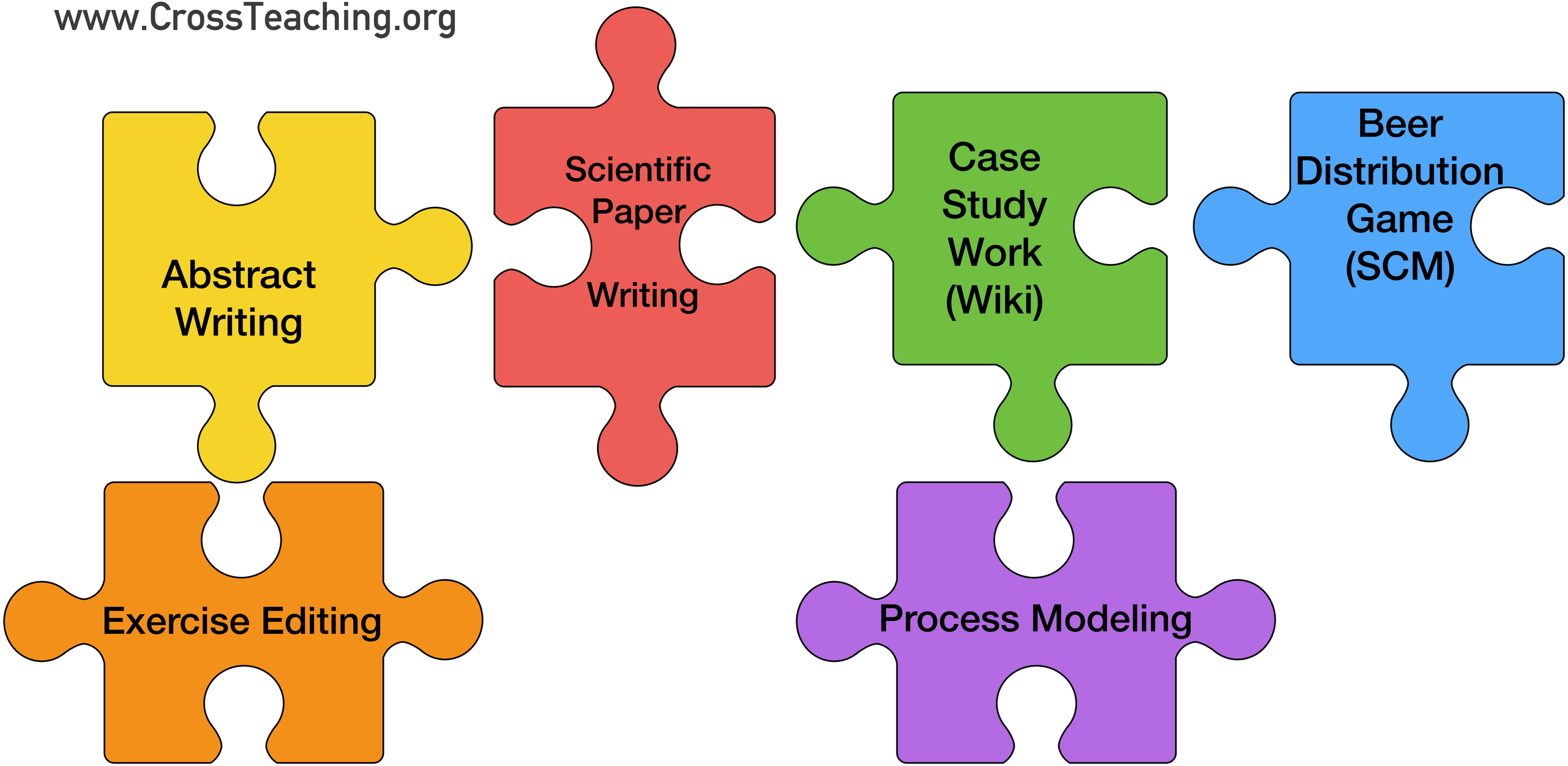
CROSSTEACHING

Interuniversity Research-Based Learning in Virtual Teams

1. Motivation
2. The Learning Scenario
3. Evaluation
4. Further Development

1 Motivation

www.CrossTeaching.org



Europe

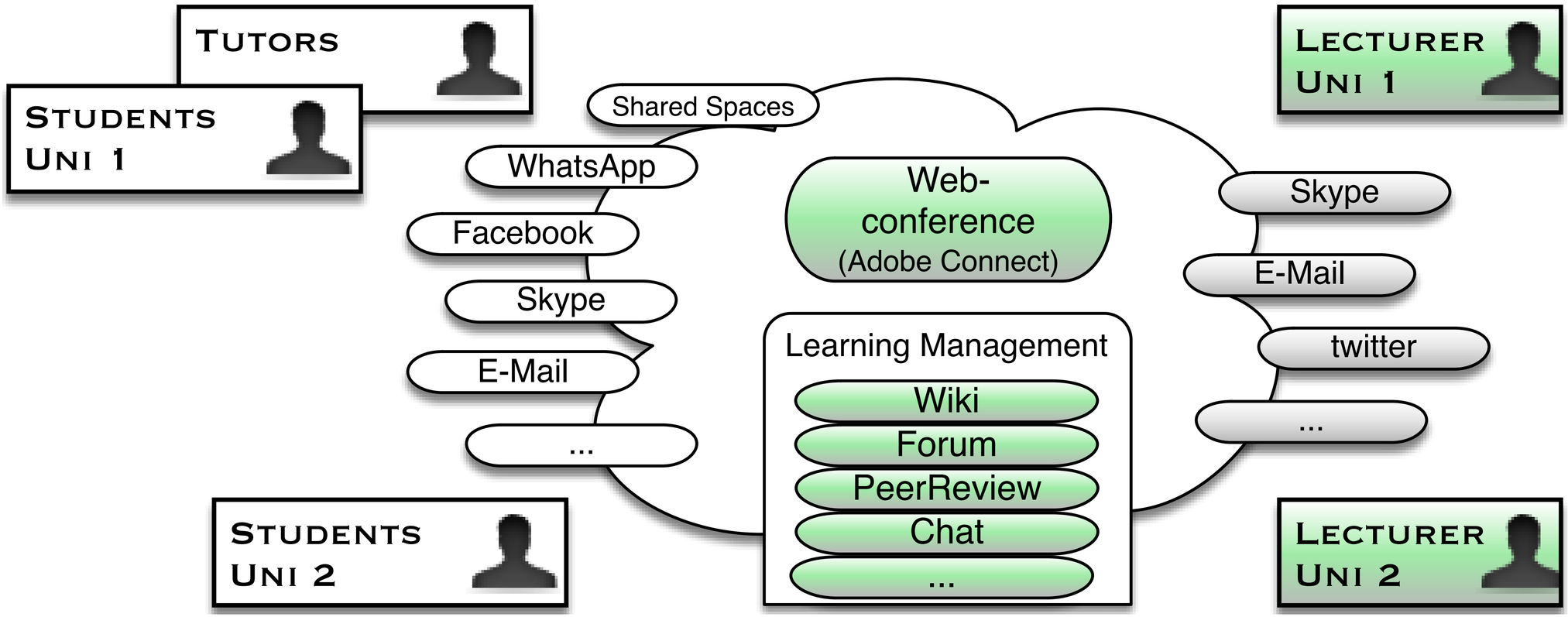
Hochschule Magdeburg • Stendal

JOHANNES KEPLER UNIVERSITY LINZ

https://www.crossteaching.org

2 The Learning Scenario

Cross-Teaching-Tool-Setting



Katzlinger, E., Herzog, M.A.,Franz, L.: Digitales Peer Review (2018)

Learning Scenario »Scientific Paper Writing«

Topic: „Ethical issues of digital communication“

- Since 2015
- 3 Master programs, 4 courses, 4 teachers, 2 countries

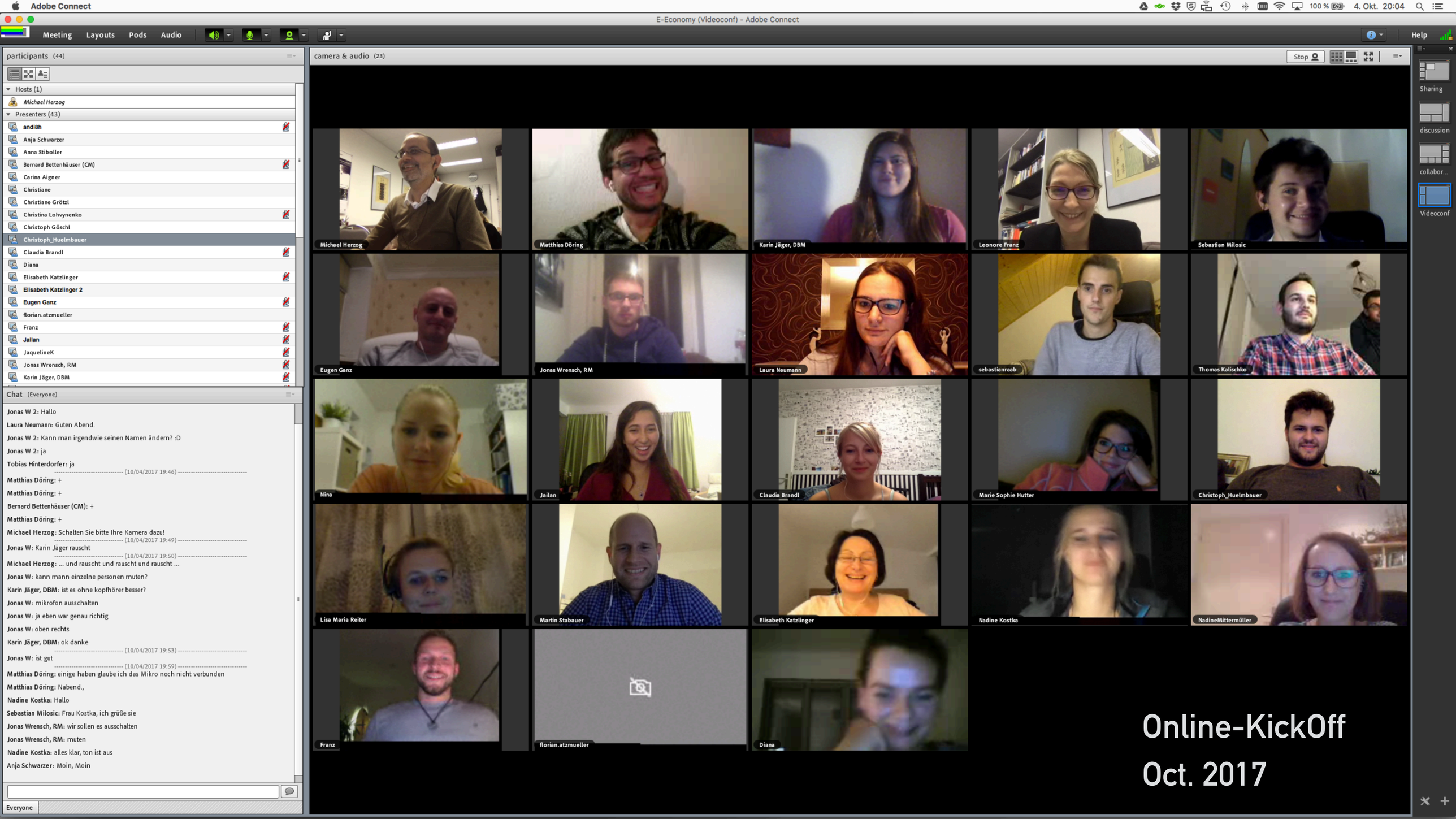
JOHANNES KEPLER UNIVERSITY LINZ

UNIVERSITY OF APPLIED SCIENCES UPPER AUSTRIA

CROSSMEDIA

Hochschule Magdeburg • Stendal

- approx. 40 students/year
- Most are part-time students with high technology and media affinity
- approx. 10-13 inter-university groups


Adobe Connect
E-Economy (Videoconf) - Adobe Connect
Meeting
Layouts
Pods
Audio
Help
participants (44)
Hosts (1)
Michael Herzog
Presenters (43)
andi8h
Anja Schwarzer
Anna Stiboller
Bernard Bettenhäuser (CM)
Carina Aigner
Christiane
Christiane Grötzl
Christina Lohvynenko
Christoph Göschl
Christoph_Huelmbauer
Claudia Brandl
Diana
Elisabeth Katzlinger
Elisabeth Katzlinger 2
Eugen Ganz
florian.atzmueller
Franz
Jailan
JaquelineK
Jonas Wrensch, RM
Karin Jäger, DBM
Chat (Everyone)
Jonas W 2: Hallo
Laura Neumann: Guten Abend.
Jonas W 2: Kann man irgendwie seinen Namen ändern? :D
Jonas W 2: ja
Tobias Hinterdorfer: ja
(10/04/2017 19:46)
Matthias Döring: +
Matthias Döring: +
Bernard Bettenhäuser (CM): +
Matthias Döring: +
Michael Herzog: Schalten Sie bitte Ihre Kamera dazu!
(10/04/2017 19:49)
Jonas W: Karin Jäger rauscht
(10/04/2017 19:50)
Michael Herzog: ... und rauscht und rauscht und rauscht ...
Jonas W: kann mann einzelne personen muten?
Karin Jäger, DBM: ist es ohne kopfhörer besser?
Jonas W: mikrofon ausschalten
Jonas W: ja eben war genau richtig
Jonas W: oben rechts
Karin Jäger, DBM: ok danke
(10/04/2017 19:53)
Jonas W: ist gut
(10/04/2017 19:59)
Matthias Döring: einige haben glaube ich das Mikro noch nicht verbunden
Matthias Döring: Nabend.,
Nadine Kostka: Hallo
Sebastian Milosic: Frau Kostka, ich grüße sie
Jonas Wrensch, RM: wir sollen es ausschalten
Jonas Wrensch, RM: muten
Nadine Kostka: alles klar, ton ist aus
Anja Schwarzer: Moin, Moin
Everyone
camera & audio (23)
Stop
Michael Herzog
Matthias Döring
Karin Jäger, DBM
Leonore Franz
Sebastian Milosic
Eugen Ganz
Jonas Wrensch, RM
Laura Neumann
sebastianraab
Thomas Kalischko
Nina
Jailan
Claudia Brandl
Marie Sophie Hutter
Christoph_Huelmbauer
Lisa Maria Reiter
Martin Stabauer
Elisabeth Katzlinger
Nadine Kostka
NadineMittermüller
Franz
florian.atzmueller
Diana
Sharing
discussion
collabor...
Videoconf
Online-KickOff
Oct. 2017

Research Workshop
JKU Linz, Nov. 2017

Research Workshop
JKU Linz, Nov. 2017

GET
SHIT
DONE

PeerReview (Online-Assessment)

Closed

Setup phase	Submission phase	Assessment phase	Grading evaluation phase	Closed
✓ Set the workshop description	✓ Provide instructions for assessment	ⓘ Open for assessment from Monday, 9 January 2017, 10:05 AM (179 days ago)	✗ Calculate submission grades expected: 40 calculated: 38	
✓ Provide instructions for submission	✗ Allocate submissions expected: 40 submitted: 38 to allocate: 2	ⓘ Assessment deadline: Sunday, 22 January 2017, 11:55 PM (166 days ago)	✗ Calculate assessment grades expected: 40 calculated: 39	
✓ Edit assessment form	ⓘ There is at least one author who has not yet submitted their work	ⓘ Time restrictions do not apply to you	✗ Provide a conclusion of the activity	
	ⓘ Open for submissions from Monday, 19 December 2016, 1:00 PM (200 days ago)			
	ⓘ Submissions deadline: Monday, 9 January 2017, 9:00 AM (179 days ago)			
	ⓘ Late submissions are allowed			
	ⓘ Time restrictions do not apply to you			

Workshop grades report

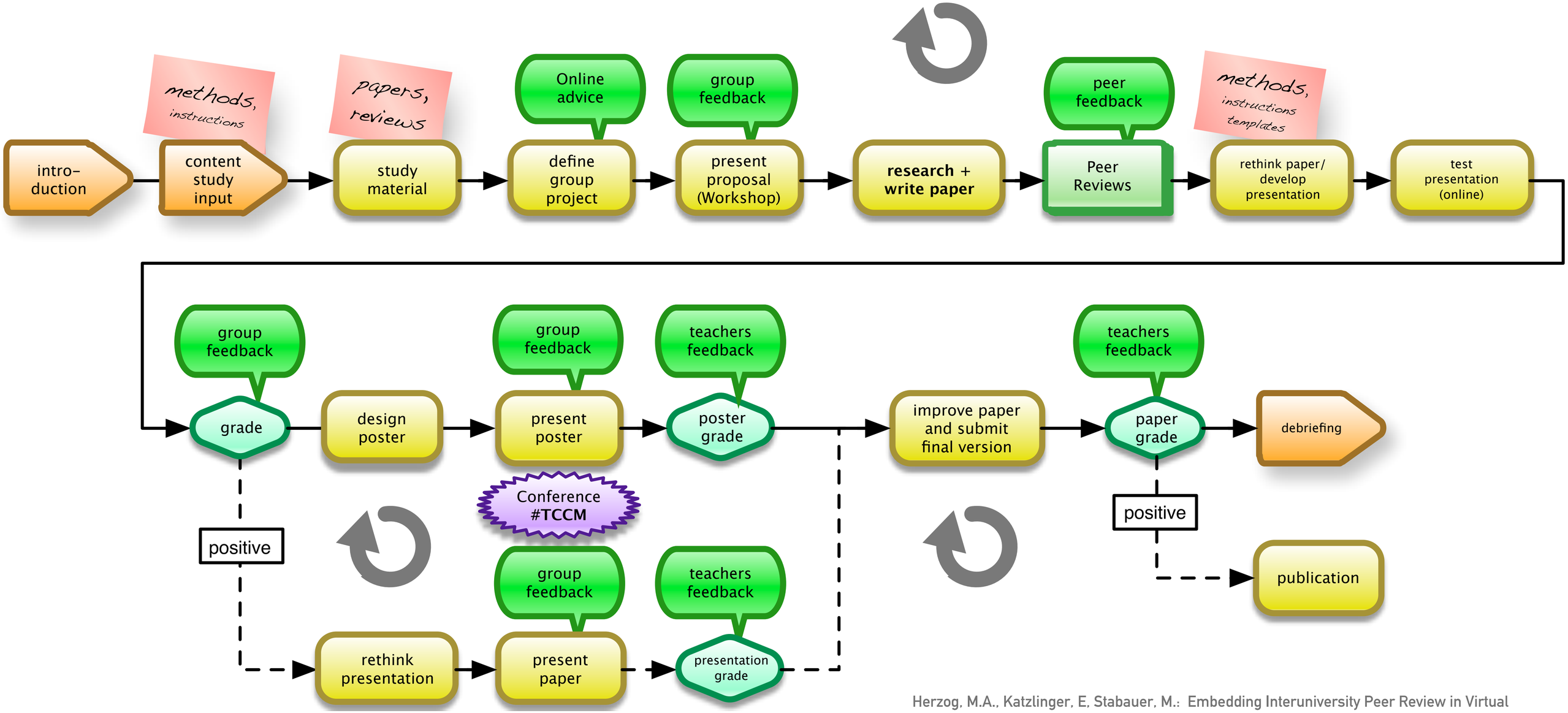
Visible groups: All participants

First name / Surname	Submission / Last modified	Grades received	Grade for submission (of 70)	Grades given	Grade for assessment (of 30)
[redacted]	**Mit welchen Methoden beeinflussen YouTuber der Beautybranche ihre Zielgruppe auf YouTube?** modified on Sunday, 8 January 2017, 9:56 AM	**53** (30)< [redacted] **55** (30)< [redacted]	~~54~~ **54**	68 (30)> [redacted] 65 (30)> [redacted]	30
[redacted]	**CodeofConduct AMT Peer Review** modified on Monday, 9 January 2017, 8:59 AM	**68** (30)< [redacted] **57** (30)< [redacted]	~~63~~ **56**	52 (30)> [redacted] 57 (30)> [redacted]	30
[redacted]	Analyse der ethischen Grundsätze (Code of Conduct) der Crowdworking-Plattform Amazon Mechanical Turk modified on Monday, 9 January 2017, 8:27 AM	**47** (30)< [redacted] **53** (30)< [redacted]	~~50~~ **56**	62 (30)> [redacted] 57 (27)> [redacted]	28

#TCCM Conference,
Magdeburg, Feb. 2017

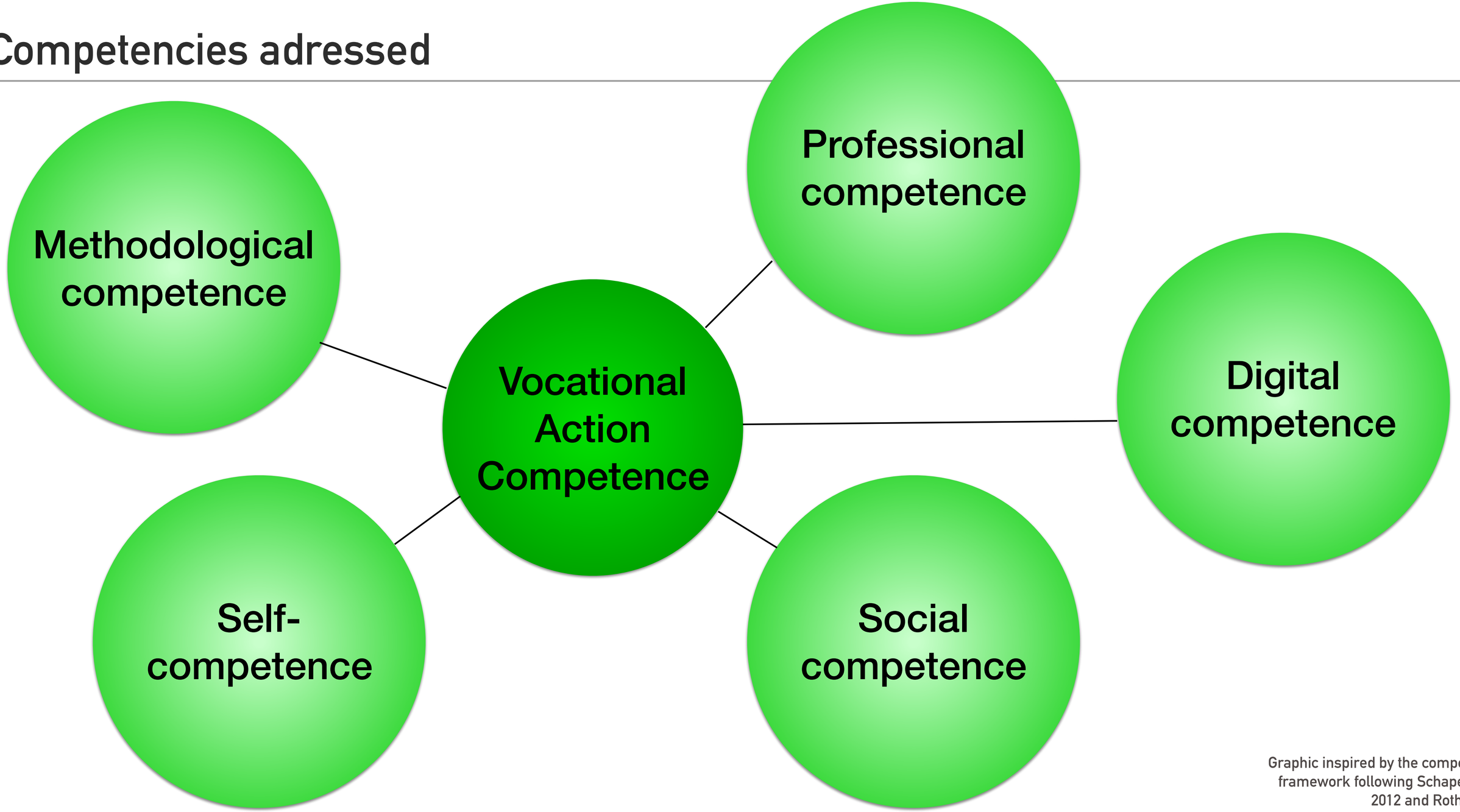
#TCCM Conference,
Magdeburg, Feb. 2016

Full Research Process



Herzog, M.A., Katzlinger, E, Stabauer, M.: Embedding Interuniversity Peer Review in Virtual Learning Groups. A Research-based Learning Scenario. In: Emerging Technologies for Education. SETE 2016, PRASAE2016. Lecture Notes in Computer Science, vol 10108. Springer

Competencies adressed



Graphic inspired by the competency framework following Schape et al, 2012 and Roth, 1971

3 Evaluation

Challenges we face(d)

Financing mobility

Interculturality

Interdisciplinary

Student's acceptance

Different curricula

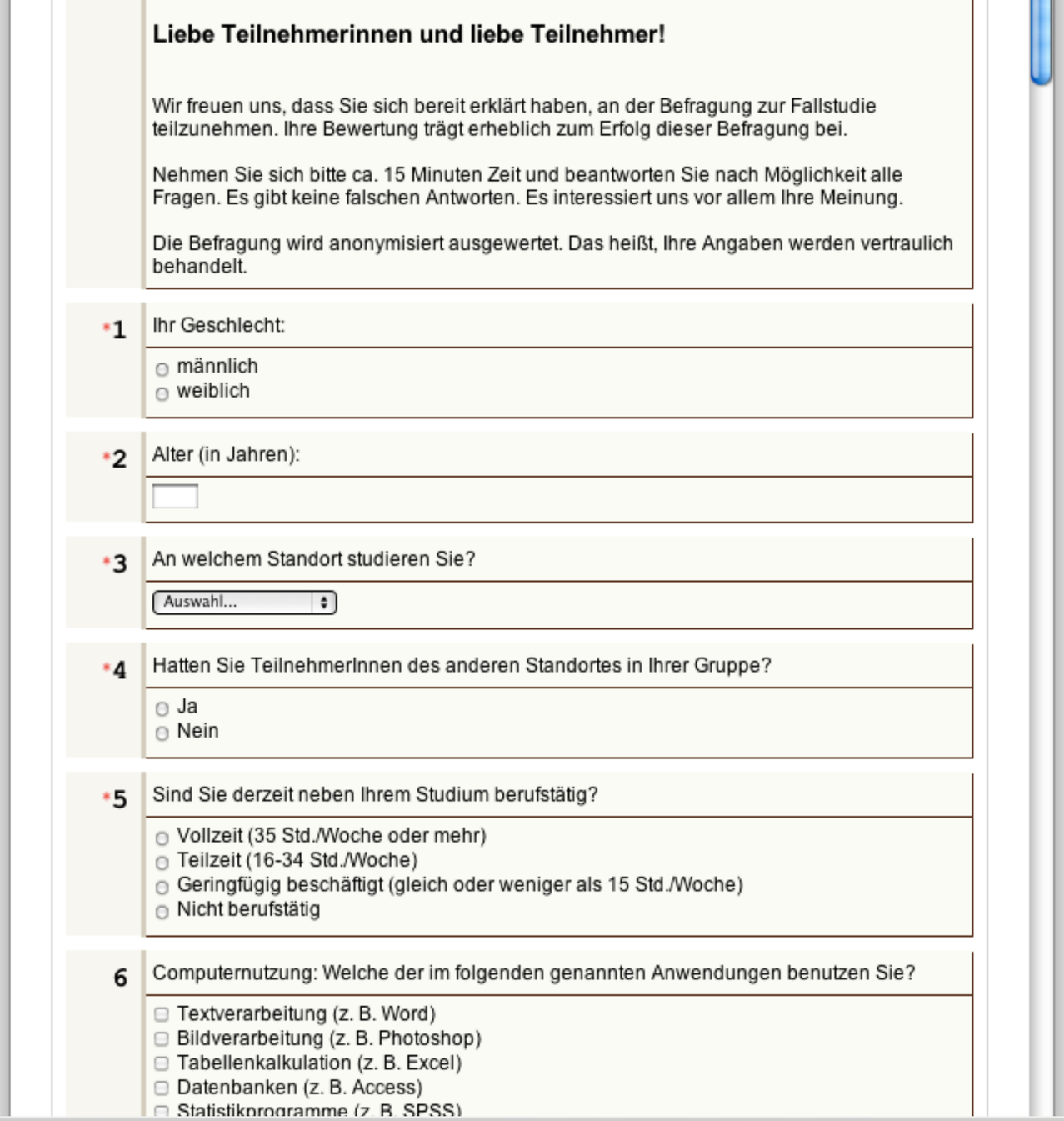
Technical problems

Publications on the Learning Scenario

- Herzog , M.A., Katzlinger, E.: „ Fächerübergreifendes forschendes Lernen am Beispiel des akademischen Publikationsprozesses“ In: S. Falk-Bartz, B. Stockleben: Think Cross Change Media 2016. Mobil, Ethisch, Kollaborativ. BoD Norderstedt, ISBN: 9783741207983
- Herzog, M.A., Katzlinger, E, Stabauer, M. „Vom Seminarraum zur wissenschaftlichen Konferenz. Interuniversitäres forschendes Lernen in virtuellen Teams“ In: R. Zehnder: Proceedings der Pre-Conference-Workshops der 14. E-Learning Fachtagung Informatik, co-located with 14th e-Learning Conference of the German Computer Society (DeLFI 2016), S. 90-101, http://ceur-ws.org/Vol-1669/ ISSN: 1613-0073
- Herzog, M.A., Katzlinger, E, Stabauer, M.: Embedding Interuniversity Peer Review in Virtual Learning Groups. A Research-based Learning Scenario“ In: Wu TT., Gennari R., Huang YM., Xie H., Cao Y. (eds) Emerging Technologies for Education. SETE 2016. Lecture Notes in Computer Science, vol 10108. Springer, Cham. 3rd International Workshop Peer Review, Peer Assessment, and Self Assessment in Education PRASAE2016, colocated with 15th International Conference on Web-based Learning ICWL2016, At Rome, #BestPaperAward
- Herzog, Michael, et al. "Peer review as a quality management tool embedded in an inquiry-based learning scenario." 16th International Conference Information Technology Based Higher Education and Training (ITHET), 2017 16th International Conference on. IEEE, 2017.
- Herzog, Michael A., and Elisabeth Katzlinger. "The Multiple Faces of Peer Review in Higher Education. Five Learning Scenarios developed for Digital Business." EURASIA Journal of Mathematics, Science and Technology Education 13.4 (2017): 1121-1143.
- Franz, Leonore, et al. "Reflecting Peer Reviews in Inquiry Based Learning Scenarios An Analysis of Peer Feedback Levels and their Implementation." 2018 17th International Conference on Information Technology Based Higher Education and Training (ITHET). IEEE, 2018
- Katzlinger, Elisabeth, et al. "Digitales Peer Review in der Hochschullehre. Wie eine Evaluationsmethode den Lernprozess direkt unterstützt." In: Susan Harris-Huemmert, Philipp Pohlenz, Lukas Mitterauer (Hrsg.) Digitalisierung der Hochschullehre. Neue Anforderungen an die Evaluation? Münster Waxmann, 2018.

CrossTeaching Research

- Online Survey
  - ~1.000 students participated (2010-2018)
    - Linz, Steyr, Magdeburg, Stendal
- Scenario „Scientific Paper Writing“
  - 76 qualified questionnaires
  - + Field reports from involved students
  - + Peer reviews
  - + Teachers evaluation of papers



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

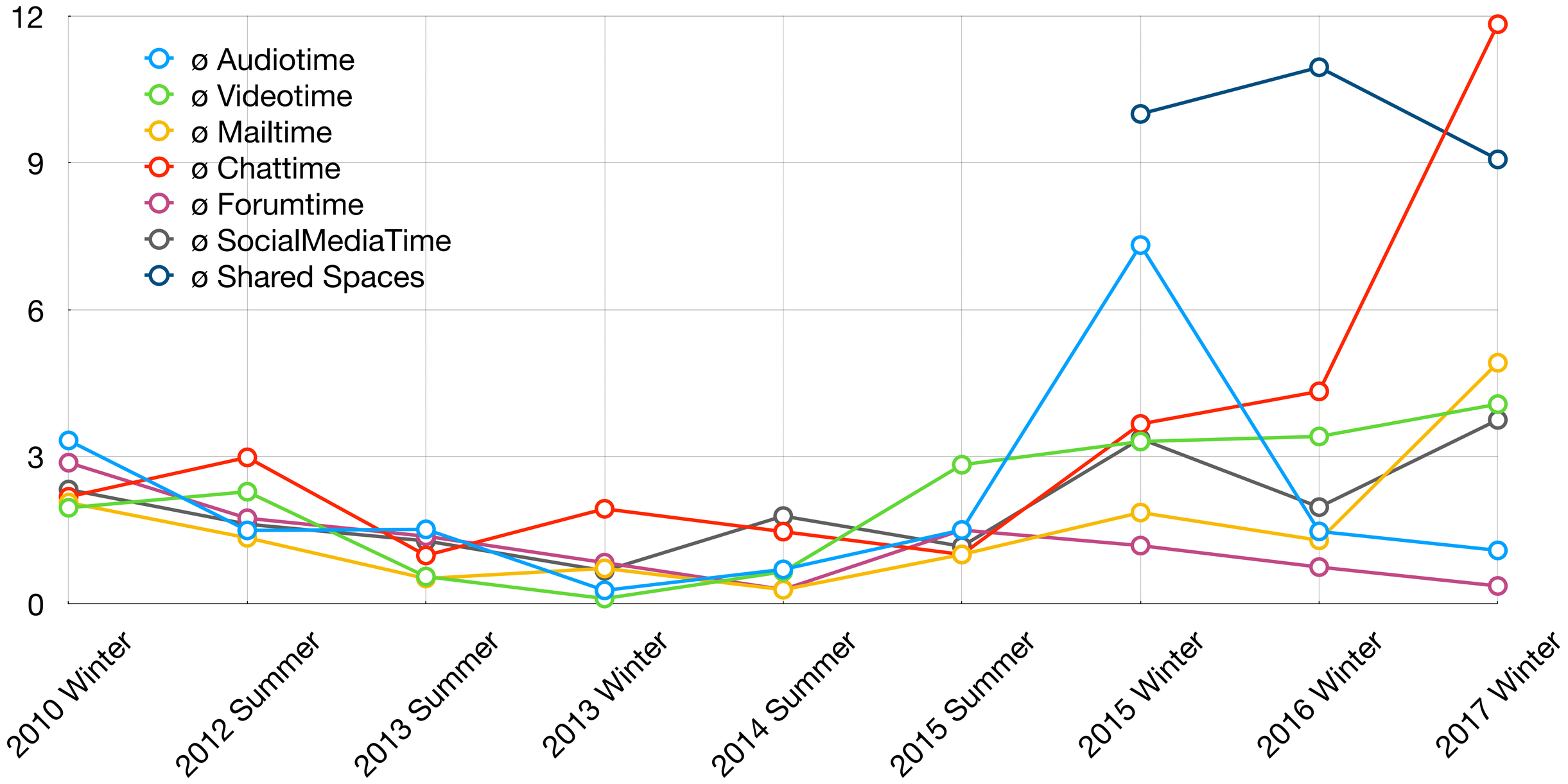
*5 Sind Sie derzeit neben Ihrem Studium berufstätig?
- Vollzeit (35 Std./Woche oder mehr)
- Teilzeit (16-34 Std./Woche)
- Geringfügig beschäftigt (gleich oder weniger als 15 Std./Woche)
- Nicht berufstätig

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)

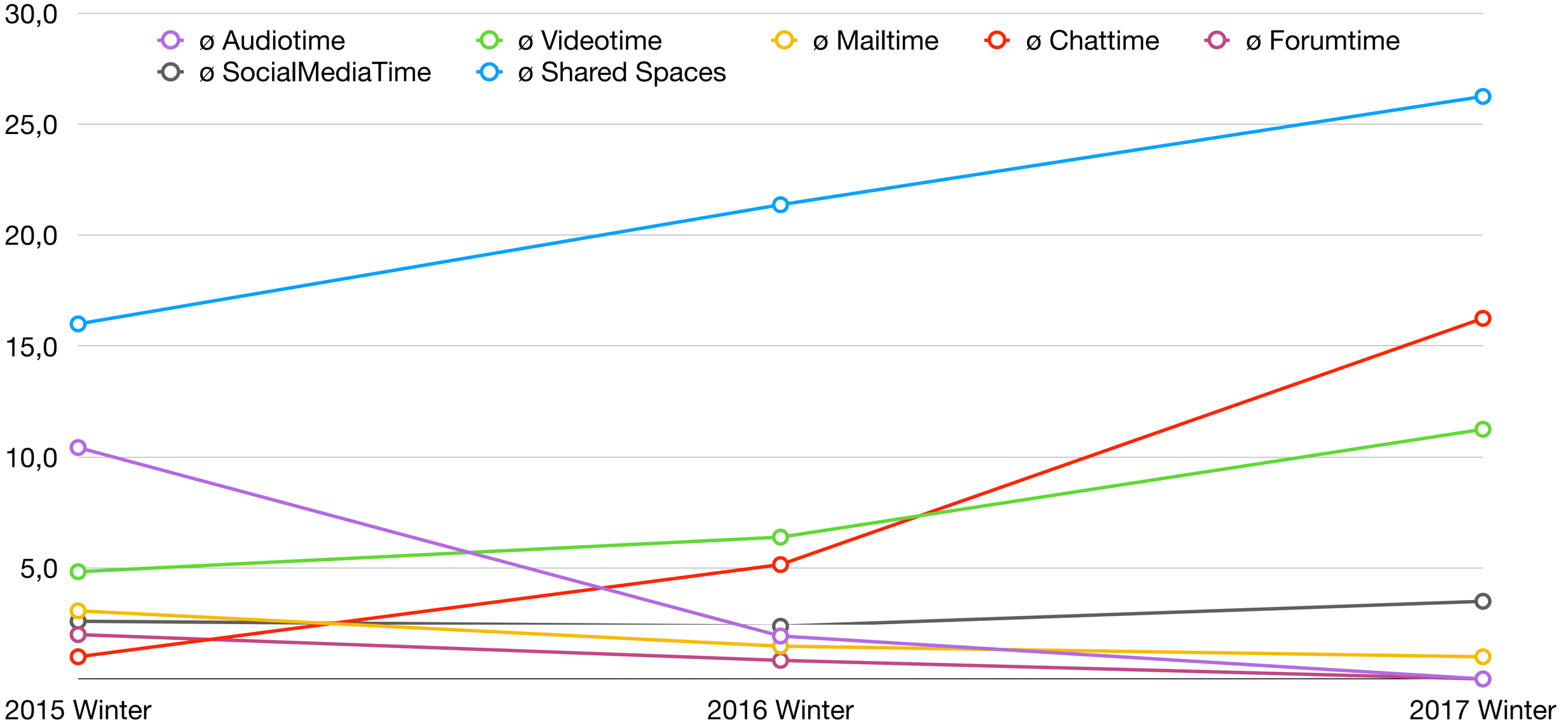
Evaluation

- Peer Review improved performance by 13,2%
- Peer Review was perceived as useful by 2/3
- 41% of feedback was incorporated – regardless of quality
- 3 groups: Neglectors, hesitants, acceptors. All profit the same
- Learning outcome: 74% satisfaction rate
  Fulltime employment: Better and worse learning outcome
- ~50% publication rate of student papers

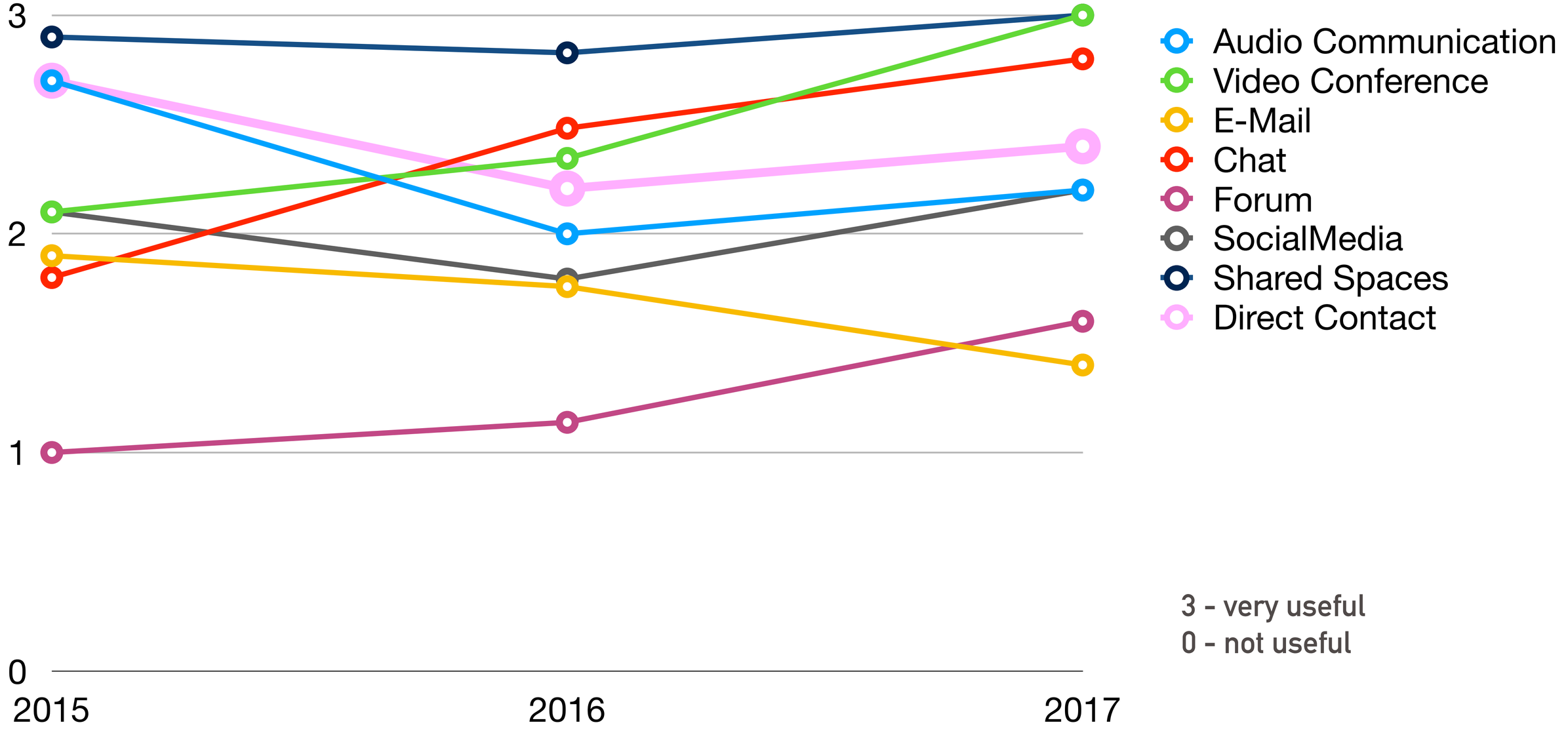
Media Usage Time in Hours for all our Learning Scenarios, n=916



Media Usage Time in Hours for the Learning Scenario »Scientific Paper Writing«, n=76



Perceived Usefulness of Tools (Students Rating), n=76



Students Voices

*»Even though the development of this paper was **more demanding** than any other during my studies, I would recommend the cooperation with the university in Magdeburg for the coming years.«*

*»Not only have we gained another experience, it was very interesting to see that in some cases students of another university have **completely different approaches**.«*

*»The chance to present our paper at the **Cross Media Conference** was great and will not repeat itself too quickly.«*

*»The **work in virtual teams** was rewarding, even though not always simple, and might turn out helpful in modern professional environments.«*

4 Further development

Further development

- Extend guidance in the learning process
- Give feedback on feedback
- Measurement of digital competencies
- New Master's Program will join in Summer 2019
  (Digital Business Management at Magdeburg-Stendal University)
- More research on learning tools and scenarios through
  Eyetracking and Emotion Detection in our new Lab
- Use more technical support, incorporate new technologies
  (e.g. NLP or/and Machine Learning)

KEY FACTS ON THE LEARNING SCENARIO

74% satisfied students

since 2015

149 involved students (2015-18)

20 used tools from **7** different catagories

3 Master's programs

4 courses & teachers

7 publications

18 published student papers

56% female

44% male students

228 Peer Reviews (2015-17)

28,74 average age of students (2015-17)

Thank you for your interest!

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Dept. of Economics

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Elisabeth Katzlinger

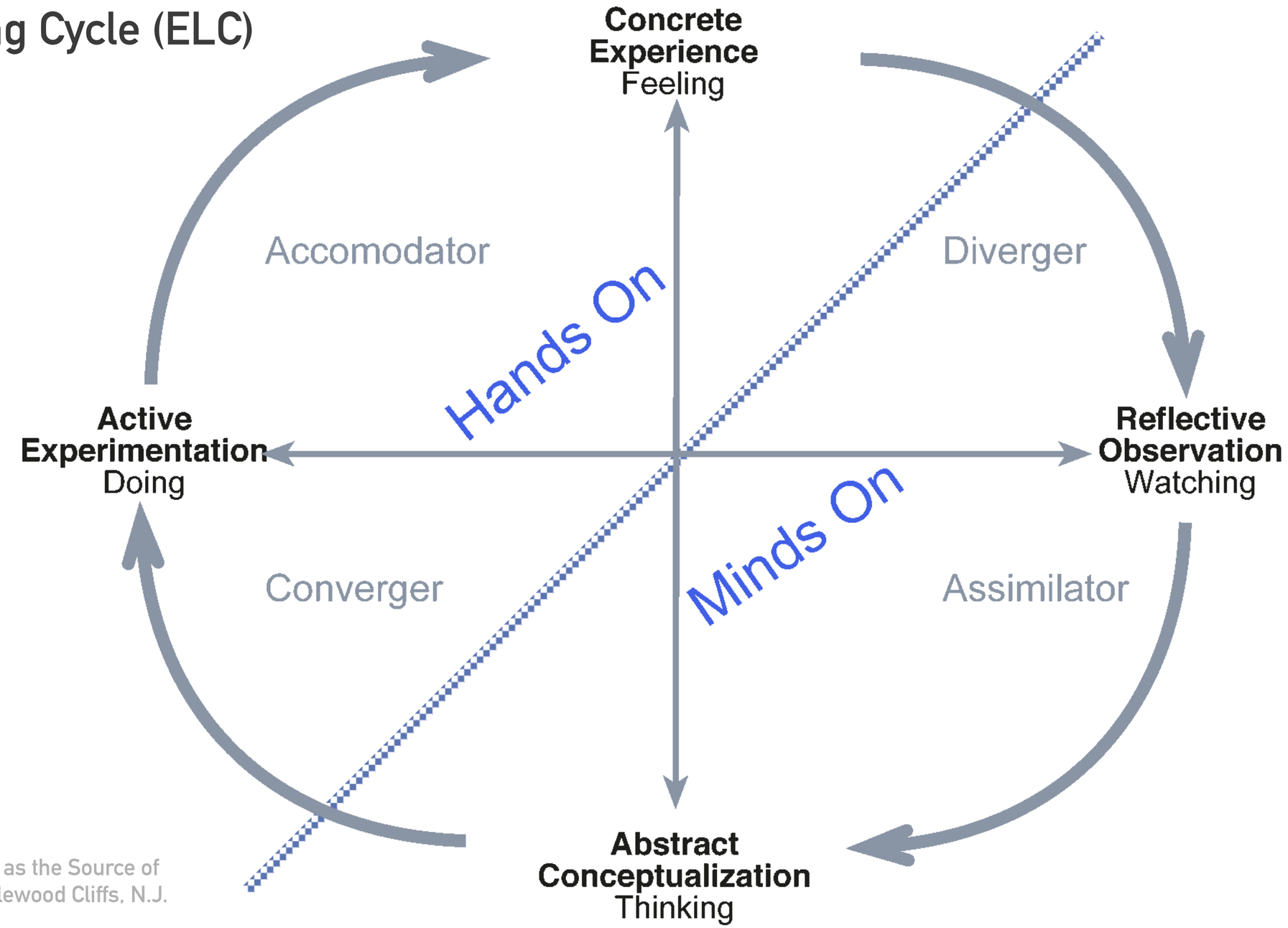
Martin Stabauer

Johannes Kepler Universität Linz

Institute of Digital Business

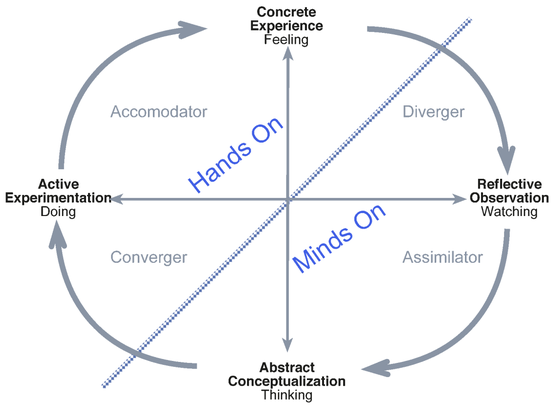
elisabeth.katzlinger @jku.at, martin.stabauer@jku.at

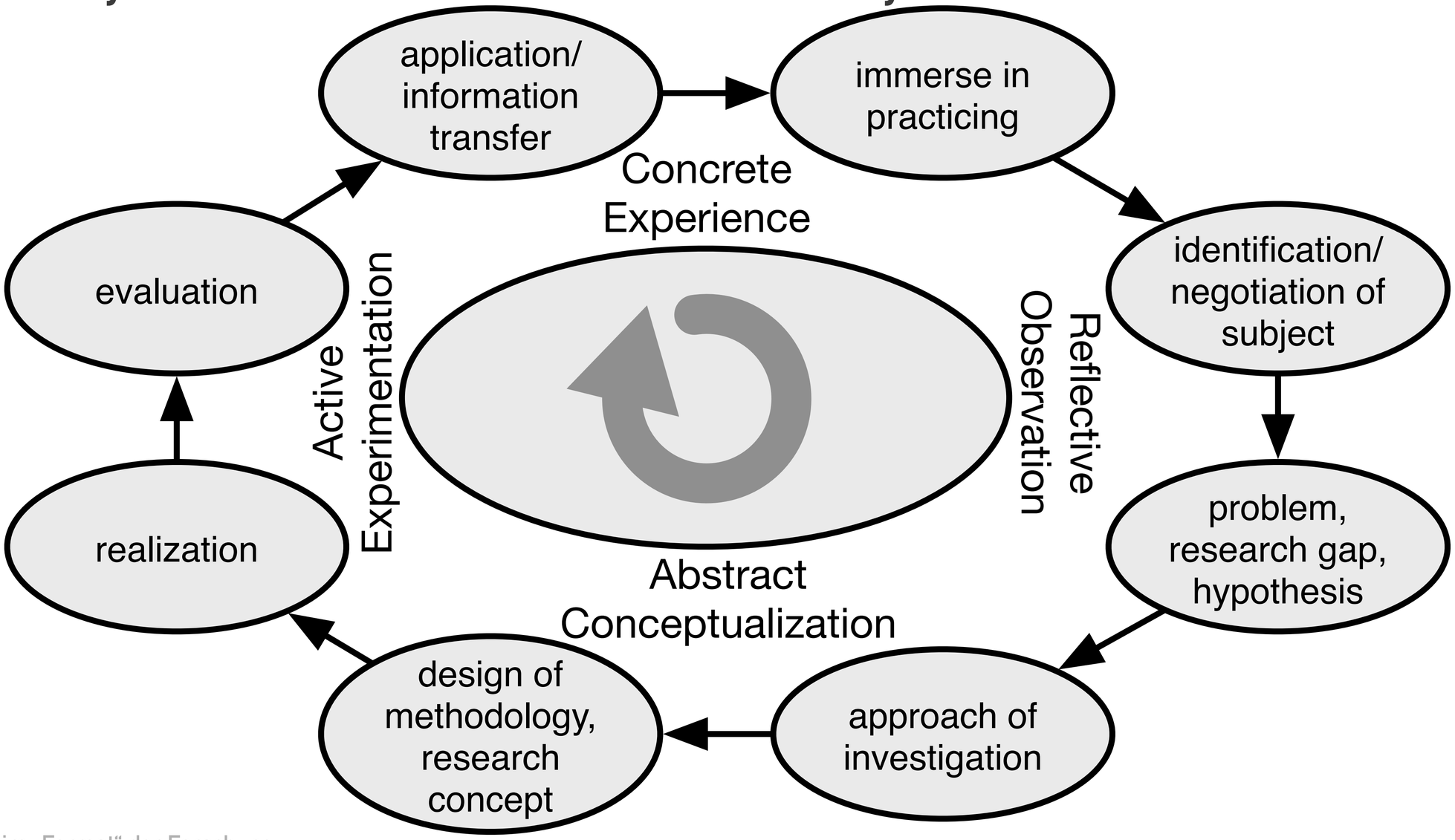
Kolbs Experiential Learning Cycle (ELC)

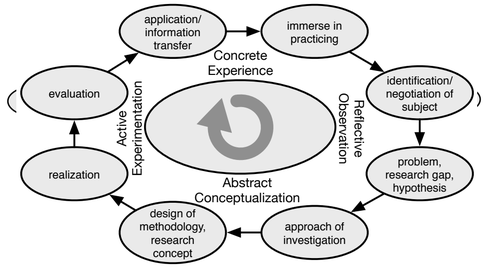
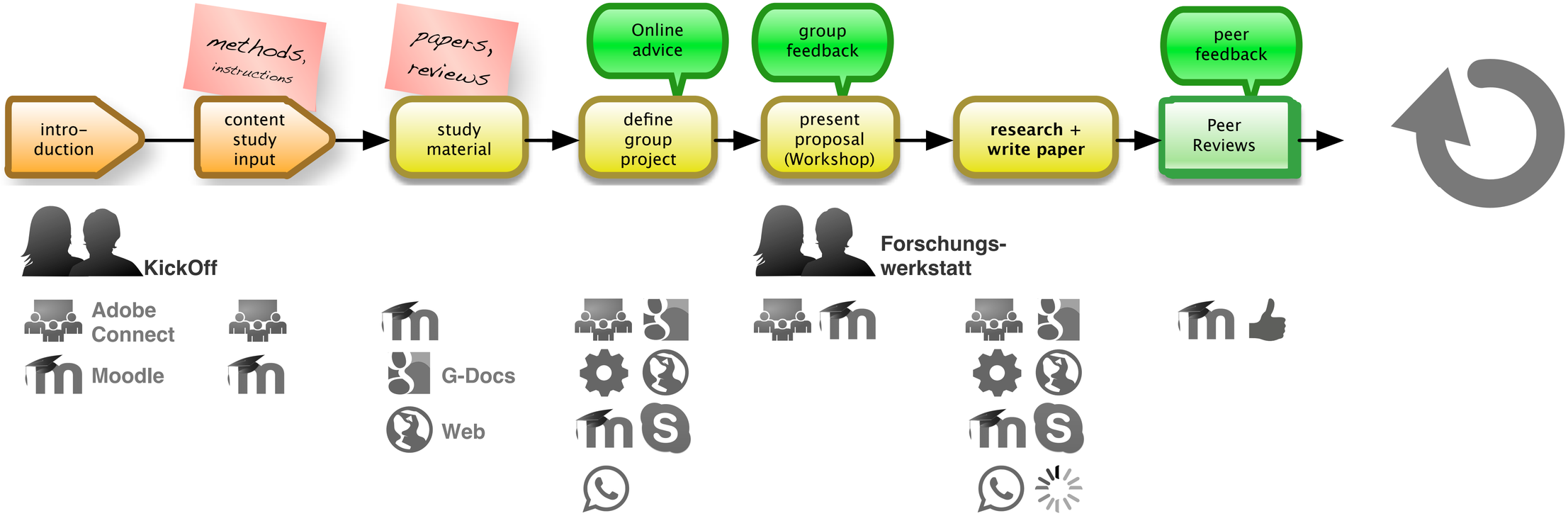


Kolb, D. A. (1984) Experiential Learning: Experience as the Source of Learning and Development, Prentice-Hall, Inc., Englewood Cliffs, N.J.

Kolb´s Learning Cycle synchronised with Wildt´s Research Cycle





Wildt, J.: Forschendes Lernen: Lernen im „Format“ der Forschung. journal hochschul-didaktik, 20(2), 2009, S 4-7

Research process in first section of the Learning Cycle