# Generalization in and from Qualitative Analysis

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# Introduction

- Generalization, in research, refers to extending research results, conclusions, or other account that are based on a study of particular individuals, settings, times, or institutions that those directly studied.

# Types of Generalizations

- Internal Generalization
- External Generalization
- Transferability

# Internal Generalization

- It is mainly concerned with representativeness of the data and conclusions for the case, settings, or individuals studied and relies primarily on empirical generalization rather than analytic generalization or tranfer.

# Strategies for internal generalization

- Systematic sampling: inadequate or unrepresentative selection can lead to flawed inferences about the case, setting, or individuals studied.
- Diversity of data: Triangulation
- Diversity of views: Satements
- Integration of findings with the past research

# External Generalization

- It overlaps substantially with the development of theory, a topic that has been extensively discussed.

# Strategies for external generalization

- The strategies described for internal generalization are relevant for external generalization.

# Transferability

- It involves transfer of knowledge from a study to a specific new situation. This shifts the responsibility of generalization from the researcher to the reader or potential user of the findings.

# Conclusion

- Generalization is initially to theorize rather than to population or a universe of cases.

# Task

- Read the article on “writing challenges, causes, and facilitating strategies…” to determine the nature of generalization and transferability in the findings.

# Theorization from Data

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# Introduction

- Theorizing from qualitative data means the understanding and explanation of phenomena through (qualitive inductive and deductive) hypothetical inferences. The researcher must draw implicitly and explicitly on previous theoretical knowledge, which may be derived either from grand theories (about universal social processes or structures).

# Types of theorizing from data

- Using general theoretical concepts to develop grounded middle-range theorizes,
- Using qualitative data to challenge theoretical concepts, and
- Transferring middle-range concepts to new research domains.

# Challenges in theorization

- Qualitative researchers have to be careful not to force ready-made hypotheses on their data
- Attempt to fully ignore or discard previous theoretical knowledge

# Conclusion

- Researchers require to reconcile and introduce previous theoretical knowledge in qualitative data analysis. This cover the logic of theory building and the role of previous theoretical knowledge in empirically grounded theory building.

# Writing Data: Analysis and Interpretation

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# The Data

- A thorough presentation of the data and results is essential if your work is to be taken seriously.
- Generally, about half of the thesis can be viewed as a sequence of three components: first, how the data was gathered and what it is intended to represent; second, what the gathered data looks like; third, how it should be interpreted. How to present ‘what the gathered data looks like.
- Readers won’t trust your results unless they understand that your data is fair, unbiased, and representative

# Data Preparation

- Describe the ways in which the data was prepared and transformed in the process of readying it for analysis and interpretation.

# Data Analysis Procedure

- Describe, and justify, the procedures for data analysis.
- To impress examiners, the results of your study must be clear, verifiable, and well presented. Clarity is achieved by being confident of what to report, and what to leave out.

# From Data to Results

- Data is meaningless without interpretation. Results are obtained by showing how the data relates to the original question via an argument.

- Keep in mind, too, that having well-organized data helps protect you from possible accusations of falsification of results and gives you confidence in the outcomes.
- Materials that are in a mess suggest that the thinking is in a mess.

# Presentation

- You need to explain the data to your reader; this may be more difficult than you expect. It is summaries and interpretations of the data, not raw numbers, transcriptions, or photographs, that are likely to be of the most value.
- This presentation should not be haphazard. The presentation should educate the reader.
- You have used the data to draw conclusions as objectively as you can; now the task is to use representative examples drawn from the data, and example analyses of the data, to persuade the reader of the validity of findings.
- Inclusion of all the data is unlikely to be feasible

# Analysis/Interpretation

- Analysis of data is how it is examined for properties of interest, which can then be related to the question. Analysis is closely linked to presentation, because good presentation is required for understanding the results.

# Reasoning from Data

- A strong result rests on an interpretation of data that yields new knowledge.
- Knowledge makes a contribution when it is integrated into a way of looking at things. It is the implications that you draw from your results that are useful to others: new insights, new theory, new frameworks.

# Illustrations

- In your study, effective illustrations are crucial to support the explanations and interpretation. Poor illustrations will undermine the value of your work.

# Qualitative Data

- Texts, Codes, Categories and Themes
- Example: Writing Challenges and Facilitating Strategies

# Wrapping It up: Discussion and Conclusion

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# Summary of Key Findings

- Briefly summarize your overall outcomes, and how they were achieved. Two or three paragraphs are sufficient.
- To get started, re-read your introduction with a focus on the motivation for the study and its aim and scope. Now rewrite these in a few sentences, keeping in mind that the reader has now been educated by you in your topic, and so can be spoken to in a more informed way. Next, go to your review of literature and write about the main ideas and trends that you found and then summarize the key results in a few sentences. You are now prepared, as is the reader, to consider your work in the context of the field.

# Discussion of Results

- In light of the knowledge in your field, and with your research questions in mind, discuss how the outcomes of your thesis contribute to current understanding.
- An effective way to open your discussion is to list points of agreement with previous work. For example, you may have found that your results largely support a particular hypothesis or way of doing things. Your contribution here is that you are strengthening our confidence in what others have found.
- As you continue, consider the points in the literature that you disagree with as a result of your own work. By ‘disagree’, I mean that you should highlight gaps or errors in our understanding. Your work, perhaps, helps to fill some of these gaps in ways that may be novel, innovative, or even surprising to others in the field. Indeed, this is your contribution, and you should show that you are proud of it.

# Implications

- To further illustrate the contributions of your study, explain their potential broader influence.
- Examiners expect that you consider ways in which your work can have an impact or be influential (internal or external generalization)
- It has been suggested that there are five key areas for consideration:

# Pedagogy

- If your work relates in some way to the way people teach and learn about your field, consider its pedagogical implications.

# Policy

- In what ways do the results of your thesis influence areas of policy for institutions, businesses, organizations, or governments?

# Professional Development

- Think about people who are already working in the field, and how they maintain their understanding of current and innovative practices in their area. You may want to suggest specific areas of professional development that can benefit from your work, or how aspects of your findings could be taught to current professionals.

# Practice and Methodology

- How might the way that you conducted your study affect future data collection, research designs, or analytical procedures?

# Products

- How could the results of the study influence the way products such as materials, software, and instrumentation are designed and built?

- The implications of your thesis will not touch on all of these five areas; indeed, I encourage students to highlight one or two of them. The main part of writing about the implications of your work is to move ‘theory into practice’, to show that your work has relevance in the world beyond research.

# Theorization

- Using general theoretical concepts to develop grounded middle-range theorizes,
- Using qualitative data to challenge theoretical concepts, and
- Transferring middle-range concepts to new research domains.

# Limitations of the Study and Critical Reflection

- If the study were to be repeated, what would you do differently? What are some of the ways in which the project may be limited?

# Agenda for Further Research

- Suggest ways to extend the current project and thus contribute to further research.

# Conclusion

- Write a brief conclusion to your entire thesis by restating the motivation for the study, its aim and scope, central results, and key contributions. There are four points you might want to consider for a robust conclusion:
- Draw your conclusion solely from the discussion.
- There should be only minimal discussion in the conclusion.
- The conclusion should respond to the aim stated in the first chapter.
- Summaries are not conclusions
- Conclusions should be crisp and concise

# Appendices

- Appendices are the logical place to keep material that supports the main argument, but is needed only for reference.
- There must be a justification for appendices.

# References and Citations

- Follow discipline style guide strictly.

# Before you Submit

- You have just typed the final sentence of your conclusion. Finished at last? Wrong—you still have a great deal of work to do. You have two major tasks ahead: you must revise your first draft in response to the criticisms of your supervisor and friends, and, when you have done that, you must check the details of the whole work.

# From First to Second Draft

- After completion of a first full draft, a surprising amount of work remains, including the task of getting good feedback from your supervisor.

# Structural Editing

- When I receive an entire draft thesis to read, I first look at the overall structure. I skim the table of contents, for example, to check that it corresponds with the chapter titles and main section headings in the text. It should tell me straight away whether there are any major structural problems. If it is informative enough, I go to the beginning of each chapter and read the introductions in order. At this stage, I am looking for logical links between each chapter, and then to see how they come together as an overall argument.

# The Main Text

- Next, I read the whole draft from beginning to end, noting spelling, grammar, and typographical errors as I go, and also noting things such as obscurities, poor style, and places where the argument seems to have logic gaps. At the end of each chapter I write a few lines about how the chapter shaped up in the context of everything that preceded it.
- The summary of the chapter is particularly important here. One of my most common comments on summaries is that the author has written a list of the chapter contents, rather than giving me, the reader, a sense of how the chapter has advanced my comprehension of the argument.

# Revising

- Take the process of rewriting, and rethinking, seriously. Problems should be identified and fixed.

# Checking the Details

- The final step is to polish the text, and to check for any minor errors.

# Preliminary Pages

- The first few pages, before the start of Chapter 1, set the context of the thesis. These initial pages will include: Title page, abstract, table of contents, acknowledgments, dedications, list of figure, list of tables, definition of key terms.

# Writing Abstract

- Why this study= One line
- Research questions
- Methodology= Two to three lines
- Findings= Three to four lines
- Implications=One line
- Keywords: Representation of the content