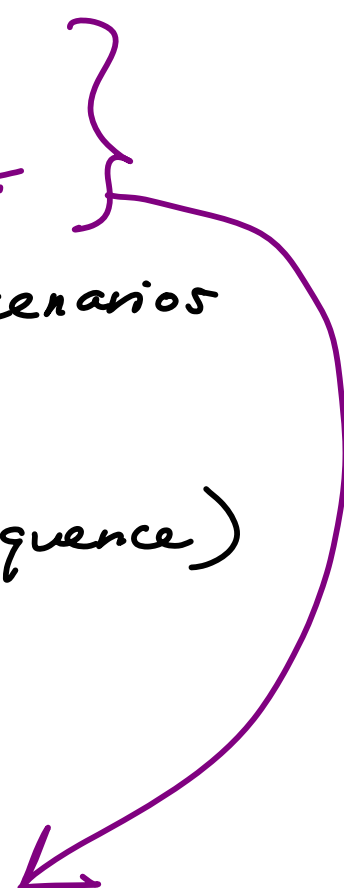


Common

outputs of qualitative research:

- ① hypotheses *
 - ② answers to questions *
 - ③ narratives, use case scenarios
 - ④ models
 - CI models (flow/sequence)
 - personas
- 

qualitative
hypothesis-generating research

Qualitative Hypothesis-Generating Research

① identify research issue

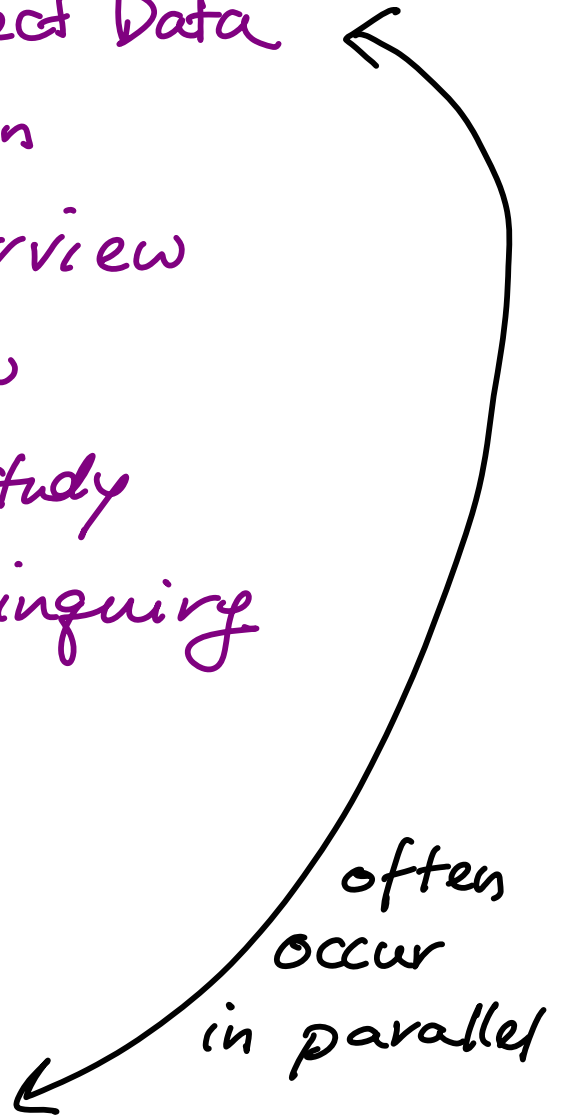
ex: study subjective experience of X
catalog a diversity of practices
for Y

② choose initial set of participants
who have experienced / continue to
experience the phenomenon you want
to study

③ Choose method / Collect Data

- field observation
- narrative interview
- other interview
- diary / log study
- contextual inquiry
- survey
- focus groups

④ Process Data.



How to process qualitative data?

- Data usually in the form of text, video, or other media

① Break data into pieces.

each piece is one independent

thought / step / episode / intent / idea

Label each piece

User #, Session #, Piece #

② Assign each piece a "code"
(CATEGORY)

1. open coding - induce category names as you go.
2. fixed coding - start with a fixed set of category names
deductive
3. stare at data and then come up with a fixed coding scheme - *bleah* :-)

Easiest Way to Code Data

(but it has problems)

- ① start with an uncategorized piece
assign it a category
- ② find all other pieces in the
same category
- ③ Repeat ①-② until all data in a
category.
- ④ Organize categories into themes.
- ⑤ Organize themes into
theoretical constructs
(together form a theory)

⑥ Continue research
by deliberately choosing
samples with a good chance
of confirming, deepening, or
disconfirming your theory
→ THEORETICAL SAMPLING

⑦ Code new data using existing
categories as a starting point
(can add/modify categories as
needed) — a little deductive

Grounded Theory

by Glaser and Strauss 1960s

a theory that was induced

(grounded in the data)

→ something that accounts for a pattern of behavior

Strauss - style grounded theory is very

systematic:

- ① theoretical sampling
- ② constant comparison
- ③ coding paradigm

Constant Comparison

- ① Start by comparing one data piece to others. What words are the same? Different?
- ② Begin to assign codes to data pieces.
(concept names)
- ③ As codes are assigned, compare each new data piece to all others with the same code (concept)
Begin to craft definitions for each code.

- ④ Now compare new data pieces
to the corresponding code definition.
→ sharpen definition of the
code
- ⑤ Build categories out of concepts.
(themes)

Coding Paradigm

Coding is not just the identification of a one-phrase code.

Strauss recommends defining

a code in detail and also noting

① causal condition: *when is this relevant?*

what caused this to occur?

② interactions among actors

③ strategies

④ consequences

Often ①-④ are pointers to other codes data pieces,

Example:

Reading Source Code

- cause: new check-in,
been away a few days,
debugging
- interactions: author stopping by
to notify of changes
- strategies:
 - start at main,
follow control flow
 - read newly edited first
 - compare diff
- consequences:
 - aware of additional changes to
be made
 - ask questions to other programmer
 - didn't find answer

Codes also have

properties with dimensions.

Example:

	props	dimensional range
Reading Code	frequency	often — never
	concentration	hi — lo
	duration	long — short

Look for comparative cases
(different values along the ranges).

Grounded Theory Process is Iterative

- continually review code assignments, code definitions, coding paradigm, properties and dimensions.
- may review notes from one category at a time (axial coding) to sharpen definition of that category

At some point,
code definitions stop changing.

You can choose a CORE CATEGORY now
— and only assign codes from
here on out that relate to the
core category (still have multiple categories)

example: choose to focus on
interactions with source
(reading/editing/building)
as CORE,
drop attention to effect of
desk layout.

MEMOS

- ① relationships between concepts,
between categories
- ② influence of your personal experience or personal study
- ③ anytime you are thinking instead of coding.

Properties of Good Qualitative Research Results

① Transparent

- other researchers know the steps you took to reach your conclusions

(back up assertions with raw data)

② Transferable

Do theoretical sampling to see how your results transfer to a different context.