

PROMOTING THE BENEFIT OF FEEDBACK IN ENGINEERING EDUCATION

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OVERVIEW OF THE ROUNDTABLE

Although we have seen an increasing interest in active learning methods the past decades, many courses at technical universities are still organized with no or minimal formative feedback (Nicol & Macfarlane-Dick, 2006). Even where formative feedback is present, literature describes that many students do not know how to use feedback in their studies (Jönsson, 2013). Therefore, to provide students with rubrics and examples of good performance has been a powerful strategy (Nicol & Macfarlane-Dick, 2006), besides educating them in giving and receiving feedback (Hattie & Timperley, 2007). Furthermore, it is also argued that students need to practice giving feedback on more than one occasion (Mutch, Young, Davey & Fitzgerald, 2018). Teachers similarly need training in providing feedback, in addition to embedding well-tailored feedback situations in their courses (Hattie & Timperley, 2007). This leads us to believe in the building a solid feedback culture among faculty members “from a collection of isolated acts to a designed sequence of development over time (from unitary items to curriculum)” (Boud & Molloy, 2013). The roundtable organizers have given workshops on formative feedback for engineering faculty at KTH Royal Institute of Technology, mostly in connection with pedagogical courses.

KEYWORDS

Formative feedback, changing faculty culture, CDIO Standards 3, 7, 9, 10

ACTIVITIES

This roundtable is a continuation of a workshop the authors led in Kanazawa in 2018. Participants are invited to share ideas and discuss how feedback cultures could be built. A single teacher can increase the use of formative feedback in his/her course, but how can we ensure that formative feedback is embedded at a program level? The roundtable aims at gathering evidence of best practices in the area and discussions will focus on two topics:

- 1) Are there well-functioning feedback cultures at your university? How can we characterize them? How were they initiated? How are they maintained and strengthened?
- 2) If we want to build a feedback culture, how could this be accomplished? Should this be done in a formal or an informal way? How should such a culture be facilitated? Which are the common stakeholders (program coordinator, director of studies...) to cooperate with? Which activities should we plan for, to make the initiative successful?

TARGET AUDIENCE

Engineering faculty members, program directors, directors of studies, educational developers. Participants are expected to have knowledge on how formative feedback impacts learning.

FOLLOW-UPS

A desired follow-up would be the formation of a community of inquiry in which everyone interested in the topic could share experiences and find answers.

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BIOGRAPHICAL INFORMATION

Niclas Hjelm is a Lecturer at the School of Engineering Sciences in Chemistry, Biotechnology and Health (CBH) at KTH. He has a degree in Engineering Physics and has been involved in teaching and learning activities since 1998. Besides teaching students, he has been involved in pedagogical courses for KTH faculty. He worked as a pedagogical developer between 2014-2017.

Elizabeth Keller is a Lecturer at the Department of Learning in Engineering Sciences at KTH Royal Institute of Technology. She has had extensive experience in teaching diverse courses in different countries. The present work stems from collaboration in a course for PhD students (Basic Communication and Teaching) she is responsible for. Her current academic interests include faculty development, internationalization, teaching and learning, and evolving technologies.

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