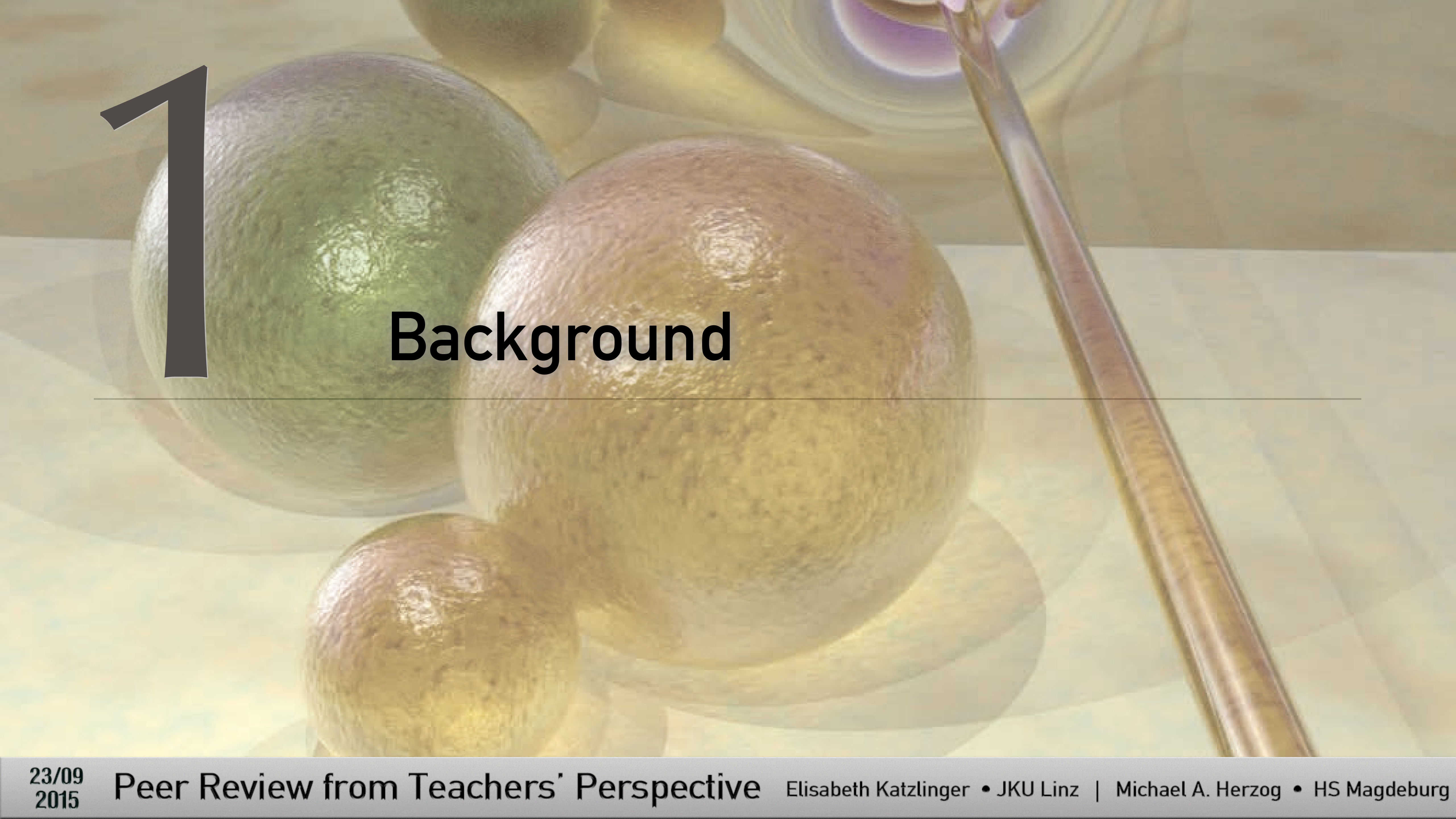


Peer Review from Teachers' Perspective

Comparing Five E-Business Learning Scenarios in Higher Education

1. Background
2. Cross Teaching Scenario
3. Research Method
4. Result Discussion

A detailed still life painting featuring several pieces of fruit, including a large greenish-yellow apple, a large reddish-brown apple, and a smaller reddish-brown apple. A glass with a purple liquid is visible in the upper right. The background is a soft, neutral tone.

1

Background

Europe









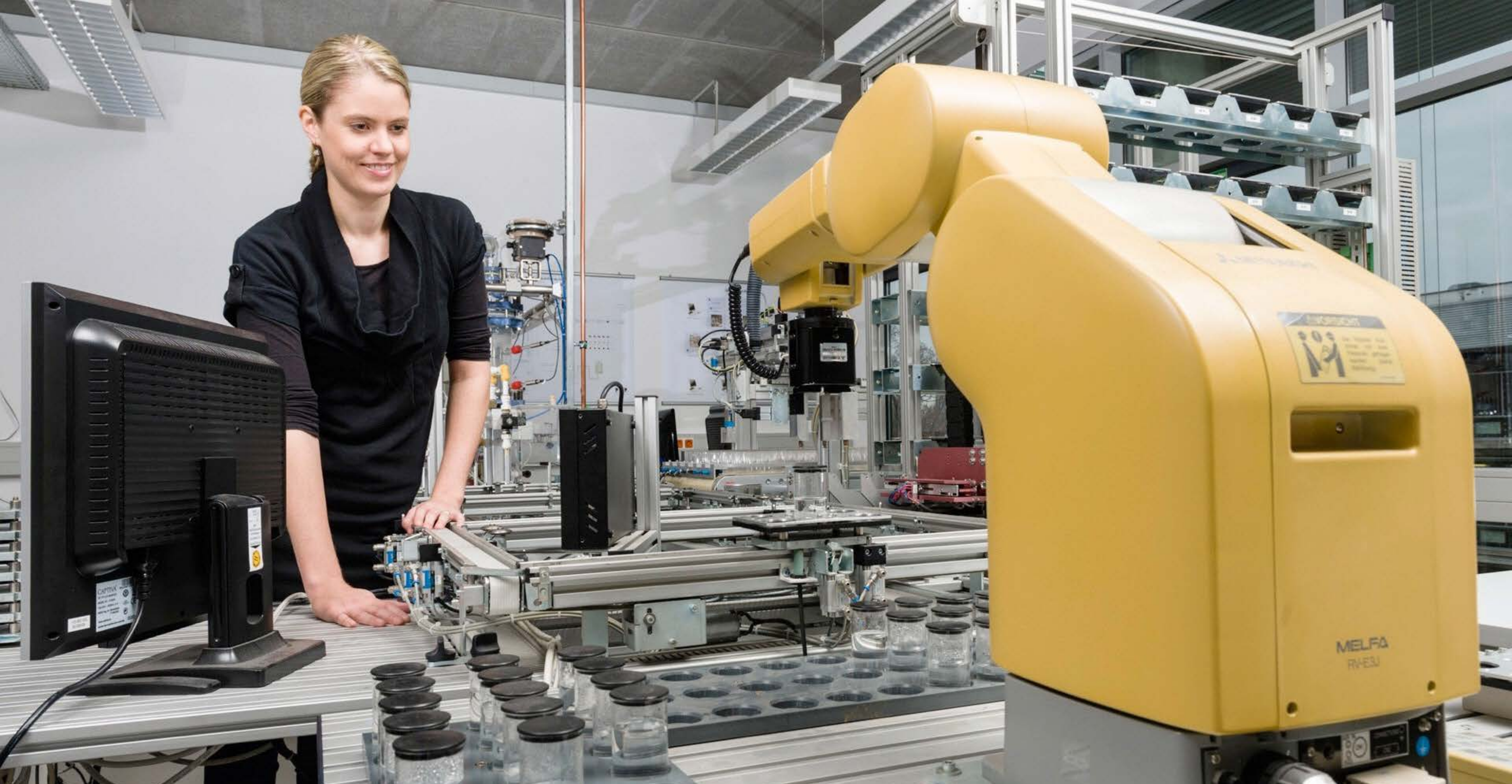


















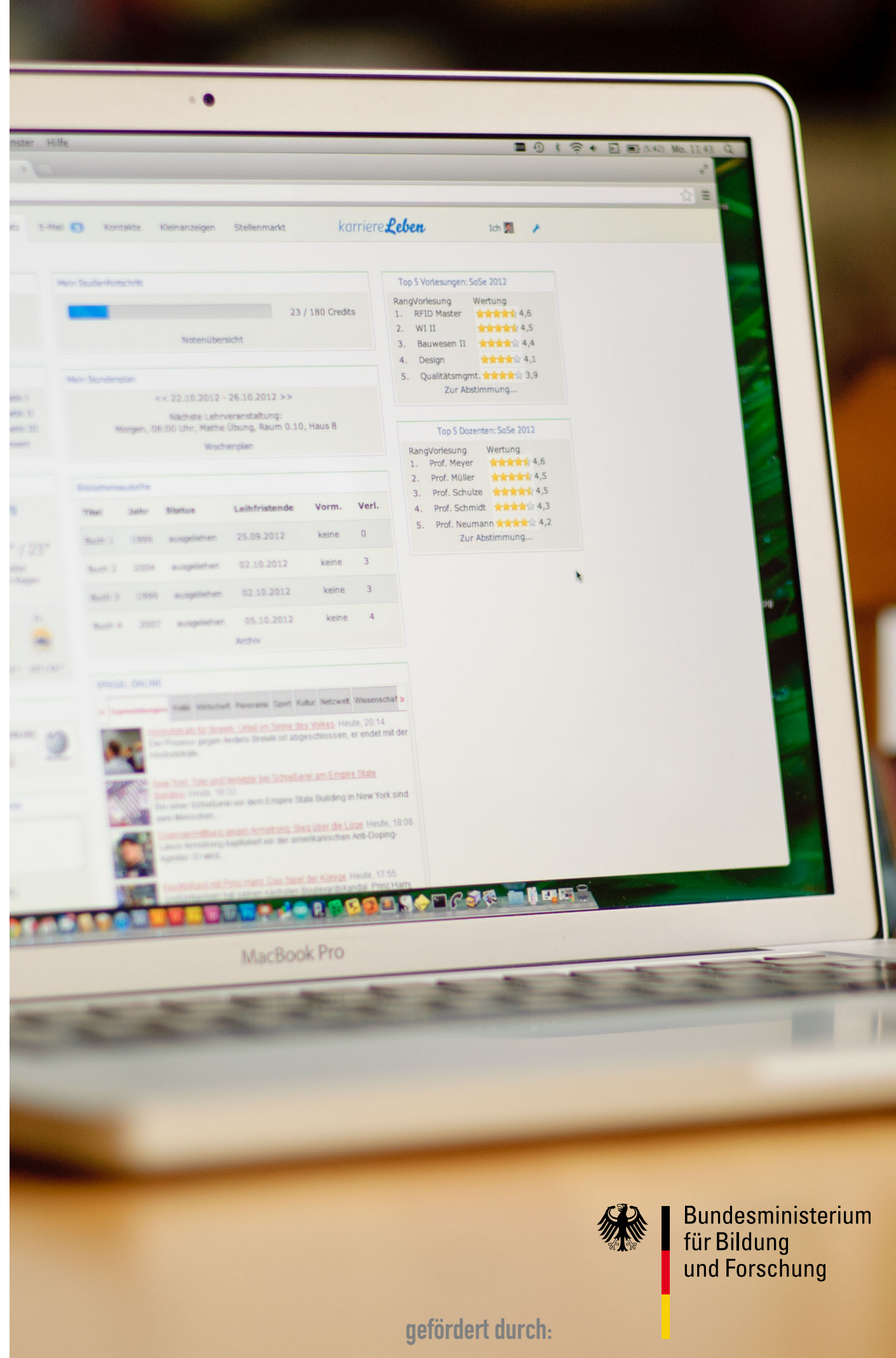






karriereLEBEN

SocialMedia-Portal for
Career- and Alumni-
Development



Bundesministerium
für Bildung
und Forschung

gefördert durch:

ROSI-3D

RFID locating
in consideration
of moving objects
in a radio field
with 3D-simulation



Bundesministerium
für Bildung
und Forschung

gefördert durch:

profUnt ^{FH}

Forschung an Fachhochschulen mit Unternehmen

 **SPIRIT**

Research group

Science Projects in Radio and Information Technology

Johannes Kepler Universität Linz

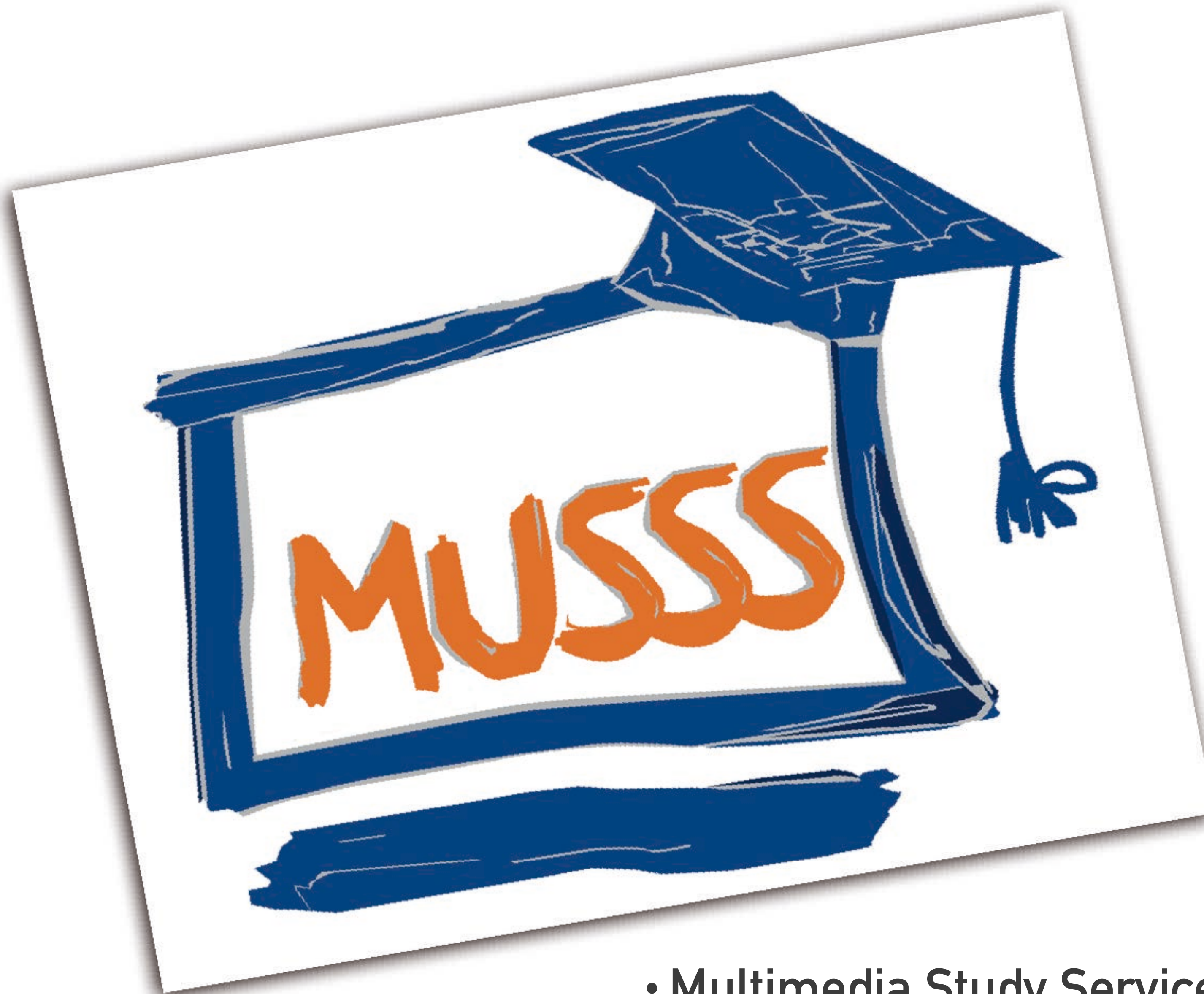


JKU
JOHANNES KEPLER
UNIVERSITÄT LINZ

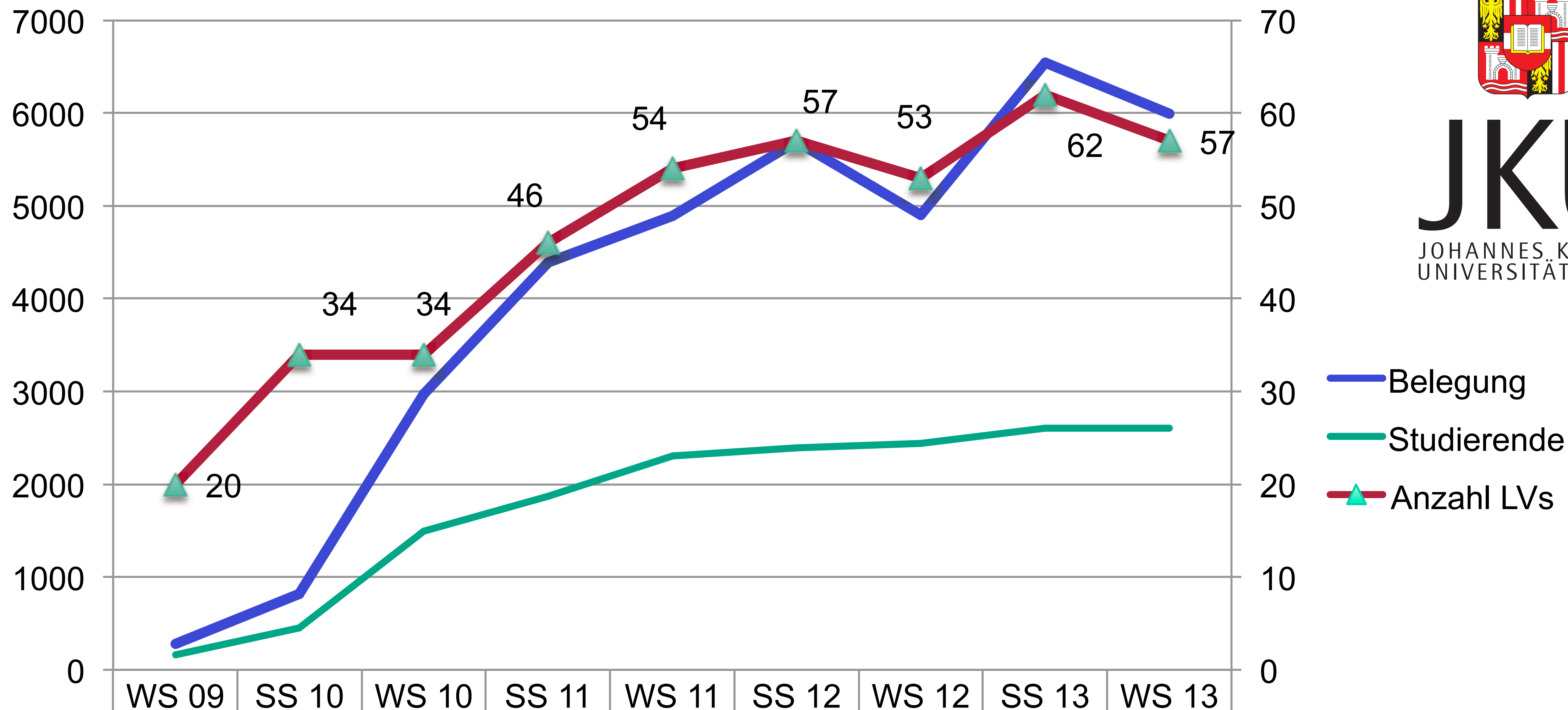
- ▶ 20.000~ students; 2.500~ employees
- ▶ 62 BA-, MA-, PhD- study programs at 118 instituts
 - Faculty of Social sciences, Business and Economics
 - Faculty of Engineering and Natural Sciences
 - Faculty of Law
 - Facukty of Medicine (since 2014)
- ▶ Dept. of Data Processing in Social Sciences, Economics and Business
 - Information Systems
 - Business and Internet (E-Business)
 - Interactive Media
 - E-Learning



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UNIVERSITÄT LINZ



• Multimedia Study Services for Social and Economic sciences



Belegung	280	815	2971	4395	4895	5697	4902	6543	5998
Studierende	160	451	1497	1872	2307	2394	2436	2605	2608
Anzahl LVs	20	34	34	46	54	57	53	62	57



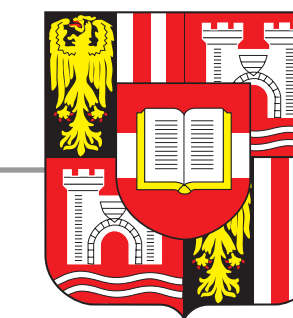
2

Cross Teaching

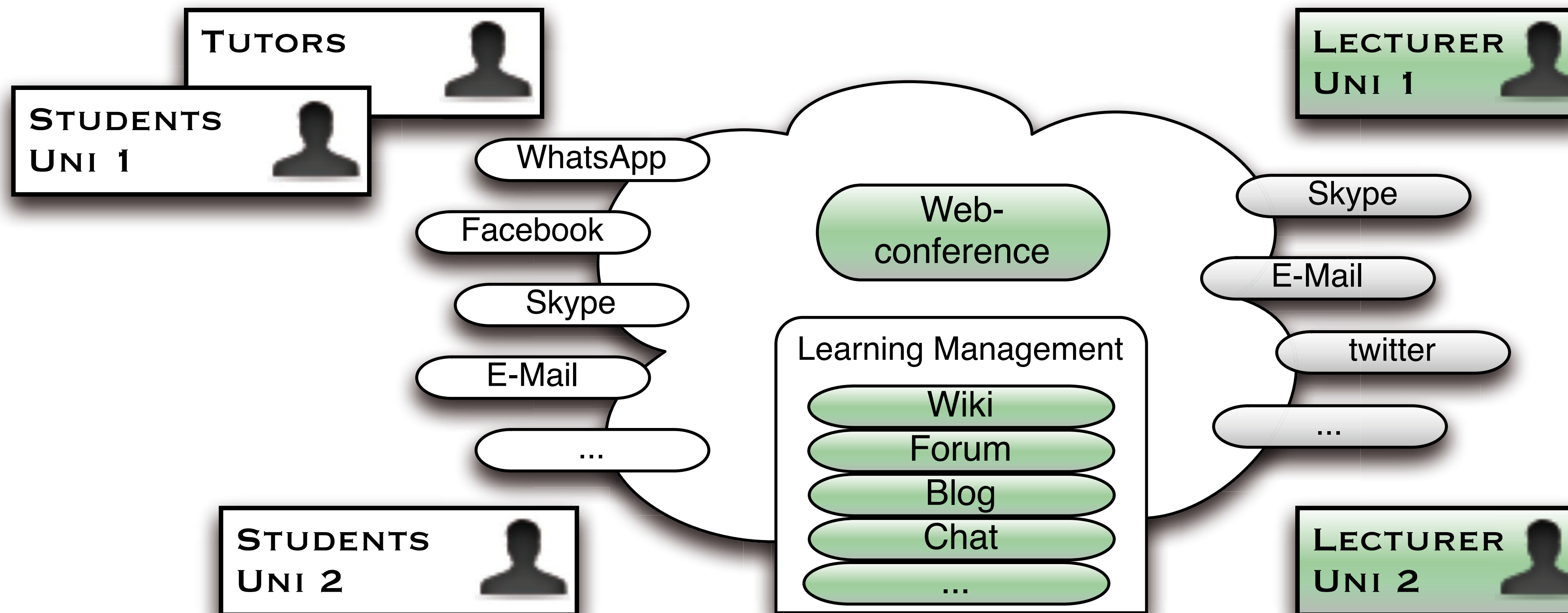
- ▶ Motivation
- ▶ Scenario
- ▶ Learning Setting

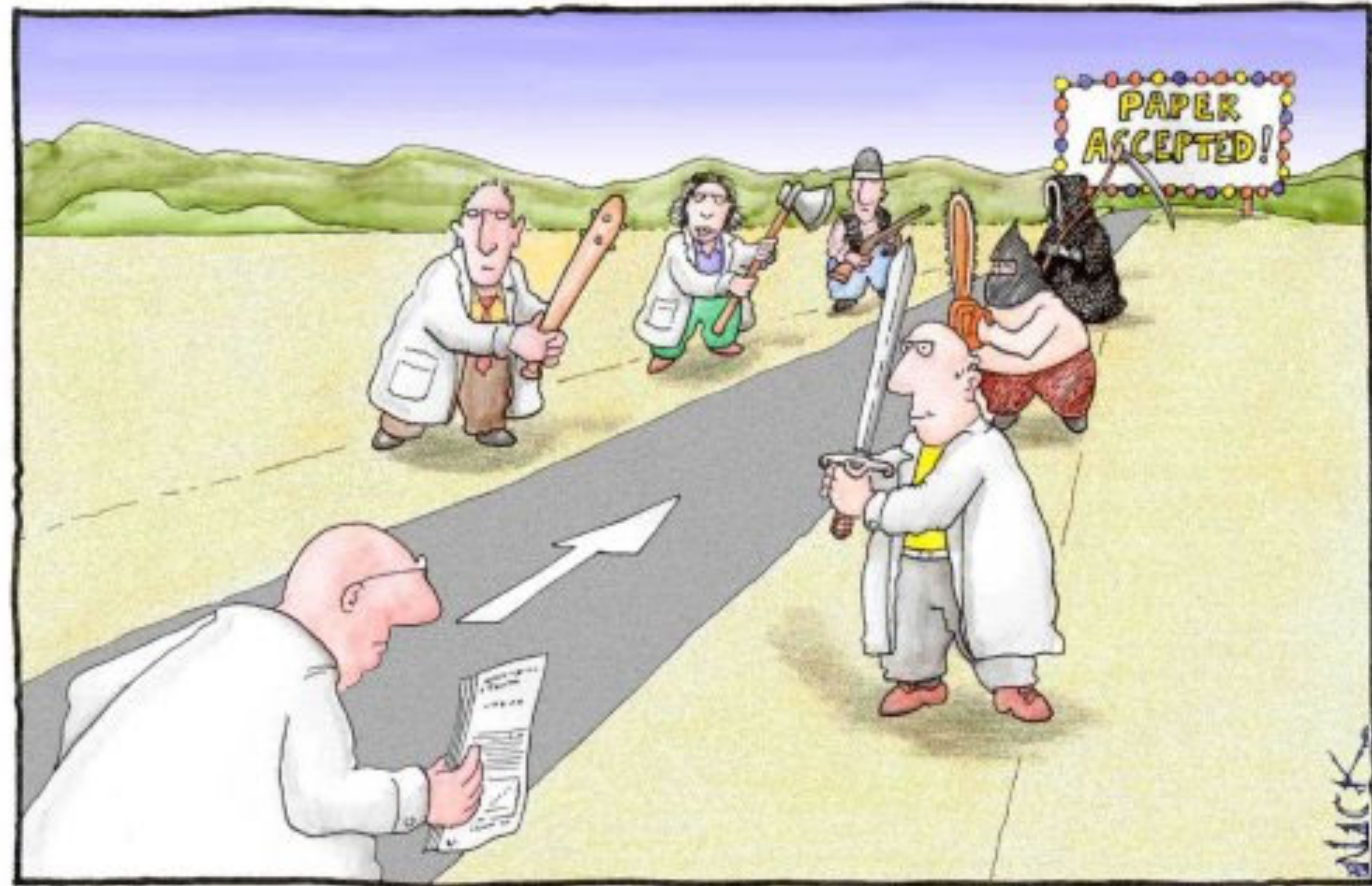


Cross-Teaching-Szenario



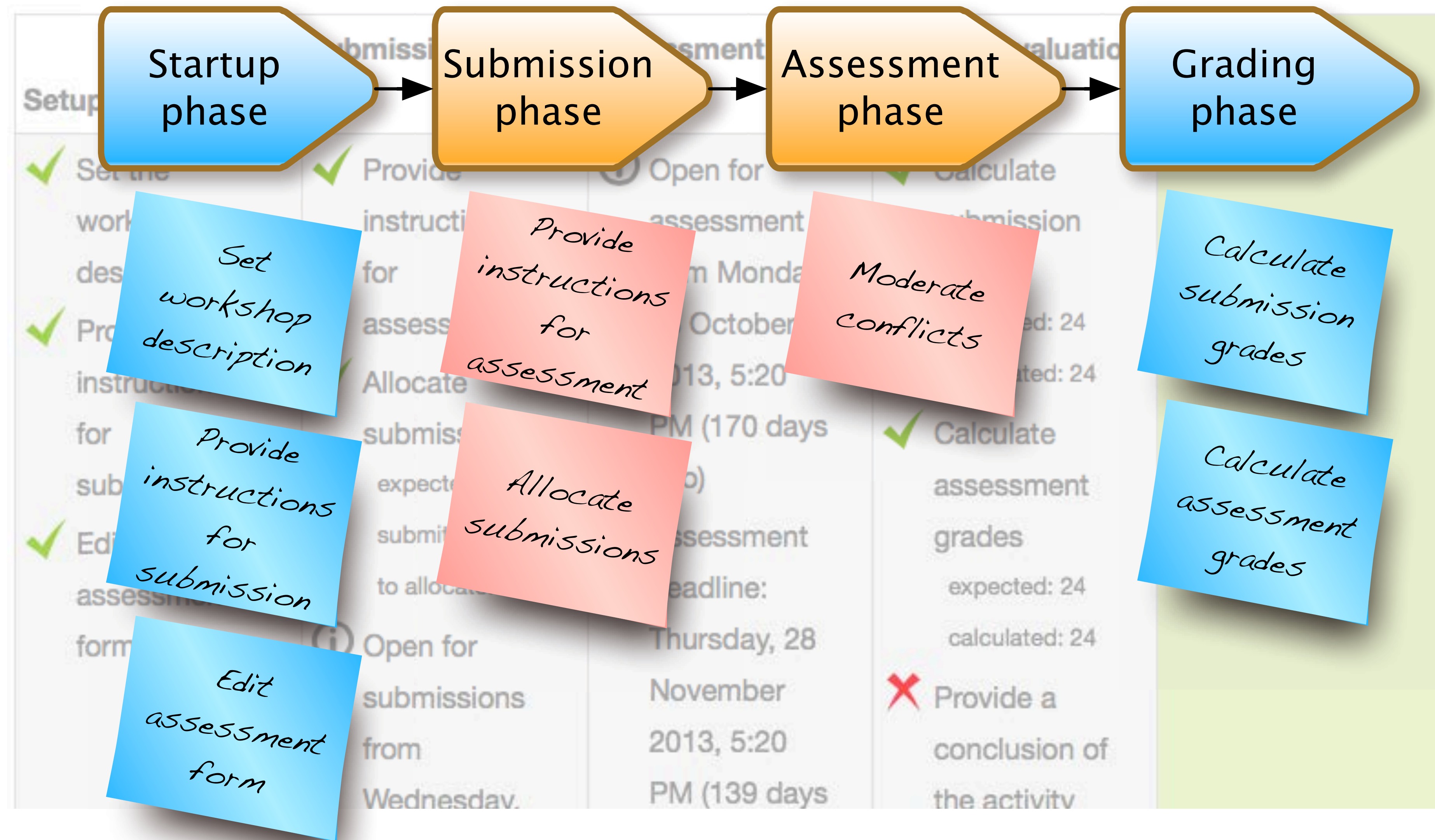
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Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

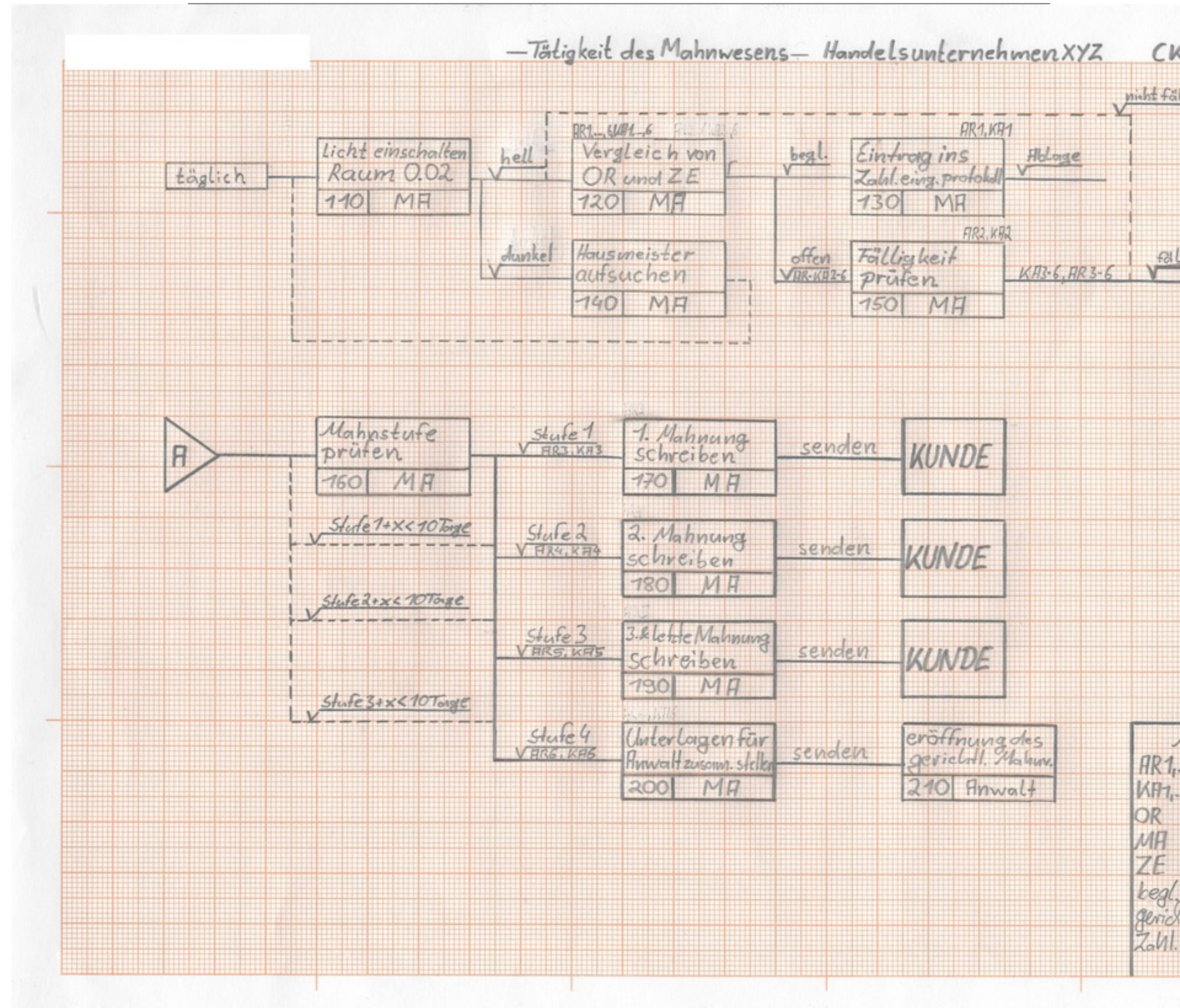
Workshop activity in Moodle



Assignments for Peer Review

Students in different courses, studies and campuses

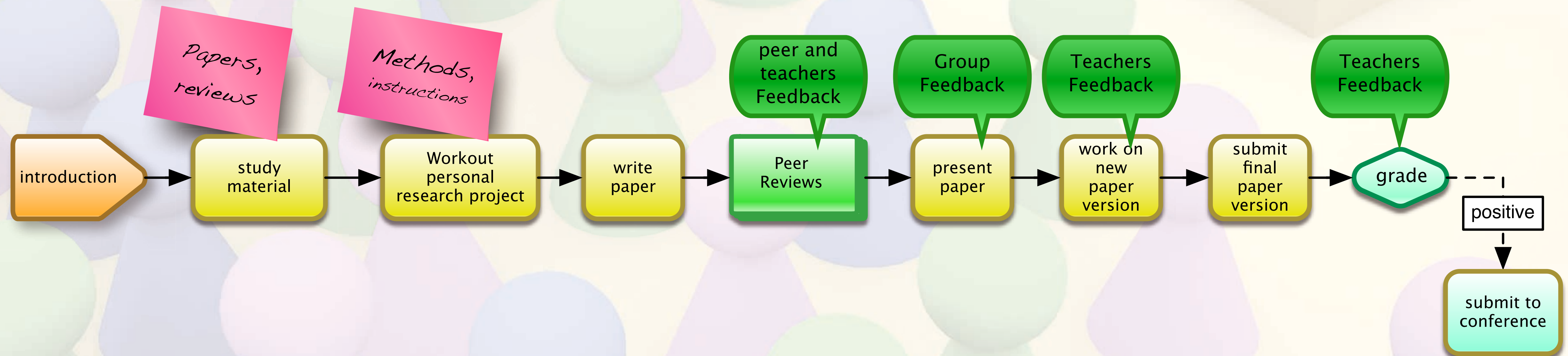
- ▶ Case study work (IT-Ethics,)
- ▶ Exercise editing (E-Procurement)
- ▶ Business Process Modeling
 - ▶ Empirical data from above
- ▶ Abstract Writing
- ▶ Scientific article writing



It's all about Feedback!

Research based learning scenario with Peer Review: Scientific Paper Writing

(Master course on research methods in economics and media design, Master course IT Ethics in Digitale Business Management)



3

Research Method

- ▶ Method itself
- ▶ Cohorts, Criteria
- ▶ Online survey implementation
- ▶ Underlying data

• Online survey

▶ More than 670 students overall participated (2010-2015)

- 465 at Magdeburg and Stendal
- 205 at Linz
- 45 E-Tutors from Linz

▶ 300 qualified questionnaires evaluated in Peer Review part of this study

• Add on:

- ▶ Field reports from E-Tutors
- ▶ Field reports from involved students (Linz)

Liebe Teilnehmerinnen und liebe Teilnehmer!

Wir freuen uns, dass Sie sich bereit erklärt haben, an der Befragung zur Fallstudie teilzunehmen. Ihre Bewertung trägt erheblich zum Erfolg dieser Befragung bei.

Nehmen Sie sich bitte ca. 15 Minuten Zeit und beantworten Sie nach Möglichkeit alle Fragen. Es gibt keine falschen Antworten. Es interessiert uns vor allem Ihre Meinung.

Die Befragung wird anonymisiert ausgewertet. Das heißt, Ihre Angaben werden vertraulich behandelt.

*1 Ihr Geschlecht:

- ☐ männlich
- ☐ weiblich

*2 Alter (in Jahren):

*3 An welchem Standort studieren Sie?

Auswahl...

*4 Hatten Sie TeilnehmerInnen des anderen Standortes in Ihrer Gruppe?

- ☐ Ja
- ☐ Nein

*5 Sind Sie derzeit neben Ihrem Studium berufstätig?

- ☐ Vollzeit (35 Std./Woche oder mehr)
- ☐ Teilzeit (16-34 Std./Woche)
- ☐ Geringfügig beschäftigt (gleich oder weniger als 15 Std./Woche)
- ☐ Nicht berufstätig

6 Computernutzung: Welche der im folgenden genannten Anwendungen benutzen Sie?

- ☐ Textverarbeitung (z. B. Word)
- ☐ Bildverarbeitung (z. B. Photoshop)
- ☐ Tabellenkalkulation (z. B. Excel)
- ☐ Datenbanken (z. B. Access)
- ☐ Statistikprogramme (z. B. SPSS)

Demography of Peer Review study part

	male		female		total	
	number	age	number	age	number	age
Linz	92	27,5	51	25,7	143	26,9
Magdeburg/ Stendal	73	25,0	82	22,9	155	23,9
Total	165	26,4	133	24,0	298	25,4

Learning scenario overview and basic data of survey (grey columns)

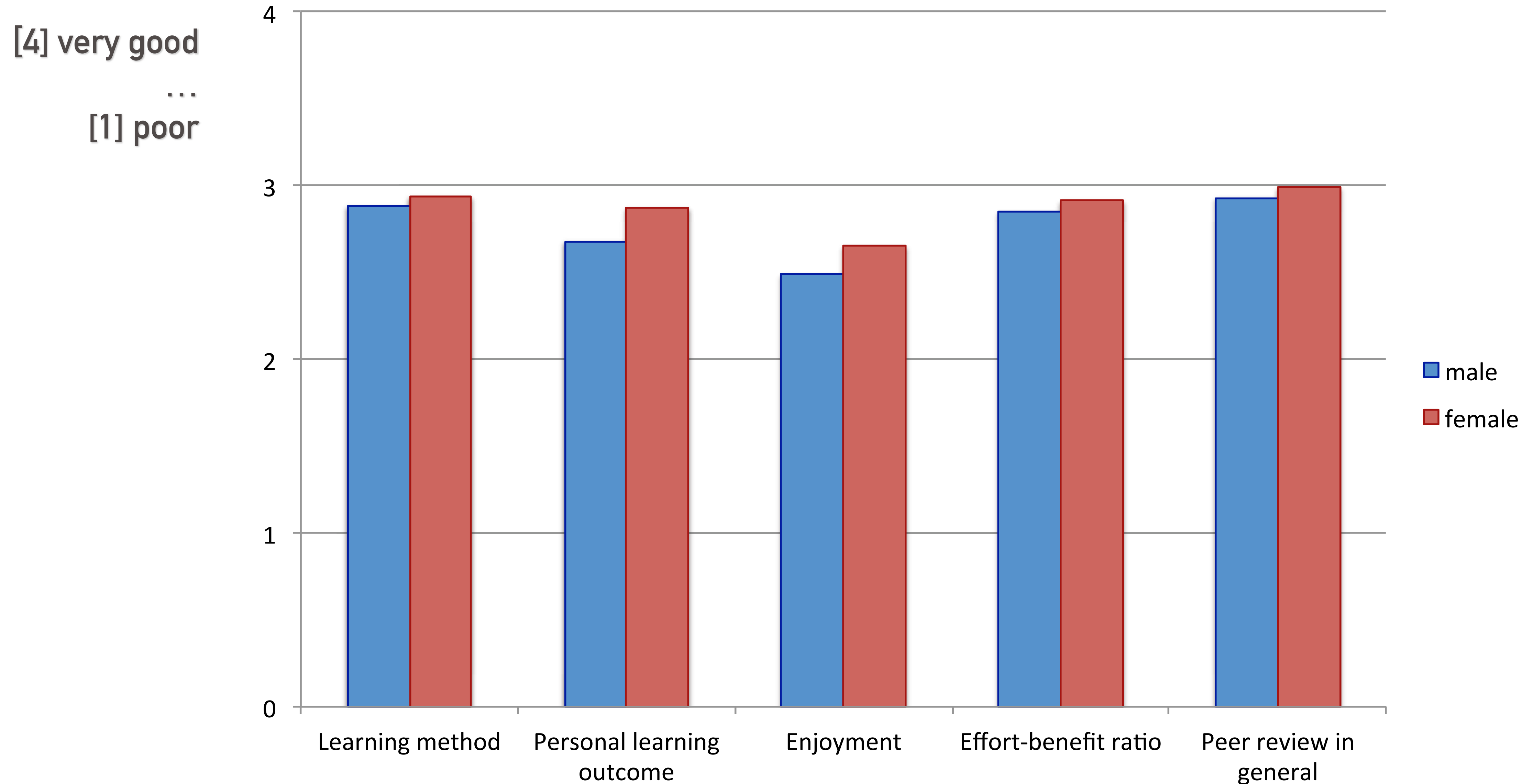
	Scientific paper writing	Abstract writing	Case study reporting	Process model creation	Exercise editing
Number of participants in each course	6...16	26	22...24	40...130	15...40
Number of courses (2013-2015)	3	1	3	5	5
N in survey	-	-	54	155	95
Study progress / semester (1...12)	10	8	9	3	4
Individual work	x	x	x	x	x
Group work	one course	-	-	one course	-

4

Result Discussion

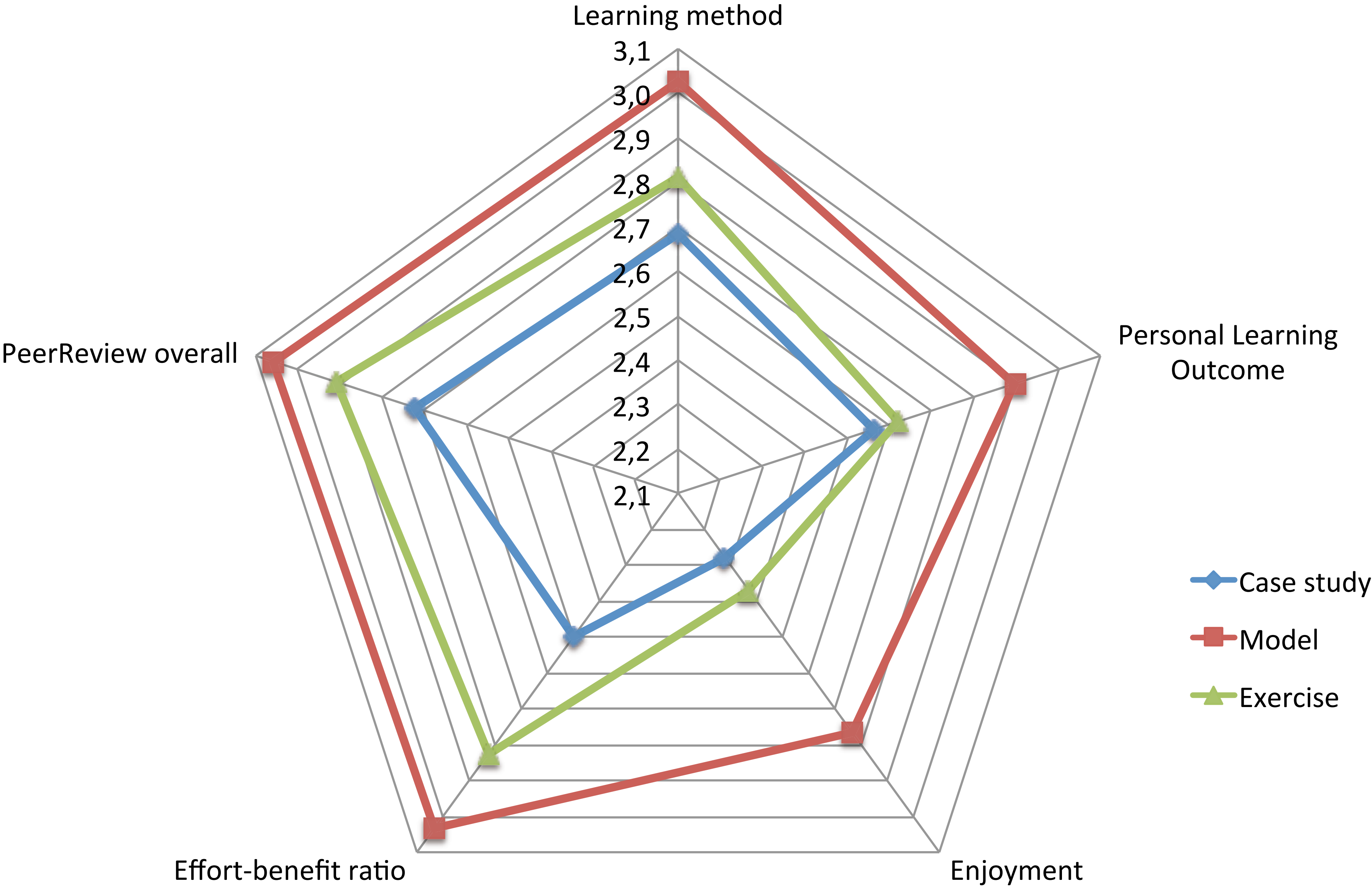
- ▶ Learning method
- ▶ Students feedback
- ▶ Learning outcome

Peer Review as learning method (assessment by students, n=300)

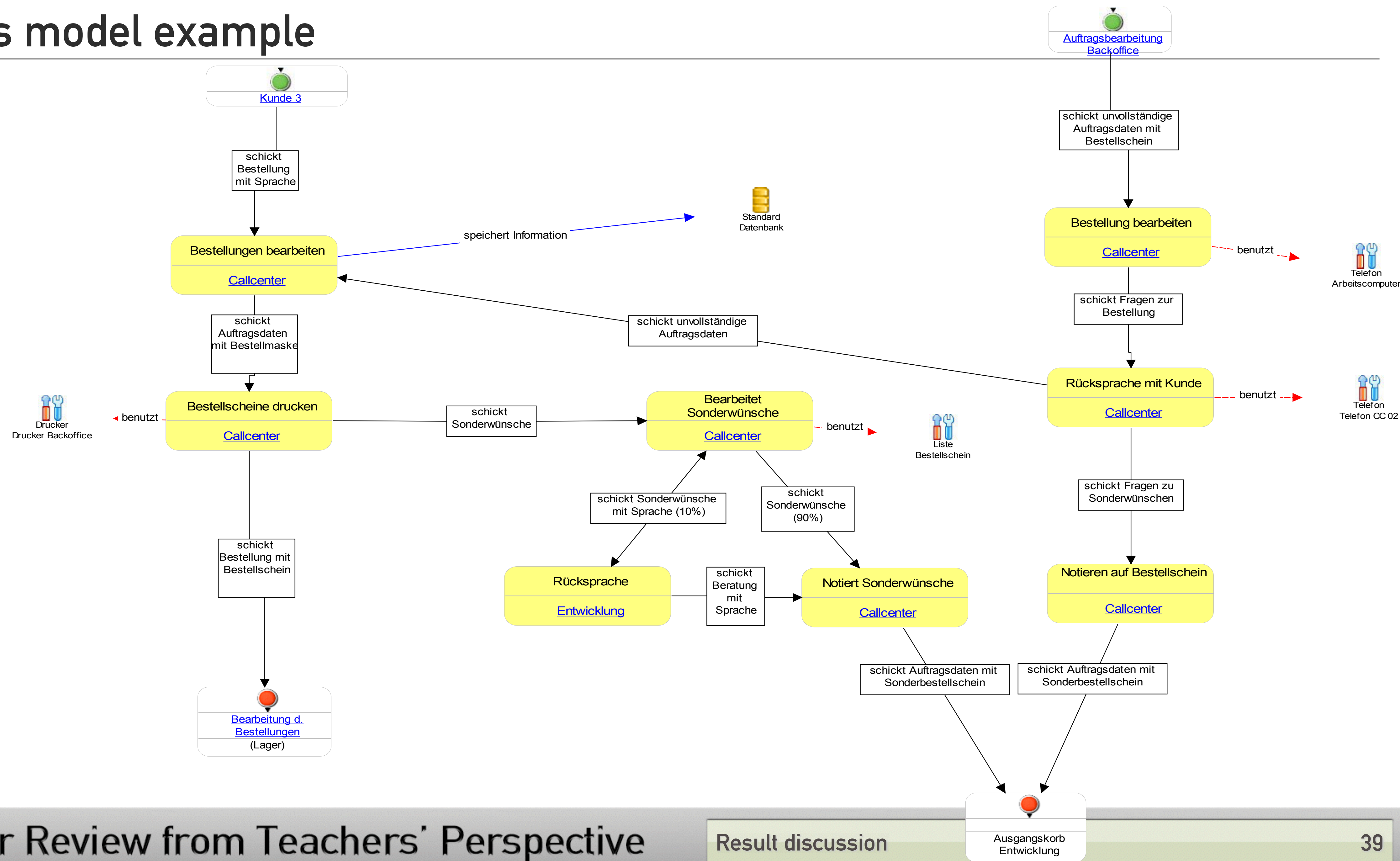


Peer Review as learning method (assessment by students, n=304)

[4] very good
...
[1] poor



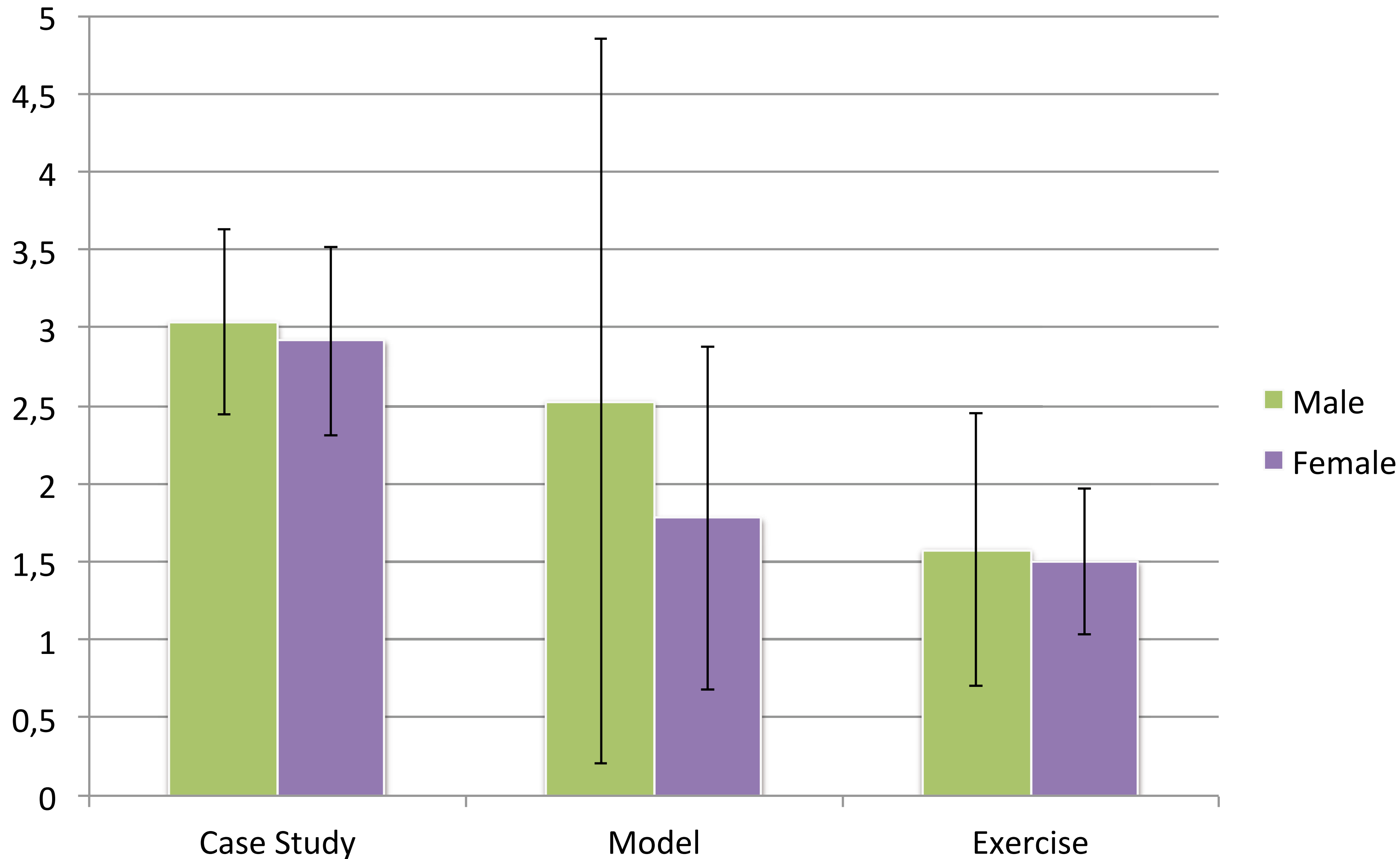
Process model example



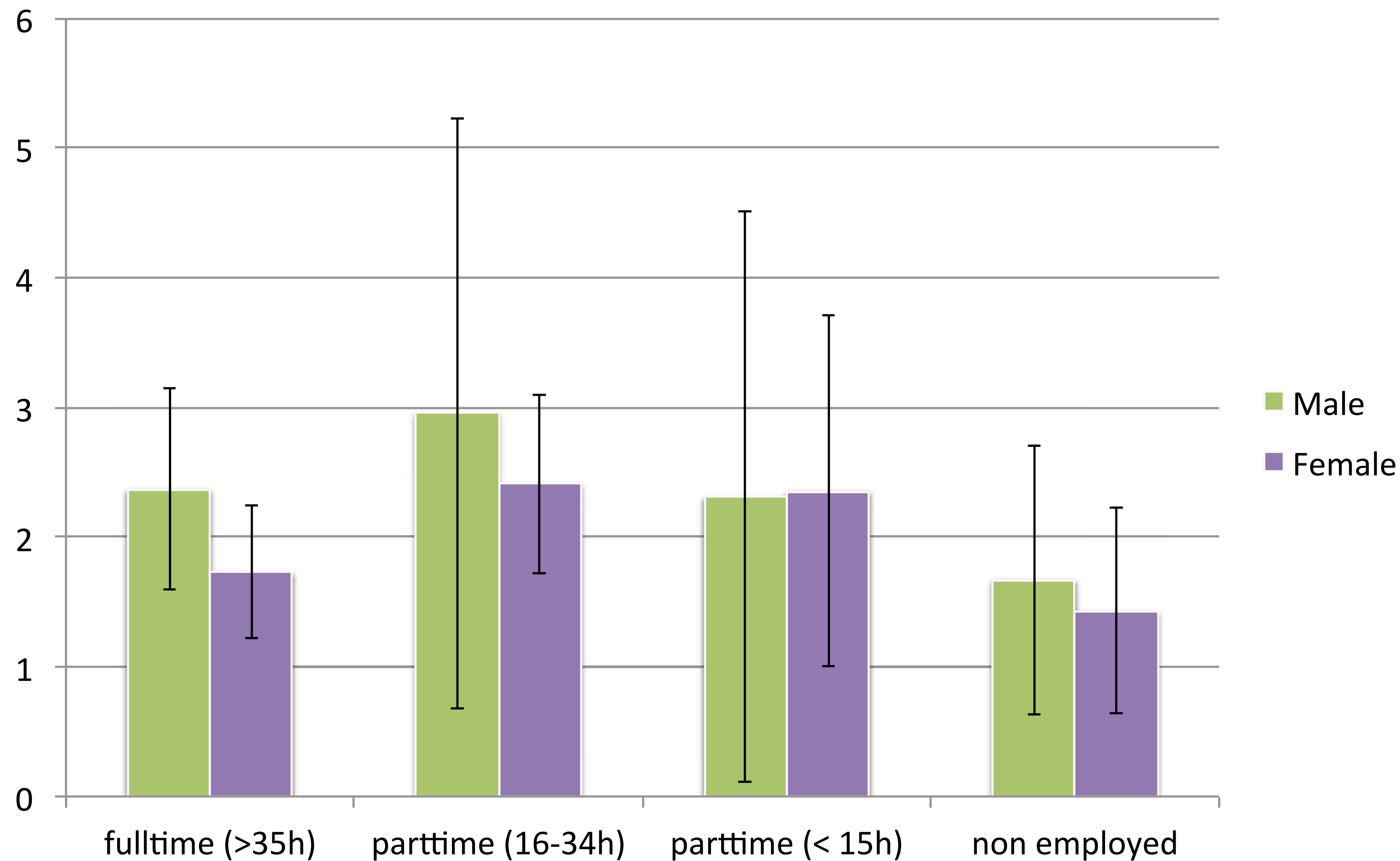
Teachers' time expectations for the five learning scenarios

	Scientific paper writing	Abstract writing	Case study reporting	Process model creation	Exercise editing
Desired time span of task for students (~in hours)	120	20	16	16	8
Desired time span of reviews (~in hours)	8	3	4	3	3
Number of expected peer reviews	2	3	3	2	2...3
Support effort for peer review per student (~in hours)	2	0	0	0,2 (tutor supported)	1
Evaluation of learning effects by teachers, scale 1 = low ... 4 = high	3,8	3	2,5	3	2

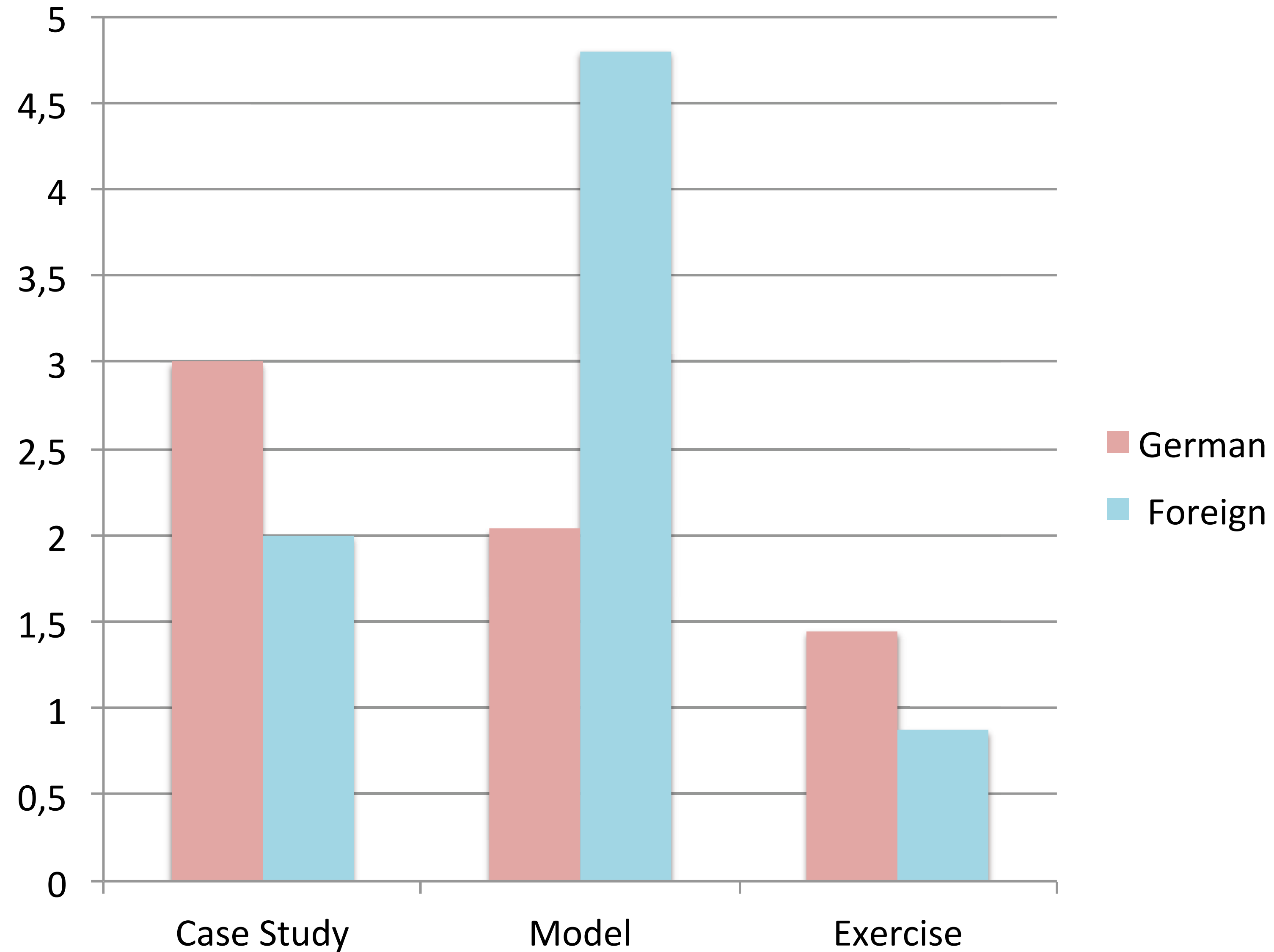
Gender and Assessment Time in hours, n=276



Employment and Assessment Time in hours, n=276



Language and Assessment Time in hours, n=290, 10 foreign

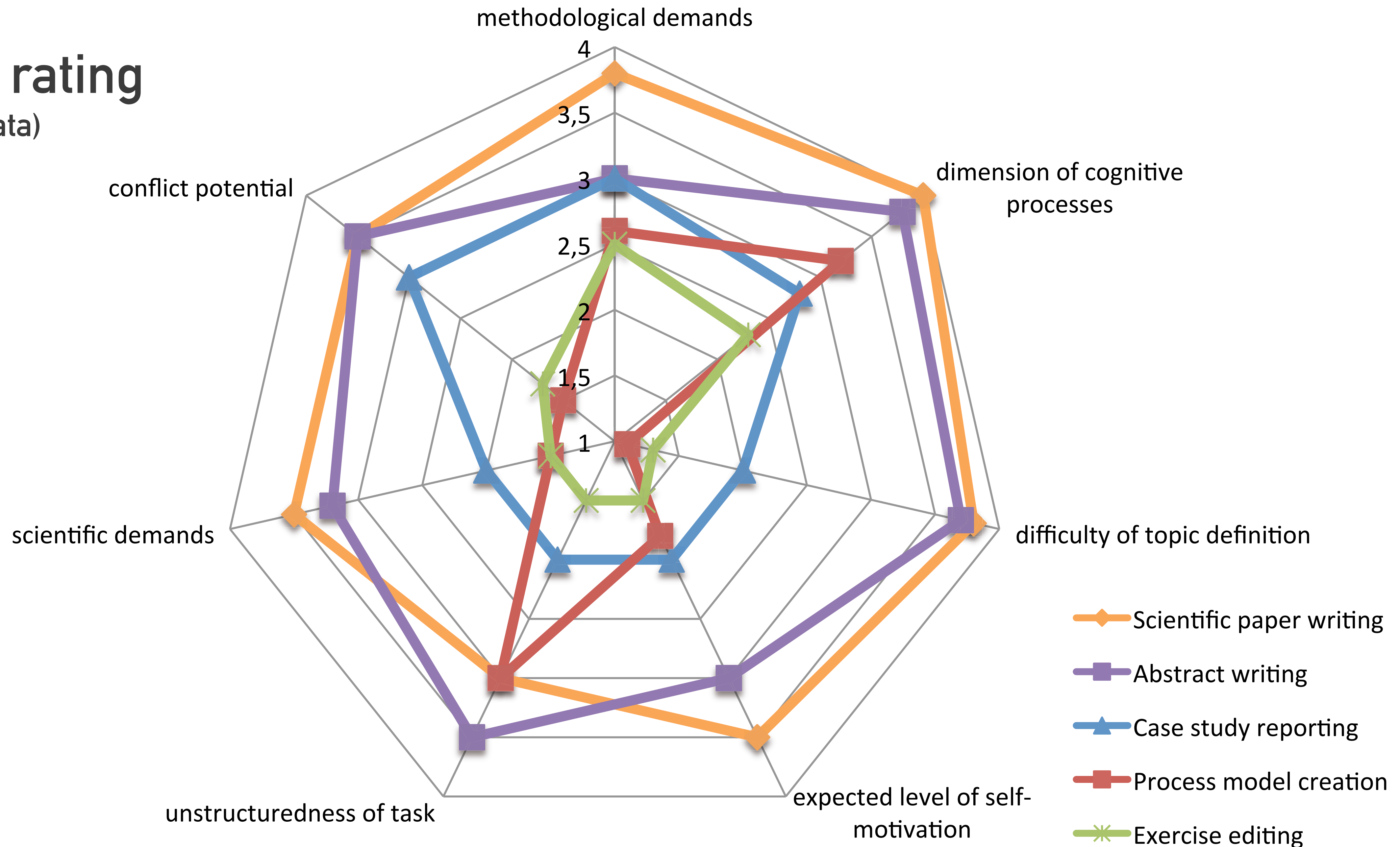


How peer review points influenced semester grading

	Scientific paper writing	Abstract writing	Case study reporting	Process model creation	Exercise editing
Updating possibility (revised version is graded)	y	y	n	n (Bonus system)	n
Students review gets into grade	n	y	y	y	y
Rating of review gets into grade	n	y	y	n	y
Participation of teachers/tutors in peer review	y	n	n	y	y

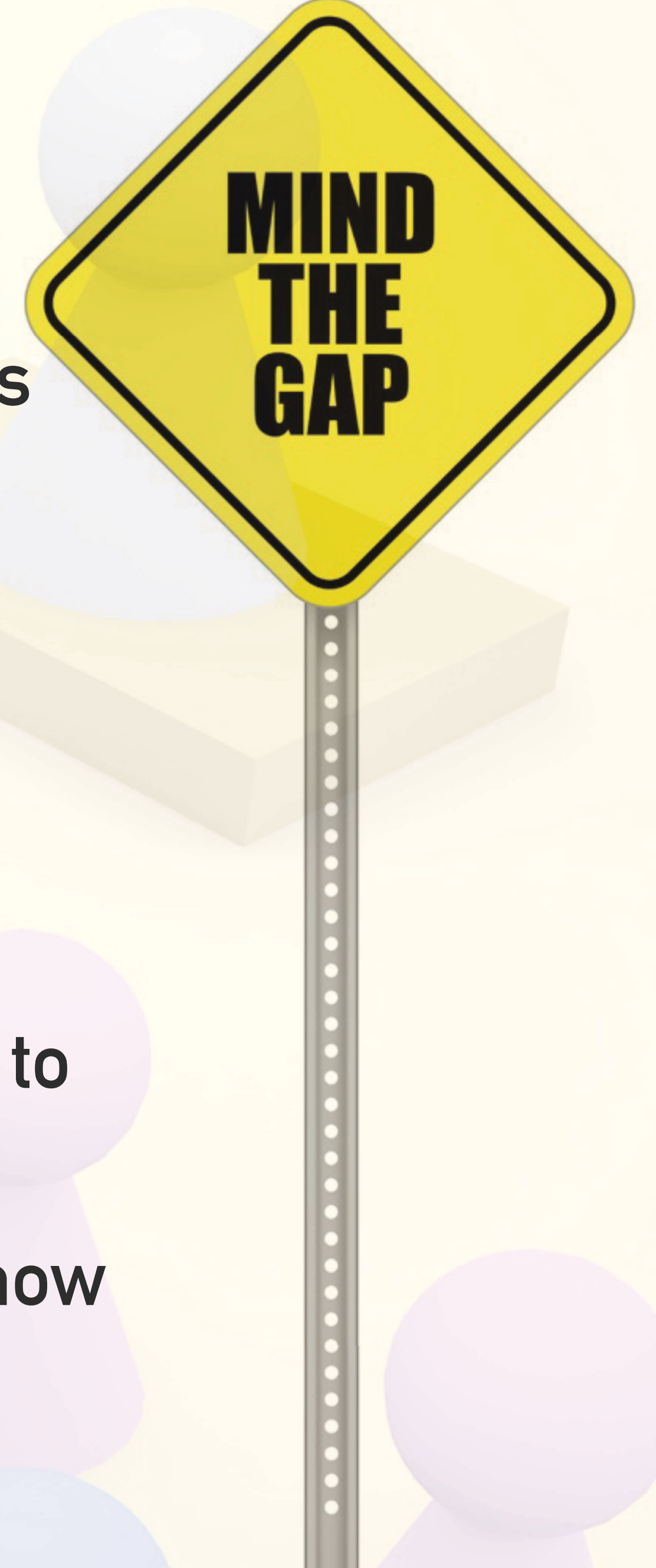
Teachers rating

(no empirical data)



Take home messages

1. Set of criteria is a key success factor for the learning process
2. Peer Review of (Process-)Models creates good value for learning effect, affordable for bigger groups.
3. For teachers PeerReview stays time consuming, especially in complex scientific topics.
4. Tutoring is well accepted.
5. Allow students to revise their work. PeerReview is a chance to learn more from feedback.
6. Plan a final submission or exam where students can show how they improved!





Thank you for your interest!

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<http://www.idv.edu>