



EDEN DOCTORAL SEMINAR

ON

**RESEARCH METHODOLOGY IN
OPERATIONS MANAGEMENT**

Brussels, February 3 – February 7, 2014

Programme



Monday, February 3

8:30 – 9:00 Registration for the seminar
EIASM, Hôtel Métropole, Place de Brouckère 31

Daily preliminary schedule

8:30/9:00 – 12:30 Sessions (coffee break at *approximately* 10:30)

12:30 – 13:30 Lunch

13:30 – 17:30 Sessions (coffee break at *approximately* 15:30)

Each morning starts with reflections on the day before. Participants are requested to prepare an analysis of implications of the day before for their research.

Each afternoon ends with reflections of what is learnt. These sessions are led by the coordinator Professor Pär Åhlström.

Participants must be ready to use evenings for preparations.

It is very important that distributed material is studied in advance and that each participant has some plan for his or her research. Write it down and bring it.



Course Programme

Monday February 3 **Introduction to Research Methodology in Operations Management**
Prof. Pär Åhlström

- Session 1: Program introduction and overview**
Overview of the week. Participant presentations. Agenda setting.
- Session 2: Research contributions**
Creating and developing knowledge. The twin pressures on operations management contributions. Judging the quality of research contributions.
- Session 3: Choosing a topic**
Examining and synthesizing the literature. Developing research hypotheses and propositions. Sources of topics. Characteristics of interesting topics.
- Session 4: Locating topic within the operations management field**
The conceptual framework. Antecedent literature, concepts and theories.
- Session 5: Developing research questions**
Types of research questions. The nature of theory and its components. Paradigms and philosophical positions.
- Session 6: Research approaches**
The importance of research design. Fitting questions to method. Overview of research methodologies in operations management. Sign of good operations management research.

Group Dinner: 19:00

Tuesday February 4 **Surveys**
Prof. Cipriano Forza

- Session 7: Introduction**
Survey research in OM. Appropriateness of survey.
- Session 8: Research design**
Purpose of the study and types of investigation. Unit of analysis. Time horizon.
Population, population frame and population sample. Sampling designs.
- Session 9: Data gathering (comparison of different methods)**
Mail-out questionnaires. In-person structured interviews. Telephone surveys
- Session 10: Questionnaire design**
Wording. Scaling-coding-categorizing. General appearance.
- Session 11: Measurement of variables**
Operational definition of variables. Measure validity. Measure reliability.



- Session 12: Data analysis**
Getting data ready for analysis. Obtaining a feel for data. Check goodness of data.
Test hypotheses. Brief presentation of statistical techniques used in OM.
- Session 13: Presentation and discussion of results**
Presenting information to allow future replications or meta-analyses.
Interpretation of the analyses in the context of the hypotheses.
Discussion of the implications.
- Session 14: Workshop**
Presentations and critical analysis of each survey-based participant's research plan with reference to research design, population and sampling, method of data gathering, questionnaire design, measurement of variables, and process of data analysis.

Wednesday February 5

**Case studies
Prof. Rui Sousa**

- Session 15: Introduction to case studies**
What is a case study - the commonalities with differences between teaching and research case
- Session 16: When to use cases**
Strengths and weaknesses of the case approach. Single versus multiple cases. Triangulation with other methods. Selection of cases - replication versus sampling logic.
- Session 17: Case methodology**
Developing the research framework, constructs and questions.
Developing research instruments and protocols. Choice of data to be collected. Data collection methods. Interviewing strategies. Use of secondary data. Validation.
- Session 18: Case analysis**
Methods of analysing case data. Dealing with and exploiting the richness of case research. Dealing with small sample sizes. Developing generalisable conclusions from case data. Relating conclusions to the theory and practice development. Reliability and validity in case research. Examples from published case research.
- Session 19: Writing up and evaluating case research**
Recognising good case research. Issues in publishing case research.



Thursday February 6

Action research

Prof. Paul Coughlan & David Coghlan

Sessions 20: What is Action Research?

What type of research is this? How was it set up and structured? What was the process? What role did the researchers play? What were the outcomes, in terms of action for the companies involved and theory generation? What would you see to be the difficulties and obstacles, in terms of both the actions for the companies and theory generation?

Session 21: Experiential Activity, Reflection and Feedback

The process of operational improvement based on an emerging understanding of a running operation. Reflection on the running operation from a number of perspectives.

Session 22: Action Planning and Research Planning

What is the context and purpose of Sticklebrick Corporation? What data have we gathered? What actually happened? Can we list and name events and incidents? What actions and clinical interventions are in prospect? How do we analyse the data? What theories can we draw on to make sense of what took place? What working hypotheses are emerging which might be understood in terms of OM theory and concepts?

Session 23: Action Research in Organisational Systems – Action Research Theory

What is action research and when can it be used? What is needed before entering into action research? Roles and ethics in action research design

Session 24: Action Research in Organisational Systems – Planning an Action Research Project

How do you design an action research project? Implementing action research. Action research skills. Politics in action research. How do you generate theory? Assessing the quality of action research.

Group Dinner: 19:00

Friday February 7

Models and simulation

Prof. Jan Fransoo

Session 25: History of Quantitative Modeling in Operations Management

The development of Operations Management from the discipline of Operational Research; role of quantitative modeling in (European) Operational Research vs (American) Operations Research; implications for current OM Research

Session 26: Methodology in Quantitative Modeling,

Developing a formal model of an operational process, verification of the model (internal consistency) and validation of the model in view of the research questions (external consistency)

Session 27: Opportunities and Limitations with Quantitative Modeling,

Work on a quantitative modelling exercise.