

Panel 3: Student drop-out

Student drop-out is a known phenomenon in the engineering sciences that remains to worry faculty, industry, society, and students themselves. Nevertheless the problem is far from being fully understood. At many universities measures are taken to enhance students' success. In this workshop we want to discuss our experiences and share ideas to advance the field of engineering education – the headline of the conference. The following questions guide our way:

1. Does drop-out in the engineering sciences contribute to maintaining the high quality of an engineering education?
2. What is an acceptable drop-out rate and why?
3. Which measures prevent a student from dropping out and how can they be encouraged?
4. What role can teaching staff and the rest of the organization/university play in preventing students from dropping out?

In order to give participants the opportunity to contribute we use the "World Café" method. Together we will find out if there are any silver bullets.

Input 1: Prof Dr Jens Bennedsen, Aarhus University School of Engineering, Denmark

Input 2: Dr Norbert Völker, VDMA – German Engineering Federation, Frankfurt/Main

Chair: Prof Dr Eva-Maria Beck-Meuth, Aschaffenburg University of Applied Sciences

Results and statements

Teaching ≠ learning

You learn something if and only if

- You work
- On the edge of your competences
- With something that you are motivated by

The ultimate formula, Steen Larsen

Initiatives to lower drop-out rates, probed by institutions of the participants:

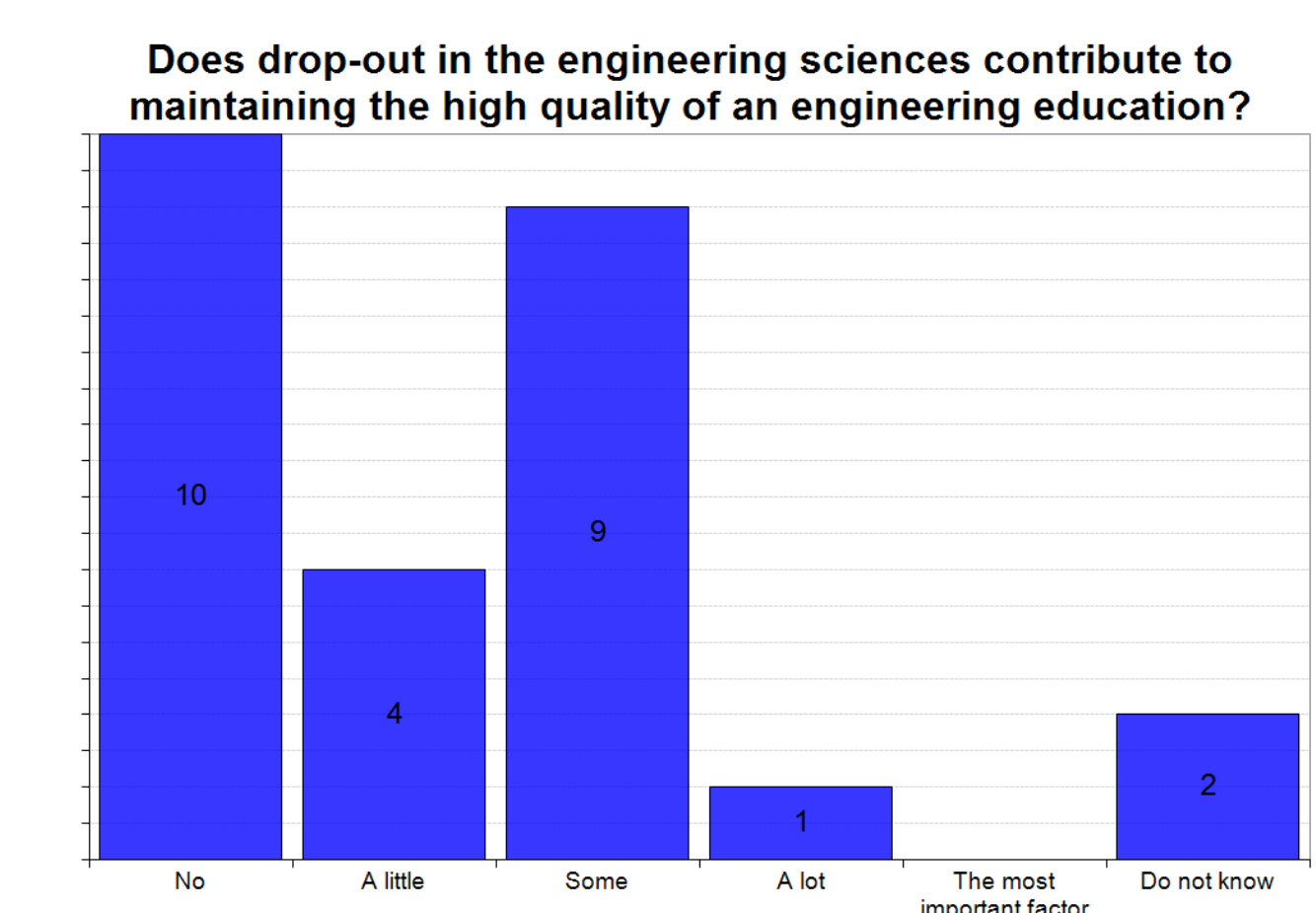
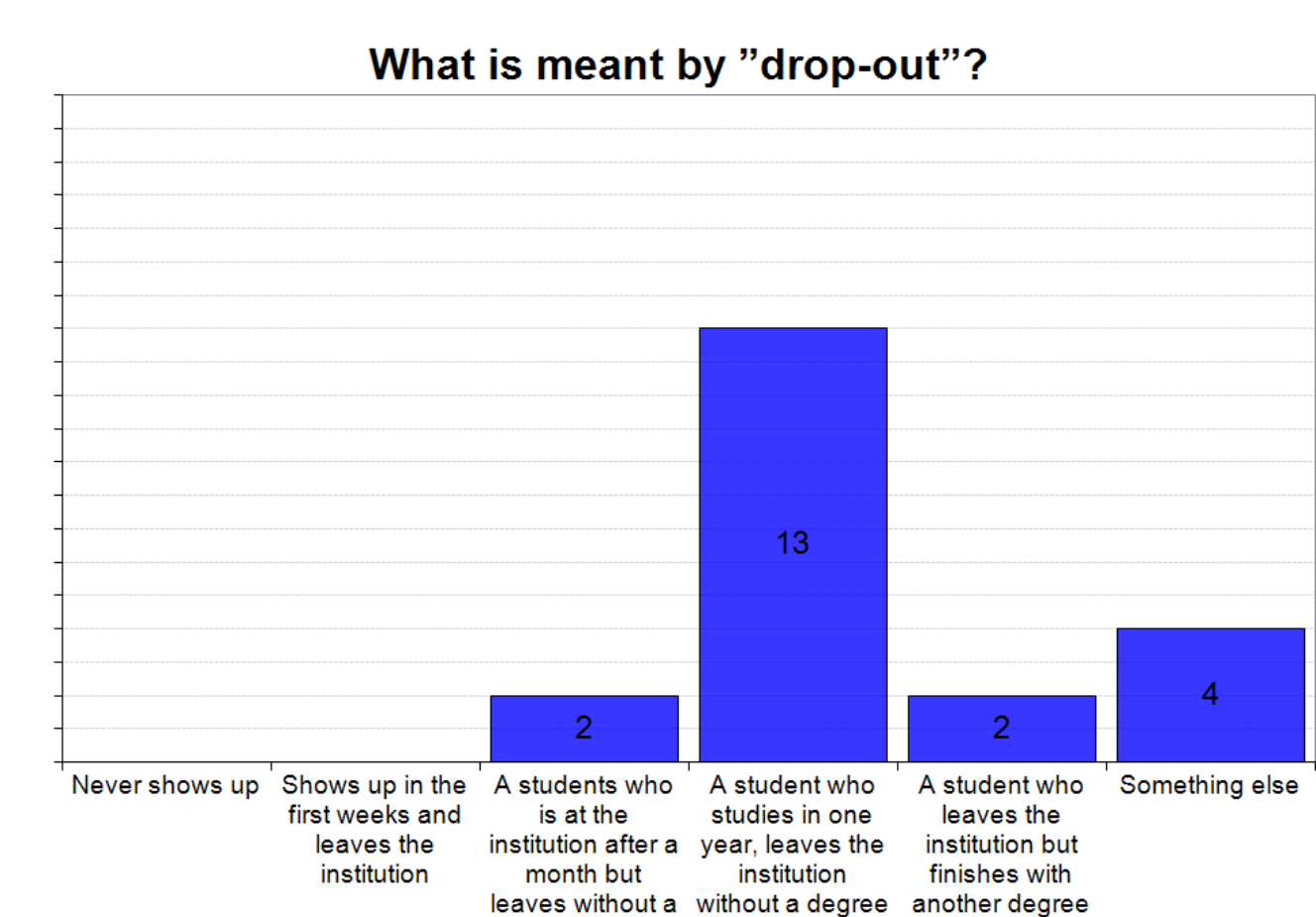
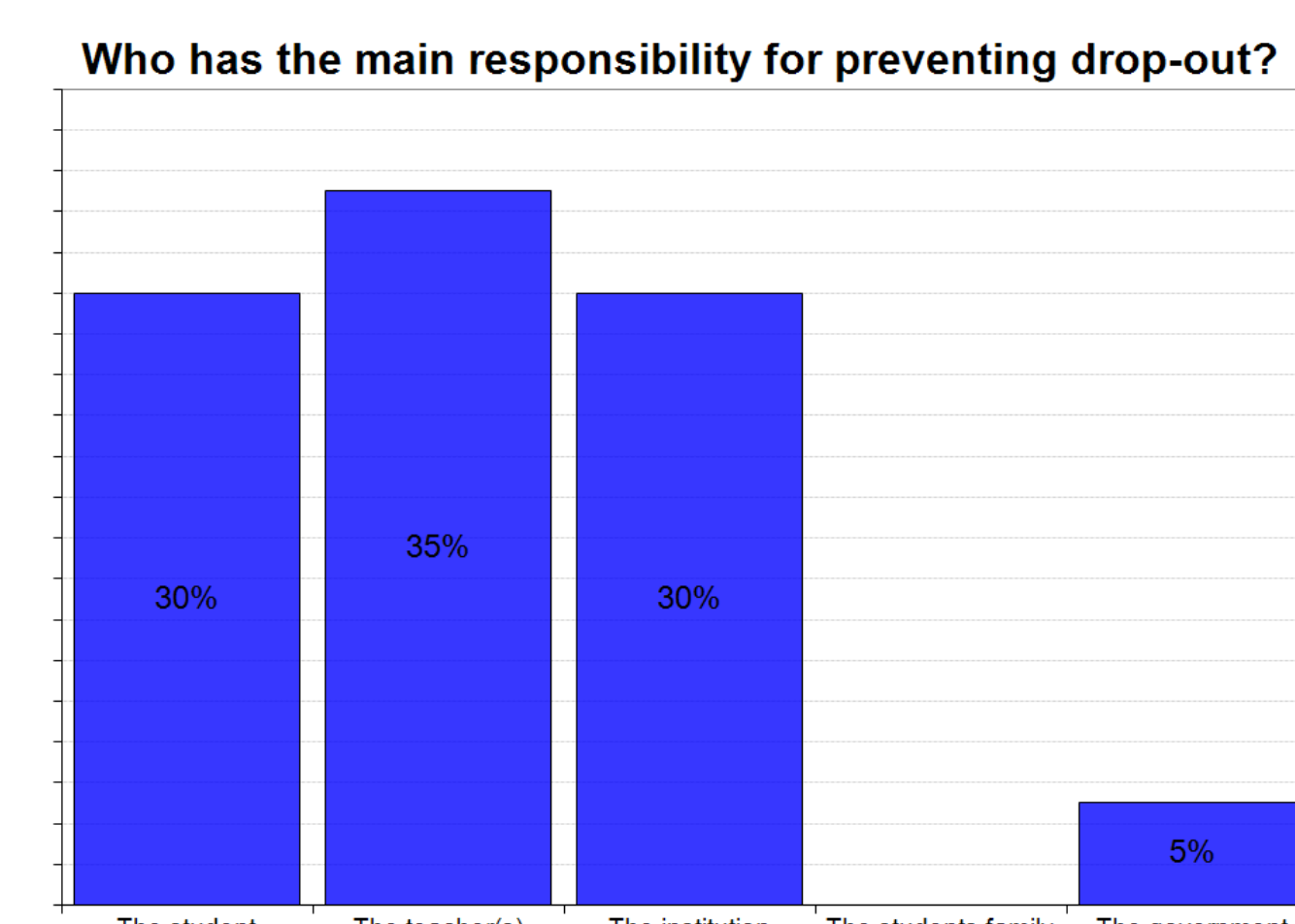
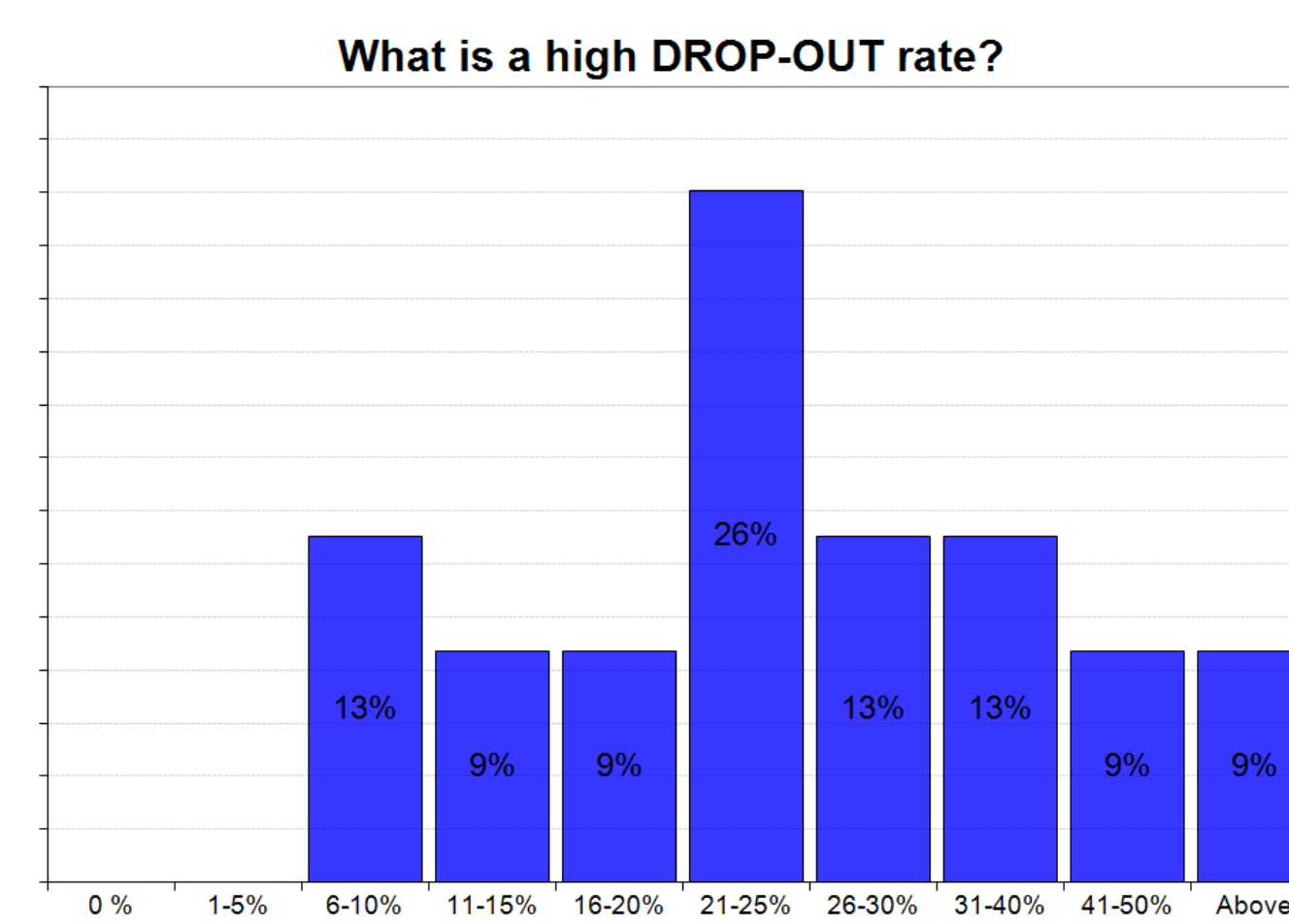
- Improve the fac/stud ratio
- Mentoring system
- Student coordinator
- QA
- Project work for beginners
- Counseling program
- Pre-study courses in math + additional courses in 1st year
- Entry test

Suggestions:

- Mentoring systems, advice for mentors
- Diversity of students has to be taken into account.
- Build up relations between students and staff.
- Increase quality of exams.
- Focus on study/learning skills
- Make projects related to real problems
- Hire staff with industrial experience
- Organize feedback of faculty towards students on a regular basis
- Extra money for students' success

Initiative "Maschinenhaus" (Power House): VDMA - German Engineering Federation

- Integrated and student oriented capacity building
- Understand the whole time at university as educational process
- Allow and work with diversity
- Build up quality management for good education
- To allow as many young people as possible from different social classes, cultures, schools and lives....access to our branch of mechanical engineering.



Conclusion (final statement)

1. We need to lower the drop-out rates while maintaining the high quality of engineering education.
2. We lack a consistent definition of drop-out and a system to measure it.
3. We need to motivate teachers and students, avoid social isolation, learn how to learn, foster student self-organization and, most importantly, bring the topic to the attention of teaching staff.
4. We need service oriented universities.
5. Get the teachers to care about their students!

International Engineering Conference: "Attracting more students and educating well-trained engineers: sensible ways to advance the field of engineering education"
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HRK German Rectors' Conference
Project **nexus**
Concepts and good practice in Higher Education

