Modes of Classroom Assessment in Computer Science

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Outline

- Classroom assessment
- 2 Case settings
  - Assessment for learning
  - Assessment of learning
- Technology for assessment of learning
- Modes of classroom assessment
- Conclusions
Classroom assessment

- promotes achievement in low-performing schools [4]
- low-performers control their own success in learning [6]
- assessment for learning versus assessment of learning [9]
- assessment methods as teaching tools
- “communication systems must deliver assessment results into the hands of their intended users in a timely, understandable, and helpful manner” [10, p.16]
Classroom assessment

- make assessment data available for students in the same context as they were assessed: immediate feedback [1]
- make students aware of their knowledge
- make teachers aware of the success of their lectures

- goal: guarantee the quality of teaching and learning in higher education

- result: systematic approach = modes of classroom assessment in higher education
Case setting

- classroom assessment at the Vienna University of Technology
- involving students directly
  - progress
  - not failure and defeat
- promoting learning, not evaluation and assigning grades
- lecture “Cooperative Work” in computer science about meetings
Assessment for learning

“What is the role of a moderator, documenter, and devil’s advocate in a meeting?”

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<thead>
<tr>
<th>Name</th>
<th>Matrikel#</th>
<th>Marks</th>
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<tbody>
<tr>
<td>Moderator</td>
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<td>Documenter</td>
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<td>Devil’s advocate</td>
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Assessment for learning

- assessment by the teacher
  - answers on paper, read later for marking
  - capturing the presence of the students
  - motivating students to join the lectures
  - students assess their knowledge before a new subject is introduced in the lecture
  - attention is directed to the subject coming next
  - activating students
  - too much work for teachers
  - no direct feedback to students for their individual answers
  - temporally postponed feedback
Assessment for learning

- peer assessment
  - each student judges the answer of his or her neighbor first
  - afterwards the teacher tells the correct answer
  - each student marks the result and hands it over to its owner
  - answers corrected immediately
  - no additional work for the teacher
  - students become aware of their knowledge in an ad-hoc manner
  - additional knowledge for judging the answer of someone else
  - no assessment by the teacher, but by the fellow student
  - relaxing for students, but competition among students
  - students get to know each other
Assessment of learning

“What is the most important characteristic of cooperation?”

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Assessment of learning

- assessment by the teacher
  - answers are read and marked by the teacher later

- assessment supported by ICT
  - by short message service (SMS) via mobile phones
  - a quiz like assessment
  - to ask short single-choice questions
Assessment of learning

- assessment supported by ICT
  - immediate use and evaluation of the data in real-time to all
  - ad-hoc feedback
  - indication for the success of the lecture
  - clarify of possible misunderstanding by direct immediate interaction
  - technical access for students must be provided
Technology for assessment of learning
Modes of classroom assessment

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Conclusions

- classroom assessments increase confidence of students
- classroom assessments offer different modes to modify teaching and learning activities
- our approach shows how to improve classroom assessments by
  - making lectures more dynamic
  - making students curious about the contents of lectures
  - improving the fun factor during learning
  - giving teachers a feedback about their teaching
  - involving students in lectures
Thanks for your attention!

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