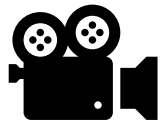


# Multimodal Thematic Analysis in ATLAS.ti: Insights from a Multimodal Ethnographic Study



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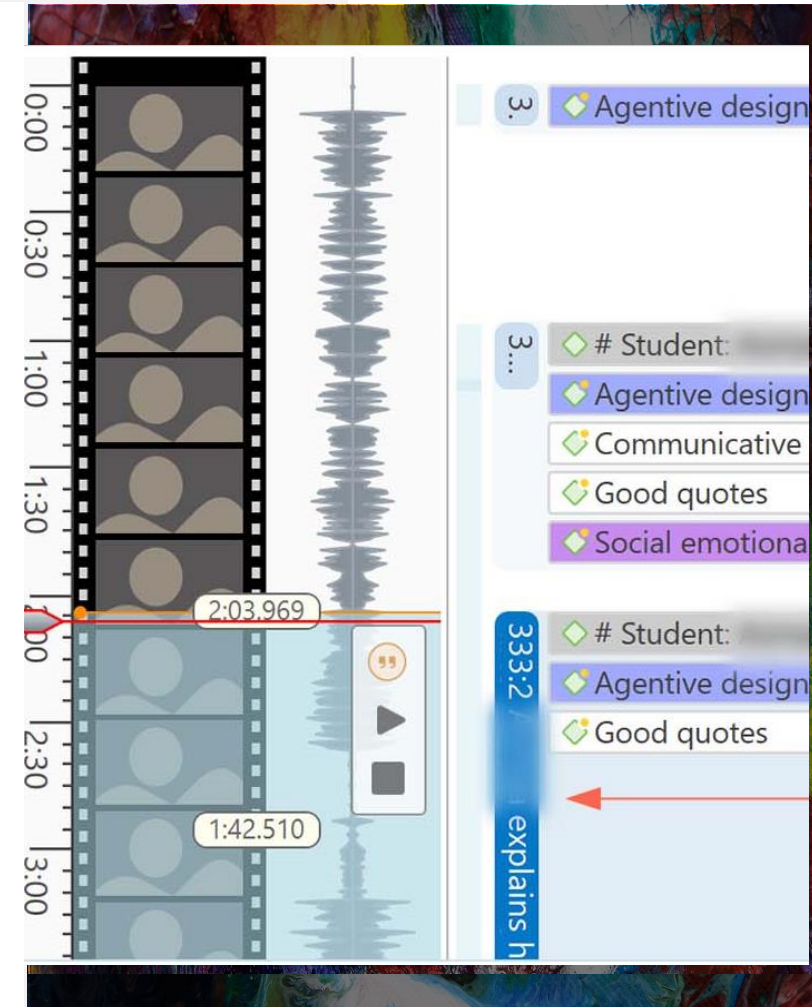
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# INTRODUCTION

- Increased possibilities of **directly analyzing audio, image, and video data** (e.g., in CAQDAS software), with compelling arguments for its usefulness (e.g., Stonehouse, 2019)
- Direct analysis is often **exploratory, inductive, and emergent**, with initial, time-consuming practice of identifying **inspectables** (Subramanian et al., 2021)
- However: little is known about **integration** with specific methodological approaches (Melgar Estrada & Koolen, 2018)
- **Reporting** of analytic practices of CAQDAS is often limited (Paulus et al., 2017)
- Current detailed descriptions of multimodal analysis **predominantly discursive** (e.g., Norris, 2019) **rather than thematic** (e.g., Pirini, 2018) + rarely operationalized in CAQDAS.



# INTRODUCTION

- Growing body of literature has been emerging to:
  - **document, illustrate, and inform** the possible ways in which different methodological approaches and methods of analysis could be operationalized in CAQDAS
- For example:
  - Discourse analysis (Paulus & Lester, 2016)
  - Narrative analysis (Bower et al., 2021)
  - Grounded theory (Hutchison et al., 2010)
  - Thematic content analysis (Frieze et al., 2018)
- This paper adds to this body of literature an empirically-based model of inductive and reflexive MTA in ATLAS.ti.





# REFLEXIVE THEMATIC ANALYSIS

- TA: **Foundational and distinctive method** of qualitative analysis (Braun & Clarke, 2006, 2020, 2021)
- Six-phased approach:
  1. Familiarization with dataset
  2. Coding
  3. Generating initial themes
  4. Developing and reviewing themes
  5. Refining, defining, and naming themes
  6. Writing up
- Reflexive TA: relies on **researcher subjectivity as a resource** and on “meaning and knowledge as partial, situated, and contextual” (Braun & Clarke, 2020, p. 6)
- Described as a method for analyzing almost any data, but **mostly built around analysis of textual data** (Braun & Clarke, 2013)
- This paper **extends TA procedures to analysis of multimodal data** in the context of a multimodal ethnographic study.



# MULTIMODAL ETHNOGRAPHY

- Methodological approach (e.g., Dicks et al., 2006, 2011; Flewitt, 2011) that:
  - integrates the focus of multimodal, social semiotic research (Kress, 2010) on the **meanings made in artifacts through multiple modes of meaning-making** (e.g., languages, visuals, sounds, gestures)
  - with the focus of ethnography on the **historical, social, and cultural contexts** in which those artifacts are produced and the **processes** that bring them about.
- This **paper illustrates MTA in the context of a multimodal ethnographic study**:
  - It is the first (to the best of my knowledge) that presents an extensive account of MTA in ATLAS.ti, especially in the context a multimodal ethnographic study.





# CONCEPTUAL FRAMEWORK

- **Interactive** approach to Qualitative Data Analysis (Maxwell, 2012; Maxwell & Miller, 2008, Maxwell & Chmiel, 2013) that involves:
  - **Categorizing** strategies (relationships of similarity): organizational, substantive, theoretical codes.
  - **Connecting** strategies (relationships of contiguity)
- Computer-Assisted Qualitative Data Analysis as an **ongoing, iterative, and emergent development and translation** of analytic **strategies** and analytic **tasks** into software **tactics** (Woolf & Silver, 2018).
- A **multimodal approach** to meaning making that:
  - **decentralizes language**
  - sees **meaning as ranging over multiple modes**, such as the linguistic (including multiple languages), visual, spatial, gestural and audial modes, in interaction (Kress, 2010; New London Group, 1996)



# CONTEXT OF STUDY

- **Systematic and detailed documentation of analysis processes** in a multi-year, multimodal ethnographic study (2019-2021), ~75 hours of audio and video data.
  - Case study research involving nine youth from refugee and migrant backgrounds (aged 13-18) and six teachers
  - at a secondary school in Western Canada
  - employed **participatory video** (Goodman, 2018; Mitchell et al., 2017), i.e., video-making led by participants to explore real world issues of their choice.
  - **Study's goals:** **make visible** youth's language, literacy, and educational practices, resources, and challenges, and **promote pedagogies** that will better engage them in school learning.
  - Data sources:
    - audio and computer-screen video recordings of all production sessions
    - audio-recording of video-screening sessions
    - field-notes
    - youth's footage and final videos (e.g., reaction videos, video podcasts)
    - formal and informal audio recordings of interviews with youth and teachers.





**RESULTS:**  
**A MODEL OF MULTIMODAL**  
**THEMATIC ANALYSIS IN**  
**ATLAS.ti**

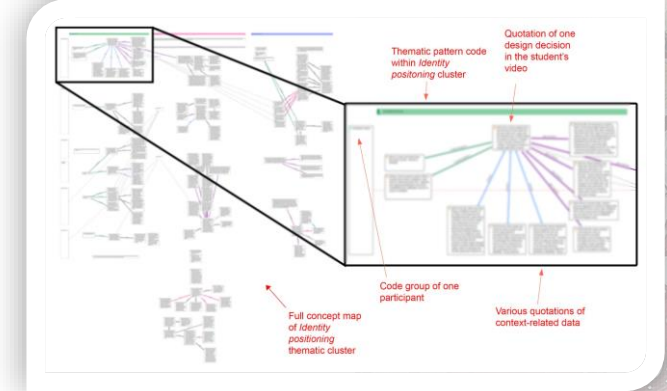
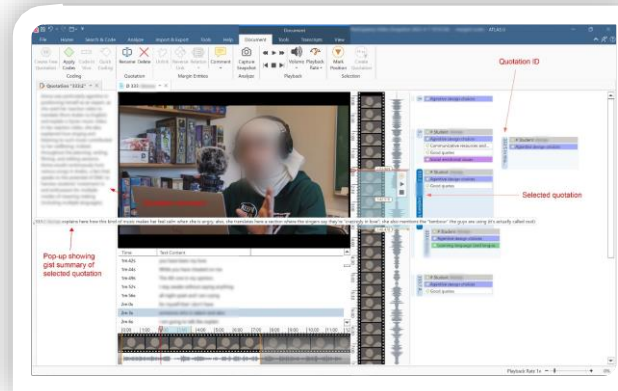
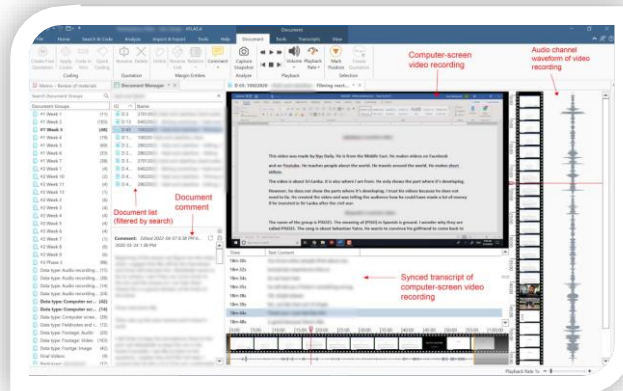
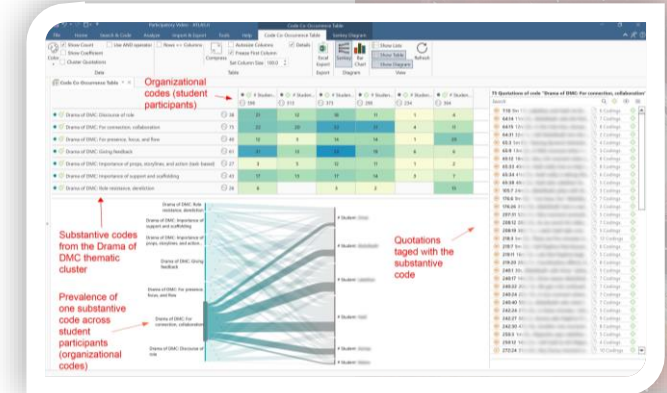




# ROUNDS OF ANALYSIS WITH RECURRING PHASES

Analysis of rich and extensive multimodal data necessitated multiple distinct, recursive, and additive rounds:

- Round 1: **Generating a bird's eye view of the data set**
- Round 2: **Mapping the data from the bottom up**
- Round 3<sub>(n)</sub>: **Excursion into a single thematic cluster**

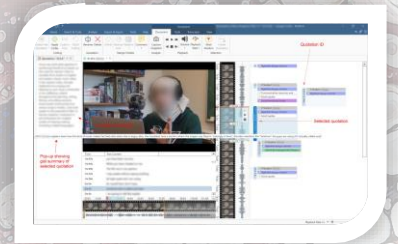
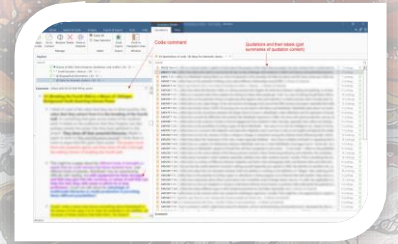
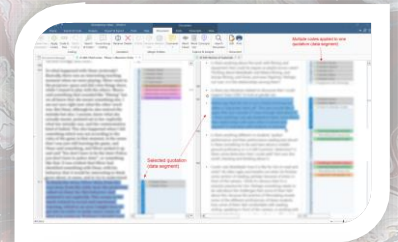
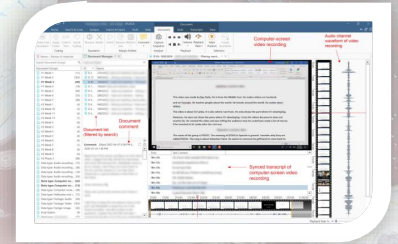


# SEGMENTING AND CATEGORIZING MULTIMODAL DATA

Text, audio, and video sources were all analyzed—reviewed, coded, and retrieved—directly in their **original form** to avoid a sensorial distance effect (Pink, 2011).

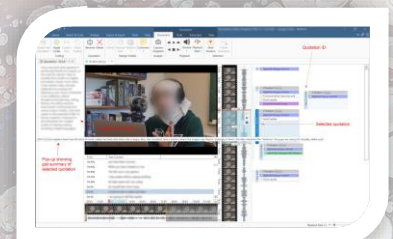
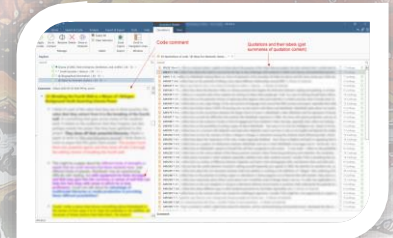
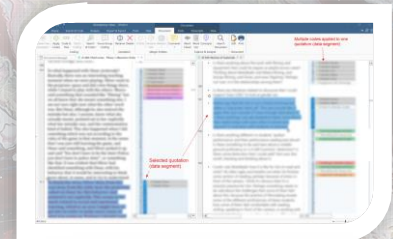
- enhanced the ability to **discern the social and cultural contexts and sensorial experiences associated with the development of multimodal artifacts** (e.g., reaction videos, video podcasts) by the students in the study, as necessary in a multimodal ethnographic approach (Dicks et al., 2006).
- Use of **language as a form of anchorage** (Barthes, 1977) for **segmentation** and **retrieval: analytic gist summaries** of segmented multimodal data (QUOTATIONS)

Analytic memo-writing and **coding of memos** to **enhance reflexivity**.



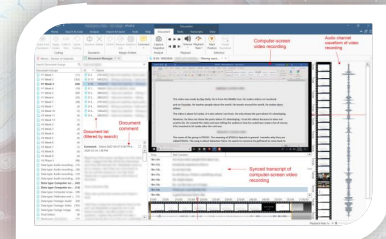
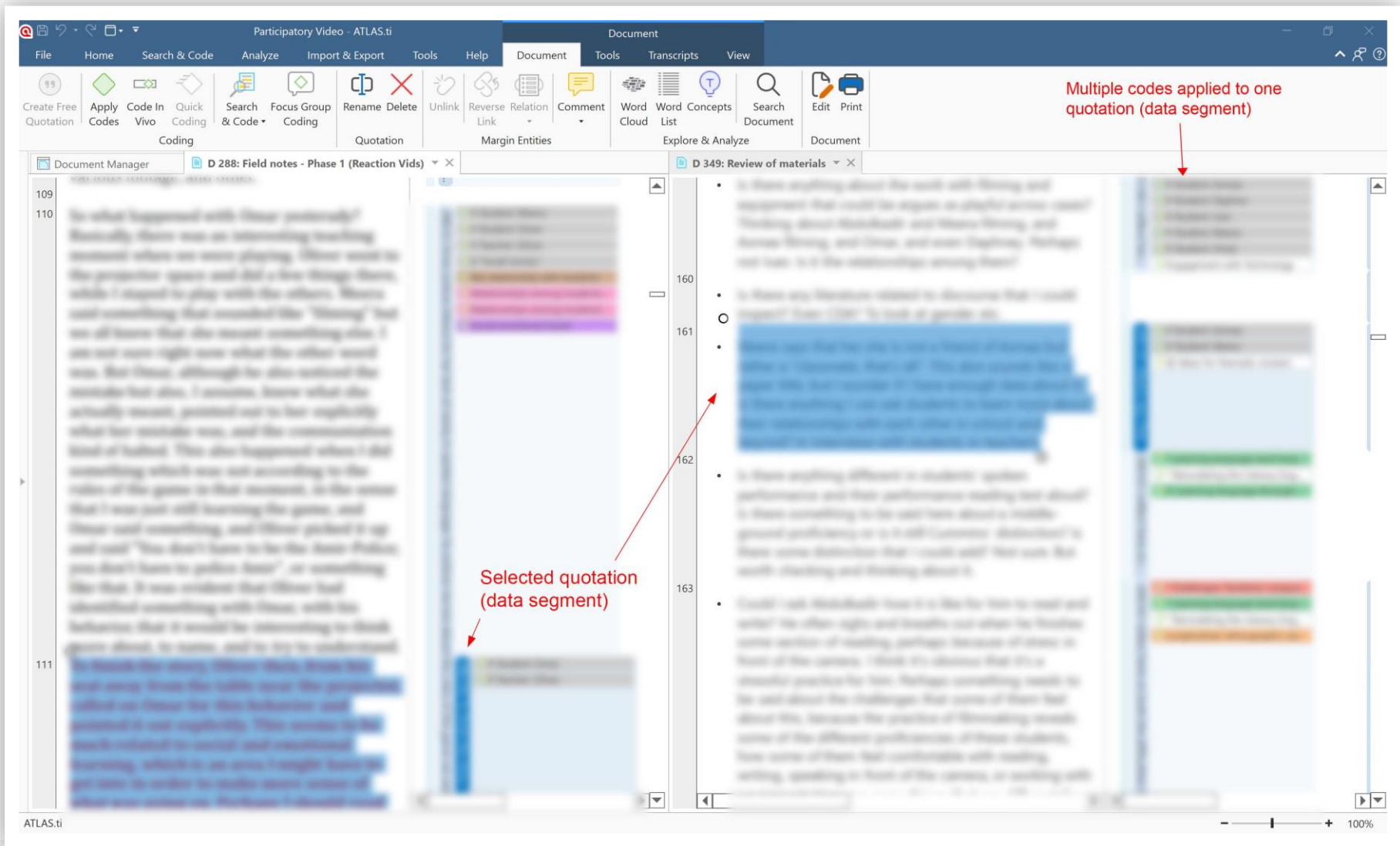


## Round 1: Familiarization with the data set

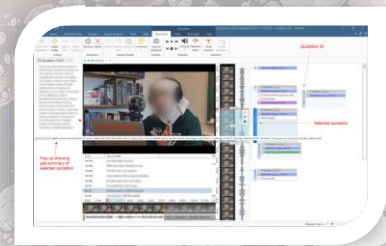
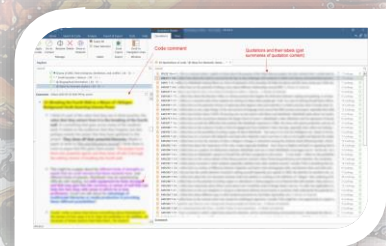
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# SEGMENTING AND CATEGORIZING MULTIMODAL DATA

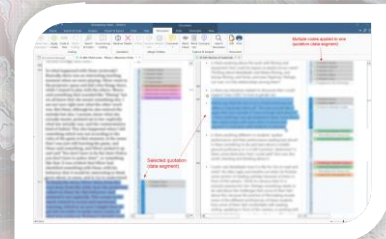
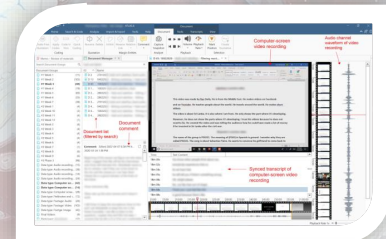


Round 1: Coding

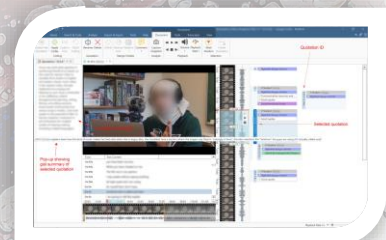


# SEGMENTING AND CATEGORIZING MULTIMODAL DATA

The screenshot displays the ATLAS.ti software interface. The main window is titled "Quotation Reader" and shows a list of quotations under the heading "63 Quotations of code '@ Ideas for thematic cluste...'. Each quotation entry includes a timestamp (e.g., 101:33 59m 41s), a snippet of text, and a list of codings (e.g., 7 Codings). A red arrow points to the "Code comment" section on the left, which contains a list of search results and a comment box. Another red arrow points to the "Quotations and their labels (gist summaries of quotation content)" section on the right, which shows a list of quotations and their associated codings. The interface includes a menu bar with options like File, Home, Search & Code, Analyze, Import & Export, Tools, and Help. A toolbar with icons for Apply Codes, Go to Context, Rename, Delete, Show in Network, Select All, Clear Selection, Excel Export, and Dock to Navigation Area Window is also visible.



**Round 1:**  
**Generating initial themes**





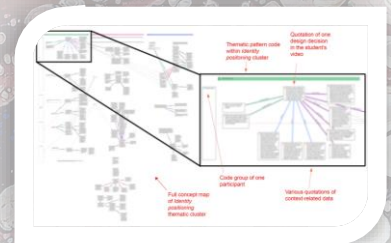
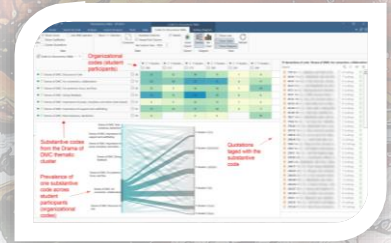
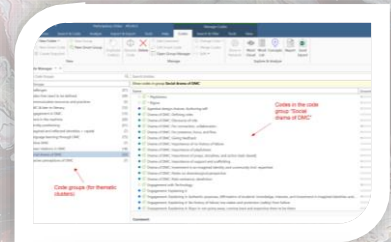
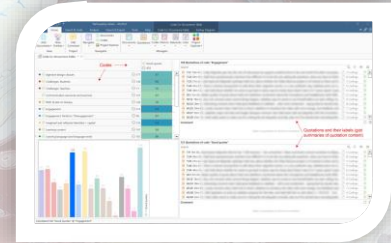
# CONNECTING SEGMENTS OF MULTIMODAL DATA

Analytic memos included the **mapping of arguments/claims and substantiating evidence** (QUOTATION IDs) that was easily retrievable in multimodal form.

Establishing **contiguity relationships between codes** from different categories (CODE CO-OCCURRENCE TABLE)

Multimodal ethnographic approach necessitated that any analysis of **multimodal participant-produced artifacts be situated in the specific social and cultural contexts** in which the artifacts were designed. For example:

- In a NETWORK (**interactive** concept-mapping space), **segments** of youth's artifacts (QUOTATIONS from their final videos) **were connected** to segments from interviews and focus groups (audio file QUOTATIONS) and filmmaking sessions (video file QUOTATIONS) that **helped explain the contexts and processes** that brought about those artifacts.





# CONNECTING SEGMENTS OF MULTIMODAL DATA

Participatory Video - ATLAS.ti

File

Home

Search & Code

Analyze

Import & Export

Tools

Help

Codes

Search & Filter

Tools

View

New Codes

New Folder

New Smart Code

Create Snapshot

New Group

New Smart Group

Duplicate Code(s)

Rename Code

Delete

Edit Comment

Edit Smart Code

Open Group Manager

Change Color

Merge Codes

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Show in Network

Word Cloud

Word List

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Report

Excel Export

New

Manage

Explore & Analyze

Code Manager

Search Code Groups

Search Entities

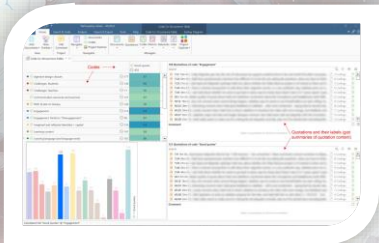
Show codes in group Social drama of DMC

Name	Grounded
* Playfulness	65
* Rigour	43
Agentive design choices: Authoring self	39
Drama of DMC: Defining roles	4
Drama of DMC: Discourse of role	38
Drama of DMC: For connection, collaboration	75
Drama of DMC: For presence, focus, and flow	40
Drama of DMC: Giving feedback	61
Drama of DMC: Importance of no history of failure	3
Drama of DMC: Importance of playfulness	9
Drama of DMC: Importance of props, storylines, and action (task-based)	27
Drama of DMC: Importance of support and scaffolding	43
Drama of DMC: Investment in an imagined identity and community (incl. expertise)	58
Drama of DMC: Notes on dramaturgical perspective	10
Drama of DMC: Role resistance, dereliction	26
Engagement with Technology	72
Engagement: Explaining it	9
Engagement: Explaining it: Authentic purposes, Affirmation of students' knowledge, interests, and Investment in imagined identities and...	68
Engagement: Explaining it: No history of failure; low stakes and protection (safety) from failure	13
Engagement: Explaining it: Rigor in not going away; coming back and expecting them to be there	20

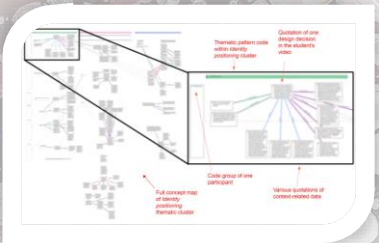
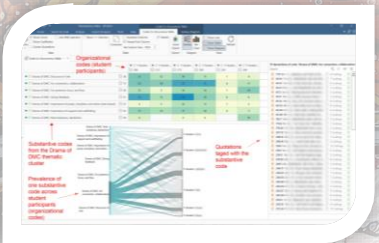
Comment:

Code groups (for thematic clusters)

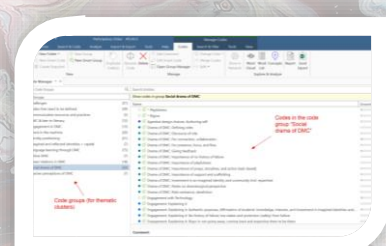
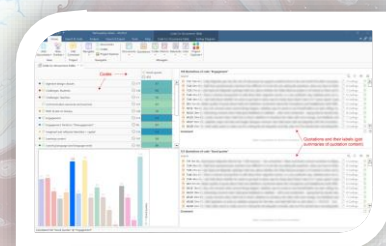
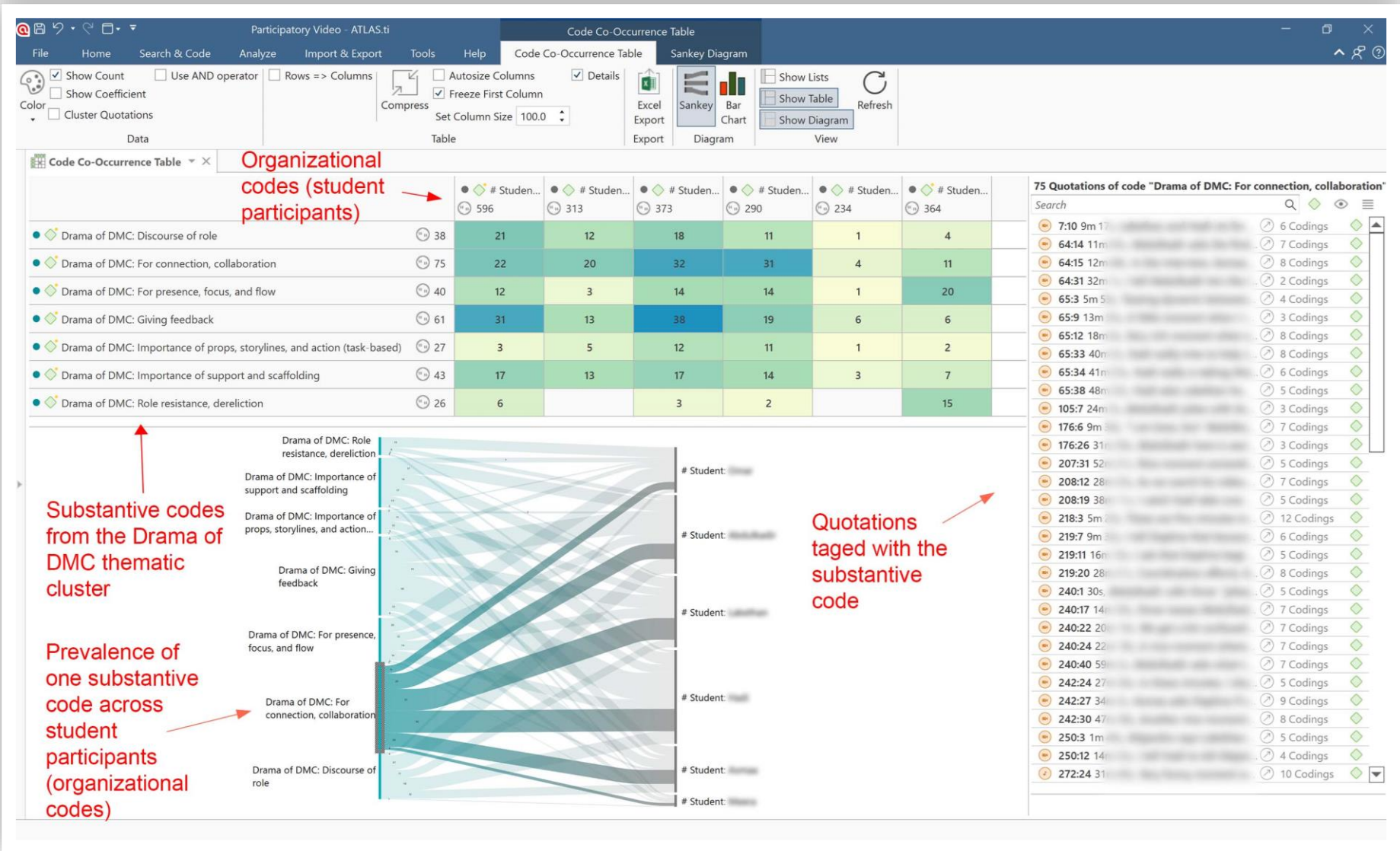
Codes in the code group "Social drama of DMC"



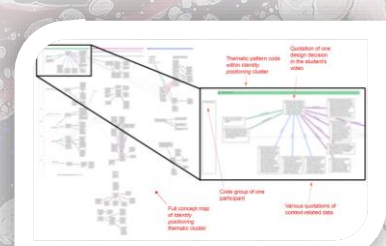
Round 2:  
Generating initial  
themes



# CONNECTING SEGMENTS OF MULTIMODAL DATA

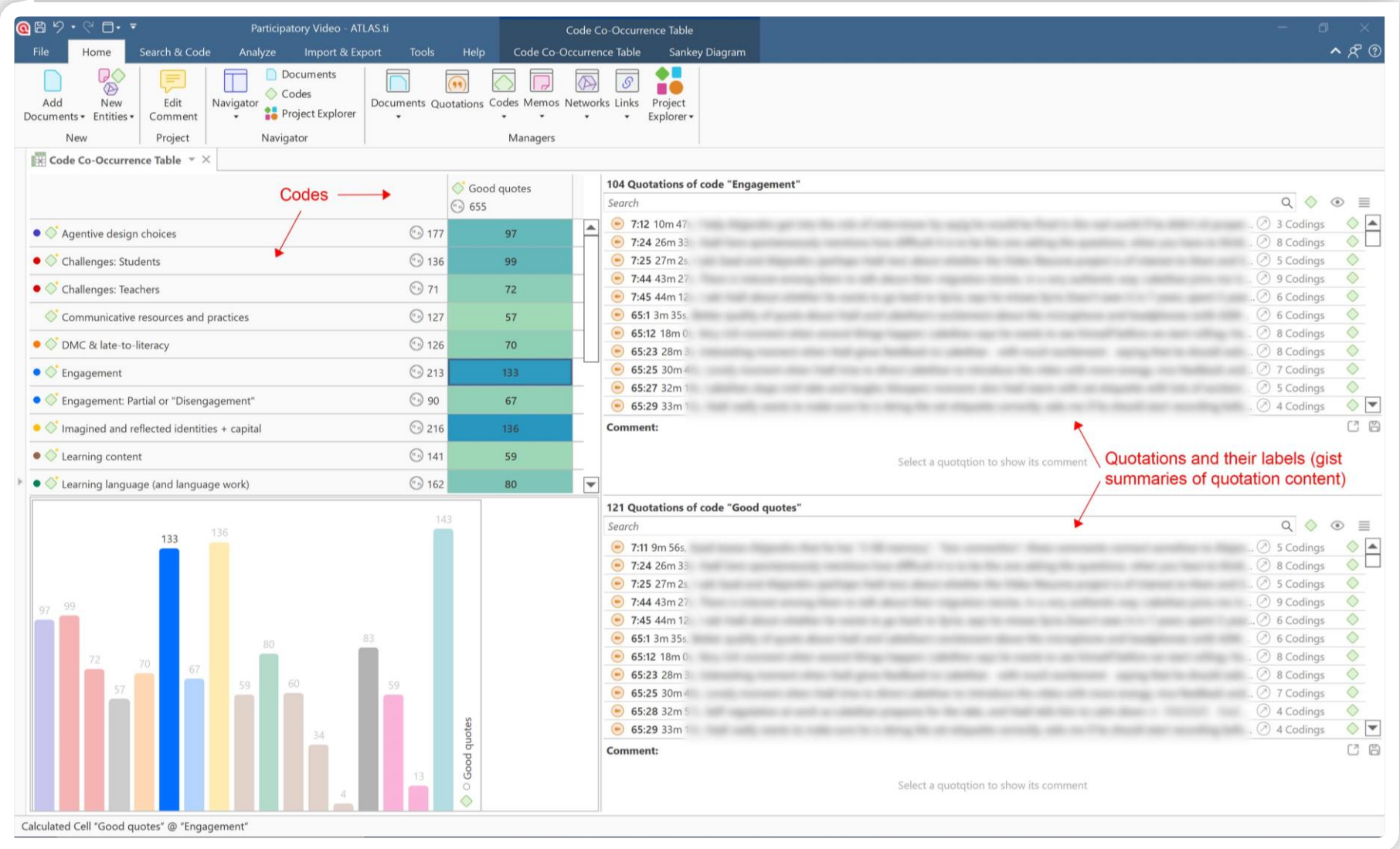


Round 2:  
Developing and  
reviewing themes

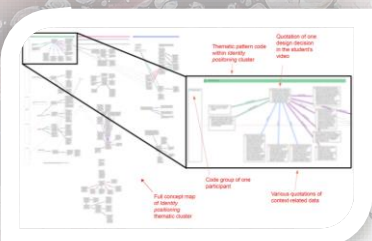
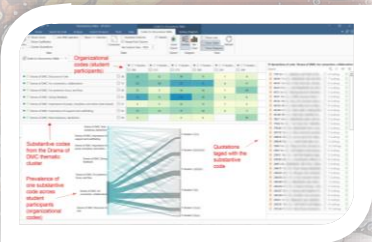
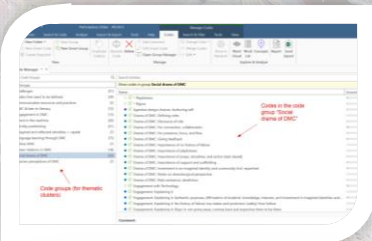




# CONNECTING SEGMENTS OF MULTIMODAL DATA

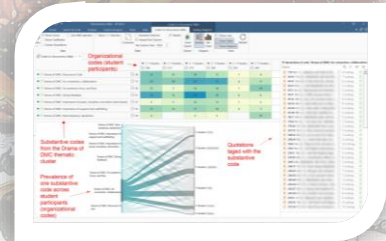
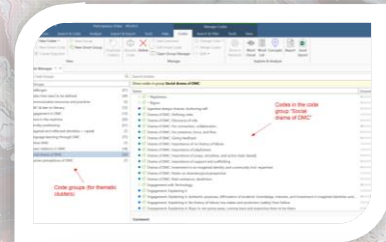
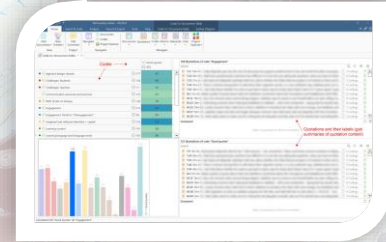
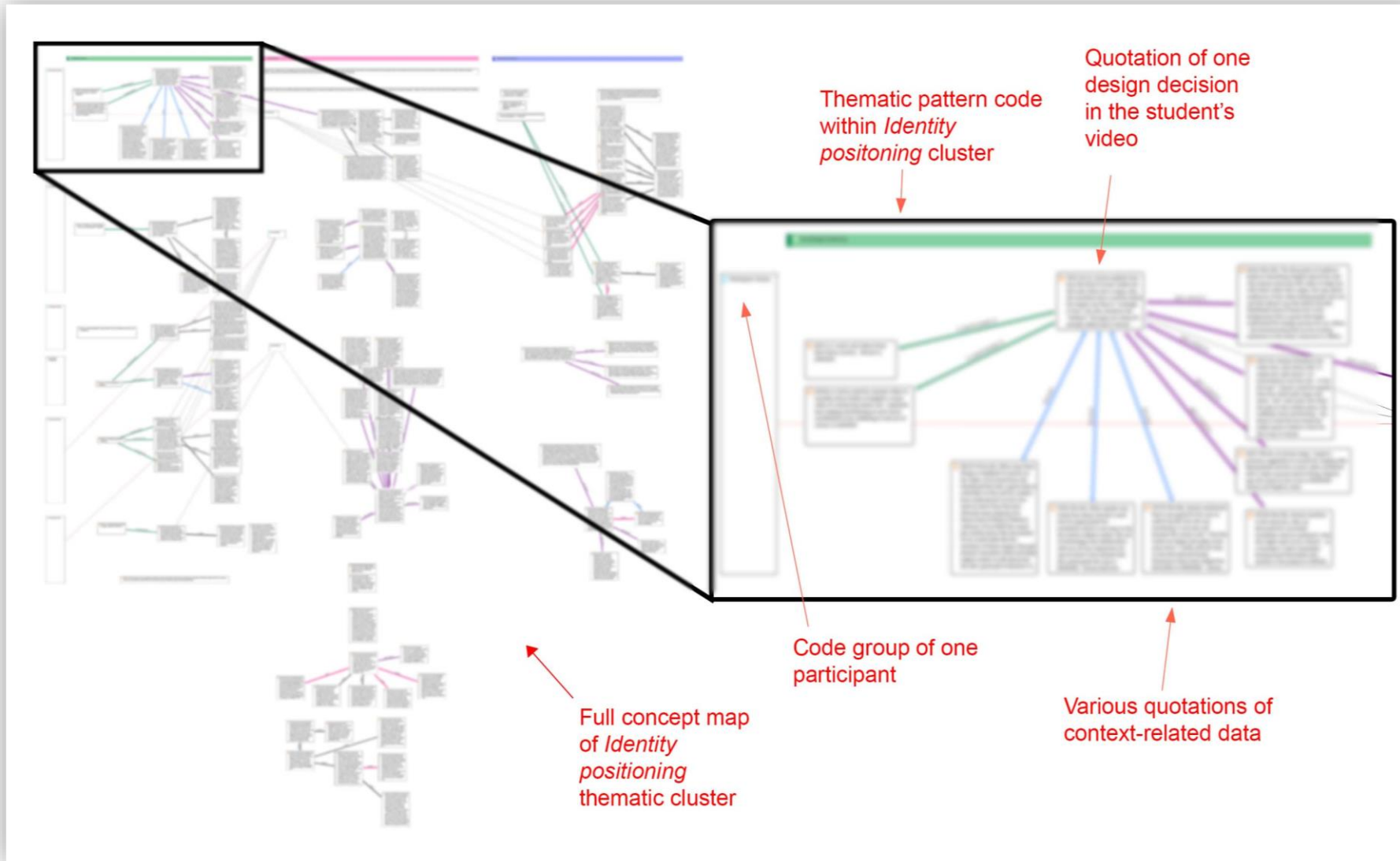


Round 1:  
Refining, defining  
and naming  
themes





# CONNECTING SEGMENTS OF MULTIMODAL DATA



**Round 3:**  
**Generating initial themes**



# EMERGING CONCLUSIONS

The presentation extends reflexive TA as laid out by Braun and Clarke (2006, 2012, 2021) to the multimodal-ethnographic realm by proposing:

1. that the previously-suggested **phases can be useful when repeated in at least three distinct, recursive and additive rounds of analysis.**
2. **direct analysis of audio and video is helpful** for maintaining a close connection to the sensory quality of the data, but that for categorizing, retrieving, and connecting techniques in CAQDAS, **researchers can benefit from attaching analytic gist summaries** in language to such data. **Combination can enhance reflexivity and trustworthiness** of analysis.
3. **relationships of similarity and contiguity play crucial parts in different rounds of MTA in ATLAS.ti**, especially for the categorizing and then grounding/connecting multimodal participant-produced artifacts in/to their social and cultural contexts and processes, as mandated by a multimodal ethnographic approach



# THANK YOU

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