

# Qualitative data analysis

# Several ways to analyze

- Thematic analysis
  - Affinity diagram
- Content coding
- Topic modeling

# Thematic Analysis

# Thematic analysis

- Go through the data and identify “themes”, these themes become your outcomes.
- Affinity diagrams are one of the easiest ways to do thematic analysis with a group or by yourself
- Pros
  - Pulls the main concepts of the data out
  - Easy for someone else to understand
  - Themes are grounded in the data with clear examples
- Cons
  - Only works with a small amount of data
  - May require more than one person to improve validity



Appu-  
cation

FAQ-FB 58 I want to study in America next year, but a lot of the semesters start in August, will I be able to attend?

FAQ-FB 59 I missed the UCAS deadline for confirming my offer, what can I do?

Requi-  
rements

FAQ-FB 55 What if I don't meet one of my conditions or requirements?

FAQ-FB 31 I'm short of one of my conditions by 1%, what should I do? Will I be okay?

FAQ-FB 03 I'm waiting to hear if I'm being accepted as I fell sort of my conditions, what do I do?

FAQ-FB 04 Is there anything I can do once I am rejected from the Uni?

Waiting  
for  
offer

FAQ-FB 60 When will I hear about my CAS number and the progress on my application?

FAQ-FB 54 Admissions haven't gotten back to me yet, is this normal?

FAQ-FB 30 How long will it take the Uni to get back to me after sending my results in?

FAQ-FB 13 How long till I get my unconditional after uploading the relevant documents?

FAQ-FB 06 How long will it take for me to get my unconditional after I submit the relevant documents?

After-  
accep-  
tance

FAQ-FB 56 After accepting my offer what do I do?

FAQ-FB 16 Can I go straight into 2nd year?

FAQ-FB 02 I was granted deferred entry, but I never requested this, what do I do?

FAQ-FB 57 I can't afford to come  
FAQ-FB 37 Can I pay accommo-

I wa

DEGREES

# FINANCE

## LIVING COSTS

## Banking

## TUITION

FAQ-FB 44 What sort of laptop should I get?  
FAQ-FB 45 Are you allowed to use a music recorder in lectures?

FAQ-FB 12 Is there an internship programme at Edinburgh?  
FAQ-FB 16 Are there any part-time jobs with informatics?

FAQ-FB 34 How much are laundry prices in halls?  
FAQ-FB 44 How much should I spend on food a week? (Catered Halls should ignore)  
FAQ-FB 57 I can't afford to come, what can I do?  
FAQ-FB 37 Can I pay accommodation fees in instalments?

FAQ-M 01 Bank accounts – How do I open one? Where is the nearest branch? Where do I get a letter that will allow me to open a bank account?  
FAQ-FB 47 Should I open a UK bank account?  
FAQ-FB 41 What bank is best for me to open an account with?  
FAQ-FB 08 I want to apply for a Masters Loan, but I'm not sure if I'm able to apply for one if I'm studying in Scotland?

FAQ-FB 46 Do I get a discount for paying my tuition fees all at once?  
FAQ-FB 15 Can you pay tuition fees incrementally?  
FAQ-FB 40 What happens to tuition fees with EU referendum result to Brexit?  
FAQ-FB 18 I submitted a SAAS application after the stated deadline, is this okay?  
FAQ-FB 45 When should I pay tuition fees?  
FAQ-FB 52 Are their student loans within the UK for international students?

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After accep-

## Application

Requirements

Waiting for offer

After acceptance

## Finance

Living costs

Banking

Tuition



# Content coding

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# Qualitative Data Analysis

A Methods Sourcebook



Edition **3**



Following  
examples are  
from this  
book

# Content coding

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“I decided that I wasn’t going to install the update because I have heard all the reviews online about how it generally makes your phone slower in every respect.”

# Descriptive Coding

- Goal: label the data to understand what is there in a very general flexible way
- Label data to summarize it
- Typically a word or short phrase, often a noun

' As I walked toward the school, there was a 7-11 convenience store 1 block away, next to a small professional office building: an optometrist, podiatrist, and other medical/health-related clinics. Directly across the street was an empty lot, but next to that stood a Burger King restaurant.

' BUSINESSES

# In Vivo Coding

- Goal: Get a sense of how the subject expresses the key ideas in their own words
- Use the participants own words to summarize the text
- Go through and identify key phrases

I<sup>1</sup> hated school last year. Freshman year, it was awful, I hated it. And<sup>2</sup> this year's a lot better actually I, um, don't know why. I guess, over the summer I kind of<sup>3</sup> stopped caring about what other people thought and cared more about, just, I don't know.

<sup>1</sup> "HATED SCHOOL"

<sup>2</sup> "THIS YEAR'S BETTER"

<sup>3</sup> "STOPPED CARING"

# Process Coding

- Goal: Understand the process, actions, or steps people engage in
- Code using only “-ing” words.

Well, that's one problem, that [my school is] pretty small, so <sup>1</sup> if you say one thing to one person, and then they decide to tell two people, then those two people tell two people, and in one period everybody else knows. <sup>2</sup> Everybody in the entire school knows that you said whatever it was. So. . . .

<sup>1</sup> SPREADING RUMORS

<sup>2</sup> KNOWING WHAT YOU SAID

# Emotion Coding

- Goal: Identify feelings or emotions
- Identify emotion words and phrases

<sup>1</sup> I just hated it when he got awarded with the honor. <sup>2</sup> I mean, we're praising mediocrity now. Never mind that what you've accomplished isn't worth squat, it's all about who you know in the good ol' boys network.

<sup>1</sup> "HATED IT"  
<sup>2</sup> BITTERNESS

# Dramatical Coding

- Goal: Identify objectives (obj), conflicts (con), tactics (tac), attitudes (att), emotions (emo), and subtexts (sub).

<sup>1</sup> There was a lot of pressure this year to “do more with less.” And that always <sup>2</sup> frustrates me, because you don’t “do more with less”—you do *less with less*. So <sup>3</sup> if they’re expecting me to do more with less money and less resources, they’re not going to get it. And it’s not because I’m being snotty or passive-aggressive about this; <sup>4</sup> it’s simply that you can’t squeeze blood out of a turnip. There’s only so much you can do with what you have. <sup>5</sup> And yes, I’m spending some of my own money this year on classroom supplies because we don’t have enough to last us through the end of the year. <sup>6</sup> That’s just the way it is these days.

<sup>1</sup> CON: LESS RESOURCES

<sup>2</sup> EMO: FRUSTRATION

<sup>3</sup> TAC: RESISTANCE

<sup>4</sup> ATT: LIMITATIONS

<sup>5</sup> TAC: SACRIFICING

<sup>6</sup> ATT: ACCEPTING “THE WAY IT IS”



**Open coding: each researcher reads through the text and marks passages with “codes” which are similar to tags.**

# Content coding: Open coding

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“I decided that I wasn’t going to install the update because I have heard all the reviews online about how it generally makes your phone slower in every respect.”

# Content coding: Open coding

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“I decided that I wasn't going to install the update because I have heard all the reviews online about how it generally makes your phone slower in every respect.”

Not updating

Recommendations

Phone speed

**Run a thematic analysis on the open codes.**

# Content coding: Code book

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1. Awareness
  2. Deciding
  3. Preparation
  4. Installation
  5. Troubleshooting
  6. Expected post state
  7. Post state
- Installation
    - Time
    - Cost
    - Resources
    - Problems
    - Failure
    - Restart
    - Bundled software

# Content coding

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I decided that I wasn't going to install the update	Deciding : did not update
because I have heard all the reviews online	Deciding : research
about how it generally makes your phone slower in every respect	Expected post state : performance : worse

# Deciding to update or not update

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- Updating is important
- The old version had problems
- Reviews
  - Features, performance, resources, bugs
- Wait out the problems
- Worth the bother?
- Updates could contain viruses



# Topic Analysis



# Topic modelling

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- a form of text mining which provides a simple way to analyse large volumes of unlabelled text.
- computer goes through the text and creates an word cloud



# Topic modelling

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- Remove the conflicting words
  - common words (e.g. “the”, “in”, “to” ... )
  - words which may cover every part of the text
- Connects words in clusters → “topic” – a cluster of words that frequently occur together
- Groups of words that tend to happen very frequently together
- What percentage of the documents are dealing with each topic