Developing a Collaborative Coding Framework for Onboarding Undergraduate Researchers

Sarah Buwick and Naomi Islas, Purdue University

BACKGROUND

Previous Study (Phase One)

- **Constructive distributed work (CDW)** is a **three-dimensional heuristic for project management and team building** created by the Corpus & Repository of Writing, an inter-institutional and interdisciplinary research team.
- This analysis is part of a larger study using data from the Basecamp team communication platform (TCP) to analyze **how Crow achieves CDW goals.**
- **Coding provides structure for data analysis** by asking researchers to assign short "codes" to represent themes and content in qualitative data.
- In our previous study, **we holistically coded 68 Basecamp threads** and described interactions between Crow team members via a codebook developed by CDW researchers.
- During this process, we outlined a basic coding workflow to maximize our efficiency in **collaborative coding.**

Recent Study (Phase Two)

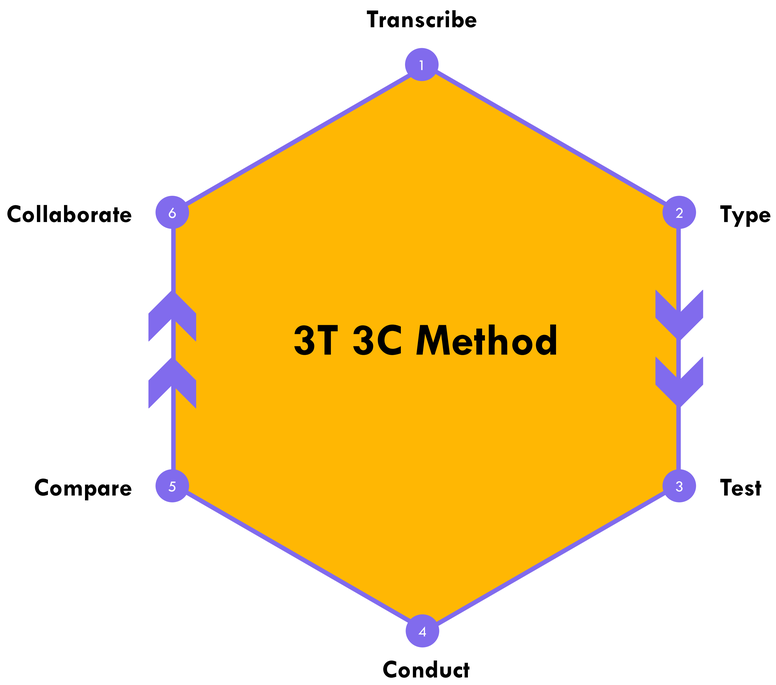
- Following Phase One, we wanted to make this workflow replicable for future studies.
- We tested this workflow in a second research phase.
- Phase Two **analyzed 163 Bc threads at a granular level.** We coded this data set using three codes describing Crow's core principles: **rhetorical confidence, networked mentoring,** and **sustainable infrastructure.**

Code	Description
Build rhetorical confidence	Sharing positive reinforcing remarks on someone's performance. Also includes inviting specific participation in an activity (i.e. read and comment for X, write a draft of an abstract or section).
Use/Model networked mentoring	Presenting guidelines and communicating actionable steps that meet team best practices.
Develop Sustainable infrastructure	Modeling any practice that contributes to building or making infrastructure visible.

METHODS

Improving Our Methods

- Using methods established by Dr. Michelle McMullin (NCSU), we coded the data set over **five meetings.**
- We determined our interpretations of the three core principle codes in **one in-person meeting,** then reviewed our progress weekly over **four Zoom meetings.**



Developing the 3T 3C Method

- Upon the study's conclusion, we drafted an ordered list detailing our workflow steps.
- Our list was comprehensive, yet brief, ensuring our explanation of the workflow was clear.
- Our initial draft led to a **six step** how-to with four substeps, which we consolidated for length.
- Finally, we arranged the six steps in the above hexagonal figure, representing the construction of the **3T 3C Method.**

DISCUSSION AND RESULTS

The Six Steps of the 3T 3C Method

- The **3T 3C Method** follows these steps:
  - **Transcribe** the data set to a spreadsheet.
  - Determine the coding **type** — granular, holistic, etc.
  - **Test** a small sample from data set.
  - **Conduct** individual coding passes for each researcher using the full data set.
  - **Compare** individual coding passes as a group.
  - **Collaborate** on a definitive coding pass; finalize results.

Onboarding Deliverable

- We are creating **onboarding documentation that includes an activity using a sample data set.** This will acclimate new Crow researchers to the coding process.
- Since undergraduate researchers spend 1-2 years with Crow and come from multiple institutions, **creating documentation that helps incoming researchers is our highest priority.**
- This activity will involve **new researchers coding a data sample from Basecamp.**

Sustainability at Crow

- New Crow researchers will
  - **acquire a baseline understanding of coding,** enabling them to **participate in future Crow coding projects**
  - be more prepared to **to serve as peer mentors** for their fellow researchers in the future.
- Using the **3T 3C Method** to code data will expose new researchers to Crow's best practices and core principles, **preparing them for future research and writing projects.**
- Deliverable will be tested with new researchers currently being hired during AY 2024-25, drawing on their feedback and analysis of the method.

References & Materials

writecrow.org

Thank you to Dr. Michelle McMullin, North Carolina State University