Quantitative Text- und Literaturanalysen
(Quantitative Reviews of Social Science Research)

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This methodological course qualifies participants to execute quantitative literature reviews in their own research fields. The course is suited for PhD students in all fields of social and economic sciences, both for novel as well as for advanced PhD candidates. Participants can use seminar outcomes to explore research fields yet unknown to them, or to pursue a sophisticated literature review as an own publication project. The course content is based on more than 10 years of experience in publishing with PhD students, it led to several successful research publications of participants.

Active and well-documented course participation is honored with 4 ECTS. In addition, participants are encouraged to utilize seminar findings to prepare a subsequent publication.

Language of the course: German or English (depending on languages spoken by participants)

Contents:

Quantitative literature analysis offers unique possibilities to systematically investigate scientific research topics. It is a suitable tool to get familiar with a new topic (for example at early stages of dissertation projects). Moreover, it can be used for preparing a stand-alone publication of a systematic literature review within a specific field of research.

Informetric analyses combine bibliometric approaches with text-analytical processes and thus provide a "360-degree-like" view on the state of research. Simple bibliometric approaches already provide an overview of important journals, authors as well as individual works of a research area. Co-citation analyses help to identify specific research streams and to reveal dynamically changing trends of the scientific discourse. Multivariate analytical methods like factor-, cluster- and social network analysis can be used to derive meaningful indicators describing scientific discourses and to obtain an overview of a research area. Text-mining further enriches the analyses and helps to describe relevant research areas through established vocabulary and key words.

Targets of course:

Target group: PhD students who want to apply informetric methods within their research projects and who are looking for hands-on experience and support in doing so.

The seminar enables participants to use novel quantitative literature analyses to support their scientific work and to pursue their publications. Each participant works on a topic chosen by him- or herself to gain expertise for own research work. The following analysis steps are performed during the seminar and implemented for one´s own research topic:

1. Data basis and data extraction

- How do I conduct a literature search request, which accurately covers my topic?
- How do I extract data and how do I prepare data to receive meaningful results?
- Which results can I get by descriptive analyses? (e.g. Pilkington, Teichert, 2006)
- How do I use text-mining software (e.g. R, KH coder) to support the data processing?

2. Analytical approach

- How does a typical process of analysis look like? (e.g. Teichert & Shehu 2010)
- Which methods of analysis serve which research questions?
- How can I combine multivariate analyses (factor- and cluster analysis) with graphic presentations (social network analysis)? (e.g. Kuntner & Teichert 2015)

3. Informetric tools

- How does a first informetric analysis look like? (e.g. Liu et al 2016)
- What do I have to take into account to apply multivariate analyses to text data?
- Which software exists and how do I use it (especially focusing on text-mining)?
- What are the newest developments and possibilities, e.g. in sentiment analyses?

Structure of the course:

1. Block: Basics and data acquisition

An overview of the methods of quantitative text- and literature analyses is provided in a one-day kick-off. Processes of literature research and -processing are introduced and explored.

> *< Homework: Data extraction from literature databases, citation analysis >*

2. Block: Bibliometric analysis

In the morning: Achieved results (homeworks) are presented and questions discussed.

After lunch: Processes of bibliometric analysis are presented and applied to own example.

< Homework: Co-citation- and network analysis>

3. Block: Text-mining und -analysis

<u>In the morning:</u> Achieved results (homeworks) are presented and questions discussed.

<u>After lunch:</u> Methods of text analysis are presented and explored on own data.

<Homework: Text analysis (additional: finalization of the seminar work) >

4. Block: Positioning of publication

Finally obtained results (homeworks) are presented and remaining questions discussed.

Dates (full days, starting at 9.30 am)

1. Block: 30.10.2017   **2. Block:** 27.11.2017

3. Block: 18.12.2017   **4. Block:** 15.01.2018

Literature (examples from instructors´ publications)**:**

Liu, Y., Teichert, T., Rossi, M., Hongxiu, L., Hu, F. (2016), Big Data for Big Insights: Investigating Drivers of Hotel Customer Satisfaction with 412,784 Users-Generated Reviews,Tourism Management, Vol. 9 (4), 554-563.<application example for textmining>

Kuntner, T.; Teichert, T. (2016), The scope of price promotion research: An informetric study, Journal of Business Research, 69, 2687-2696

Teichert, T. (2014), Themen und Trends der Werbeforschung, transfer – Werbeforschung & Praxis, Vol. 60 (2), 19-31.

Teichert, T.; Shehu, E. (2010), Investigating research streams of conjoint analysis: A bibliometric study, BuR – Business Research, Vol. 3 (1), 49–68.

Pilkington, A., Teichert, T. (2006), Management of Technology: themes, concepts and relationships, Technovation, Vol. 26, 288–299.