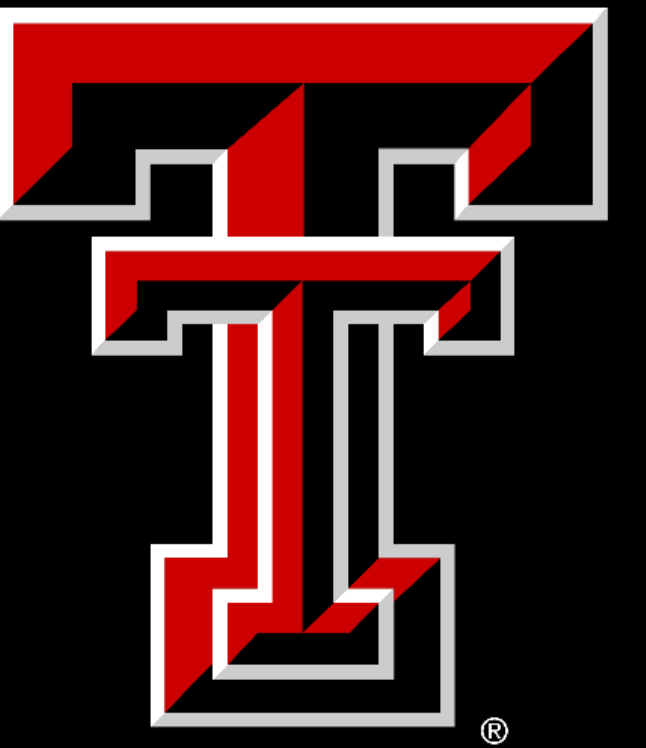


Resilience in Crisis: Strategies for Effective Adaptation of Science Organizations

Mahedi Hasan¹, Oluwabusayo Okunloye¹, Kerk Kee¹, and Ewa Deelman²



¹ College of Media and Communication, Texas Tech University
² University of Southern California

Overview

In this study, we explored the information sources and decision-making strategies utilized by science organizations, more specifically, major facilities. We focused on studying MFs as an example of science organizations because the origin of the crisis – COVID-19 – is inherently a scientific problem in medical sciences. Through 3 phases of data collection and analyses between December 1, 2020, and August 28, 2023, we developed themes and found that the highest-rated information source was leadership-based, and not science-based, for science organizations.

Interestingly, the primary strategy was the scientific method of risk assessment, and the leadership-based strategy dropped to the lowest-rated strategy in our second analysis.

This suggests that science organizations may approach a crisis using a scientific method (e.g., conducting thorough risk assessments) but rely on leadership-based sources (e.g., leaders/supervisors/managers) for information. Overall, these four strategies were crucial in navigating the uncertainty and complexities of the pandemic, allowing science organizations to maintain their operations and continue their science missions.

Theoretical Framework

Diffusion of Innovation (Rogers, 2003)
Information Diffusion (Altay & Pal, 2014)

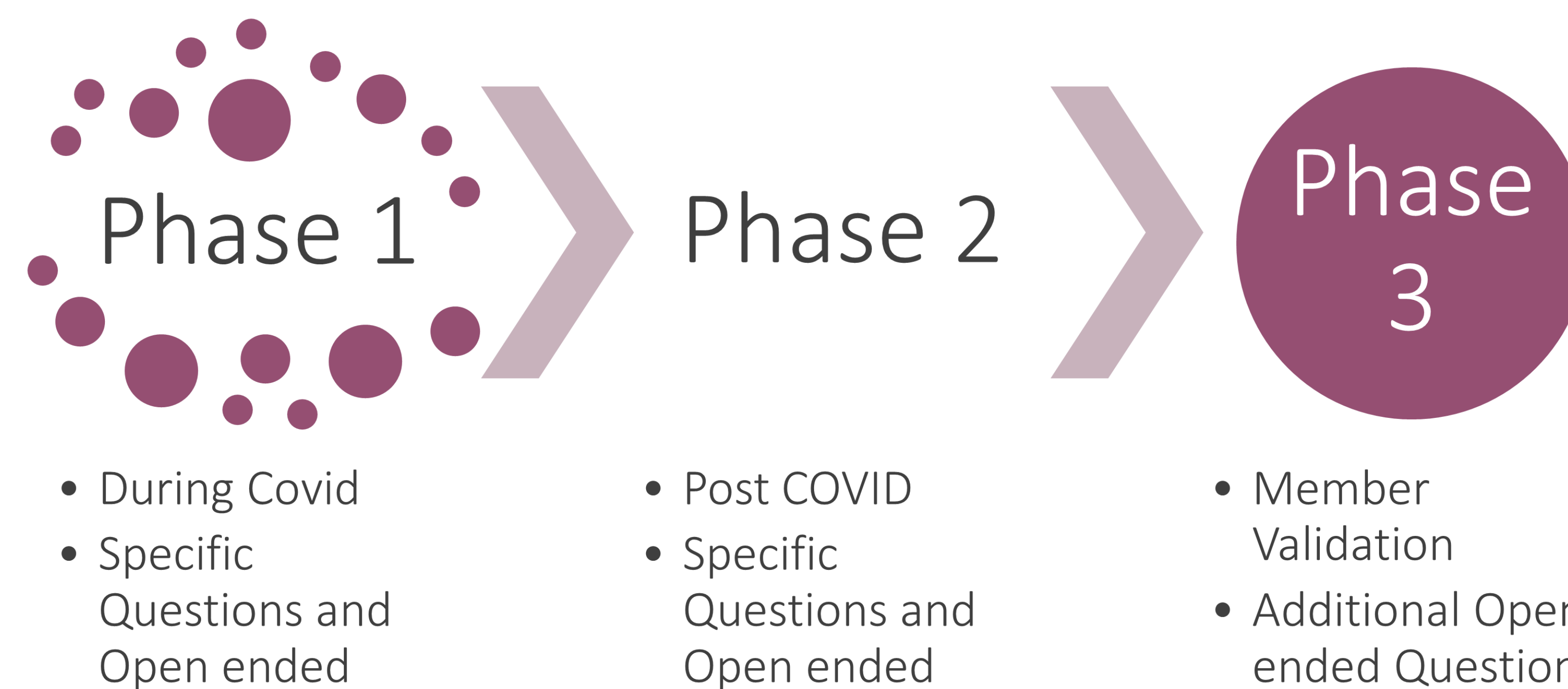
Research Questions

- RQ1: What were the sources of information sought by science organizations that contributed to effective decision-making?
- RQ2: What factors were considered in making adaptive decisions?

Methods

Mixed Method Research Approach

- Semi Structured Interview- 56 Interviews (December 1, 2020, to August 28, 2023)
- Member Check, and Numerical Ratings (Quantitative)



Grounded theory approach (Strauss & Corbin, 1990)

Discussion

Confusions, so many information's
No central hub
Everyone on their own

RQ1: Sources of information

Leaders/supervisors/managers

Health Authorities

University

Personal Networks

Regional Governance

Associations/Councils (e.g., UNOLS)

Funders (e.g., NSF, Research Infrastructure Guide)

Peer-reviewed articles

Media

RQ2: Decision making Strategies

Risk assessments

Seeking input from the team and colleagues.

Triangulating multiple sources

Leadership team/institutional administrators made top down decisions.

Conclusion

- Information's matters, as well as the source of information
- Information from reliable sources helped organizations for effective decision making
- Risk assessment, and decisions via team helped for effective adaptation in crisis



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