Writing

Fundamentals of Human-Centered Computing

Writing

Going from analysis to paper

    How to write a good Grounded Theory paper

Today I will cover:

- Purposeful writing

- Structured writing

- Connecting to literature

Also: presentation group formation!

Purposeful writing

The goal and purpose of grounded theory writing

Purposeful writing

The main purpose: convince your readers

Why should they care?

  Ask "so what?" questions

Why is this true?

  Ask "but what if...?" questions

So what?

Explain the purpose of your writing

    What have you contributed?

    What problems have you solved?

    How does this advance the field?

You can contribute to a specialty field, and simultaneously extend general theory

    You can use theoretical codes for this!

But what if...?

Defend your theory by:

- Making implicit arguments explicit
- Providing context for them (usually by examining the categories)
- Backing them up with data
- Linking to literature (at a later stage, though)

But what if...?

A good GT paper makes a link between data and theory

– Make the theory as abstract as possible based on the data

– Ground the theory in real data (don't cleanse your analyses from specifics and examples!)

Structured writing

Steps for good writing

Structured writing

Specificity hourglass:

Broad intro

Generic research
questions

Specific study hypotheses

Study setup and results

More generic discussion

Broad conclusion

Writing strategies

Write your paper five times!

1. Outline

2. Key sentences

3. First draft

4. Understandable draft

5. Thorough edit

6. (usually additional edits)

Outline + sentences

Outline each section

   "Organize" the paper (enhance flow, prevent duplication)

   Create diagrams, if useful!

   Using "keywords", what are your main arguments?

   Each of these keywords will become a paragraph

For each paragraph, write the key sentence

   The main takeaway of the paragraph

   The rest of the paragraph will be in service of this key sentence... Write it carefully!

First draft

Write the paragraph around each key sentence

> Connecting sentences, clarifications, arguments, examples
>
> Must be in support of the key sentence!
>
> Add connections wherever they are implicit
>
> Key sentence is usually at the beginning or end

Structure:

> Academic: arguments —> conclusion (key sentence)
>
> Grant/industry: statement (key sentence) —> supporting arguments

"Reader" edit

Re-write the paragraph, keeping the reader in mind; for each sentence:

Do they understand it?

Is it relevant (to the key sentence)?

Does it connect (are there gaps, is it out of order)?

Is it convincing?

You can do this in parallel

Thorough edit

Review and edit each other's sections, keeping in mind:

Do I understand it?

Do I find it relevant (to the key sentence)?

Does it connect for me?

Do I find it convincing?

Finally: get an external review (fellow student, advisor)

Give specific instructions

Flag points of contention (discuss them to find a solution)

Paper sections

How to write each section of your paper

Paper sections

Title and abstract

Introduction

Related work

Methods

Findings

Discussion, limitations and future work

Conclusion

Introduction

Present the main argument all the way in the beginning

    This should read like an interesting and useful finding

Then unpack your writing

    What is the purpose?

    What have I contributed?

    What problem have I solved?

    What does this relate to? How is it similar, how is it different?

    How does it extend beyond this field?

Introduction

Defend your work: Why is it important?

    Some statistics

    Research questions (ingoing focus and/or final focus)

    Main takeaway/contributions/signposting

At the end of the intro:

    A reader must know if they want to read the rest

    A reviewer must be on board with your ideas

Don't overclaim or underclaim your scope; keep it on topic

Related work

Conduct a literature review **after** you are done with the main findings

Juxtapose your work against the found literature; What opinions and findings you accept and reject?

Only present related work if it is in service of the argument/ theory

  Don't summarize their results; instead explain why they are relevant

  In your study: only make a link to Grand Theories

Methods

Start with an overview of your study (what and why)

Subsections for:

Participants (demographics and recruitment)

Procedure (step-by-step description of the semi-structured interview process AND the grounded theory analysis process)

Findings

The structure is extremely important here

    Use iterative drafting extensively!

Within each part of the argument:

    Describe the categories carefully

    Describe their links

    Link the arguments

All of this at highest comfortable level of abstraction

    All of this using data to back it up

Findings

Highlighting and/or annotate your text with meta-analysis

"My argument here is that _____"

Link statements together into a succinct main argument

Find where it all comes together, that will be the meat of your argument

Sharpen the argument and revise the text if needed

A strong argument persuades the reader to accept the writer's viewpoint (both on "what" and "why")

Findings

Revise a lot!

Ask "why did I write this?" about anything you wrote

If there is no good answer: chop!

Only include categories that fit your argument (and only the properties that are needed)

Write sections for them, but feel free to combine them in a single section

Only give the ones that introduce something new an explicit heading

Findings

Provide signposts!

    Before a split in the argument: foreshadow, what is to come

    Before a lengthy argument: ask the question you are going to answer

    Before a merge: recapitulate

Discussion

Start with summary of the theory

 Keep this short: a single paragraph is enough!

 Put more emphasis on the surprising aspects of the theory; try to explain them

Next, put your theory in the context of Grand Theories, where possible

 The theoretical framework "locates" your argument

 Use theoretical codes for connections

 This allows you to contribute to a specialty field, and simultaneously extend general theory

Discussion

Now move to implications

    This is where you can extrapolate on the results

    What are the real-world implications?

    Often these are "design implications"

    Managerial or research implications are also ok

Limitations and future work

    They are often combined, sometimes part of discussion

    Discussing limitations can mitigate potential criticisms

Limitations

General structure:

- Here is a limitation

- Here is why it is actually not a limitation (or at least not a huge limitation), OR

- Here is the trade-off behind it (why we couldn't resolve it), AND

- Here's how future work can resolve this limitation

Conclusion

Go back to your motivation (from the intro)

    Why did you conduct this study?

    Did you make any progress?

    What is the main implication of your work?

    I usually end on a "future outlook"

Title and abstract

Most important parts of the paper!

> 99% of the time, reviewers are selected based on title and abstract only!

> Also what makes readers decide whether to download the paper

Title usually gets decided on during the writing process

> For me, often during the "key sentences" part

The abstract is usually something I do at the end

> Or at least that's when I iterate on it

Title

Research shows that papers with shorter titles have more citations*

CHI paper titles often have the format: "Catchy tagline: What we actually studied"

Don't try to be punny

Abstract

Summary of the paper, usually 200 words or less

Structure:

    What is the phenomenon you planned to study

    What did you do (type of study, methods!, etc.)

    What is your main theory

    What is your main implication (I tend to emphasize only the most important one)

Style points

Some notes on writing style

Language use

Keep it simple!

    Straightforward writing is better than rhetorical flourish

Remove unnecessary words

    E.g. in order to -> to

Avoid passive language

    Active language tends to be more concise

Language use

Avoid gendered language

Most importantly, when writing about "the user" use "they/them" (or use the plural "users")

~~Don't~~ Do not use contractions!

Its vs. it's (the latter should be "it is"!)

Users' vs. user's vs. users

Avoid colloquial language

Figure out, pretty good

Be consistent!

Consistently use the same terms

E.g. "participant" or "subject"? "System" or "program"?

Follow the provided template

Headings, captions, etc.

Citations/reference style

Past or present tense?

Past tense: something you did (methods and results)

Present tense: implications (intro and discussion)

Related work: either way is possible, but be consistent

Users/participants

When you talk about your study/results: participants

   Older participants were more less to disclose

When you talk about implications: users

   This suggests that older users are more concerned

Be consistent with this!

Final tip

If you want more tips, read Bem 2002!

Linked in the syllabus table

Groups

Presentation order

Planning

Tuesday 22nd and Thursday 24th:

    No class, work on your presentations

    I will be available for questions 12:30-1:00

Tuesday 29th and Thursday 1st:

    Presentations!

Planning

Tuesday 29th:

    12:30 - 12:50: privacy decisions (group 1)

    12:55 - 1:15: learning programming languages (group 3)

    1:20 - 1:40: socializing in quarantine (group 5)

Thursday 1st:

    12:30 - 12:50: internet-based voting (group 2)

    12:55 - 1:15: recommendations (group 4)

    1:20 - 1:40: general feedback from me

Presentations

Present your developing theory (12-15 minutes)

Update us on what you have done (1-2 min)

Describe the theory succinctly (2-3 min)

Highlight important categories and relationships (4-6 min)

Identify gaps in your current theory, and a plan to solve it (3-4 min)

Questions/suggestions from the audience (5 minutes)

Ideas for interpretation, further interviews, etc.