



*Research Seminar 4 cr (683207)*

Risto Hotulainen  
OKL/Helsingin yliopisto  
Risto.Hotulainen@Helsinki.fi

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### Goals of Research Seminar

**Students understand**

- the structure of educational research process, problem-setting of research, and methodological solutions
- the importance of scientific knowledge, the epistemological foundations of educational research as well as foundations of scientific research, and core concepts of educational research
- the interactional relationship of theory and practice
- peer group's support in teachers' work

**Students are able to**

- make a research plan, conduct research and produce a research report (pedagogical product or study)
- apply didactical, subject-specific and research methodological knowledge into practice
- view their work from a research perspective

**Students have preparedness to**

- examine educational theory from a practical perspective and practice from a theoretical perspective
- develop their skills of critical thinking and drawing conclusions

**grow** into professionals who are inquisitive, and who research and develop their own work

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### Conduct research and produce a research report (pedagogical product or study)

→ Presentation (15-20min), opponent (5-10 min), general discussion (5 min)

→ Deliver your paper (draft) two days before your presentation to Risto and to your opponent

→ Final date for the thesis is 15.05.2015

The study unit is evaluated according to the pedagogical product or study made and presented by the student, as well as participation. The study unit is assessed on the scale 0-5.

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### Timetable and theme proposal

11.02.15	ke 10.15-11.45	<a href="#">Fontell, kok 202, Orientation</a>
25.02.15	ke 10.00-12.00	<a href="#">Risto's office Athena 319, Individual tutoring</a>
25.02.15	ke 16.00-18.00	<a href="#">Risto's office, Athena 319, Individual tutoring</a>
16.03.15	ma 16.15-17.45	<a href="#">Fontell, kok 202 How to write method chapter</a>
23.03.15	ma 16.15-17.45	<a href="#">Fontell, kok 202, Moodle (method chapter)</a>
30.03.15	ma 10.15-13.45	<a href="#">Fontell, kok 202, Moodle (commenting others)</a>
31.03.15	ti 10.15-13.45	<a href="#">Fontell, kok 202 (FREE)</a>
01.04.15	ke 10.15-13.45	<a href="#">Fontell, kok 202</a> Presentations (FREE)
13.04.15	ma 16.00-18.00	<a href="#">Fontell, kok 202 Presentations</a> (4)
27.04.15	ma 16.00-19.00	<a href="#">Fontell, kok 202 Presentations</a> (6)

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### Content of the STEP THESIS

**Small study project (1/3 master's thesis)\***

**Risto's guidelines (15-20 pages)**

**Content of thesis**

1. Introduction	}	50% text
2. Theoretical frame		
3. Questions of the study		
4. Method	}	50% text
5. Results		
6. Discussion		

**\*Check example thesis on Moodle pages**

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### How to write method chapter?

Orientation: use methodology matrix

Methodology	Essential question	Collection method	Sample	Relationship to population / can we generalize

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## How to write method chapter?

### 4. Method chapter

1. Participants
2. Instruments
3. Procedures
  - Design
4. Data Analysis
5. Limitations

Tense: Proposals: future tense / Final report: past tense

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### 4.1 Participants

- Target population and the sample that you will use for generalizing about the target population.
- Demographic information such as age, gender, and ethnicity of your sample.
- Procedures for selecting the sample should be outlined, including justification for the sampling method, also known as Sampling Procedures

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### 4.1 Participants

Teachers of IB lukio

A population is a group of individuals that have the same characteristic(s).  
A sample is a subgroup of the target population that the researcher plans to study for the purpose of making generalizations about the target population.  
→ Samples are only estimates.  
→ Difference between the sample estimate and the true population is the sampling error

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Common demographics:

1) Age, gender, and ethnicity (if relevant)

→ The general sample was composed of 223 participants (168 male, 55 female; Mage= 44.55 years; SD= 12.55; age range, 19 – 64 years). Participants were divided by education (23.1% class teachers, 53.8% subject teachers and 12.1% special ed. Teachers and other teachers 12 %)

2) Sampling procedure (how and when and what is the intent?)

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4.2 Instruments / Materials / Measures

This section should include the instruments you plan on using to measure the variables in the research questions.

- o the source or developers of the instrument
- o validity and reliability information
- o information on how it was normed
- o other salient information (e.g., number of items in each scale, subscales, etc.).

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4.3. Procedures

→ Procedures section is the “how-to” section of the study and will introduce the design of the research and how the data will be collected based on the questions of interest.

→ The material should be presented in a step by step fashion.

Rule of thumb:  
Another researcher should be able to replicate the study by reading your Procedures section without asking any questions

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### The Research Design

(usually sub-heading under procedures)

- The research design is the actual structure or framework that indicates (a) the time frame(s) in which data will be collected, (b) when the intervention will be implemented (or not), and (c) how many groups will be involved (Edmonds & Kennedy, 2010).

#### Example Research Designs

Quantitative	Qualitative
Correlational -Explanatory design -Predictive design	Grounded Theory -Systematic design -Emerging design
Survey -Cross-sectional design	Ethnographic -Case study design
Between-subjects -pre-and posttest design	Narrative -Narrative design

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### How to write the "how-to" section of the study

#### Example

"Initially, students were asked to complete the informed consent forms. Questionnaires were then distributed and completed in English classes during the middle of the term. The PSS scale was administered to all students at the end of each period. The WRAT-III scale was then administered at the beginning of each period. Students were given as much time as needed to complete each assessment".

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### Data Analysis:

- These data analyses should be based on the research questions and the research design selected for the study.
  - Specify the procedures for reducing and coding the data.
- For quantitative studies, subsequent data analyses should include summary descriptive statistics and inferential statistical tests. For qualitative studies, the procedures to be followed for the analyses must also be addressed.

#### Example 1: Quantitative

Descriptive statistical analyses were performed on the sample groups to obtain a clear understanding of the population. Measures of central tendency (means, medians, and other percentiles) and dispersion (standard deviations, ranges) were computed. Bivariate correlational analysis were conducted in order to assess the strength of direction of the relationship between stress and achievement.

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### Example 2: Qualitative

You need to define

#### a) Strategies of Inquiry

- Identify the specific strategy of inquiry (i.e., design) to be used (e.g., narrative, grounded theory, ethnographic).
- Provide some background information about the strategy (i.e., discipline origin, applications).
- Identify how the use of this strategy will shape the type of questions asked, the form of data collection, the steps and data analysis, and the final narrative.

#### b) Data collection

A discussion about participants and the site including

- The setting, The actors (who will be interviewed), The events (what will the actors will be observed or interviewed doing), The process (the evolving nature of events undertaken by the actors within the setting)

→ Indicate the type or types of data to be collected (e.g., observational, interviews, documents, audio and visual material).

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### Example 2: Qualitative

#### c) Data Recording.

This section should include a brief description and framework for the data recoding protocol that will be used to answer the research questions.

If an established instrument will be utilized then this section will detail each data-collection instrument. The relevant information pertaining to each instrument should include the source or developers of the instrument and any other salient information.

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### Example 2: Qualitative

"The third-person voice was used, because this is a realist design, no personal ideas were included in the report; rather, the facts are presented through the actual words of the participants. Objective data from the interviews and observations were sequentially coded and objectively reported (including the use of personal quotes)".

"Ordinary details of each teacher's work experience were included, and standard categories for cultural descriptions were used. The final interpretive report was then reviewed which allowed the researcher to provide subjective explanations of the data representing the nature of teacher retention".

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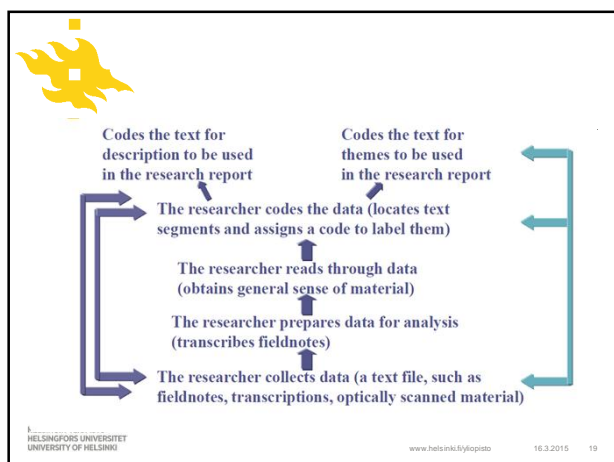
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#### 4.4 Limitations

##### Quantitative and Qualitative

- A) Sufficient access to the site for data collection
  - Sufficient time for data collection
  - Limit initial collection to one or two observations or interviews
  - Time is needed to establish a substantial database
- B) Observational role
- C) Building rapport with participants
- D) Obtaining permission to use documents and audiovisual materials
- E) Ethical issues
  - Anonymity of participants
  - Convey true purpose of study without deception

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