, to encourage a feeling of agency and confidence, in turn motivating them to take responsibility for their own learning.