

Crafting Literature Reviews by Textmining & Bibliometric Analyses: A Paper Development Seminar

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This course qualifies participants to craft quantitative literature reviews in their research fields. As a method course it is suited for PhD students in all fields of social and economic sciences. Both novel as well as advanced PhD candidates are addressed. Course outcomes might serve as basis for a scientific publication or might be used for a chapter of participants' dissertation works.

Early PhD-students can utilize seminar outcomes to explore research fields yet unknown to them; advanced PhD-students to pursue a sophisticated literature review aimed at a publication on its own. The course is based on more than 10 years of experience in joint publishing. Past courses led to several high-ranked research publications of participants.

Active and well-documented course participation is honored with 4 ECTS. In addition, participants are encouraged to utilize seminar findings for subsequent publications.
Language of the course: German or English (depending on participants languages)

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.

This course joins established bibliometric approaches with novel text-analytical tools. Bibliometric approaches 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 and social network analysis derive meaningful indicators describing scientific discourses and help to obtain an overview of a research area.

The novel focus of this course will be on text-mining. Text mining does not only enrich the analyses (as e.g. in Kuntner, Teichert 2016), it can also describe relevant research areas through established vocabulary and key words. We further explore the possibilities of text-mining as an instrument on its own to assess research streams on a sophisticated level. Hereby, we strive to jointly realize innovative publication potentials.

Targets of course:

Target group: PhD students who want to systematically explore their research areas and who are interested in contributing with own literature reviews to their discourses.

The seminar enables participants to apply novel quantitative techniques to gain an in-depth understanding of their research field and to write scientific review publications. Topics are chosen based on the interests of participants. A multi-step approach is performed during the seminar to gain a 360-degree perspective on literature review techniques and to develop an empirical basis for subsequent publications/ book chapters:

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. Basic bibliometric analyses

- 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. Novel approaches of text-mining

- What can I get out of written data by textmining? (e.g. Hu, Trivedi, Teichert, 2018)
- Which steps of data preparation are needed to analyze text data and which software can support me in doing so?
- How can I apply multivariate analyses and social network analysis to text data?
- How can I further integrate textmining with bibliometric techniques?

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 explored.

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

2. Block: Basic 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: Novel approaches of text-mining

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

After lunch: 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: 8.4.2019 **2. Block:** 6.5.2019

3. Block: 17.6.2019 **4. Block:** 15.7.2019

Literature (Excerpt):

Hu, F., Trivedi, R., Teichert, T. (2018), Assessing Service Encounters with Frontline Employees by Text Mining, Working Paper, submitted to: Journal of Business Research

Humphreys, A., & Wang, R. J. H. (2017). Automated text analysis for consumer research. Journal of Consumer Research, 44(6), 1274-1306.

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

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

Rost, K., Teichert, T., & Pilkington, A. (2017). Social network analytics for advanced bibliometrics: referring to actor roles of management journals instead of journal rankings. Scientometrics, 112(3), 1631-1657.

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

Wilden, R., Akaka, M. A., Karpen, I. O., & Hohberger, J. (2017). The Evolution and Prospects of Service-Dominant Logic: An Investigation of Past, Present, and Future Research. Journal of Service Research, 20(4), 345-361.