Mapping the Social World Boundaries of Interdisciplinary Teams: Processes for Working Across Disciplines

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Research Questions

How are the boundaries of the multiple social worlds of the interdisciplinary team defined?
How do social worlds segment and change over time?
How do information researchers fit into the social worlds?

How do team members view and identify with the social worlds of the team?
What roles do team members play in the social worlds and subworlds and how have they changed over time?
What challenges emerged at critical points and what strategies were developed to address them?

How do team members bridge the social worlds of the interdisciplinary team?
What processes and objects enable translation and coherence across social world boundaries?

Background

Importance: Many of the research questions needed to solve scientific and social problems are too complex to be addressed by single disciplines, and funders such as NSF and NIH have called for transformative interdisciplinary approaches. In addition, it is important to understand cross-disciplinary collaboration as LIS is inherently an interdisciplinary domain.

Purpose: To explain the processes that a time-limited interdisciplinary team used to collaborate across domain boundaries while developing an educational technology intervention.

Sensitizing Concepts: The social worlds perspective (Strauss, 1978), intrinsically transient social worlds (ITSW) (Kazmer, 2010), and boundary objects theory (Star & Griesemer, 1989).

Research Design

Population: A time-limited interdisciplinary academic team investigating the use of mobile technologies to help elementary students conduct scientific investigations at a nature center and in the classroom.

Methods: Grounded theory (Charmaz, 2006; Clarke, 2005; Strauss & Corbin, 1998) and social network analysis.

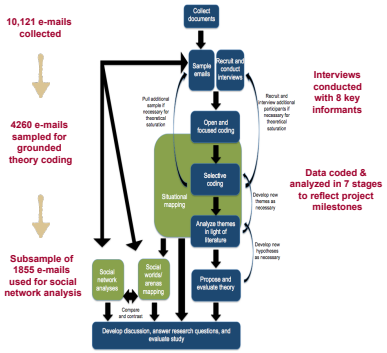

Figure 1. Research Design

Findings

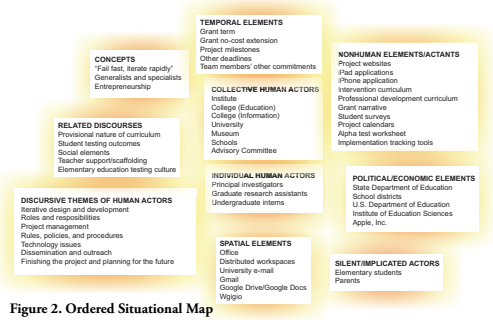

Figure 2. Ordered Situational Map

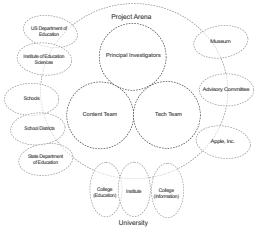

Figure 3. Social Worlds/Arenas Map

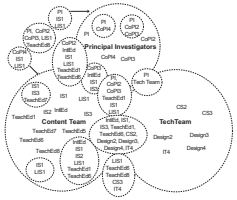

Figure 4. Stage 4 Project Map

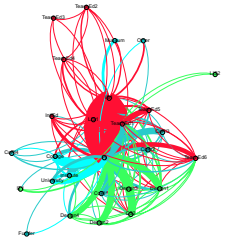

Figure 5. Stage 4 Social Network

Discussion

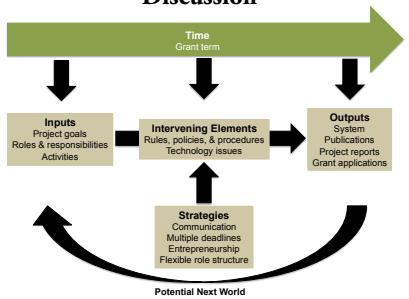

Figure 6. Iteratively Designed Teamwork Model

- Social worlds exhibited primary activities, sites, technologies, and organization (Strauss, 1978) as well as different arenas of discourse and specific vocabularies (Maines, 2001)
- Subworlds formed based on functional needs and changed over time; some subworlds evidenced segmentation processes such as competition for resources (Strauss, 1984)
- Both colocated and distributed work patterns were observed
- Multiple technologies were employed with some specialization by social world
- Five information researchers were distributed among the social worlds, two of whom were boundary spanners
- Most team members' roles were stable and connected to home domain
- Main challenges included time pressures, a need for more support for teachers during the pilot test, and technology issues
- Strategies to address challenges included flexibility and entrepreneurship
- Findings from this study align with Kazmer's refined ITSW model (2010)
- The sociotechnical system (technology, educational content, and curriculum) served as a boundary object (Star & Griesemer, 1989; Bowker & Star, 2000)

References

Bowker, G. C., & Star, S. L. (2000). *Sorting things out: Classification and its consequences*. Cambridge, MA: MIT Press.
Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Los Angeles, CA: Sage.
Clarke, A. E. (2005). *Situational analysis: Grounded theory after the postmodern turn*. Thousand Oaks, CA: Sage.
Kazmer, M. M. (2010). Disengaging from a distributed research project: Refining a model of group departures. *Journal of the American Society for Information Science & Technology, 61*(4), 758–771. doi:10.1002/asi.21281
Maines, D. R. (2001). *The faultline of consciousness: A view of interactionism in sociology*. New York: A. de Gruyter.
Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, "translations" and boundary objects: Amateurs and professionals in Berkeley's museum of vertebrate zoology, 1907-39. *Social Studies of Science, 19*(3), 387–420. doi:10.2307/285080
Strauss, A. (1978). A social worlds perspective. *Studies in Symbolic Interaction, 1*, 119–128.
Strauss, A. (1984). Social worlds and their segmentation processes. *Studies in Symbolic Interaction, 5*, 123–139.
Strauss, A., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.

Acknowledgements

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