

Educating the engineer as a reflective practitioner who is qualified to participate in project work

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Introduction

- First and second year engineering students in the problem based and project oriented group work at Aalborg University
- One learning objective is that students must learn to organize and collaborate within a project organization
- The supervisor should facilitate that learning objective

Theory

- A model for supervision is developed using the theory of Niklas Luhmann about operative constructivism
- Donald Schön's theory of reciprocal reflection – in – action describes a reflective communication between the supervisor and the students

Method

- Participatory Action Research (PAR)
- 18 month Case study
- Part of a Ph.D. study 1997 - 2000

The supervisor's use of Donald Schön's concept of Reciprocal reflection – in - action

- The supervisor should be an expert in teamwork within a project organization
- The supervisor should act as an example to be followed
- The supervisor should facilitate the students' reflective imitation of the expert

Two examples that demonstrates facilitation of students' development of project work competences

- Developing communicational competences during a supervision session
- Developing organizational competences by asking facilitative questions

Conclusions

- The students become more aware of project competences
- The students become more reflective in developing their project organization
- Students do not tend to experiment with their praxis by them self

Reciprocal reflection – in - action


