Systems Engineering Course Research Methods; Structure of Academic Papers

by *Gerrit Muller*   University of South-Eastern Norway-NISE

e-mail: gaudisite@gmail.com

www.gaudisite.nl

Abstract

The final product of the Master project is an academic paper. This presentation focuses on the structure and flow of academic papers.

March 6, 2021
status: preliminary draft
version: 0

logo
TBD

Structure

Take reader's perspective.

Make a book plan with structure of the paper:

  sections and subsections with size estimate, e.g.

   abstract (50 to 150 words)

   introduction (1 page)

      domain, company, system, and case introduction

      problem statement

      method introduction and rationale

  etc.

Do **not** include table of content, or list of abbreviations in the paper itself.

USN ESI

Content

title, authors, abstract

introduction

    domain, company, case, problem, goal

    research questions, claims and observations, positioning
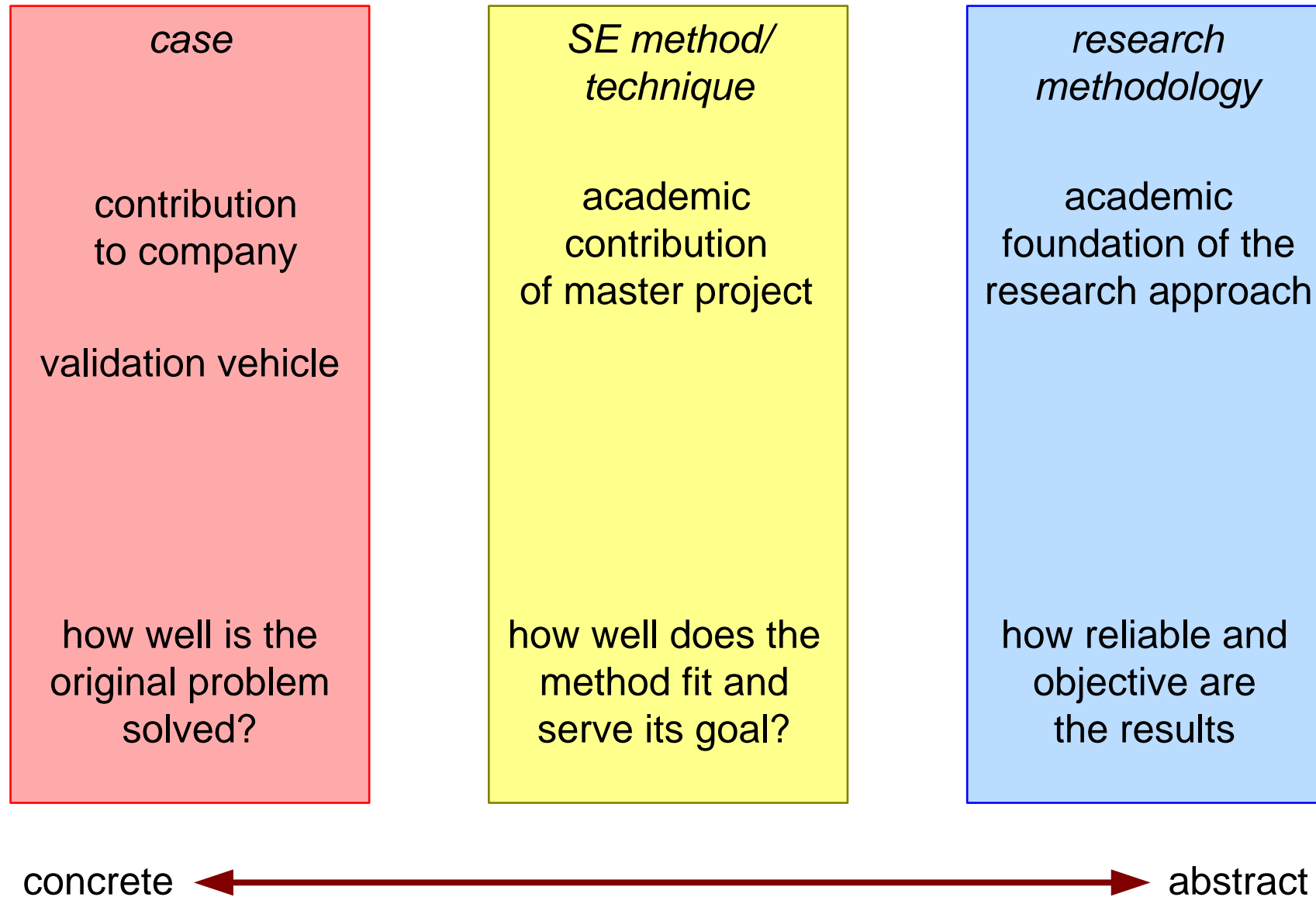
research methodology

main body

    data, analysis, results

conclusions, summary

future research

references

Multiple Threads

case	*SE method/ technique*	*research methodology*
contribution to company	academic contribution of master project	academic foundation of the research approach
validation vehicle		
how well is the original problem solved?	how well does the method fit and serve its goal?	how reliable and objective are the results

concrete ←——————————————————→ abstract

USN   ESI

Open, Elaborate, Close

open
    elaborate
    open
        elaborate
    close
    open
        elaborate
        open
            elaborate
        close
    close
close

open: introduction, question, problem, or statement

elaboration: facts, explanations, and argumentation

close: conclusion or summary

USN ESI