

Supplementary Material B:

Hybrid Thematic Analysis Approach

We adopted a deductive/inductive hybrid thematic analysis approach (cf., Fereday & Muir-Cochrane, 2006; Xu & Katina Zammit, 2020) for our analysis, where we describe our process in detail below:

Step 1 (Deductive): Create and Agree on the Code Manual. We (five co-authors) developed a code manual based on the research questions and the interview guide. Using a top-down deductive coding approach, the manual served as a guidebook with broad categories to systematically code each participant's data and retrieve relevant information from the transcripts. In our study, six broad categories were formed, namely: (1) **Background:** product design and development experience and vibe coding tools used; (2) **Workflow & Productivity:** Vibe coding design and development processes and their impact on productivity; (3) **Prompts & Oversight:** AI prompts, design accuracy, and human oversight; (4) **Collaboration & Team Dynamics:** Human-human and human-AI collaboration and their impact on team dynamics; (5) **Adoption & Career Impact:** Vibe coding adoption, ownership, and career implications; (6) **Closing Reflections:** Final thoughts and takeaways.

Step 2 (Deductive): Individually Code the Raw Data (Transcripts). According to the six broad categories created in the code manual, we individually read through all 22 interview transcripts and retrieved the data that fit the descriptions in the manual. We then created our own statement cards on a Miro board. Each statement card (yellow Miro sticky note, see Figure 1) included the participant ID and our interpretation of the raw data. Importantly, each statement card (yellow Miro sticky note) was supported by at least one associated quote (green Miro sticky note, see Figure 1) to ensure traceability to the source data. We held a half-day workshop to review and compare all statement cards. Cards that overlapped were merged, while those on which we disagreed were discussed collectively until we reached a decision to keep or discard them. This process resulted in a total of 617 statement cards.

Step 3 (Deductive): Validate the Initial Codes (Statement Cards). After the initial round of individual coding (Step 2), we held a second half-day workshop place these 617 statements alongside the associated quotes under the six broad categories in the code manual for each participant (Figure 2).

Step 4 (Inductive): Further Categorization and Identifying Themes. Given that the categories in the code manual were still too broad, we then adopted an inductive coding approach, where we further clustered the initial 617 statement cards in a third half-day workshop and labeled each cluster, resulting in 31 clusters (Figure 3). Then, we had a fourth half-day workshop to identify themes by discussing and connecting these clusters.

Step 5 (Inductive): Reviewing and Naming Themes. We had a fifth half-day workshop to review the statement cards under the five identified themes and sub-themes and decided on the naming of each theme and sub-theme (Figure 4).

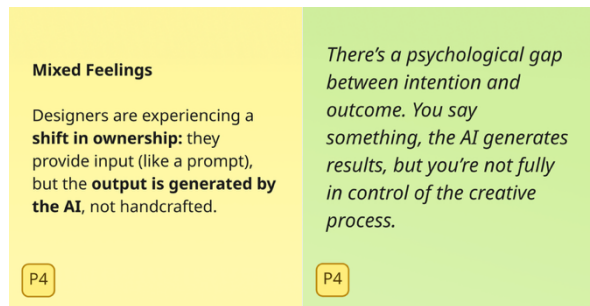


Figure 1. An example of a statement card (yellow) and its associated quote (green)

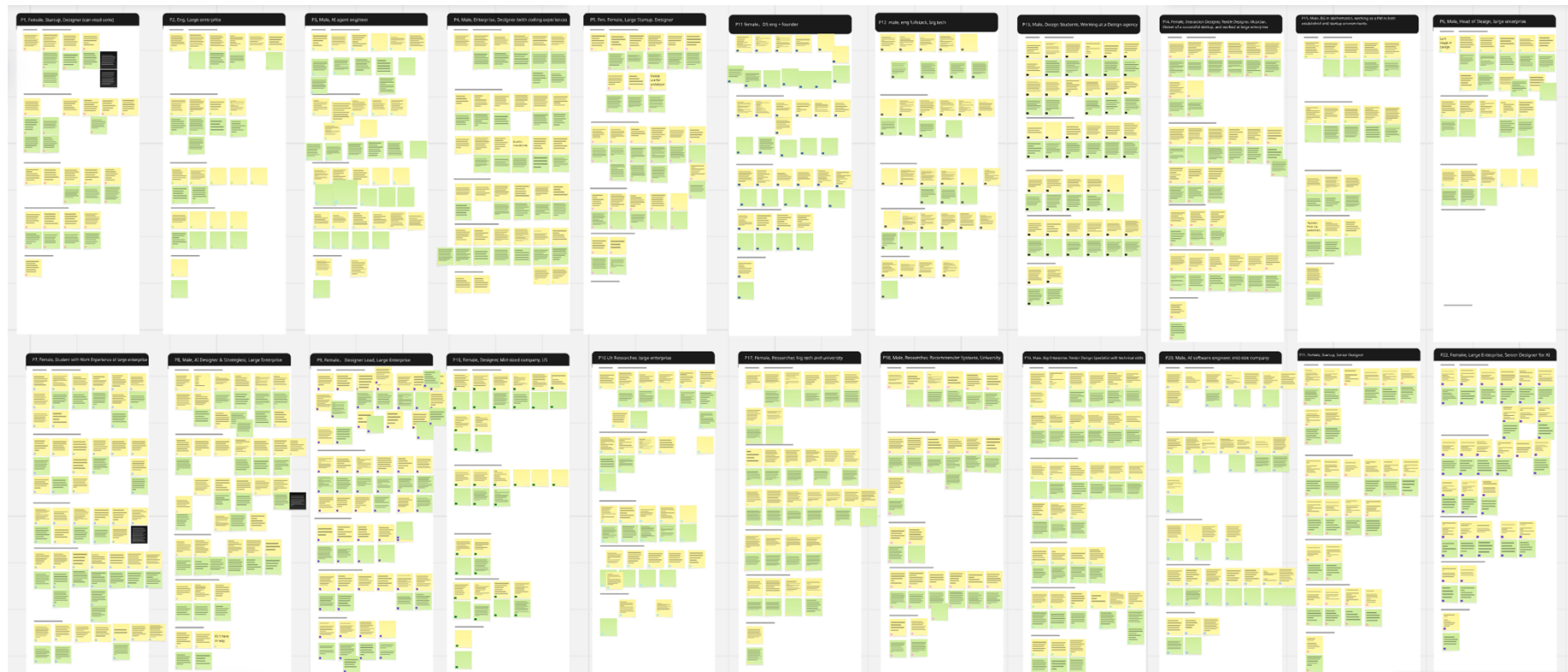


Figure 2. We placed these 565 statements alongside the associated quotes under the six broad categories in the code manual for each participant.



Figure 3. We further clustered the initial 617 statement cards in a third half-day workshop and labeled each cluster, resulting in 31 clusters

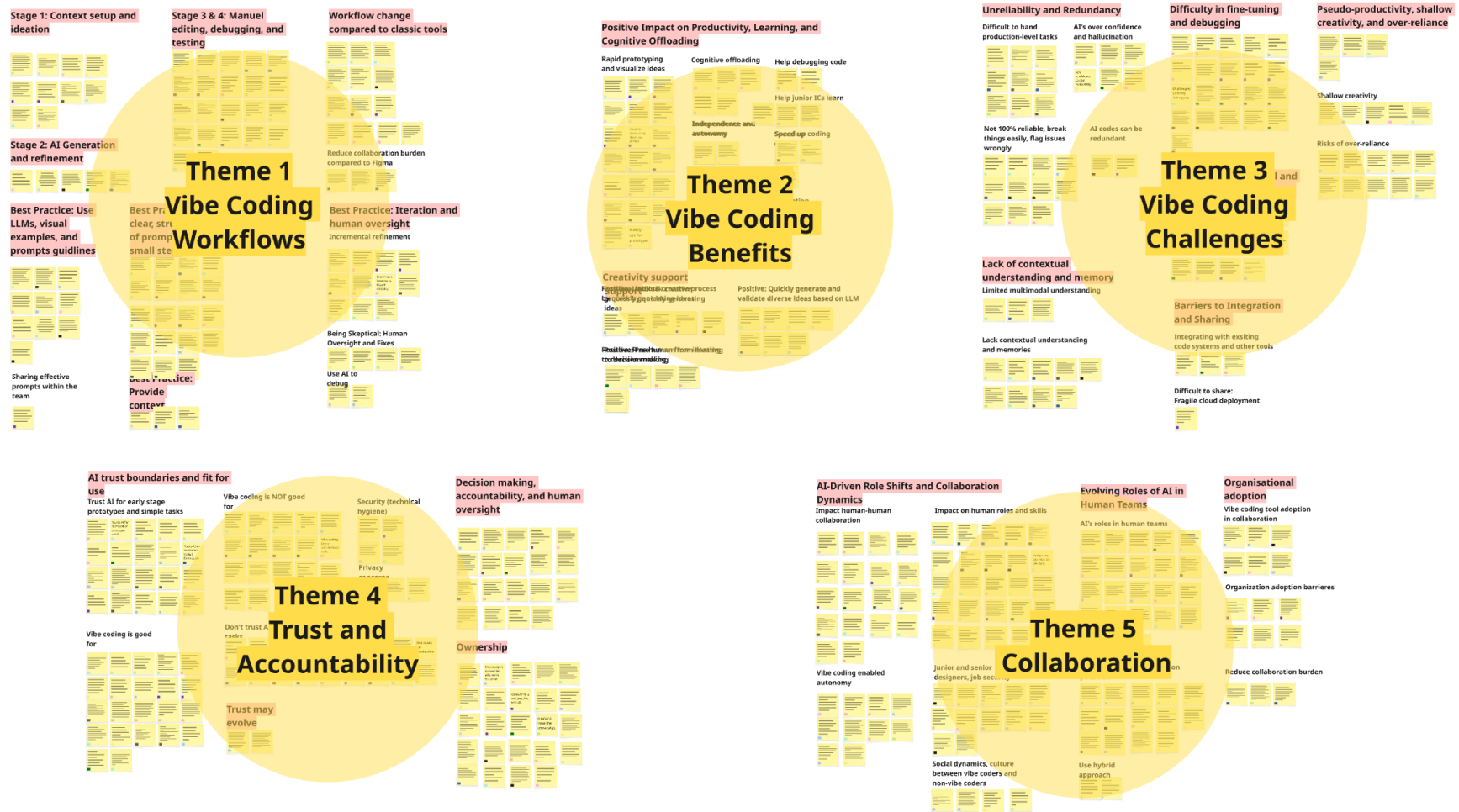


Figure 4. The five final themes, which were reviewed in Steps 4 and 5.

References

- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, 5(1), 80-92. <https://doi.org/10.1177/160940690600500107>
- Xu, W., & Zammit, K. (2020). Applying Thematic Analysis to Education: A Hybrid Approach to Interpreting Data in Practitioner Research. *International Journal of Qualitative Methods*, 19. <https://doi.org/10.1177/1609406920918810>