

Various issues in academic writing

...to be gradually complemented during the course

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The issues presented within this document are not meant to be hard rules that you are forced to follow. The point is to make you think your writing at the meta-level, and discuss some typicalities in academic writing.

Motivation

- ▶ You should always think that writing is part of your research method, an issue being stated, e.g., in the context of qualitative research methods.
- ▶ Writing is thus the *unavoidable tool* for presenting your results and ideas
 - ▶ It forces you to think your research systematically
 - ▶ as it forces you to “explicate”
 - ▶ if you can present a logical research report through writing, perhaps you research is "saturated enough", and thus ready for publication
- ▶ Take it as a skill that can be and is practiced by any researcher continuously!

A well-structured report

- ▶ **Think at a meta-level** what sections and subsections you need and try to adhere to you current design of the writing.
- ▶ A typical research report consists of:
 - ▶ (abstract)
 - ▶ introduction,
 - ▶ related work (e.g., background theories, related empirical research),
 - ▶ method/study
 - ▶ results (your analyses)
 - ▶ discussion
 - ▶ conclusions
 - ▶ (references)

...continues

- ▶ This format (previous slide) applies very well to a master's thesis as well.
- ▶ In the monographic thesis, you may of course have several main sections for the related work.
- ▶ ...for instance, one for technical standards, one for related theories, and one for related empirical research.
- ▶ You might also need a section between the introduction and the method section for describing the study context: e.g. a particular course in an educational study.

...continues

- ▶ Discussion and conclusions might be combined into one main section.
- ▶ In the article format, it is sometimes handy to present related work after the results, as the results can be directly discussed in reference to the related work.
- ▶ Notice yet that the selection of the research method may have implications on what is the appropriate structure for the report. Find examples (I show one on autoethnography here)!

Why use the conventional structure?

- ▶ It is easy for the reviewer (cf. evaluation of your thesis) and easy for the reader.
- ▶ Key attributes of the conducted research are found in the paper as expected.
- ▶ For instance, an overview and implications of a particular study can be typically read in the conclusion section without a need to go through all of the report.
- ▶ Let's find an example (e.g. Computers and Education, Ville see dropbox)

Summary

- ▶ Let us yet look one master's thesis example (Ville, see your dropbox, writing guidelines)
- ▶ Let us look at the thesis evaluation criteria.
- ▶ To summarize this section, *acknowledge the typical structure and find relevant examples for adjustments.*

Writing the Abstract

- ▶ Often the “first place to look” at your work!
- ▶ Publishers usually offer abstracts in an open-access way; let’s look at the ACM digital library...

...continues

A typical structure would

1. Bring the reader into the topic area, very briefly
2. State the research problem/target
3. Motivate the research problem
4. State the research approach taken
5. Summarize main results/implications

Let's look at a (this-morning) random example, Ville see dropbox (misconceptions)

- ▶ While these are usual items there are variation regarding their order and whether all the items are included.
- ▶ Often the abstract starts: “In this paper, we...” or “This paper reports on...”, thus with the second item in the previous slide
- ▶ Let’s find an example for this, Ville see dropbox (writing guideline)

- ▶ Selected research approach and method may have an effect on the applicable format.
- ▶ Publishers may in any case require a particular abstract format; see, for example,
<http://www.sciencedirect.com/science/article/pii/S0950584913001936>
- ▶ In this example, the abstract was thus structured with titles, which, as we can observe, are very well in line with the typical items as described in the earlier slide.

Writing the Introduction

- ▶ Devote to Introduction!
- ▶ Avoid discussing irrelevant features, kind of subplots, about your work.
- ▶ Thus, use the writing of introduction as a tool for focusing and delimiting your study.
- ▶ There are many opinions on when it should be written.

Writing the Introduction

- ▶ A typical structure would
 1. bring the reader into the topic area
 2. state the research problem (target of the paper)
 3. motivate the research problem
 4. describe and motivate the research approach/method taken
 5. perhaps outline the contents of the study, and make necessary remarks to help the reader understand the perspective of the paper

We notice that these seem to be quite similar to Abstract items, of course you extend here the writing on these items...

...continues

- ▶ Sometimes you go through several motivations (with several text paragraphs)
- ▶ Sometimes you state the motivation first, and then the research problem
- ▶ Sometimes you lead the reader to the research problem by motivating citing of the literature, then the second and third item might work in one and the same paragraph (example given, Ville see dropbox, (ComTest))

- ▶ When motivating the research problem/target, try to explicitly compare and contrast it with the existing research; show the reader why your study is important (Ville, show example from submitted iticse paper, dropbox root)
- ▶ It is very usual to to outline the contents of chapters in the last paragraph of the Introduction in a monographic master's thesis (item 5 above)
- ▶ Similar to the whole research report, the selection of method may affect how to formulate Introduction (consider the previous example on autoethnography)

Summary

- ▶ Prepare a well-structured abstract and introduction
- ▶ If the writing is confusing already at the beginning, you burden the reader straight away.
- ▶ Find examples yourself and identify writing patterns!
- ▶ You may actually begin writing the Introduction at the meta-level, by sketching the necessary text paragraphs and their logical order, I try to demonstrate it here...

Avoid annoying repetition

- ▶ The basic guideline is that you state the various matters in the sections they belong to, and only once.
- ▶ Each section, and also text paragraph, has an “idea”, and the sections and paragraphs therein are laid out in a logical order, usually progressing “from general to specific”.
- ▶ At the end of the writing process, you could mechanically observe unnecessary repetition in your work and try to get rid of it.
- ▶ Not easy to identify in the text: when accidentally repeating, it often happens using different wording than in the previous occurrence of the repeated matter (ville, show example from jfp-paper)

- ▶ Note: of course you need to repeat things at certain points, for instance, in the conclusion section where you typically begin by summarizing the main results. (Ville, show conclusion-example, and TOCE example)
- ▶ Note: in some discussional theoretical papers, it may be necessary to keep repeating the main idea of the paper, but then the repetition becomes an acknowledged writing tool.

Synonyms

- ▶ Avoid using synonyms for key terms
- ▶synonyms may make the text difficult to interpret
- ▶ “exercise vs. task vs. assignment”

Structuring your text

- ▶ When you introduce topics in certain order (usually at the beginning of chapters and sections, use this same order when you go through the topics in your text (example, iticse-2014, npo)
- ▶ Avoid "snapshots" where you refer to something which has not yet been introduced to the reader (ville, discuss
<http://dl.acm.org/citation.cfm?id=2534971&bnc=1>).

- ▶ One guideline is to begin a text paragraph with an "idea" sentence, and then the remaining of the paragraph specifies and illustrates this idea. (show jfp example again)
- ▶ Avoid "jumping around" within a paragraph with several idea sentences.

- ▶ Write sufficiently independent text paragraphs:
- ▶ If a paragraph starts:
“Next, we give an example of how they can be used to express the calculation of the type of the expression ‘fmap fmap’...”
the writer expects that the reader can associate the word “they” with some previous matter

Unsubstantiated claims

- ▶ Avoid unsubstantiated claims!
- ▶ ...if your intention is to discuss or argue, show this in your writing: “We argue that”
- ▶ ...try also show what matters underpin your conclusions: “Based on our observation that ..., we conclude that... ” (Ville, show example (jfp-3))
- ▶ Do not “put down” related work

- ▶ Conclusions should have a connection to your study.
- ▶ Cohesion!:
- ▶ Only those issues that you initialize in Introduction belong to the report. Be clear with your research focus!
- ▶ “Smallest publishable item”

- ▶ Refer to tables and figures within main text: “Figure 1 describes the outcome space of the phenomenographic analysis conducted...”
- ▶ Avoid lengthy, ambiguous, sentences

Working with the literature

- ▶ Show that you know about the research field
- ▶ Identify the related research areas
- ▶ Make synthesis from the perspective of your research topic (discuss)

- ▶ Try to connect the related research to your work (example, ville see dropbox)
- ▶ Explain what are the closest references to your work to enable the reader to understand your perspective
- ▶ (show the example from the local folder)