The Literature Review Seminar

Seminar: Master | Ph.D.

Prof. Dr. Gerit Wagner
Information Systems and Applied Computer Sciences
Otto-Friedrich-Universität Bamberg

Prior knowledge of literature reviews, topics, and expectations

- What is your topic and research question for this seminar?
- What are your expectations for the seminar?
- Did you work on a literature review before?

Your instructor: Prof. Dr. Gerit Wagner

Sustained **fascination** for literature reviews for 10+ years:

- 2014-2018: **Dissertation** on the scientific impact of literature reviews
- 2020-2022: Postdoctoral fellowship at HEC Montréal (Canada):
  - Worked with **Guy Paré**, Ph.D., a frequent co-author and mentor, who served as a Senior Editor for Literature Reviews at JAIS
  - Served as a TA for the **literature review seminar** for Ph.D. students at five universities in Montréal
- 2022-2024: Professor of Information Systems at Otto-Friedrich-Universität Bamberg
  - Started offering the **Literature Review Seminar**
- I have **published 20 papers related to literature reviews** (out of 30)
- I am the lead developer of **CoLRev**, a Python tool for literature reviews

Why literature reviews are exciting (I)

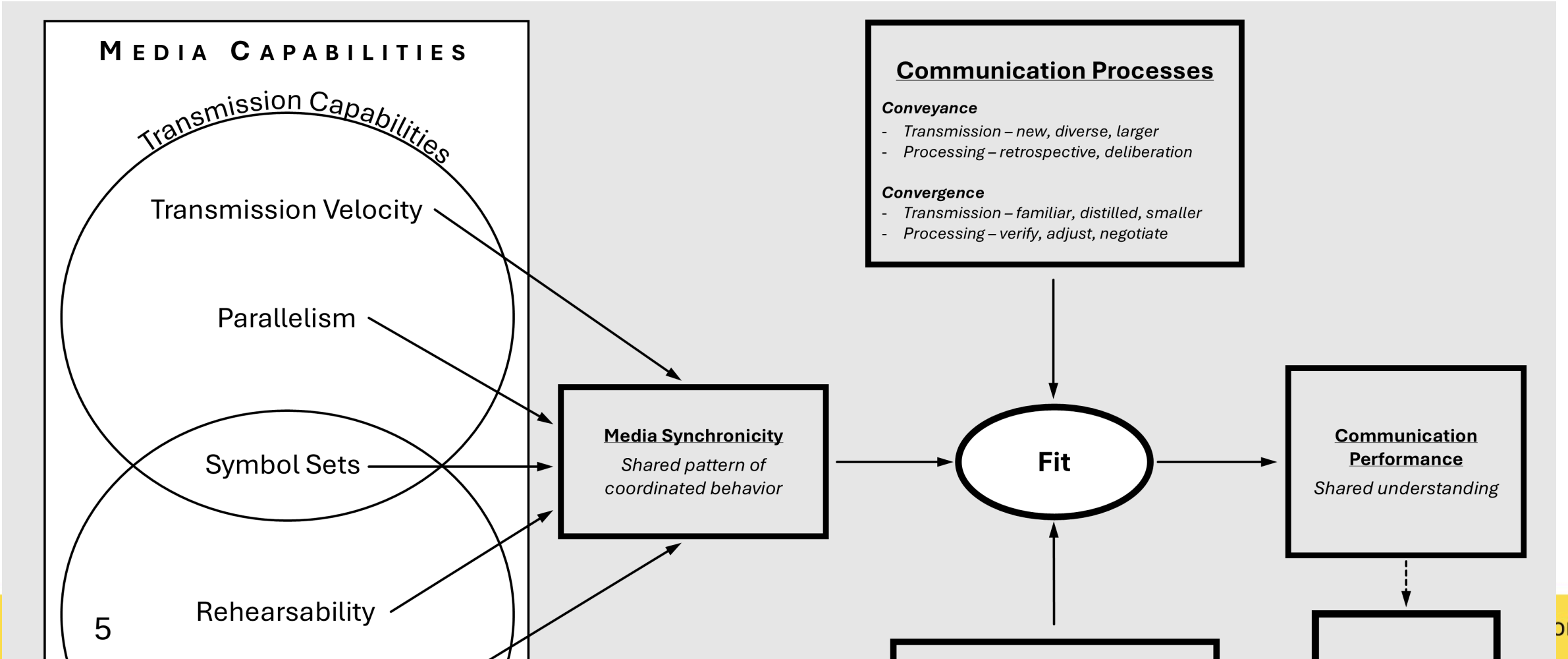
Literature reviews are essential to respond to key trends:

- The rapid growing volume and variety of research output:
  - Over 2 million new papers per year
  - Over 600 guidelines for different research methods (see EQUATOR network)
- The need to demonstrate novelty of contributions and avoid reinventing the wheel
- The need to exercise critical judgment of prior research

In the future, the ability to synthesize, organize, and critically assess prior research will become even more essential.

Why literature reviews are exciting (II)

Literature reviews can make theoretical contributions that could never be accomplished in an individual study.



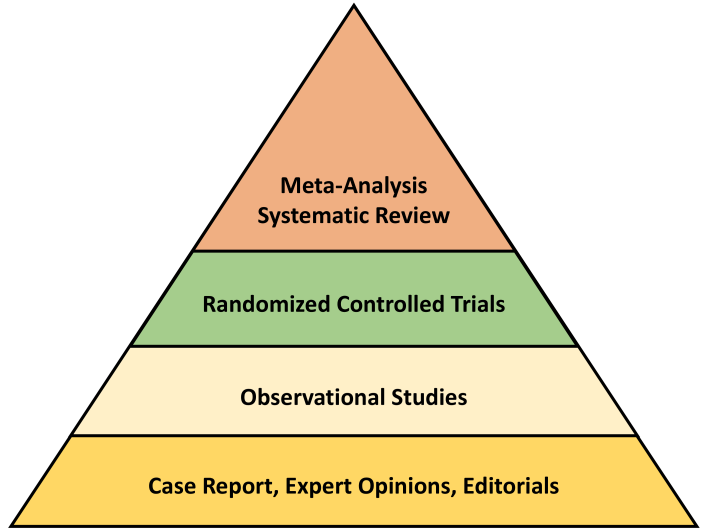
Why literature reviews are exciting (III)

Meta-analyses and qualitative systematic reviews can be used to aggregate the empirical evidence across studies. They are at the top of the **hierarchy of evidence**. For **practitioners** and **policy makers**, meta-analyses can be an authoritative source of evidence:

- The Cochrane Reviews (public health)
- The Campbell Collaboration (social policy, and criminal justice)
- Visible learning: A synthesis of over 800 meta-analyses relating to achievement (Hattie 2008)

For **researchers**, meta-analyses and systematic reviews may indicate areas where empirical evidence is inconclusive.

Meta-analyses are able to address common errors that cannot be eliminated in empirical studies (e.g., measurement error or publication bias).



Why literature reviews are exciting (IV)

Literature reviews can have a profound impact (e.g., Vial 2019 is cited 2,000 times per year)

Google Scholar

Gregory Vial

FOLLOW

Associate Professor, Department of Information Technology, HEC Montreal
Verified email at hec.ca - Homepage

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TITLE	CITED BY	YEAR
Understanding digital transformation: A review and a research agenda G Vial The Journal of Strategic Information Systems, 27	6809	2019
Barriers to the Implementation of AI in Organizations: Findings from a Delphi Study M Bérubé, T Giannelia, G Vial	53	2021
Managing artificial intelligence projects: Key insights from an AI consulting firm G Vial, AF Cameron, T Giannelia, J Jiang Information Systems Journal 33 (3), 669-691	30	2023
Reflections on quality requirements for digital trace data in IS research G Vial Decision Support Systems 126, 113133	26	2019
Data governance and digital innovation: a translational account of practitioner issues for IS research G Vial Information and Organization 33 (1), 100450	25	2023
The Data Problem Stalling AI		

Cited by

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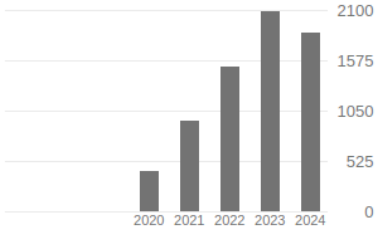
Citations	7059	7026
h-index	9	9
i10-index	9	8



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1 article 3 articles

Why literature reviews are exciting (V)

There are many open challenges, such as

- Considering differences and synergies between disciplines in the design of methods and tools,
- Design of LR software to manage data, AI, and collaboration,
- Coping with massive input and addressing urgent demands (e.g., COVID reviews - and statistics)

Learning objectives

Acquire a broad understanding of

- the **goals** and types of literature reviews
- the **steps** of the process
- the **qualities** of a good review paper
- the **tools** available

Outcome

- A **review protocol** applying this understanding and a short **presentation**
- Criteria and resources are available online
- Dates for submission and presentation: see outline

🛠️ We work hard to improve the seminar for you

In line with our values and our teaching concept, we

- Run evaluations at the end of each semester and make the results publicly available (view results).
- Document how we implement your feedback and continuously improve the course (see ongoing updates).
- Invite you to contribute directly to our teaching materials by submitting an issue ♻️ or suggesting edits 🛠️.
- Actively actively contribute to the discourse on literature reviews and benefit from the feedback of peers:

Eckhardt, P., Ernst, K., Fleischmann, T., Geßler, A., Schnickmann, K., Thurner, L., and Wagner, G. “search-query: An Open-Source Python Library for Academic Search Queries”. (🎓 student working paper)

Wagner, G., Prester, J., Mousavi, R., Lukyanenko, R., and Paré, G. “Generative Artificial Intelligence and the Future of Literature Reviews and Scientific Inquiry”. (working paper)

Wagner, G., Prester, J., Lukyanenko, R., and Paré, G. “Data Management in Literature Reviews: Foundations, Principles, and Recommendations”. (working paper)

Wagner, G. 2024. “BibDedupe: An Open-Source Python Library for Bibliographic Record Deduplication”. *Journal of Open Source Software*, 9(97), 6318. doi:10.21105/joss.06318

Paré, G., Wagner, G., and Prester, J. 2023. “How to develop and frame impactful review articles: Key recommendations“. *Journal of Decision Systems*, 33(4), 566–582.

Wagner, G., Lukyanenko, R., and Paré, G. 2022. “Artificial Intelligence and the Conduct of Literature Reviews”. *Journal of Information Technology (JIT)*, 37(2), 209–226. (🏆 Best Paper Prize 2022)

We value feedback — please let us know what works and how we can improve ♡

Administration and Materials

Contact: gerit.wagner@uni-bamberg.de

Consultation hours: via Calendly

Materials are available online:

Slides

- Presentation slides will be made available for download.
- You are expected to take complementary notes and read the recommended literature.

Literature

- Literature and complementary materials are listed at the end of each lecture.
- Reading of complementary materials depends on your interest and ambition.

Acknowledgement:

- Guy Paré: the materials are largely based on his literature review seminar.

References

Dennis, A. R., Fuller, R. M., & Valacich, J. S. (2008). Media, tasks, and communication processes: A theory of media synchronicity. *MIS Quarterly*, 32(3), 575-600. doi:10.2307/25148857

Petter, S., DeLone, W., & McLean, E. (2008). Measuring information systems success: models, dimensions, measures, and interrelationships. *European Journal of Information Systems*, 17(3), 236-263. doi:10.1057/ejis.2008.15

Rando, H. M., Greene, C. S., Robson, M. P., Boca, S. M., Wellhausen, N., Lordan, R., ... & COVID-19 Review Consortium. (2021). SARS-CoV-2 and COVID-19: An evolving review of diagnostics and therapeutics. Manubot. link

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