E-government colloquium
Summer semester 2023

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https://www.uni-koblenz.de/agvinf/

agenda

ÿ Basics / formalities

ÿ Introduction to scientific work

ÿ Coordination of further lecture dates

Qualification work - understanding

ÿ Qualification papers are examination papers that require admission and are intended to show that the students are able to work within a given period of time to solve a problem independently using scientific methods

ÿ Qualification work ÿ
- Bachelor thesis ÿ
- Master thesis ÿ
- Doctoral thesis

Qualification work - scope

- Bachelor: 6 months time for processing, task must be solvable in 3 months with full time commitment
  - Workload approx. 450 working hours for 15 ECTS (work 12 + colloquium 3) = 3 months full time
- Master: 6 months with full scope of work
  - Workload: approx. 900 working hours for 30 ECTS (work 27 + colloquium 3) = 6 months full time
- Doctorate: larger scope (about 3 years full-time)

Objectives of the colloquium (1/2)

ÿ Accompanying the preparation of the qualification work:

ÿ Information and exchange between the students in the development of the Qualification / thesis

ÿ Joint discussion of problems / challenges in the elaboration
- ÿ With fellow students

ÿ Exchange and cooperation among each other in thematically related work

Objectives of the colloquium (2/2)

ÿ Hints / Discussion of basic aspects
  ÿ Structure, methodology, implementation, literature, citation methods, format, etc.

ÿ Assistance in the further development of the work ÿ
  Through the supervising lecturers ÿ Through
  the discussion with fellow students

ÿ Framework for the final presentations (according to examination regulations 2019, § 17 (9))

It is very important to us that
your work is outstanding !!!

Course of the colloquium (1/3)

ÿ Everyone presents their own work at least twice ÿ Short presentation at the beginning of the qualification work ÿ [Intermediate presentation] ÿ Final presentation (PO § 17 (9))

ÿ Lectures on
- ÿ bachelor theses
- ÿ master and diploma theses ÿ doctoral theses

Course of the colloquium (2/3)

ÿ Presentations followed by discussion

ÿ Brief presentation of work in progress ÿ 5-7 min presentation
(overview of the work) + 5 min discussion

ÿ Intermediate presentation in the middle of the elaboration ÿ
10-15 min. Presentation of a specific focus with results + 5 - 10 min.
discussion

Course of the colloquium (3/3)

ÿ Presentations followed by a discussion (Caution:
EXAM RELEVANT!!! - see § 17 (9) of the PO 2019)

ÿ Final presentations
- ÿ 30 min. presentation for the elaboration (cf. § 17 (9) of the PO 2019) (presentation of the entire work)
  - ÿ Focus on methodology and on the results (basics should also be briefly addressed be) ÿ 10 min. discussion

Notes for the presentation (1/2)

ÿ Core statements are in the foreground
- ÿ Objective and framework of the presentation in relation to the status and type of the work ÿ If necessary, clarify with supervisor in advance ÿ Reflect on feedback from previous discussions and presentations

ÿ Visualization ÿ
- Less is often more (focusing / core statements) ÿ
- Structuring (argument structure)

Notes for the presentation (2/2)

- Time management
  - Adhere to the specified time
  - Rule: approx. 2-3 minutes per slide
- Speech and body language
- Lectures can be in German or English
- If you would like feedback on your presentation: please inform me in advance

Steps for registering the qualification work (1/2)

ÿ Step 1: Write an exposé ÿ Discuss
the topic with the first supervisor (= Prof. Wimmer) ÿ Prepare an exposé based on a template ÿ No prior familiarization with the subject area is required

ÿ Step 2a: Register online with the examination office from April 1, 2023
Candidate ÿ Prof. Wimmer, as
the first reviewer, is actively involved in the registration process
ÿ Link via email for “signature”
ÿ Clarify the date from which the registration should take place -> according to the PO, the period of 6 months begins from the date of registration

Registration form in the HPA (1/2)

Antrag auf Zulassung zur Bachelor-/ Masterarbeit gem. § 17 der gemeinsamen Prüfungsordnung für Studierende der Bachelor- und Masterstudiengänge des Fachbereichs 4

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Antragssteller/in

Bearbeitungsbeginn | Abgabetermin | Zulassungsdatum

Clarify with Prof. Wimmer

Exactly 6 months after the start of processing

Studierendendaten

Studiengang

Vorname | Telefon

Nachname | E-Mail

Matrikel-Nr.

Adresse ,

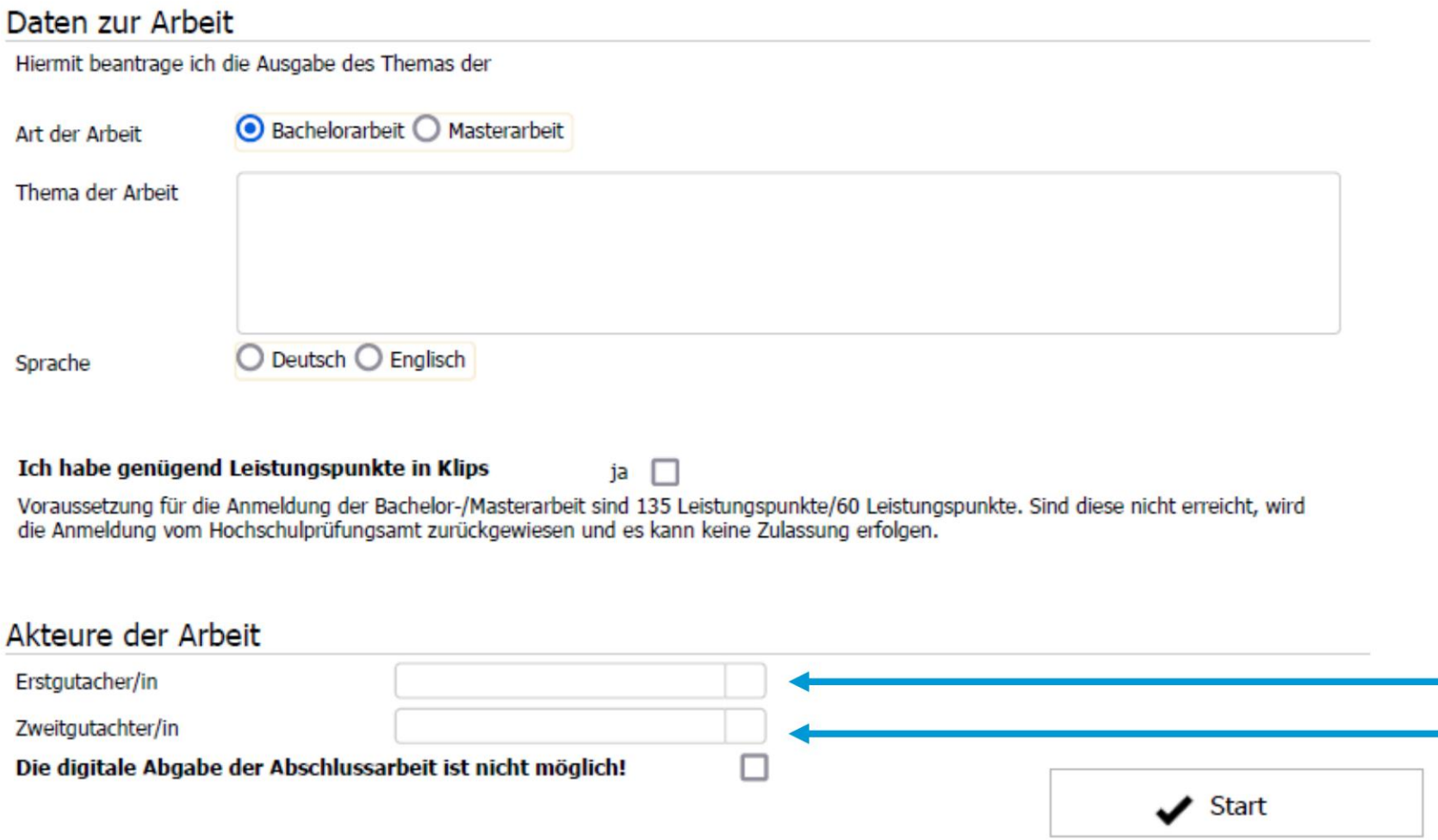
Auflagen die vor der Anmeldung der Arbeit erfüllt sein müssen

Ich habe Auflagen ○ Ja ○ Nein | wenn ja, habe ich diese erfüllt ☐

Relevant only for Master's students

Eine Abschlussarbeit darf nur angemeldet werden, wenn alle Auflagen nachweislich erfüllt sind.
Sind diese nicht erfüllt, wird die Anmeldung vom Hochschulprüfungsamt zurückgewiesen und es kann keine Zulassung erfolgen.

Registration form in the HPA (1/2)



Professor Wimmer

Clarification of the second examiner
(possibly also the second supervisor) with Prof. Wimmer

Steps for registering the qualification work (2/2)

ÿ Step 2b: Regulation of exploitation rights – form will be provided

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Fachbereich 4: Informatik
Forschungsgruppe E-Government
Universitätsstr. 1; D-56070 Koblenz
https://www.uni-koblenz.de/agvinf

Vereinbarung über die Verwertungsrechte an einer Abschlussarbeit (Diplom, Master, Bachelor)
(Die Vereinbarung ist vom Studierenden zusammen mit dem Exposé bei dem oder der verantwortlich betreuenden Professur abzugeben!)

Nach den Vorschriften des Gesetzes über das Urheberrecht und verwandte Schutzrechte (Urheberrechtsgesetz – UrhG) liegen die Verwertungsrechte an einer Examensarbeitsarbeit (Diplom, Bachelor, Master) ohne eine Vereinbarung bei der bzw. dem Studierenden als Urheberin bzw. Urheber. Andererseits kann der oder die verantwortliche Professur einschließlich ihrer Mitarbeitenden und Forschungspartner ein Interesse (Sicherung von Schutzrechten, Sicherung eigener Ergebnisse usw.) an diesen Rechten haben. Zur Klärung der damit verbundenen Fragen wird Folgendes vereinbart:

Thema der Arbeit:

.....

Urheber/in: .....

Verantwortliche Professur: Prof. Dr. Maria A. Wimmer.....

1. Es wird ein nicht ausschließendes Verwertungsrecht durch den Autor bzw. die Autorin und die Universität Koblenz vereinbart.
(Punkte 2. und 3. entfallen bei „ja“) ☐ Ja ☐ Nein

2. Alle Rechte stehen auf Grund einer vertraglichen Vereinbarung dem Projektpartner zu.

Projektpartner: .....

Vertragsnummer der Uni Koblenz: .....
(Punkte 3. und 4. entfallen damit)

3. Eine Veröffentlichung / Weitergabe der Arbeit darf ganz oder teilweise sowohl seitens der Urheberin bzw. des Urhebers als auch seitens der Universität Koblenz (verantwortliche Professur) zur Sicherung möglicher Schutzrechte
3.1 ☐nur bis auf die in der beigefügten weiteren Vereinbarung ausdrücklich ausgenommenen Abschnitte
3.2 ☐erst nach dem .....*(Datum eintragen)*
erfolgen.

4. Die verantwortliche Professur

erhält die während der Arbeit entstandenen Unterlagen (Programme, Modelle, Datensammlungen, Messprotokolle etc.) ☐ Ja ☐ Nein

zur Nutzung an der Universität Koblenz, insbesondere um weiterführende Forschungsarbeiten durchzuführen. Die sonstigen Verwertungsrechte der Urheberin bzw. des Urhebers bleiben unberührt.

Koblenz,	Koblenz,
.....	.....
(Urheberin bzw. Urheber)	Verantwortliche Professur (Universität Koblenz)

Formal requirements when submitting the written drafting

ÿ Cover sheet

ÿ Declaration in lieu of an oath ...

see also individually provided template in pdf and in Word

ÿ Summary (1 page each G/E) (for Web Science / Web and Data Science 1 page is enough E)

ÿ List of contents, tables and figures

ÿ Bibliography with complete information

Support for the written qualification work

ÿ Format template https://svn.uni-koblenz.de/egov/bamatemplate
  ÿ Access with Uni-ID ÿ
  Word and Latex templates available

ÿ Citation styles & format for reference list according to a selected format
  ÿ Use of the functionalities for managing literature

ÿ Use functionalities of the selected word processing system
  ÿ Enumerations, table and figure captions, numbering of headings,
    References, table of contents

Important for the preparation of scientific work

ÿ Appropriate language ÿ
  Concise and neutral
  ÿ Grammatically correct
  ÿ Constructed in a style that appeals to the reader

ÿ Observe the requirements for scientific writing

ÿ Adhere to rigor and relevance requirements

ÿ Recommended book:
  The handbook of academic writing by Rowena Murray & Sarah Moore, McGraw Hill, 2006 (Available in the library)

Other useful links for writing qualification papers

ÿ Preparation of qualification papers & guidelines for the preparation of scientific papers (access with university ID) ÿ https://www.uni-koblenz-landau.de/de/koblenz/fb4/iwvi/agvinf/qualifications work/leit thread seminar work.pdf

ÿ Ensuring good scientific practice in the community of teachers and learners – avoiding plagiarism ÿ http://www.plagiarism.org/plagiarism-101/what-is-plagiarism/ ÿ https://www.hochschulverband.de/879.html# ÿ Use of TurnItIn plagiarism software

Submission of the qualifying work to the examination office

- After consultation with Prof. Wimmer
- Students who registered before April 1st, 2023: Submit the PDF by email to the university examination office and cc to the two reviewers
- Students registering after April 1st, 2023: submit the PDF by submitting it in the online system
- Electronic version in source code and PDF in the common cloud Area
  - Source files with all attachments, instruments, datasets, materials, lectures in colloquium etc.

Web presence of the theses in the FG

ÿ Consent of the students that they are on the website of the research group be named with the title of their work and a brief summary ÿ under "Current qualifying work" during their work and ÿ under "Completed qualifying work" after submission of the work

ÿ … confirmed with the signature on the exposé

Technical advice from supervisors along the Elaboration (1/3)

ÿ Preliminary discussion: Agreement on the topic ÿ Choice of a topic, delimitation of the same, decisions regarding theory / Methodology / implementation, and agreement on a rough schedule

ÿ To the exposé / abstract and to the structure
- ÿ If necessary, agreement on corrections, acceptance of the exposé
  - ÿ Including coordination of the date of submission of the registration form to the examination office (-> Licensing requirement | deadlines start to run)

ÿ Coordination of the structure of the work

Technical advice from supervisors along the Elaboration (2/3)

ÿ During the elaboration: Regarding the elaboration of the theoretical part & related Work & research methodology

- ÿ Discussion of those written independently by the students
  - ÿ theoretical content ÿ
    existing approaches and solutions to the topic ÿ research
    methods and methodological approaches in the development of the topic
- ÿ Advice on the content and literature ÿ
  Notes on related work and research methods

Technical advice from supervisors along the Elaboration (3/3)

ÿ During the elaboration: Regarding the elaboration of the empirical part /
the practical conversion / implementation ÿ Support
through advice and discussion of the concepts, methods, implementation
as well as the elaborations and documentation

ÿ Before submission: agreement that the work can be submitted or whether
an extension of the submission deadline is required ÿ
See also "Instructions for submitting theses" from the Department of Computer Science

Working independently (1/2)

ÿ Independent preparation with regular feedback from the students

ÿ Active and regular advice from Prof. Wimmer (and other supervisors)
catch up

ÿ Eg e-mail inquiries, request regular meetings ÿ Get advice on problems and open issues

ÿ Mandatory participation with presentations at the colloquium dates

ÿ If students are prevented from doing so, they can actively deregister from Prof. Wimmer (by email)

Working independently (2/2)

ÿ Understand quality work as a project
- ÿ Create your own time and resource plan ÿ
- Project management for qualification work

ÿ The supervisors also need time for proofreading and good feedback!!! ÿ
- Allow time for this in project management !!!

Note on corrections ->

Notes from curricula and examination regulations

ÿ Qualification papers are independent examinations

ÿ In principle, no right to suggestions for corrections by the supervisors ÿ

Proofreading is goodwill / accommodation on the part of the supervisors and is to be understood as a mutual interest in creating / maintaining a good work

ÿ Insists on the final inspection of the work before it is actually submitted to the examination office no claim

agenda

- Basics / formalities
- Introduction to scientific work
- Coordination of further lecture dates

Introduction to scientific work

- What characterizes a scientific work?
- How is an academic work structured?
- Recommendations on the approach/work steps

Scientific work

ÿ Systematic processing of a research question using certain...

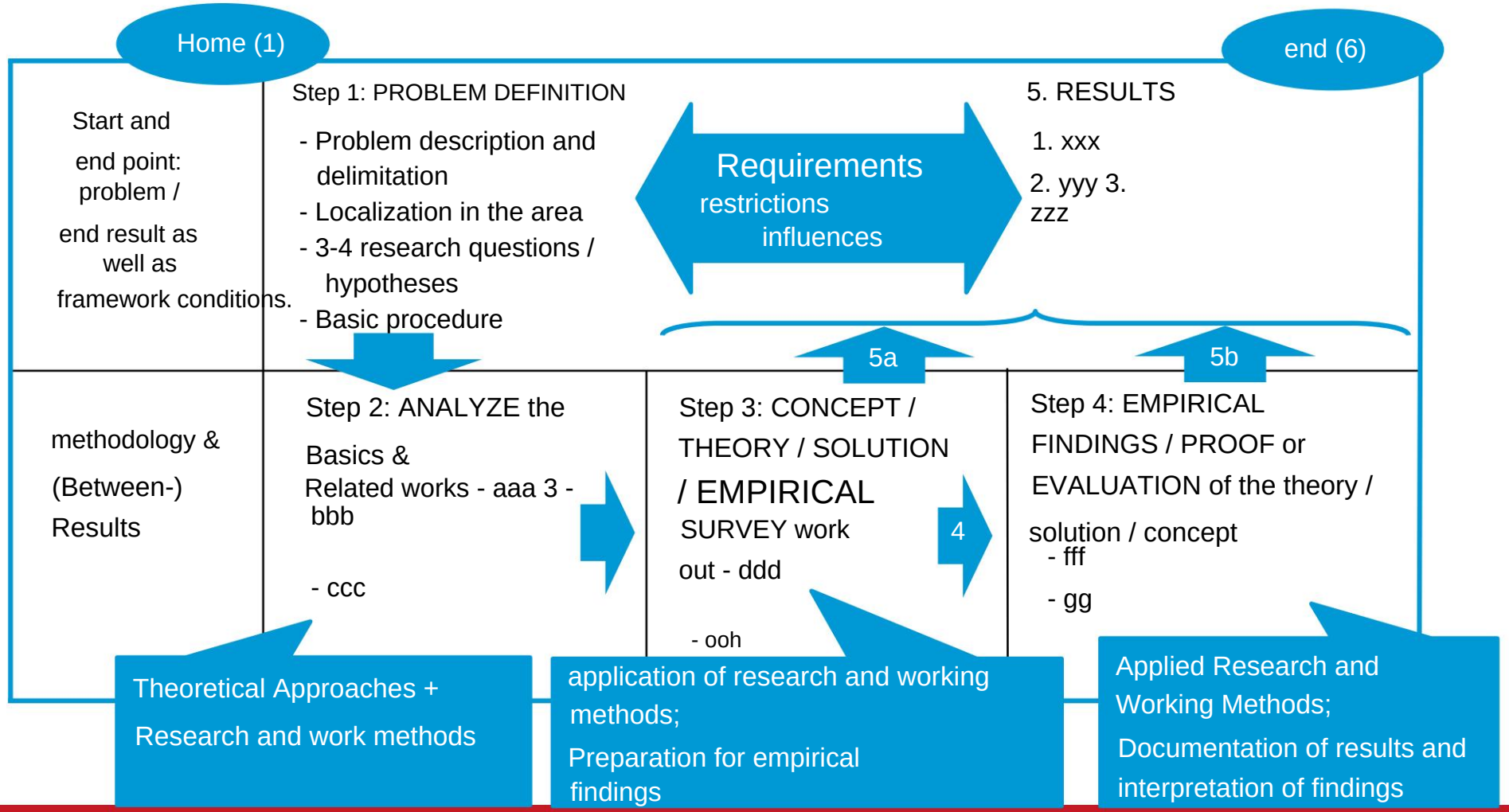
…	BSc	MSc
Theoretical foundation and status of the Technology	min. 15% of drafting	min. 30% of drafting
research and working methods	min. 10% of drafting	approx. 10% of the elaboration
Conceptual / developmental contributions or empirical findings	approx. 50% of the elaboration	about 50% of the elaboration
Introduction and Summary	together max. 5-8% of the elaboration	together max. 5-8% of the elaboration

Types of scientific work in our group

research oriented Literary/theoretical & conceptual work	implementation work / Experimental development work	empirical work
Extensive literature work theories and concepts	Theoretical basics	Theoretical basics
Methodological basics	methodical approach	Hypothesis & Methodical Approach
Testing of a hypothesis / new concept or framework	conception, implementation, testing	Design, data collection, evaluation of the empirical work
development of theories and basic concepts	Embedding innovative development in science	Findings of the empirical work

See Bänsch, A., *Scientific work.* – 9th Edition 2007. Munich, Oldenbourg Wissenschaftsverlag;
Helmut Balzert, Christian Schäfer, Marion Schröder, Uwe Kern: Scientific work: science, sources, artefacts, organization, presentation. W3l GmbH, 2008

construction of a scientific work (also of the synopsis)



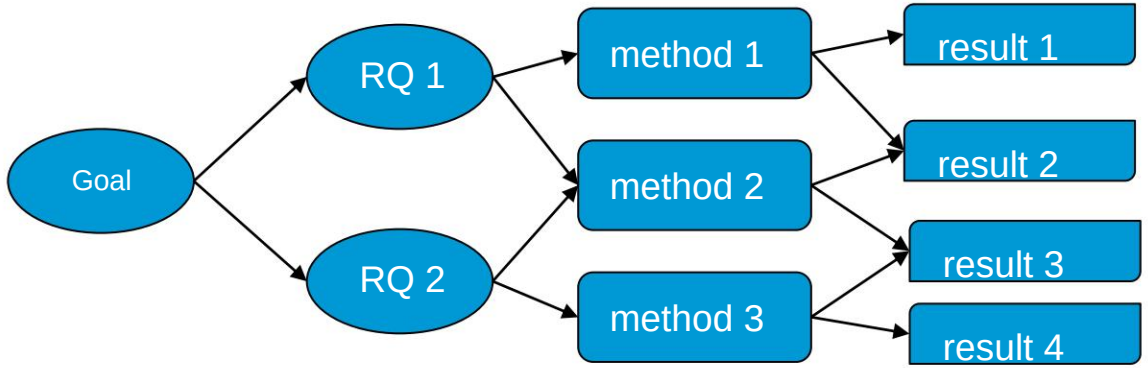
Research design – describe the methodological approach

ÿ On one fundamental point
Build research paradigm
ÿ Present

research design in
tabular or

graphical form

Objective research question		method result	
Goal	RQ1	method 1	result 1 result 2
	RQ2	method 2 method 3	result 3
	RQ3	Method 4 result 4	



Basic structure of a qualification work

Introduction Problem definition, embedding in the research environment, motivation and goal of the work, expected results and basic procedure, structure of the work	2-3 pages
Theoretical foundations, methodology, related work	focus of Work – weighted differently depending on the type
Concept, solution, empirical work, implementation	
Evaluation, recommendations, scientific novelty	
Summary and outlook & critical appraisal	2-4 pages
References (number of scientific sources depending on the type of work)	min. 1 **scientific** ref. per page
If applicable, attachments	

Content / core of your Work

What is a scientific reference?

“Value” of literature sources (1/2)

The following are counted as scientific sources (no. corresponds to value):

1. Journal article
2. Peer-Reviewed Conference Papers (“Paper”)
3. Monographs and book chapters or contributions to an anthology (usually non-peer-reviewed)

ÿ this also includes published ones dissertations

Gray literature (no order)

ÿ Master theses

ÿ Studies, Technical Reports, White Papers

ÿ research reports, work reports

What is a scientific reference?

“Value” of literature sources (2/2)

Other sources to be referenced (no order) ÿNorms and standards (incl. URLs)

ÿContributions in specialist magazines or press articles (e.g. c't)

ÿInternet Sources

ÿe.g. laws, Gabler lexicon, etc.

ÿ Suitable for new topics, but do not count among the scientific sources and are referenced in footnotes

ÿURLs to projects, web appearances of case studies, tools, etc.

ÿNot all sources are suitable for a scientific elaboration (eg lecture slides)

ÿFor online sources, always state the last day of access

Key questions of a scientific work (1/4)

ÿ Which problem should be solved/worked out? ÿ
Working definition, example of a problem statement

ÿ In which questions / tasks can this problem be broken down ÿ The structure of the work is also derived from this

ÿ **Problem statement**

Key questions of a scientific work (2/4)

ÿ With which scientific / application / empirical methods can these questions be solved? ÿ Selection and description of
the methodology and techniques ÿ Approaches,
methods and/or models used ÿ Languages,
design methods, data models, analysis methods, formalisms

ÿ **Methodology for elaboration (procedure for steps 1, 2 and 3)**

Key questions of a scientific work (3/4)

ÿ What existing / similar approaches are there? ÿ
Literature study, analysis, comparison

ÿ Which findings from the literature / similar approaches are used, to create the work?

ÿ Concepts, design, solutions
- ÿ Architecture, implementation, etc.
- ÿ Empirical elaborations (data collection, results) ÿ Expand theories ...

ÿ Related work / theoretical foundation / conceptual solution

Key questions of a scientific work (4/4)

ÿ How can the models be verified?

ÿ What insights can be derived from the elaboration / interpretation of the results?

ÿ What conclusions and recommendations can be given?

ÿ **Evaluation / interpretation of the results / findings**

Scientific work - work steps (1/4)

ÿ Choice of topic / problem ÿ Specification / outline ÿ Structuring ÿ Basis for literature research

ÿ Plan work as a project ÿ Time planning with tasks and deadlines (including deadline) ÿ Schedule buffer times (also for supervisors!)

Scientific work - work steps (2/4)

ÿ Gathering information / literature research
- ÿ Literature list
  - ÿ Proportionality ÿ
- References ÿ
  - Citing, referencing ÿ
  - Synthesis, summary, criticism ÿ
  - Important: Consistency!!!

Most important question: what is the connection
between literature/information and the problem ...
Argue and ensure your contribution to the work!!!

Scientific work - work steps (3/4)

ÿ Information analysis
- ÿ Theoretical foundation
- ÿ View related work / other work ÿ
- Argumentation structure – “red thread” & well-founded statements ÿ Important: Consistency!!!

Most important question: what is the connection between literature/information and the problem ...
Argue and ensure your contribution to the work!!!

Scientific work - work steps (4/4)

ÿ Methodology and process description ÿ
Describe results and design ÿ Test
development / evaluate results ÿ Communicate knowledge ÿ Interpretation
of results ÿ Contribution to science
ÿ Innovation ÿ Usefulness
… for whom?

ÿ Table of contents (abbreviations, glossary) ÿ
Final formatting

ÿ Constant coordination with supervisors

Most important question:
Clarify your contribution to solving the problem !

agenda

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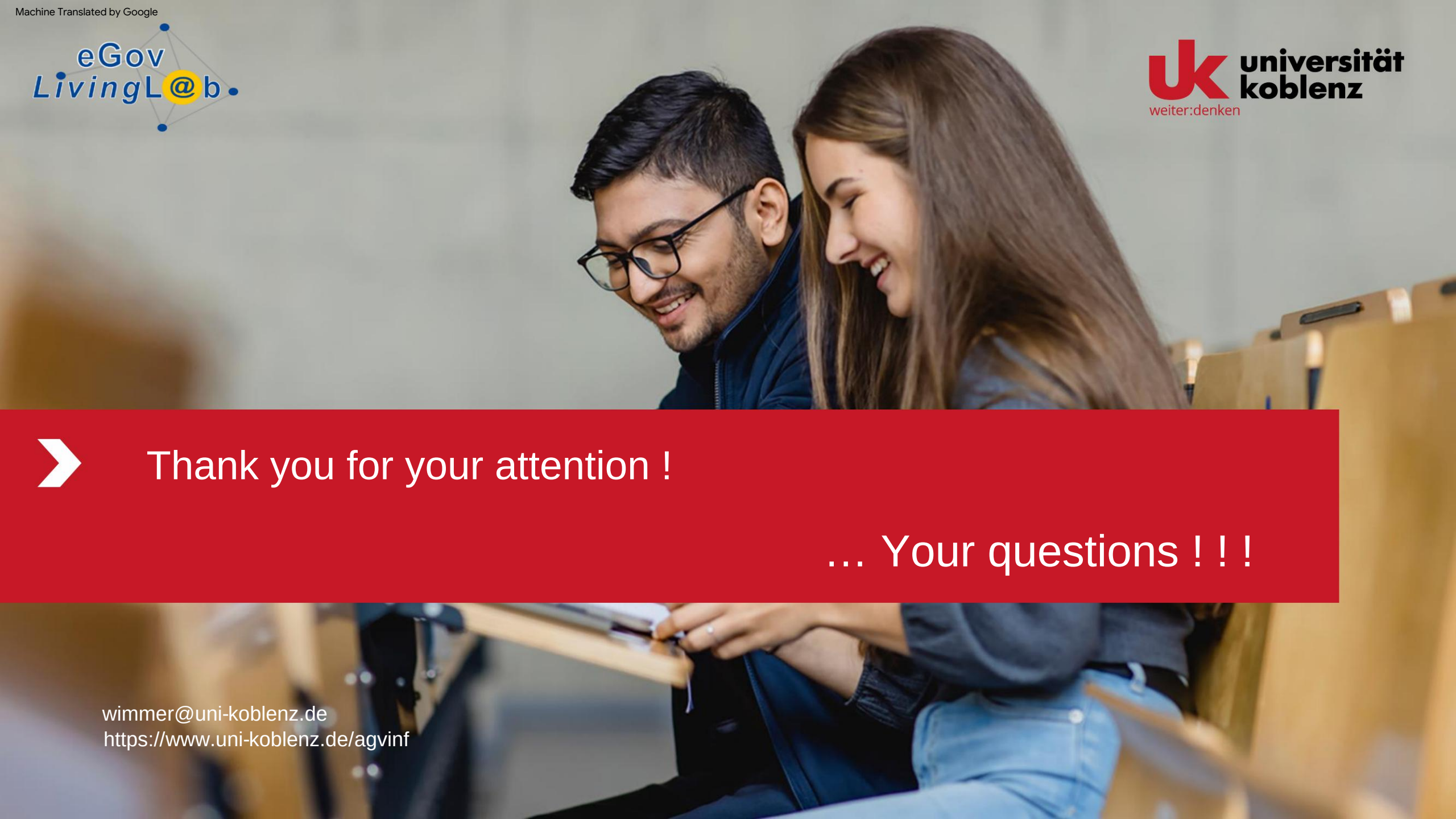
Presentation dates SoSe 2023

Date	lectures
04/17	Lucas Hahn, degree, bachelor's degree
04/24	Constitutive session with introduction by Prof. Wimmer and appointment scheduling
04.05.	MTI guest lectures (lecture series)
08.05.	Mohamad Tarek Kalash, Bachelor Degree Behruz Valizoda, Intermediate P. master
05/15	MTI guest lectures (lecture series)
22.05.	tba

Date	lectures
05/25	MIT guest lectures (lecture series)
05.06.	Ivan Gladusch, degree, bachelor's degree Igor Bestvater, Bachelor Initial
26.06.	Behruz Valizoda, Degree, Masters more tba
03.07.	Marc Müller, degree, bachelor's degree Simon Schmidbauer, degree, bachelor's degree
07/17	Manfred König, degree, diploma John Nguyen, Graduation, Bachelors
07/31	Dimitri Dudnikov, Master's degree Christian Nowak, Bachelor's degree

A final required date in September 2023 will be announced towards the
end of the lecture period (end of July) for all those who complete their work by the end of SoSe 2023.



Thank you for your attention !

… Your questions ! ! !

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https://www.uni-koblenz.de/agvinf