Research Methods and Academic Writing Part I

Prof. Dr. Thomas Schuster

Cooperative State University Baden-Württemberg Mannheim

Study Programme International Management for Business and Information Technology

Winter Semester 2016/2017

Useful Information

- Office hour: Please contact me to make an appointment
- Room: D 223
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- AM: 03212/1337253
- About me: http://en.wikipedia.org/wiki/Thomas_Schuster
- No smartphones etc. are allowed in class!
- No notebooks, tablets etc. are allowed if students start surfing on the internet
- Classroom language is English

Literature I

- Babbie, Earl (2016), The Basics of Social Research, 7th edition, Belmont: Thomson/Wadsworth.
- Balzert, Helmut; Schäfer, Christian; Schröder, Marion (2011), Wissenschaftliches Arbeiten, 2. Auflage, Osnabrück.
- Blumberg, Boris; Cooper, Donald R.; Schindler, Pamela S. (2014), Business Research Methods, 4th edition, Boston: McGraw-Hill.
- Bryman, Alan; Bell, Emma (2015), Business Research Methods, 4th edition, Oxford University Press.
  - Equivalent: Bryman, Alan, Social Research Methods
- Cottrrell, Stella (2013), The Study Skills Handbook, 4th Edition, Palgrave Macmillan.
- Ghauri, Pervez; Gronhaug, Kjell (2002), Research Methods in Business Studies, 2nd edition.
- Hair, Joseph F./Wolfinberger, Mary/Money, Arthur H./Samouel, Phillip/Page, Michael J., Essentials of Business Research Methods, London, New York: Routledge 2011
- Kornmeier, Martin. (2011), Leitfaden zur Gestaltung wissenschaftlicher Arbeiten. in: http://www.ib.dhbw-mannheim.de/fileadmin/ms/bwl-ib/Downloads_alt/Leitfaden_31.05.pdf.
- Kornmeier, M. (2013), Wissenschaftlich schreiben leicht gemacht für Bachelor, Master und Dissertation, Stuttgart: Haupt.

Literature II

- Kornmeier, Martin (2007), Wissenschaftstheorie und wissenschaftliches Arbeiten: eine Einführung für Wirtschaftswissenschaftler. Heidelberg: Physica-Verlag.
- Mauch, James; Park, Namgi (2003), Guide to the Successful Thesis and Dissertation: A Handbook for Students and Faculty (Books in Library and Information Science), 5th edition, CRC Press.
- Oxford University Press (ed.) (2014), New Hart's Rule: The Oxford Style Guide, Oxford: Oxford University Press.
- Saunders, Mark; Lewis, Philip; Thornhill, Adrian (2016), Research Methods for Business Students, 7th edition, Harlow: Pearson.
- Theisen, Manuel René (2013), Wissenschaftliches Arbeiten. Erfolgreich bei Bachelor- und Masterarbeiten, 16. Auflage, München: Vahlen.
- Thomas, Murray R.; Brubaker, Dale L. (2007), Theses and Dissertations: A Guide to Planning, Research, and Writing, 2nd edition, Corwin Press.
- Tissington, Patrick ; Hasel, Markus (2017), How to Write Successful Business and Management Essays, 2nd Edition, Los Angeles et al.: Sage.
- Trochim, William M. K. (2016), Research Methods Knowledge Base, in: http://www.socialresearchmethods.net/kb.
- The University of Chicago Press (ed.), The Chicago Manual of Style, 16th edition, Chicago: Chicago University Press 2010.

Individual Work

- Take a piece of paper and write down the three most important topics you would like to cover in this seminar

Outline of the Course

1 Research Ideas, Research Questions, and Research Objectives
2 Variables, Hypotheses, and Theories
3 Deductive and Inductive Research
4 Research Methods
5 Literature Search
6 Recording the Literature
7 Plagiarism
8 Confidentiality
9 Tables and Figures
10 Structure of the Report
11 Best Practice Examples
12 Questions and Answers

Introduction to Research Methods

Cooperative State University Baden-Württemberg Mannheim

Study Programme International Management for Business and Information Technology

Winter Semester 2016/2017

Formulating and clarifying your research topic

The important steps

- Identifying the attributes of a good research topic
- Generating ideas that help you select a suitable topic
- Turning ideas into clear research questions
- Establishing interesting research objectives
- Writing your research proposal

Attributes of a good research topic (1)

Capability: is it feasible?

- Are you fascinated by the topic?
- Do you have the necessary research skills?
- Can you complete the project in the time available?
- Will the research still be current when you finish?
- Do you have sufficient financial and other resources?
- Will you be able to gain access to data?

Attributes of a good research topic (2)

Appropriateness: is it worthwhile?

- Will the examining institute's standards be met?
- Does the topic contain issues with clear links to theory?
- Are the research questions and objectives clearly stated?
- Will the proposed research provide fresh insights into the topic?
- Will your topic have a symmetry of potential outcomes, i.e. are the results of similar value, whatever you find out
- Does the research topic match your career goals?

Attributes of a good research topic (3)

And – (if relevant)

Does the topic relate clearly to an idea you were given –

possibly by your organisation ?

Generating research ideas

Useful Techniques

Rational thinking	Creative thinking
Searching the literature	Brainstorming
Discussion	Relevance trees
Scanning the media	Keeping an ideas notebook
Exploring past projects	

Refining research ideas

- Using the Delphi Technique: have a group help in providing ideas regarding a specific topic
- Continually testing out your ideas
- Integrating ideas
- Conducting a preliminary study
- Refining topics given to you by your organisation

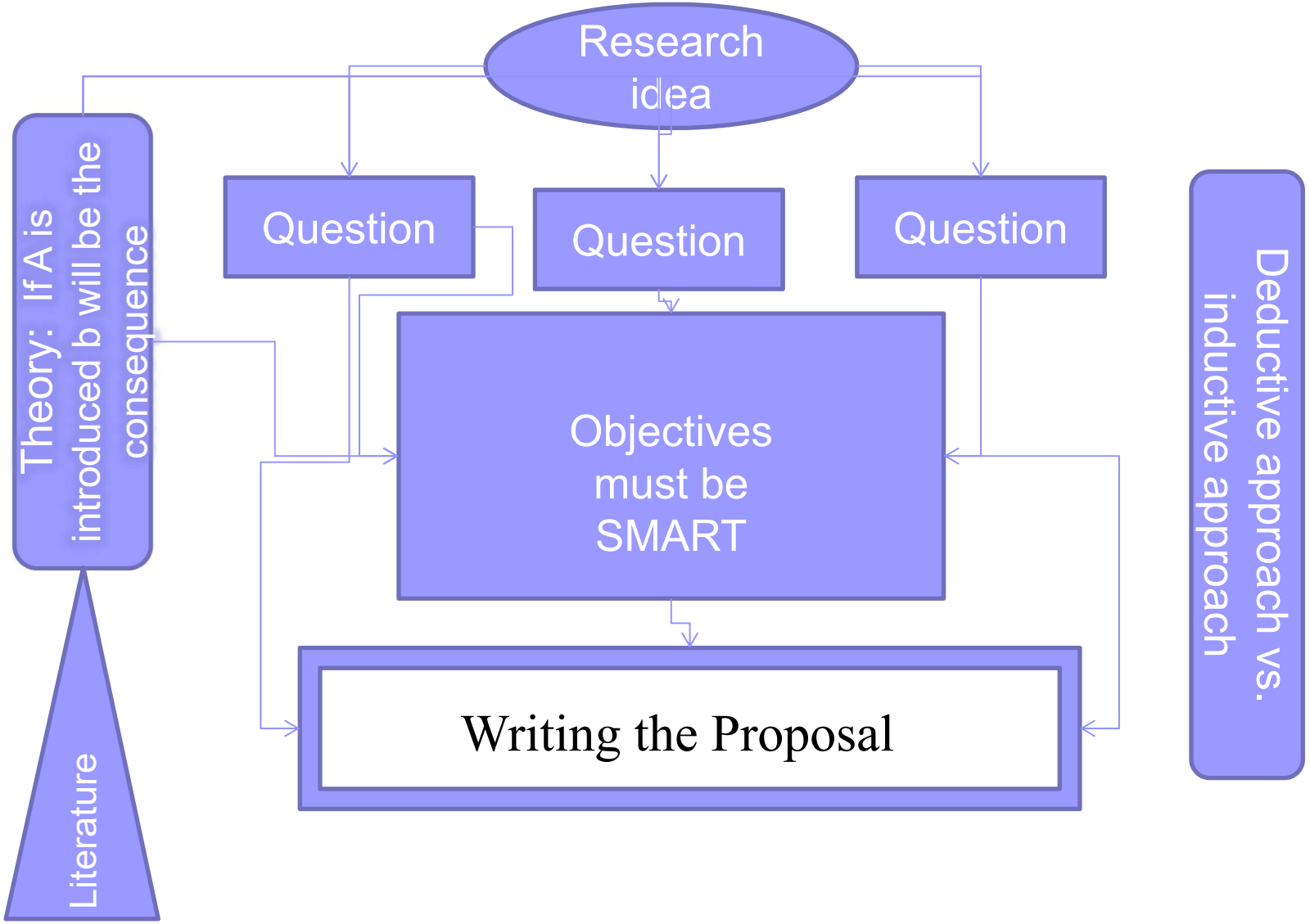
Individual Work

- Please write a clear and succinct
  - Title of your project thesis
  - Statement (in less than 25 words) of the overall aim/s of the thesis

- Hint: The title should be as concise as possible

Be prepared to present the findings to the audience

From ideas to proposal



Writing research questions

Write research questions that are

Consistent with expected standards

- Able to produce clear conclusions
- At the right level (not too difficult)
- Not too descriptive
- Use the ‘Goldilocks Test’
  - Not too big, not too small
- Just right questions are those that are right for investigation at this time, by this researcher in this setting

Clough and Nutbrown (2002)

Writing research questions

Which of these questions cannot be easily or fully researched?

A. Does a waste disposal site or a waste incineration plant produce more carbon dioxide emissions that harm the environment?

It is researchable. You'd have to sift through a lot of information, in order to choose the best information to answer the research question and support your own point of view, but the point is that there is at least enough information to sift through.

Does McDonald's or Burger King make a better burger?

It is not researchable as it is worded, since it has no concrete meaning. What does "better" mean? Better in terms of nutrition? Better tasting? Better value? Fewer calories? Better for making your kids happy? This question could become researchable only if you define the concept "better".

Writing research questions

Select what you think is the best research question

A. What marketing strategies does the Coca-Cola company currently apply?
B. What should the Coca-Cola company's future marketing plan be?
C. What marketing strategies has the Coca-Cola company used in the past?

******

A. What impact has deregulation had on the airline industry?
B. What percentage of commercial airline crashes were traced to negligent maintenance during the 10 years immediately preceding and following deregulation?
C. What impact has deregulation had on commercial airline safety?

Writing research questions

A. *Question “A" is the best research question. Your research to answer this question may include observation of print, television, and radio advertisements as well as research into various current marketing theories and strategies. Both types of research are "do-able," and the question is focused enough to yield a fully-developed research paper. However, the research question is descriptive.*

B. *Question “B" is principally a good research question. However, it is unresearchable--it's unlikely that Coca-Cola personnel will reveal their marketing plan.*

C. *Question “C" may be too broad as well, since "the past" covers a lot of time, especially since the Coca-Cola company was incorporated in 1919*

Writing research questions

A. *Question “A" is too broad, once you get into the research, since deregulation may have had impact on safety, costs, passenger fees, ability to comply with government regulations, and many other areas of the airline industry, too many to deal with in depth in one research paper*

B. *Question “B" is too narrow. It can be answered with simple percentages and cannot be developed into a full research paper.*

C. *Question “C" is the best research question. You may use statistics such as question “B" would uncover as you answer question “C," which is focused enough to allow you to research the question in some depth yet broad enough to allow you to consider the various effects of deregulation on airline safety.*

Turning ideas into research projects (1)

Research idea	General focus research questions
Advertising and share prices	How does the running of a TV advertising campaign designed to boost the image of a company affect its share price?
Job recruitment via the Internet	How effective is recruiting for new staff via the Internet in comparison with traditional methods?

Saunders et al. (2016)

Turning ideas into research projects (2)

Useful techniques

- Start with a general focus question
- Discuss areas of interest with your supervisor

Individual Work

- Set up three research questions of the proposed thesis

- Hint: Avoid general research questions, be as specific as possible

Be prepared to present the findings to the audience

Turning ideas into research projects (3)

Writing clear research objectives

- Check your examining body's preferences for stated objectives or whether research questions are enough
- Use a general focus question and generate more detailed research questions from which you write a set of precise research objectives
- Research objectives lead to greater specifity

Saunders et al. (2016)

Turning ideas into research projects (4)

Include SMART Personal objectives

Specific: What precisely do you hope to achieve from undertaking the research?

Measurable: What measures will you use to determine whether you have achieved your objectives?(Secured a career-level first job in software design)

Achievable: Are the targets you have set for yourself achievable given all the possible constraints?

Realistic: Given all other demands upon your time, will you have the time and energy to complete the research on time?

Timely: Will you have time to accomplish all your objectives?

Turning ideas into research projects (5)

Research question	Research objective
1 Why have organisations introduced team briefing?	**1** To identify organisations' objectives for team briefing schemes
2 How can the effectiveness of team briefing schemes be measured?	**2** To establish suitable effectiveness criteria for team briefing schemes
3 Has team briefing been effective?	**3** To describe the extent to which the effectiveness criteria for team briefing have been met
4 How can the effectiveness of team briefing be explained?	**4a** To determine the factors associated with the effectiveness criteria for team briefing being met **b** To estimate whether some of those factors are more influential than other factors
5 Can the explanation be generalised?	**5** To develop an explanatory theory that associates certain factors with the effectiveness of team briefing schemes

Saunders et al. (2016)

Individual Work

- Determine three smart research objectives of the proposed thesis

- Hint : Keep in mind to be as smart as possible

Be prepared to present the findings to the audience

The importance of theory

- Asking for opinions and gathering facts – 'what' questions (descriptive research)

- Using questions that go beyond description and require analysis – 'why' questions (causal research)

Phillips and Pugh (2005)

In order to:

Explain phenomena

Analyse relationships

Predict outcomes

Compare and generalise

The importance of theory

- Every thesis contains naturally some descriptive research
- But every thesis should also entail some causal research because causal research is the base for
  - Explaining phenomena
  - Predict outcomes
  - Giving recommendations

Writing your research proposal

Purposes of the research proposal

- To organise your ideas
- To convince your audience
- To contact your company (your academic supervisor)

Content of your research proposal (1)

- **Title -** likely to change during the process
- **Research question** – one focus question and some more specific one
- **Research objectives -** what you seek to achieve
- **Research methods** – methods of data collection

Content of your research proposal (2)

- **References** - include some key literature sources
- **IT aspects** of the thesis
- **Management aspects** of the thesis

Source: IMBIT (2014)

Evaluating research proposals

- How the components of the proposal fit together
- Viability of the proposal – can the research be carried out satisfactorily within the timescale and the available resources
- Absence of preconceived ideas – be open to any new knowledge that is discovered

Summary Chapter 1

The best research topics

- Formulate and clarify the topic
- Meet the requirements of the company and the examining body
- Use a variety of techniques when generating research ideas
- Are focused on clear questions based on relevant literature

Summary Chapter 1

The best research topics

- Are theory dependent
- Have a proposal containing organised ideas

Tell the reader

- What will be done and why
- How it will be achieved

Introduction to Research Methods

Cooperative State University Baden-Württemberg Mannheim

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Chapter Outline

- Case
- Variable
- Hypothesis
- Theory

Variable

- Case
  - Individual unit for which data have been collected
- Variable
  - An attribute on which cases vary
- Value of the variable
  - The specific attribute for one case
- Observation
  - Determining the value of the variable

Variable

- Independent variable
  - Has a causal influence on the dependent variable
- Dependent variable
  - Is influenced by the independent variable

Hypothesis

- Proposition
  - Statement about observable phenomena that can be true or false
- Hypothesis
  - Proposition that is formulated for empirical testing
  - A hypothesis is always of tentative nature

Hypothesis

- Examples for a proposition
  - Life exists in the Andromeda Galaxy
  - The greater the human capital investment, the greater the life chances
- Examples for a hypothesis
  - Life exists on the moon
  - The greater the formal education, the greater the income

Hypothesis

- Descriptive hypothesis
  - It states the existence, size, form, or distribution of one variable
- Relational hypothesis
  - Hypothesis that describes the relationship between two variables with respect to a case
  - It can be expressed in the form
    - If …, then …
- For scientific work, mainly relational hypotheses are interesting

Theory

- A theory is a set of systematically interrelated concepts, definitions, and hypotheses that are advanced to explain and predict facts
- The difference between theory and hypothesis is one of degree of complexity and abstraction
- Theories are abstract and involve multiple variables
- Hypotheses are simple and involve only a few variables

Individual Work

- Based on your research questions, set up one corresponding relational hypothesis
  - E.g. If the software has a graphical user interface, it is perceived as more user-friendly
- Name the variables of the hypothesis
- Determine possible cases
- Find possible values for the variables
- Determine the independent and the dependent variable

- Hint 1: If possible, use relational hypotheses
- Hint 2: Be as precise as possible

Be prepared to present the findings to the audience

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Deduction and Induction

- Deduction
  - Theory → observations/findings
- Induction
  - Observations/findings → theory

Deduction and Induction

- Your company thinks of introducing a social intranet
- Develop a deductive and an inductive research project to analyse the topic

The Process of Deduction

Source: Bryman/Bell (2015)

The Process of Induction

- Develop theory

- Look for patterns

- Form categories

- Ask Questions

- Gather information

Pair Work

- Task 1
  - Start with the hypothesis “Software programmed with Java cost less then software programmed with any other computer language”
  - Develop a research project to test the hypothesis
  - Use the deductive method

- Task 2
  - Develop a hypothesis about the relationship the different programming languages and the cost of programming
  - Use the inductive method

One member of the group should be prepared to present the findings at the whiteboard

Quantitative and Qualitative Research Methods

- Quantitative research
  - Researcher employs measurement
  - Researcher uses a lot of observations
    - “Large n”
  - In most cases, the deductive method is applied
- Qualitative research
  - Often no measurement involved
  - Uses only a few observations
    - “Small n”
  - The inductive method is predominant

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Research Method

- A r**esearch method** is simply a procedure for collecting data
- Relevant general research methods
  - Literature review
  - Survey questionnaires
    - Online surveys are possible with
      - MQuest (tablet-based)
      - Limesurvey (internet-based)
      - Surveymonkey

Licence and support available at ZEEB

Research Method

- Relevant general research methods (cont.)
  - Expert interviews
    - Unstructured interviews
    - Semi-structured interviews (generally preferable)
  - Focus groups
    - 8-12 participants discuss a topic
  - Official statistics
    - Statistical data from national statistical offices etc.

Research Method

- Relevant research methods (cont.)
  - Organisational documents
    - Mostly company documents
  - Content analysis
    - Good software to conduct a content analysis is MAXQDA
      - Licence and support available at ZEEB
  - Structured observation
  - Participant observation
    - E.g. mystery shopping

Quantitative and Qualitative Research Methods

- Quantitative research
  - Surveys
  - Structured observation
  - Content analysis
- Qualitative research
  - Expert interviews
  - Focus groups
  - Official statistics
  - Organisational documents
  - Participant observation

Research Method

- Relevant special research methods for business informatics
  - Modelling
    - Set up a model of the world, e.g. production processes
      - Flowcharts
      - Mindmaps
      - Modelling language, e.g. UML
  - Prototyping
    - Develop one prototype software and evaluate it

Research Method

- Relevant special research methods for business informatics (cont.)
  - Simulation
    - Use a model to evaluate how different states of the world influence model outcomes
  - Laboratory experiment
    - Identifying precise relationships between chosen variables via a designed lab situation

Research Method

- Relevant special research methods for business informatics (cont.)
  - Automated structured observations
    - Log files
    - Debugging mode
    - dtrace
    - Google Analytics

Research Method

- Relevant special research methods for business informatics (cont.)
  - User Experience (UX)
    - Use cases (list of actions or event steps)
    - Scenarios
    - Mock-ups (simple prototype with main features)
    - Scribble (rough sketch)
    - …

Research Method

- Relevant special research methods for business informatics (cont.)
  - Action research
    - Researcher participates in mixed group action (scientists and practitioners), e.g. developing a software
    - Form of participant observation
  - Field experiment
    - Extension of the laboratory experiments into the real-life situations of organizations and/or society
    - E.g. one department uses the first software release

Research Method

- Relevant special research methods for business informatics (cont.)
  - Learning by doing
    - This is not a scientific research method, but very common in business informatics
    - Avoid it

Introduction to Research Methods

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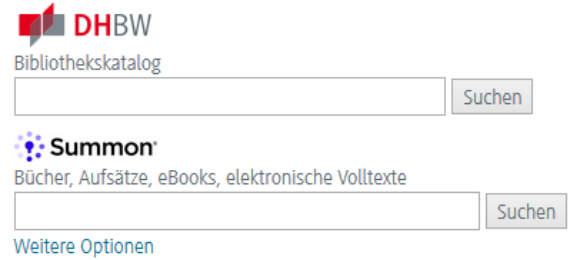
Winter Semester 2016/2017

What kind of resources can be used?

Sources for your Literature Review

DHBW Library
Print Collection



Internet

DHBW Library
Digital Collection

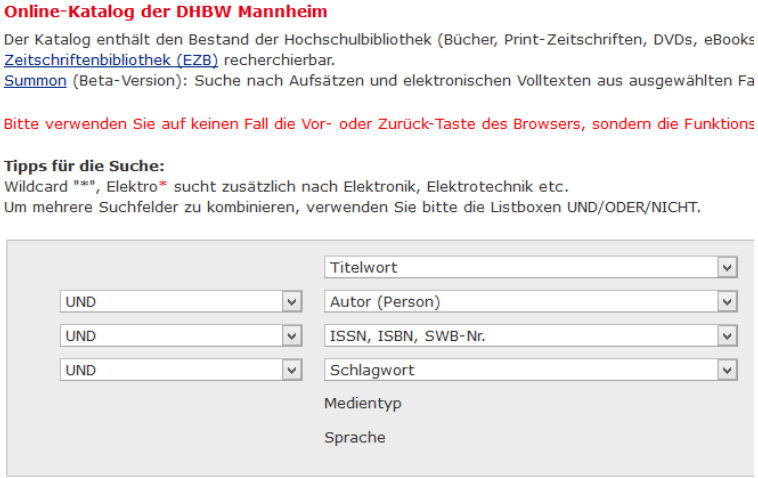
Datenbank-Infosystem (DBIS)
Bibliothek der Dualen Hochschule Baden-Württemberg Mannheim

What kind of resources can be used?

DHBW Print Collection

ACCESS
via DHBW Library Catalogue
http://www.bib.dhbw-mannheim.de/

INCLUDING
all Books, Journals and AV Media
owned by DHBW|Library



DHBW Library Catalogue Features

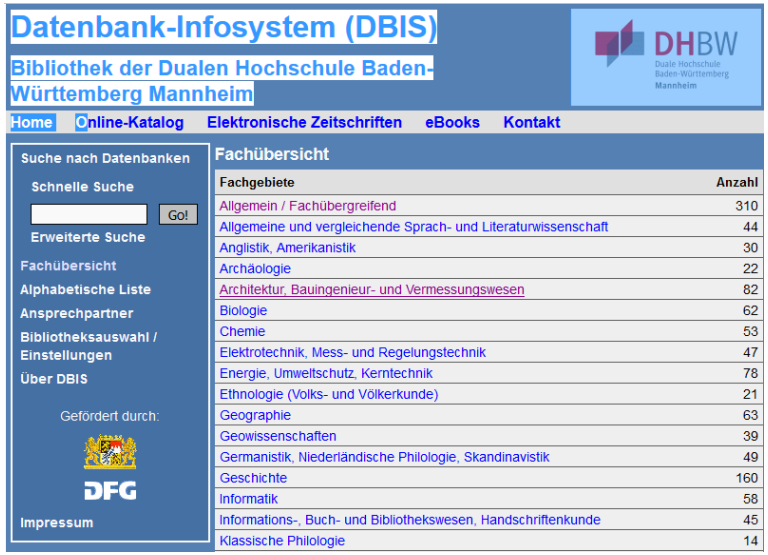
- Online search for all items
- See what is borrowed and on the shelf

What kind of resources can be used?

DHBW Digital Collection

ACCESS
via DBIS

INCLUDING
all DHBW Digital resources



DBIS Features
- Lists of DHBW-licensed and accessible databases (11.848) and especially computer science databases (about 200), including access details where necessary
- All the downloadable documents are retrievable via the search screen

What kind of resources can be used?

Free Internet Sources and Tools

GENERAL RESEARCH TOOLS

General Search Engines
General Meta Search Engines
Web Directories

ACADEMIC RESEARCH TOOLS

Academic Search Engines
Academic Meta Search Engines
Library Online Catalogues

What kind of resources can be used?

Free Internet Sources and Tools

GENERAL RESEARCH TOOLS

- Google
  www.google.com
- MetaGer
  meta.rrzn.uni-hannover.de
- Computer Science Directory
  www.asciencedirectory.com

ACADEMIC RESEARCH TOOLS

- Karlsruhe Virtual Catalog
  www.ubka.uni-karlsruhe.de/kvk.html
- Purdue Online Writing Lab
  owl.english.purdue.edu
- German laws
  www.gesetze-im-internet.de
- German Statistical Office
  www.destatis.de

International Scientific Journals

- Journal of Management Information Systems
- Information Systems Journal
- INFORMS Journal on Computing
- Journal of Strategic Information Systems
- ACM Transactions on Database Systems
- Fuzzy Sets and Systems Database
- Artificial Intelligence
- ACM Transactions on Information Systems
- ACM Computing Surveys
- The journals are ranked by rating and impact

German Scientific Journals

- **Management**
  - Die Betriebswirtschaft – DBW
  - Zeitschrift für Betriebswirtschaft – ZfB
  - Schmalenbachs Zeitschrift für betriebswirtschaftliche Forschung – zfbf
- **Computer sciences**
  - Informatikspektrum
- **Business informatics**
  - HMD - Praxis der Wirtschaftsinformatik
  - Wirtschaftsinformatik

German Non-scientific Journals

- ct
- iX
  - These journals can be read
  - But do not cite them because they are not scientific

Dictionaries and Encyclopedias on the Internet

- Reliable online encyclopedias and dictionaries with free access on the internet
  - Cambridge Dictionaries Online
    - http://dictionary.cambridge.org
  - Encyclopaedia Britannica
    - www.britannica.com
  - Fischer Weltalmanach
    - www.bpb.de/nachschlagen/lexika/fischer-weltalmanach
  - IT Wissen
    - www.itwissen.info
  - Gabler Wirtschaftslexikon
    - wirtschaftslexikon.gabler.de

DHBW Online Databases

- Reliable online encyclopedias and dictionaries with free access on the internet (cont.)
  - Lexikon der Wirtschaft
    - www.bpb.de/nachschlagen/lexika/lexikon-der-wirtschaft
  - The New Palgrave Dictionary of Economics
    - www.dictionaryofeconomics.com/dictionary
  - PONS Online Wörterbuch
    - http://de.pons.com
  - Recht A-Z
    - www.bpb.de/nachschlagen/lexika/recht-a-z

DHBW Online Databases

- Reliable online encyclopedias and dictionaries in DBIS
  - Langenscheidt Online-Wörterbuch

DHBW Online Databases

- General scientific databases in DBIS
  - BASE
    - Search engine for open access scientific documents
  - WISO
    - 340 German scientific journals
  - JSTOR
    - Numerous international scientific journals
  - Google Scholar
    - Go to settings, library links, choose Baden-Württemberg Cooperative State University for full-text access

DHBW Online Databases

- Management databases in DBIS
  - Business Source Premier (via EBSCO Host)
  - Emerald Insight
  - Science Direct College Edition
    - Access to all Elsevier journals
  - SpringerLink
    - Access to all Springer journals

DHBW Online Databases

- Business informatics databases in DBIS
  - ACM Digital Library
  - IEEE Xplore
  - Computer & Applied Sciences Complete
  - Safari Tech Books Online

Sources of Major Developers

- Adobe
  - www.adobe.com/devnet
- Amazon
  - aws.amazon.com\tools
- Apple
  - developer.apple.com
- Google
  - developers.google.com
  - developer.android.com

Sources of Major Developers

- IBM
  - www.ibm.com/developerworks
- Microsoft
  - msdn.microsoft.com

Miscellaneous Informatics-related Internet Sources

- ACM special interest groups
  - www.acm.org/special-interest-groups
- OASIS
  - OASIS-open.org
- Apache Software Foundation
  - www.apache.org
- IEEE
  - www.ieee.org
- W3C
  - www.w3c.org

iTunes University

- German universities
  - www.en.uni-muenchen.de/news/lmu_on_itunesu/index.html
  - www.rwth-aachen.de/cms/root/Die-RWTH/Profil/Social-Media/~dcmx/iTunes
  - itunesu.informatik.kit.edu
  - www.podcasts.uni-freiburg.de/itunesu
  - itunes.hpi.uni-potsdam.de
  - www.podcast.ethz.ch/technic/anleitung_itunes

iTunes University

- US universities
  - www.harvard.edu/itunes
  - web.mit.edu/itunesu
  - itunes.stanford.edu
- British universities
  - www.ox.ac.uk/itunes-u
  - www.cam.ac.uk/video-and-audio/itunes-u
- Developers
  - www.apple.com/itunes

Literature Search

- For technical details and further sources, attend session with the head of DHBW library, Mr Krosta, during the lecture

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Style Manuals

- The most important style manuals are
  - Chicago Manual of Style
  - MLA Style Manual and Guide to Scholarly Publishing
    - Edited by the Modern Language Association
  - New Hart‘s Rules (Oxford University Press)
  - Publication Manual of the American Psychological Association (APA)
  - Harvard Referencing Guide (author-date referencing)
    - Unlike many referencing styles, there is no source document for a Harvard Guide
    - Take Kornmeier (2011) as a template

Style Manuals

- Rules
  - Be consistent throughout the whole dissertation
  - It is not necessary to follow one specific manual
    - But to ensure consistency, pick one style manual and follow the rules
- Chicago Manual of Style is very widespread in the academic world
- For IMBIT, the author-date Harvard referencing style is relevant

Referencing

- With every reference, the following information MUST be mentioned
  - Author or institution
  - Title
  - Place, journal name or URL
  - Year
- With journals, mention also volume and issue number as well as page range
- With internet sources, state additionally the date when the source was last accessed
- List entries alphabetically

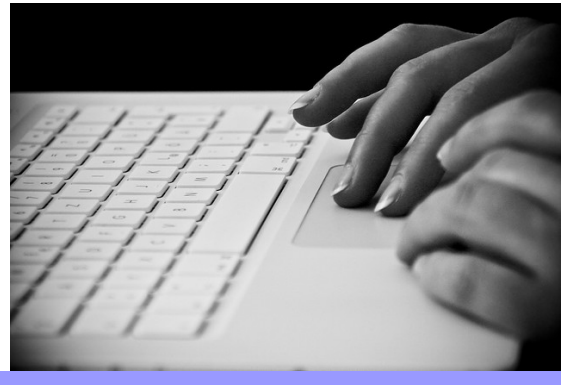
Referencing

- Use always capital letters for most words when referencing English titles
  - „Capitalize the first and last words in titles and subtitles […], and capitalize all other major words (nouns, pronouns, verbs, adjectives, adverbs, and some conjunctions […].
  - […]
  - Lowercase the conjunctions and, but, for, or, and nor.
  - […]
  - Examples of headline-style capitalisation
    - […]
    - A Little Learnig Is a Dangerous Thing
    - Four Theories concerning the Gospel according to Matthew“

Source: University of Chicago Press (2010, pp. 448-449)

Referencing

- These are the most common sources in the reference list
  - Book
  - Journal article
  - Article in book
  - Internet source
  - Expert interview



Individual Work

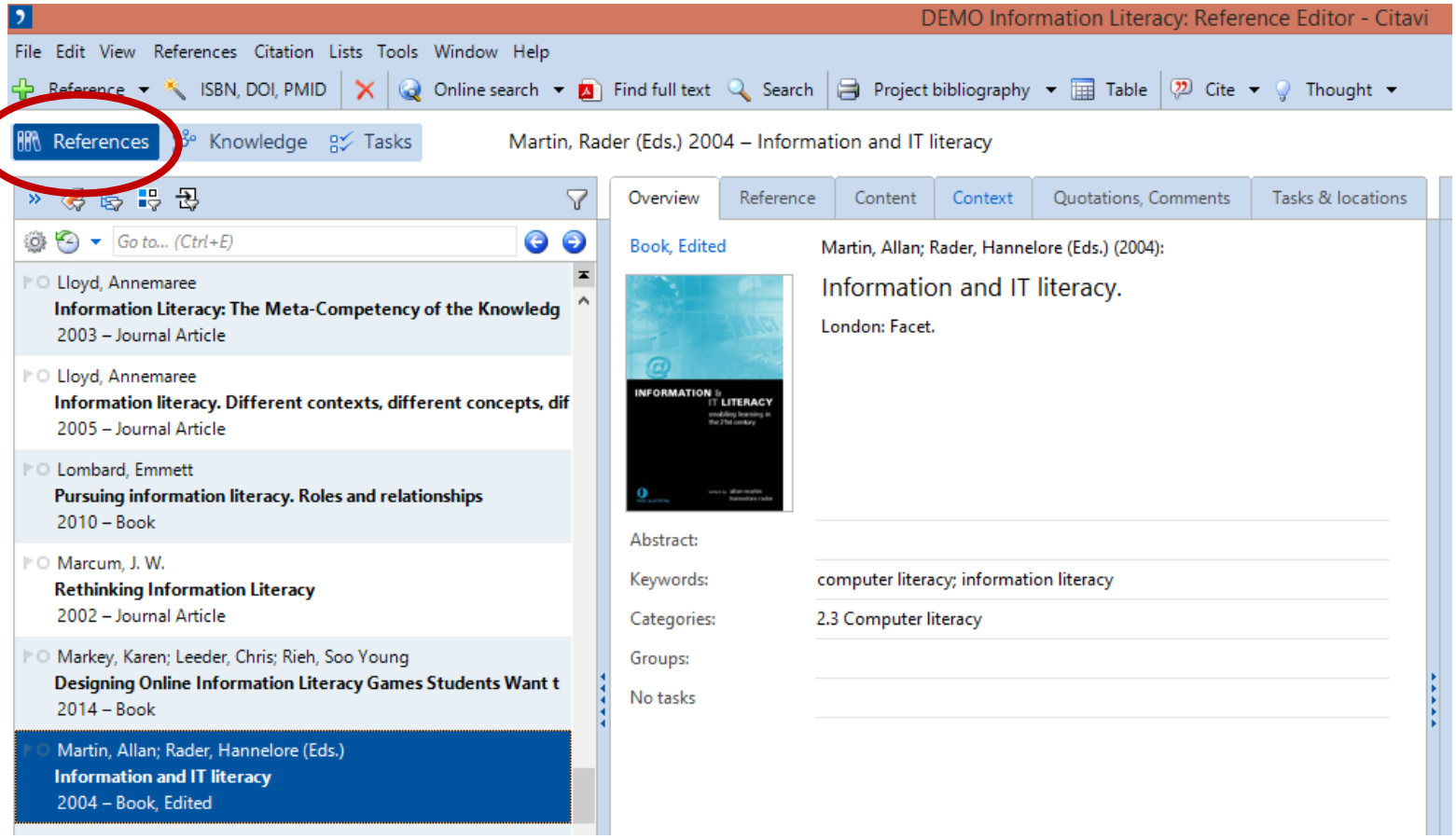
- Take for each of the sources one example from the internet (Amazon or Google Scholar) and cite it correctly based on the Harvard reference style (Kornmeier, 2011)
  - Book
  - Journal article
  - Article in book
  - Internet source
  - Expert interview
- Cite additonally
  - Lecture slides in research methods
- Be prepared to show your result on the document camera

Referencing

- Use a professional referencing software to collect information about the literature used
  - At DHBW, Citavi is quite common
    - www.bib.dhbw-mannheim.de/digitale-bibliothek/citavi.html
    - The licence key is available on the DHBW library homepage
    - The online Citavi manual can be found here
      - www.citavi.com/sub/manual5/en/index.html
  - Widespread alternatives are Mendeley or Zotero
    - www.bib.dhbw-mannheim.de/digitale-bibliothek/mendeley
    - www.bib.dhbw-mannheim.de/digitale-bibliothek/zotero.html
  - All tools are free of charge

Referencing

- Citavi screenshot



Referencing

- At least 50% of the sources mentioned in the reference list MUST be either from the print collection or from the electronic database of a scientific library
- At least three sources should be from the list of international scientfic journals (see chapter 5)
- Sources like Wikipedia, Investopedia etc. are not allowed
- Use high-quality dictionaries instead
  - E.g. Encyclopædia Britannica, Gabler Wirtschaftslexikon, The New Palgrave Dictionary of Economics

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BBC Sign in | News | Sport | Weather | Shop | Earth | Travel

NEWS

Home | Video | World | UK | Business | Tech | Science | Magazine | Entertainment &

World | Africa | Asia | Australia | Europe | Latin America | Middle East | US & Canada

German Defence Minister Guttenberg resigns over thesis

1 March 2011 | Europe

The German army was being restructured under Mr zu Guttenberg, so his departure leaves a gap in government

German Defence Minister Karl-Theodor zu Guttenberg has stepped down after he was found to have copied large parts of his 2006 university doctorate thesis.

Source: www.bbc.com (2011)

Plagiarism: What is that?

- Four types of plagiarism
  - Stealing material from another source and passing it off as your own, for example
    - buying a paper from a research service, essay bank or term-paper mill (either specially written for the individual or pre-written);
    - copying a whole paper from a source text without proper acknowledgement;
    - submitting another student's work with or without that student's knowledge (e.g. by copying a computer disk);

Saunders et al. (2016)

Plagiarism: What is that?

- Four types of plagiarism (cont.)
  - Submitting a paper written by someone else (e.g. a peer or relative) and passing it off as your own;
  - Copying sections of material from one or more source texts, supplying proper documentation (including the full reference) but leaving out quotation marks, thus giving the impression that the material has been paraphrased rather than directly quoted;
  - Paraphrasing material from one or more source texts without supplying appropriate documentation;

Saunders et al. (2016)

Plagiarism: What is that?

- “Scientific wrongdoing is present if wrong facts are presented deliberately or recklessly in scientific dissertations, if intellectual property of others is violated … Violation of intellectual property [means] … the unauthorised utilisation pretending authorship (plagiarism)” (my translation)

Source: DHBW (2010)

- “If dissertations use other aids than mentioned or if they are taken in parts from other sources without denoting or referencing it, it is assessed as plagiarism.” (my translation)

Source: DHBW (2013)

Plagiarism: What is that?

- Your supervisor will check your thesis for plagiarism
  - DHBW uses the software “Turnitin”
- Plagiarism results in the student failing the dissertation!

Plagiarism: What is that?

- Declaration of Academic Authorship

  I hereby declare, that

  I have written the seminar paper/thesis on hand »… title of paper …« on my own, i.e. without the help of a third party, and that the work is my own,

  I have indicated the thoughts adopted directly or indirectly from other sources at the appropriate places within the document,

  I have not submitted my thesis to any other university or authority,

  I have not published my thesis in the past.

  I am aware that a dishonest declaration will entail legal consequences

  Place, date, signature

- Legal consequences mean firstly failing the dissertation and secondly that the academic degree can be annulled up to two years after graduation if cheating is discovered after the mark was published
- Ghost writing is strictly forbidden!
- Use of a ghost writer results in the student failing the thesis!

Types of Quotations

- Quoting a topic
  - Quotation without quotation marks and without page number
  - Rappaport was the first scholar to introduce the shareholder value (Rappaport 1986)
  - In chapter 3 of his book about the shareholder value, Rappaport describes in detail how to calculate the shareholder value of a firm (Rapaport 1986, chapter 3) or (Rapaport 1986, pp. 45-71)

Types of Quotations

- Paraphrasing
  - Quotation without quotations mark but with page number
  - Source
    - “In 2010, international stock markets and the adidas AG share increased markedly. The improving global macroeconomic environment, strong corporate earnings and rising consumer confidence supported equity market growth.”
  - Quote
    - Both international stock markets and the share of adidas AG performed very well in 2010 (adidas 2011, p. 34)

Types of Quotations

- Direct quotation
  - Quotation with quotation marks and with page number
  - Source
    - “In 2010, international stock markets and the adidas AG share increased markedly. The improving global macroeconomic environment, strong corporate earnings and rising consumer confidence supported equity market growth.”
  - Quote
    - According to adidas, the „improving global macroeconomic environment, strong corporate earnings and rising consumer confidence“ were the main reason for the increasing share price (adidas 2011, p. 34)

Types of Quotations

- Direct quotation
  - Rules to follow
    - Cite more than three words as a direct quote
    - Do not cite more than half a sentence directly unless
      - it is a definition or
      - you want to reproduce the opinion of an author in detail.

Types of Quotations

- „When source citation is unneeded.
  - Commonly known facts, proverbs, and other familiar expressions require no source citation unless the wording is taken directly from another work.“ (University of Chicago Press 2003, p. 445)

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Confidentiality

- Supervisors at the DBHW are obliged to treat the information contained in project theses and bachelor dissertations confidential
- An additional confidentiality statement in the thesis is not necessary
- If the company has nevertheless problems to disclose critical data in the thesis or dissertation, it is recommended to anonymise or to pseudonymise them

Source: IMBIT (2012)

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Tables and Figures

- Position tables and figures after the paragraph in which they're described. Cite the source of the table and figure information with a "source line" at the bottom of the table or figure. Source lines are introduced by the word *Source(s)*, followed by a colon, and ended with a period.
  - E.g. Source: Smith (2011, p. 21).
- Acknowledge reproduced or adapted sources appropriately (i.e., data adapted from; map by . . .).

Source: Purdue Online Writing Lab (2016)

- If you use [tables,] graphs, diagrams, photographs or other images in your work that you have created yourself, you do not need to reference them

Source: University of Salford (2014)

Tables and Figures

- Every table should have a number and (a short and descriptive) title flush left on the line above the table.
- Every figure should have a number and a caption flush left on the line below the figure.
- Number tables and figures separately in the order you mention them in the text.
- In the text, identify tables and figures by number ("in figure 3") rather than by location ("below").

Source: Purdue Online Writing Lab (2016)

Example Table

Table 2: Debt and Deficit Levels for Selected Countries in 2001

Country	Debt as % of GDP	Deficit as % of GDP
	60.0	**3.0**
France	56.4	1.5
Germany	60.8	3.1
Greece	100.3	4.5
Ireland	33.5	0.9
Italy	107.3	3.1
Portugal	55.8	4.3
Spain	57.9	0.5

Source: Data adapted from Eurostat data (2011a).

Example taken from Schuster/Uskova (2012)

Example Figure

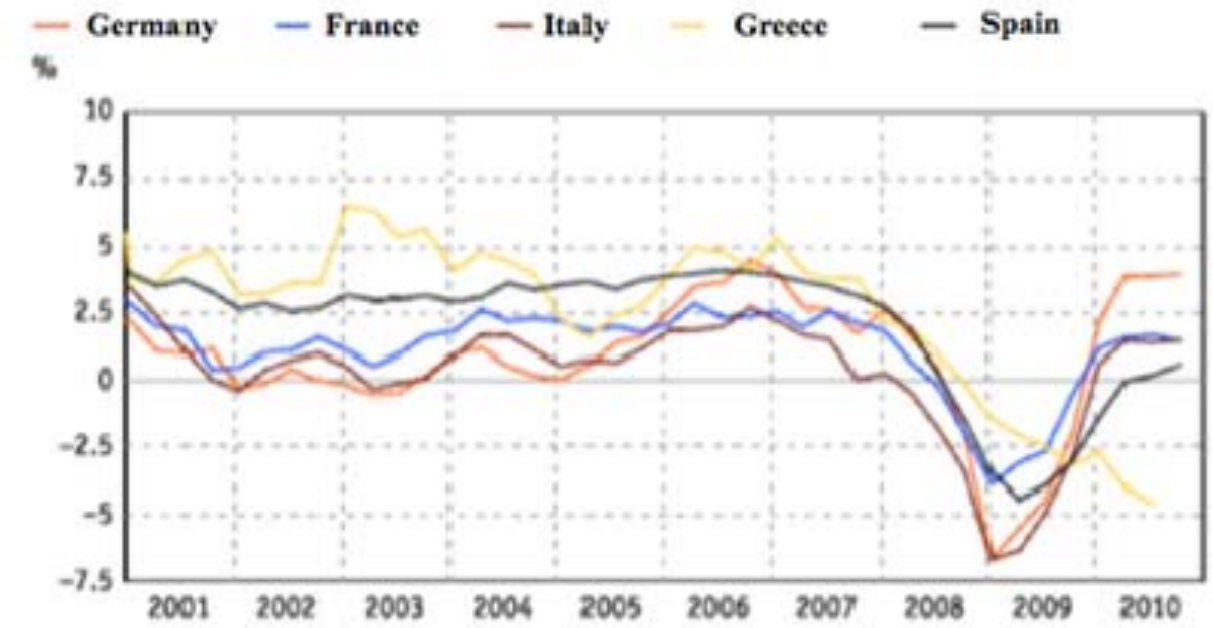

Figure 1: GDP Growth of Selected European Countries

Note: Percentage Change of GDP as Compared with Previous Year.

Source: Eisenhut (2011).

Example taken from Schuster/Uskova (2012)

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Chapter Outline

- Structure of the Thesis
- Page Numbering
- Title Page
- Abstract
- Table of Contents
- Declaration of Authorship
- Structure of the Main Part
- Statistical Methods to Present Findings
- Statistical Methods to Analyse Findings
- Appendix

Structure of the Thesis

- Title Page
- Declaration of Authorship (signed!)
- Abstract
- Table of Contents
- List of Tables/Figures/ Appendices/Abbreviations/Symbols
- Introduction
- Discussion
- Conclusion

} The Body

- References
- Appendices

Page Numbering

- Every page of the research paper has a “number“
  - Only exception: No number on the title page
- The “number“ is placed in the top right hand corner of the page

Page Numbering (cont.)

- The table of contents, abstract and lists (of tables etc.) take Roman numerals, e.g.
  - I
  - or
  - page I

Page Numbering (cont.)

- The body, references and appendices take Arabic numerals, e.g.
  - 1
  - or
  - page 1

Title Page

- The following information should be on the title page
  - Title of paper
  - Type of thesis
  - Student's major and course
  - Student's name
  - Student's address
  - Student's identification number
  - Name of academic and company supervisor
  - Paper's due date

Title Page

Title of the Project Thesis

Project Thesis

Bachelor of Arts
Major: International Business for Management and Information Technology
Faculty of Business
Baden-Württemberg Cooperative State University Mannheim

Student:	John Do
Address:	Any Street
	12345 Any City (Any State)
Group:	WIMBITxxY
Student ID Number:	12345
Academic Supervisor:	Prof. Dr. John Smith
Training Company:	XY company Ltd.
Company supervisor	Sam Jones
Submission date	dd/mm/yyyy

Title Page (cont.)

- The title page should **not use** any graphics, logos or art work
- All information on the title page must be centred

Abstract

- Write an abstract that summarises the main facts of the text
  - Research questions
  - Used methods
  - Main findings
  - Main recommendations
- Abstract should be roughly 100-150 words
- Add 3-5 key words to classify the thesis

Keywords - JMIS Classification

- Keywords of the Journal of Management Information Systems (JMIS) will help you finding appropriate ones
  - Source: http://www.jmis-web.org/keywords

Table of Contents

- Table of Contents is to be written out and either flush left or centered on the first line
- Indents can be used to differentiate the level of headings

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Declaration of Authorship

I hereby declare, that

I have written the seminar paper/thesis on hand »… title of paper …« on my own, i.e. without the help of a third party, and that the work is my own,

I have indicated the thoughts adopted directly or indirectly from other sources at the appropriate places within the document,

I have not submitted my thesis to any other university or authority,

I have not published my thesis in the past.

I am aware that a dishonest declaration will entail legal consequences

Place, date, signature

Ehrenwörtliche Erklärung

Ich erkläre hiermit ehrenwörtlich,

dass ich die vorliegende Projekt-/Bachelorarbeit zum Thema »…Titel der Arbeit…« ohne fremde Hilfe angefertigt habe,

dass ich die aus fremden Quellen direkt oder indirekt übernommenen Gedanken an den entsprechenden Stellen innerhalb der Arbeit als solche kenntlich gemacht habe,

dass ich meine Projektarbeit bisher keiner anderen Prüfungsbehörde vorgelegt und auch noch nicht veröffentlicht habe.

Ich bin mir bewusst, dass eine unwahre Erklärung rechtliche Folgen haben wird.

Ort, Datum, Unterschrift

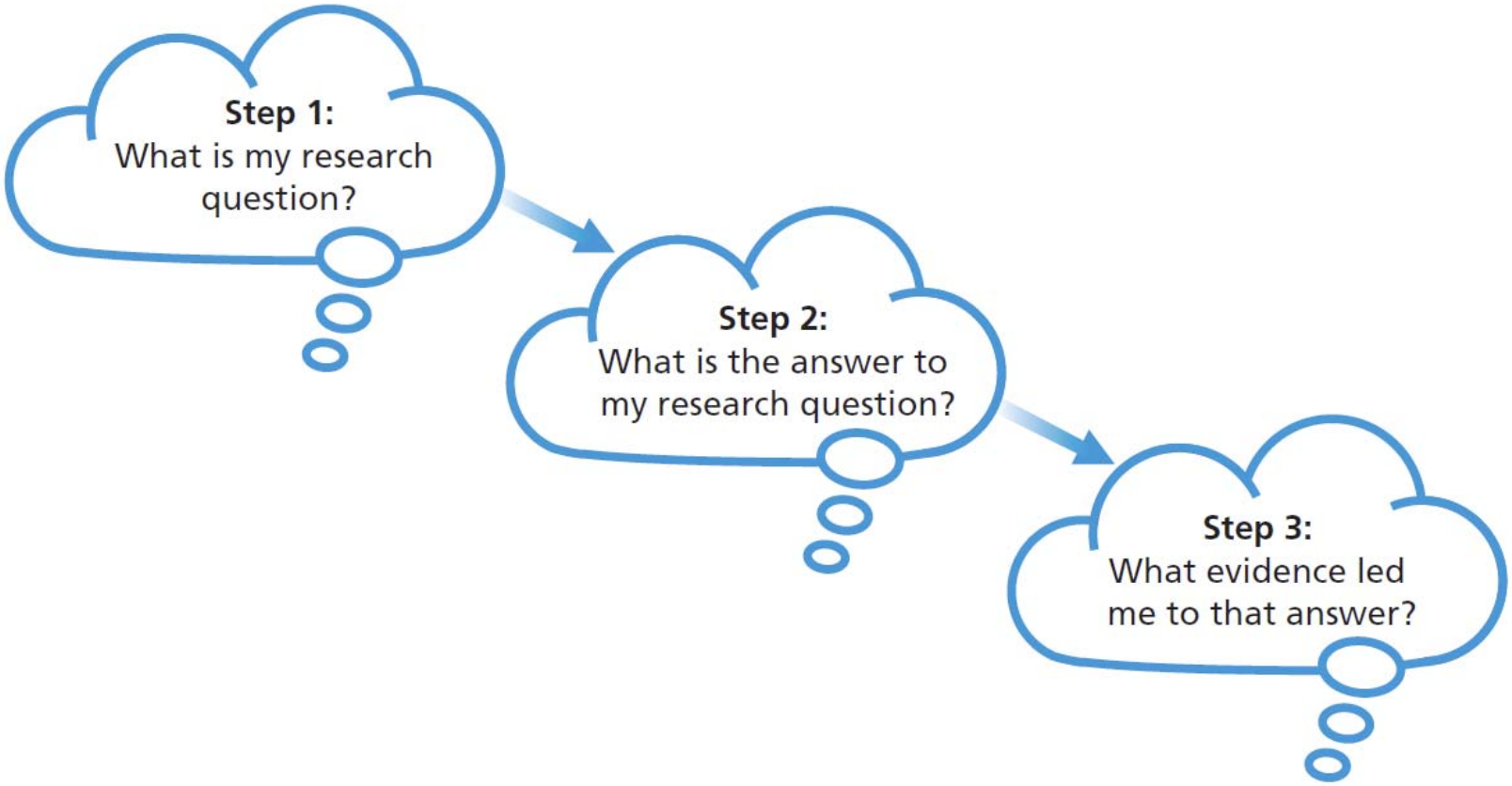
Structure of the Main Part (Qualitative Study)

- Introduction
- Theory/Literature review
- Case study
  - Background information about the case
  - Application of theory to case
  - Answers to research questions relevant in this chapter
- Recommendations
  - Measures to improve situation, based on findings of the case study
  - Answers to research questions relevant in this chapter
- Conclusion

Structure of the Main Part (Quantitative Study)

- Introduction
- Theory and hypotheses
  - Based on literature review
- Empirical study
  - Methodology (sampling method, questionnaire, etc.)
  - Presentation of findings
- Discussion of results
  - Analysis of findings
  - Answers to research questions
- Conclusion

Tell your Storyline



Source: Developed from Raimond (1993)

Statistical Methods to Present Quantitative Findings

- Frequency tables
  - Normally, percentage frequencies are used
- Frequeny figures
  - Bar and column chars
  - Pie charts
  - Histograms
  - Ogives

Statistical Methods to Present Quantitative Findings

- Measures of location
  - Arithmetic, geometric and harmonic mean
  - Median
- Measures of dispersion
  - Range
  - Standard deviation
  - Coefficient of variation
- Measurs of location and dispersion
  - Percentiles

Statistical Methods to Analyse Quantitative Findings

- Correlations
  - Pearson‘s correlation coefficient
  - Spearman‘s rank correlation coefficient
- Hypothesis tests to test descriptive hypotheses
  - Hypothesis test about one population mean
  - Bivariate regression analysis

Statistical Methods to Analyse Quantitative Findings (cont.)

- Hypothesis tests to test relational hypotheses
  - Hypothesis test comparing two population means
  - χ^2-test (chi-squared) of independence
  - χ^2-goodness-of-fit test
  - Multivariate regression analysis

Appendix

- Add an appendix if necessary
  - Additional data
  - Additional tables
  - Additional figures
  - Other background information
- Guideline what to add
  - Present all data that is relevant to understand the calculations and conclusions in the text
  - A second research (i.e. the supervisor) must be able to replicate the study
  - If the data is too big to be printed in the appendix, include it on a CD

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Best Thesis Award

- All names and topics of the best thesis award at the International University of Bad Honnef can be found at
  - www.iubh.de/en/faculty-research/publications/best-thesis-award.php

Individual Work

- Look at the table of contents of Isa Witte's thesis "Mystery Shoppers in Luxury-Hotels – An efficient tool of quality assurance in the luxury hospitality industry?"
  - The thesis is published in Moodle
  - Find out what is done well
  - Suggest (an) improvement(s) to the table of contents
- Decide on the type of study (deductive, inductive)
- Is it a quantitative or qualitative study?
- Name the research methods used

Be prepared to present the findings to the audience

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Remaining Questions

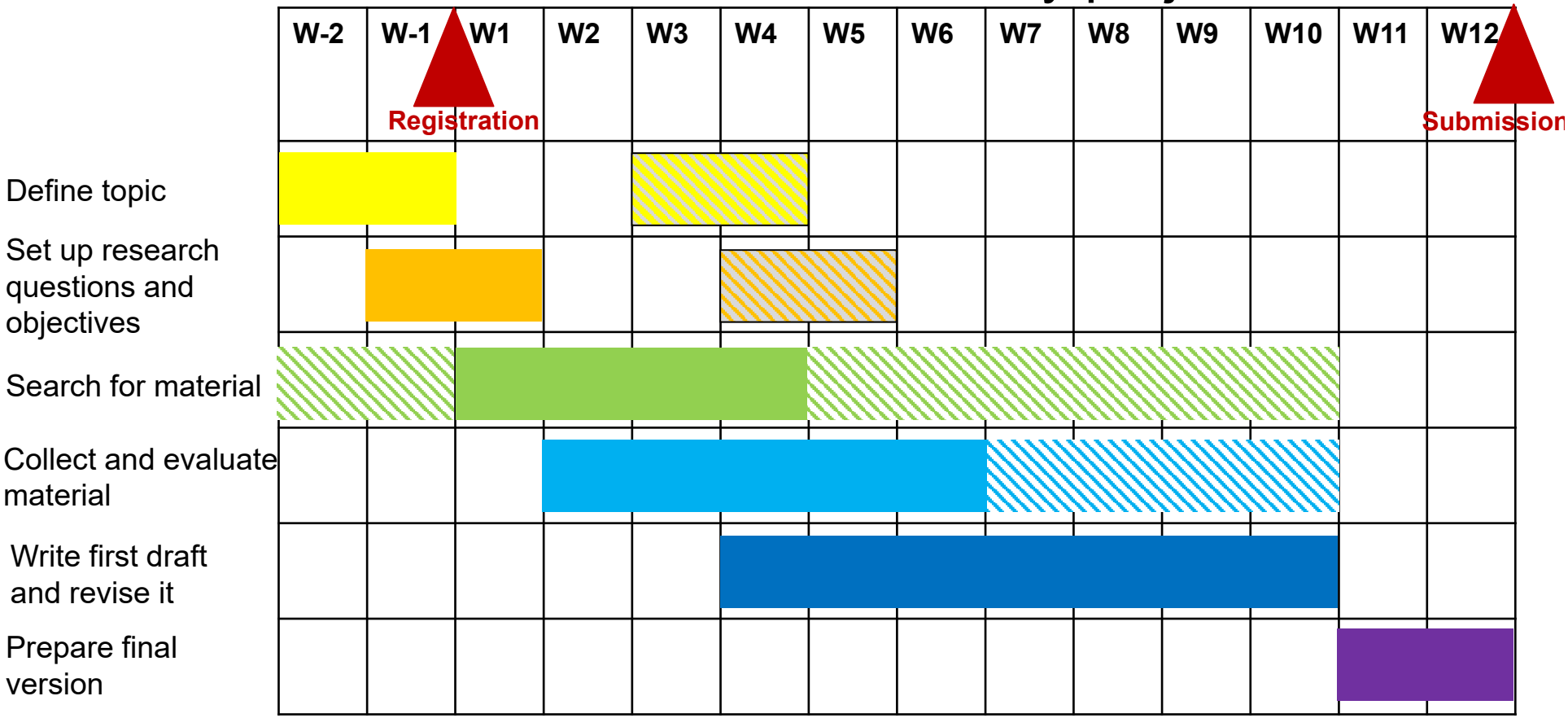
- What are the formal requirements of the project thesis I?
  - 20-30 pages
  - Page and font layout as well as additional formal requirements according to the IMBIT dissertation guideline
    - http://www.imbit.dhbw-mannheim.de/studieninfos.html
    - Look at the section „Hinweise zur Gestaltung wissenschaftlicher Arbeiten
  - Referencing according to Kornmeier (2011)
    - http://www.ib.dhbw-mannheim.de/fileadmin/ms/bwl-ib/Downloads_alt/Leitfaden_31.05.pdf
  - However, the rules and regulations should be reconciled with the academic supervisor

Remaining Questions

- What should I do if I do not know the department and my company supervisor at submission date of the title?
  - Contact the human resource department of your training company as soon as possible to find out the internship department and the company supervisor
  - If it is really not possible to find out the department, contact the head of your study course to find a solution

Remaining Questions

- How much time do I need to write my project thesis?



Note: A shaded bar means that this activity might be extended if necessary

Source: Hoyer (2013)

Remaining Questions

- What are the criteria to evaluate the project thesis?
  - Look at the evaluation form the academic supervisor uses to determine the mark
    - www.dhbw-mannheim.de/fileadmin/dhbw/download-center/lehrbeauftragte/Ws/09.10.13_Gutachten_PA_I__II__BA.doc

Remaining Questions

- What are the rules for a good academic writing style?
  - Read the section „Conciseness“ with the subsections „Conciseness“, „Eliminating words“, „Changing phrases“, and „Avoid common pitfalls“ of the Purdue Online Writing Lab
    - https://owl.english.purdue.edu/owl/resource/572/1/

Remaining Questions

- What is the difference of a bachelor dissertation compared to a project thesis?
  - The bachelor thesis is just a bigger piece of academic work (60-80 pages) than a project thesis (20-30 pages)
  - The rest is the same
    - Setting up a concise title, research questions, and research objectives
    - Applying research methods
    - Searching for high-quality literature
    - Quoting and referencing
    - Structure of the thesis
    - Answering research questions

Remaining Questions

- How do I visualise my research findings?
  - Flow charts
  - Frequency tables
  - Cross tables
  - (Multiple) bar or column charts
  - Pie charts
  - (Multiple) line charts
  - Stratum charts
  - Histograms
  - Ogives
  - Scatter diagrams
  - Gantt chart
  - Decision trees
  - Surface rendering

Remaining Questions

- What must be included in the methodology?
  - Research questions
  - Research objectives
  - Research hypotheses (if applicable)
  - Research methods
  - Sampling method if it is an empirical topic
  - Do not write a literature review about methodology, only mention the different topics in relation to your thesis

Remaining Questions

- How to structure a literature review?
  - Choose 1-2 theoretical topics most relevant to your empirical study
  - For each of the topics
    - Find a logical structure
    - Depict the most important facts of the theory
  - Always try to show the „red thread“

Remaining Questions

- How do I cite and set up a reference list properly?
  - How do I cite a
    - book,
    - journal article,
    - internet resource,
    - content of a table,
    - content of a chart,
    - picture?
  - Look at the Harvard referencing guide for further details (Kornmeier 2011)

Remaining Questions

- How do I quote a part from an electronic book where I can find no page numbers or where the page numbers depend on the screen size?
  - „If no fixed page numbers are available, you can include a section title or a chapter or other number.” (University of Chicago Press 2010)
  - Example
    - Smith 2013, chapter 3.1, para. 5
    - Miller 2010, chapter headline, paras. 9-14

Remaining Questions

- What should I do if I find no author?
  - “If no author or editor is listed, name of institution standing in their place”
    - (University of Chicago Press 2010)
- What should I do if I find no date or place?
  - n.d. = no date
  - n.p. = no place, no publisher, no page
    - (University of Chicago Press 2010)

Remaining Questions

- Is the project thesis marked?
  - For the first project thesis, there is no mark
  - The student can only pass or fail

Remaining Questions

- Most important pitfalls too avoid
  - No link between literature review and the empirical study
    - Literature review is not relevant for the empirical study
    - In the empirical study, the theoretical knowledge is totally ignored
  - The hypotheses cannot be tested with the gathered information
  - Poor quality of the questionnaire for structured interview or the interview guideline for semi-structured interviews
  - Findings are not really new
  - Wrong citation of internet sources
  - Too many mistakes concerning grammar, spelling, and punctuation