FAKULTÄT
FÜR !NFORMATIK

Faculty of Informatics

Modes of Classroom Assessment in Computer Science

Hilda Tellioğlu
Institute of Design and Assessment of Technology
Faculty of Informatics
Vienna University of Technology, Austria
hilda.tellioglu@tuwien.ac.at

CompSysTech'11
June 16-17, 2011, Vienna

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?"

Name	Matrikel#	Marks
Moderator	• • •	
Documenter	• • •	
Devil's advocate	• • •	

Assessment for learning

Name	Matrikel#	Marks
Moderator	. . .	
Documenter	. . .	
Devil's advocate	. . .	

- 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

Name	Matrikel#	Marks
Moderator	. . .	
Documenter	. . .	
Devil's advocate	. . .	

- 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?"

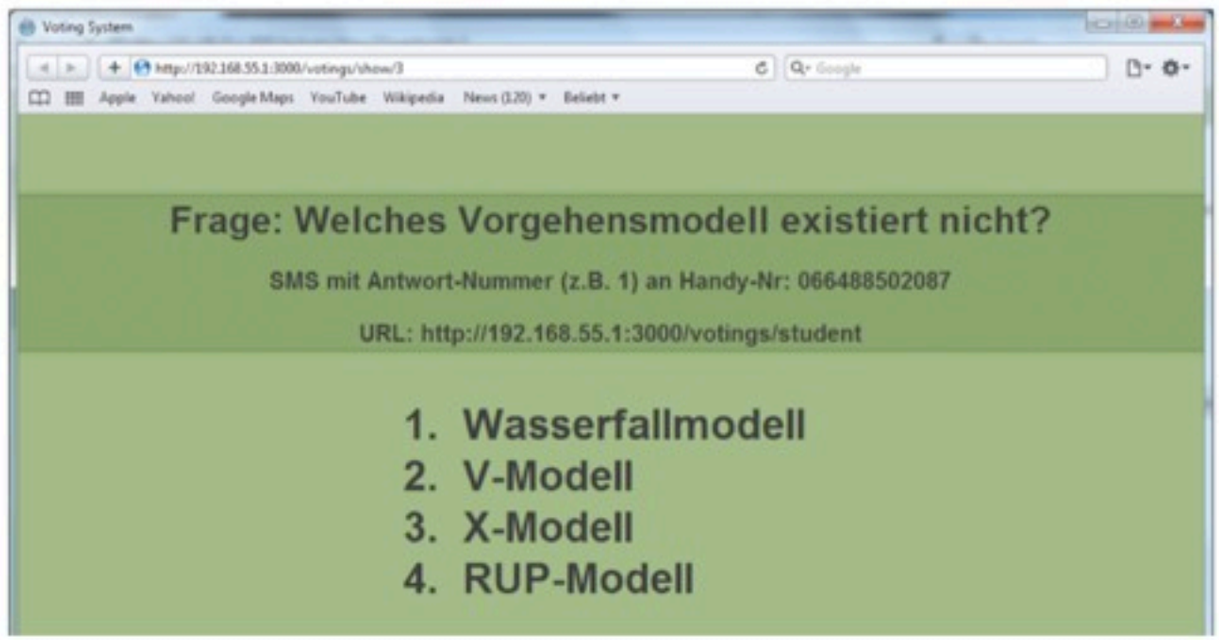
Name	Matrikel#	Marks

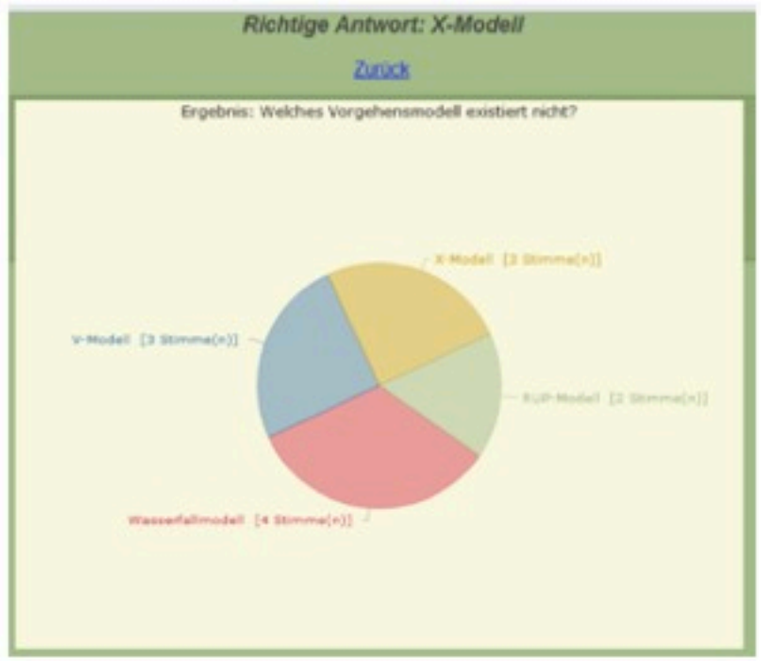
A group of people	
Whole > Sum	
Working together	
Synergy	
Cooperation	
Reporting to one boss	
Sharing one aim	
Flexibility	
Serving one customer	

Assessment of learning

Name	Matrikel#	Marks
A group of people		
Whole > Sum		
Working together		
Synergy		
Cooperation		
Reporting to one boss		
Sharing one aim		
Flexibility		
Serving one customer		

- 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



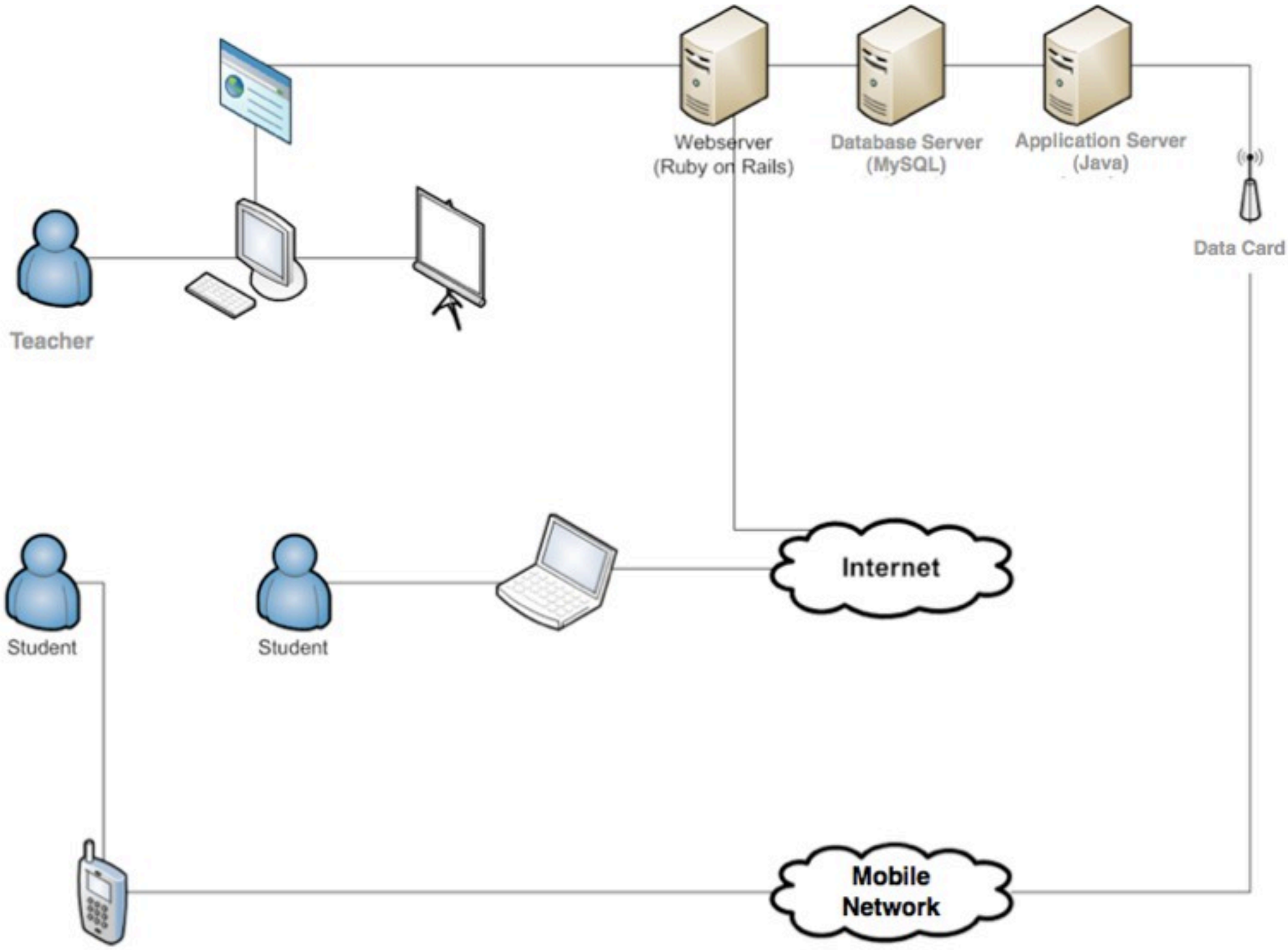


Assessment of learning

Name	Matrikel#	Marks
A group of people		
Whole > Sum		
Working together		
Synergy		
Cooperation		
Reporting to one boss		
Sharing one aim		
Flexibility		
Serving one customer		

- 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

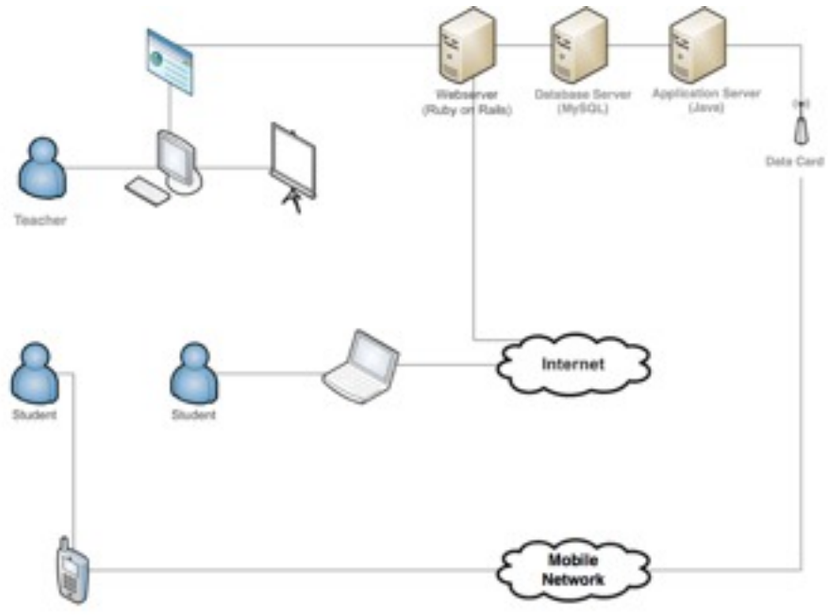


Modes of classroom assessment

Assessment *for* learning	Assessment *of* learning	Done by	ICT support
asynchronous	asynchronous	teacher	no
synchronous/indirect	synchronous/direct & indirect asynchronous	teacher & student	yes
synchronous/direct asynchronous	asynchronous	student	no
synchronous/direct	synchronous/direct	student	yes
synchronous/direct	synchronous/direct	peer	no
synchronous/direct	synchronous/direct asynchronous	peer	yes

Name	Matrikel#	Marks
Moderator	• • •	
Documenter	• • •	
Devil's advocate	• • •	

Name	Matrikel#	Marks
A group of people		
Whole > Sum		
Working together		
Synergy		
Cooperation		
Reporting to one boss		
Sharing one aim		
Flexibility		
Serving one customer		



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!

FAKULTÄT FÜR !NFORMATIK
Faculty of Informatics

Modes of Classroom Assessment in Computer Science

Hilda Tellioğlu
Institute of Design and Assessment of Technology
Faculty of Informatics
Vienna University of Technology, Austria
hilda.tellioglu@tuwien.ac.at

CompSysTech'11
June 16-17, 2011, Vienna