

Supervision in a research community perspective: A model for increasing the learning outcome of project-writing across levels in Engineering

Program text

Students writing larger projects in engineering face difficulties that impact their learning outcome. We present a supervision model that addresses these issues without increasing supervision time.

Abstract

Introduction

Writing BA-projects, master's and PhD theses poses several issues for engineering students, such as low writing self-efficacy, procrastination and writer's block (Berdanier et. al, 2018). These issues can negatively affect the intended learning outcome of engaging in disciplinary writing and revision processes, as well as hinder the development of students' evaluative judgement (Tai et al., 2018). Supervision must therefore address these issues, but high student intake rates mean less time for teacher feedback on student's written work. We propose a supervision-model that addresses these issues without increasing supervision time.

Methods

The 3-phased model is characterized by 1. Supervision groups (Nordentoft et al. 2013) formed across BA, Master's and PhD-level, 2. Scaffolding of the writing process, 3. Use of peer feedback (Nicol et al., 2006). The model was implemented at the University of Southern Denmark in the fall semester of 2018. A cohort of 6 engineering students was formed (5 Master's thesis writers and 1 PhD student). They participated in nine meetings, producing written material and providing feedback using rubrics in between. Individual interviews with all participating students were carried out by the supervisor following the supervision.

Results

We found that all participating students 1. began writing early in the process, 2. noticed advantages of a longer writing process (increased reflection, lower risk of mistakes and time to discover and correct weaknesses), 3. expressed that they received considerably more feedback than usual and that it improved their writing skills as well as the final report.

Discussion

The limitations of the data collection method must be taken into account, but we still argue that the model based on its theoretical underpinnings and the reported student experiences has the potential to improve the learning outcome of writing larger projects in engineering and possibly other STEM fields.

Author(s)

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Literature

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