Who am I?

Work in Maastricht, Netherlands

... at the Department of Data Science and Knowledge Engineering (DKE)

Katharina Schneider

... which is a department of:

Maastricht University
Lecture hall in 18th Century
Lecture Hall late 20\textsuperscript{th} Century
What? My friends went for a beer without me?

Awwww....

A grumpy baby

A starship trouper

Lungs
And sometimes it looks like that.
Need For a Change

• Put the students back into the focus
• Activate the students
• Let the students apply the knowledge
• Let the students explore their interests
Problem-based learning (PBL)

Contextual

Constructive

Collaborative

Self-directed
How does DKE interpret PBL?

PCL – Project Centered Learning

Projects
My Job

Lecturer

Project Coordination

Research
Projects at DKE

- Students work in groups of 6-7 students (in total 10-30 groups in each year)
- On real-world data science and AI problems (in year 3 even in collaboration with companies)
- Tutor guides students through project (weekly/bi-weekly meetings)
- Examiner assess and give feedback
FinalGrade =
0.9 \cdot (0.15 \cdot \text{gradePhase1} + 0.15 \cdot \text{gradePhase2} + 0.7 \cdot \text{gradePhase3})
+ \text{skillClassGrade}
+/- \text{individualGrade}

- Group grade: based on performance of the group
- Skill class grade: based on how many missed skill classes ∈ \{0; 0.5; 1\}
- Individual grade: based on individual contribution
Complaints & Issues

• Students complain about
  – Free riders
  – Group members not submitting their tasks on time
  – Unfair individual grades
  – ...

• Tutors/examiners
  – Have a hard time to find out the truth
  – Need input from other group members to give individual grades
  – Are contacted often too late
• Thus, we wanted a platform where the students can give feedback to each other (anonymous)
• Good learning experience for students
• Easier for tutors to identify free-riders and issues early
• Base for giving individual grade
Implementation at DKE

- Feedback fruit integrated to our education management system
- Anonymous GME in the middle of phase 2
- Self-evaluation + evaluation of peers
- GME in phase 2 discussed by tutor
  - What are your main take-away from the feedback?
  - Do you agree with the feedback, why so/why not?
  - What do you think went well?
  - What would you have done differently, given the opportunity?
<table>
<thead>
<tr>
<th></th>
<th>Unacceptable</th>
<th>Satisfactory</th>
<th>Exemplary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attending internal team meetings</strong></td>
<td>Frequently missed meetings and did not inform the team</td>
<td>Attended most team meetings. When member had to be absent they informed and/or sought the agreement of the team.</td>
<td>Attended all team meetings and took the initiative to organize and facilitate them.</td>
</tr>
<tr>
<td><strong>Responsibility</strong></td>
<td>Did not share any responsibility for tasks to be accomplished</td>
<td>Shared responsibility for tasks to be accomplished</td>
<td>Shared responsibility for tasks to be accomplished and also helped others</td>
</tr>
<tr>
<td><strong>Interaction and collaboration</strong></td>
<td>Does not or insufficiently listens and does not consider team members’ ideas and opinions</td>
<td>Makes sufficient effort to listen and consider team members’ ideas and opinions but could improve on this (e.g. sometimes responded in a dismissive manner or did not always listen to others’ suggestions)</td>
<td>Listens and respectfully considers team members’ ideas and opinions</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Does not or barely communicate with team and does not or barely respond to team members’ questions</td>
<td>Communicates and responds to team members’ questions but there is some room for improvement (e.g. communication is sometimes unclear, or (s)he does not reply in a timely manner)</td>
<td>Communicates clearly and responds promptly to team members’ questions and requests</td>
</tr>
<tr>
<td><strong>Initiative</strong></td>
<td>Shows little to no initiative (e.g. gave no suggestions and did not participate in team decision making and planning)</td>
<td>Shows some initiative and interest in team decision making and planning but there is room for improvement (e.g. providing suggestions or seeking feedback)</td>
<td>Made frequent suggestions, sought feedback and actively participated in team decision making and planning</td>
</tr>
<tr>
<td><strong>Timely submission of assigned work</strong></td>
<td>Was not able to submit any assigned work on time</td>
<td>Was able to submit most assigned work on time</td>
<td>Was able to submit all assigned work on time</td>
</tr>
</tbody>
</table>
No summative assessment

- GME was not part of summative assessment
- Not participated in GME -> reduction of skill class grade
- We would like to make the individual grade completely based on peer feedback
- BUT:

  Equal coding contribution (wanted by tutors/examiners)
  vs.
  Incentive to go the easiest way (students)
Reflection

- 6 runs of GME so far
- Most groups valued feedback and reflected seriously
- Some cases, where students got more self-confidence
- Tutors got a lot of insights into group dynamics
- In the pilot: 2 GME per project -> too much
- Possible improvement: comments mandatory at least for low grades for a certain criterion
Thank you