

Tvorba vědeckého textu

Session 1

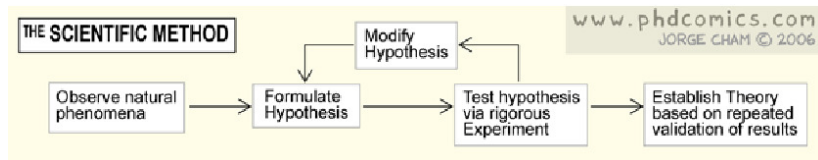
Jaroslav Hlinka

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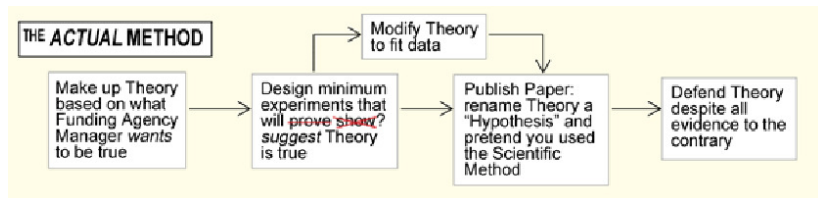
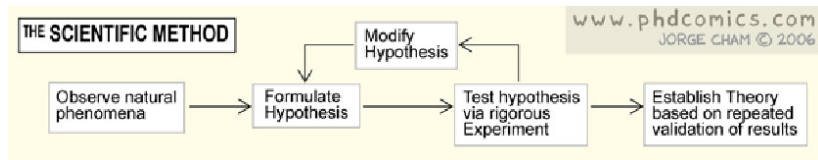
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Brno 2. 3. 2017

About the course

Scientific method

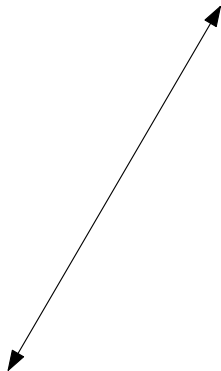


Scientific method



Scientific process - what I learned

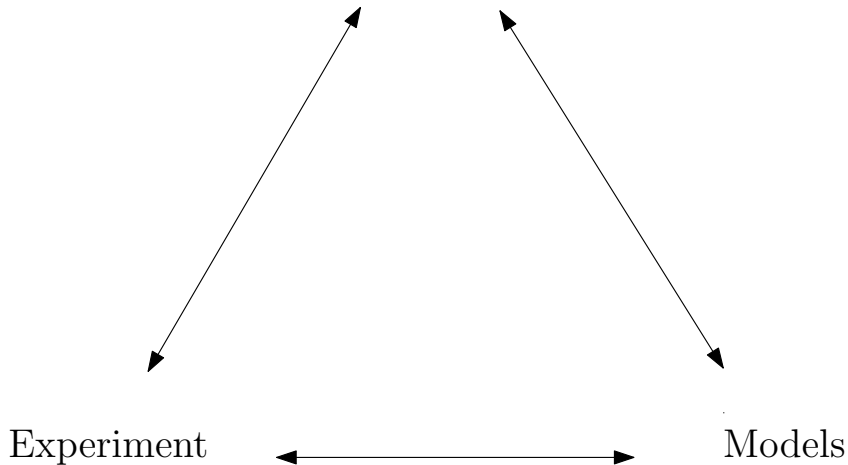
Theory



Experiment

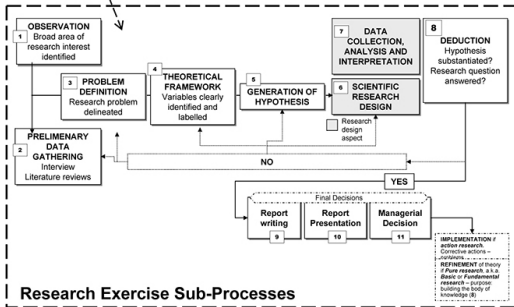
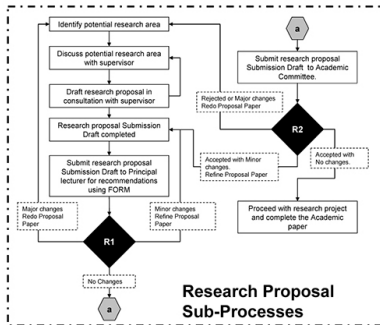
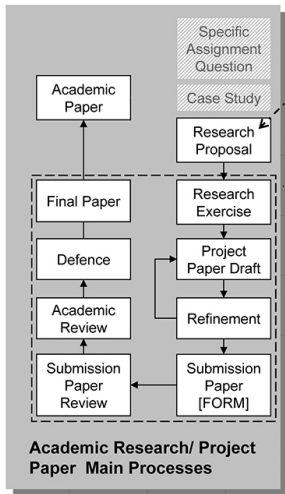
Scientific process - what I experienced

Theory



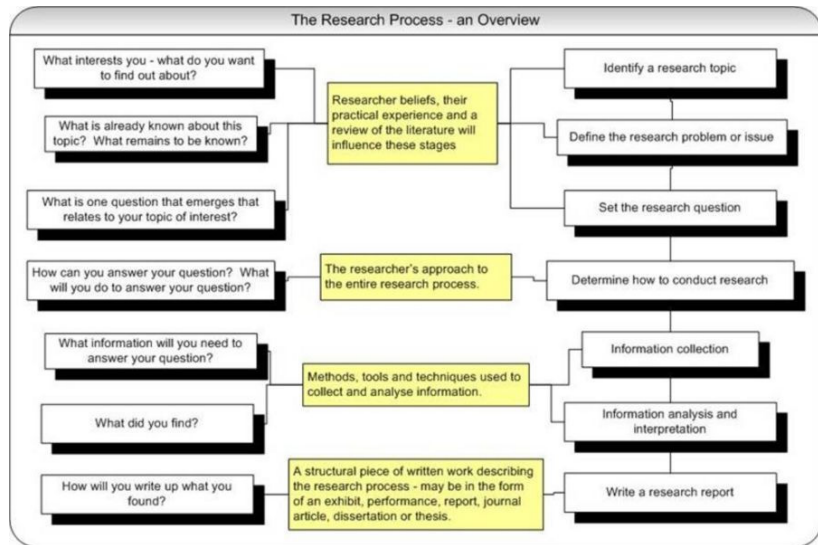
Anatomy of a research project/paper

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Source: adapted from Faisal, 2005; Sekaran, 2003 and Welman & Kruger, 1999.

Anatomy of a research project/paper



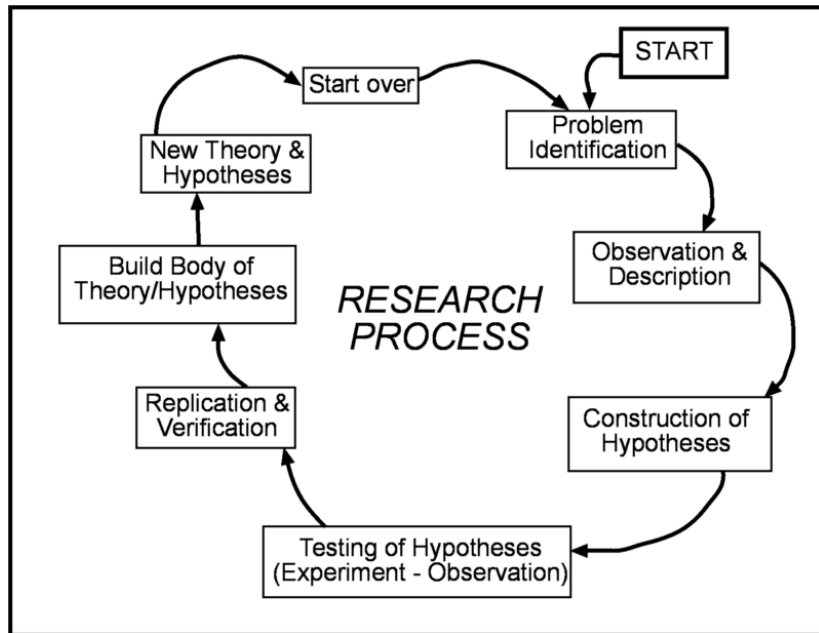
Anatomy of a research project/paper

- ▶ Wow! Hmmm?! I need to know this!
- ▶
- ▶ Do I really care? Why?
- ▶ Does anybody know already?
- ▶ How could I find out?
- ▶ Let's gather some evidence!
- ▶ So what have I learned?
- ▶ But what if?
- ▶ The answer is 42! Wow! Hmmm!?

Anatomy of a research project/paper

- ▶ Wow! Hmmm?! I need to know this! **Title**
- ▶ I need to tell everybody! **Abstract**
- ▶ Do I really care? Why? **Introduction I.**
- ▶ Does anybody know already? **Introduction II.**
- ▶ How could I find out? **Methods**
- ▶ Let's gather some evidence! **Data**
- ▶ So what have I learned? **Results**
- ▶ But what if? **Discussion**
- ▶ The answer is 42! Wow! Hmmm!?! **Conclusion**

Anatomy of a research project/paper



Starting from start: selecting a research question

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- ▶ time for new questions and teams till 14/03

Determining research question

- ▶ **Feasible:**
 - ▶ Adequate number of subjects
 - ▶ Adequate technical expertise
 - ▶ Affordable in time and money
 - ▶ Manageable in scope
- ▶ **Interesting:** Getting the answer intrigues investigator, peers and community
- ▶ **Novel:** Confirms, refutes or extends previous findings
- ▶ **Ethical:** Amenable to a study that institutional review board will approve
- ▶ **Relevant:**
 - ▶ To scientific knowledge
 - ▶ To clinical, societal, technological policy/applications
 - ▶ To future research

Determining research question: guiding questions

Questions that may help:

Determining research question: guiding questions

Questions that may help:

- ▶ What exactly do you mean by ...?
- ▶ Who has already studied this question? What did they find?
- ▶ Where is the boundary between known and unknown in this area? Where is the knowledge gap?
- ▶ How could ... be determined/measured? Which methods can be used? How they differ? What are their limitations?
- ▶ How can the answer distilled from the data? How will I analyze it?

Assignments

- ▶ finalize topics; email title and authors by March 14
- ▶ (optional) literature minireview concerning the question - prepare a 15-30 minutes presentation