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Implementation of Federally Mandated Technology:

A Successful Case Study

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Agenda

- Introduction
- Literature Review
- Theoretical Framework
- Research Methodology
- Results
- Discussion
- References



Introduction

Component	Description
P (Problem Setting)	Implementation of Federally Mandated Technology (FMT) in the health services industry
A (Area of Concern)	Organizational Implementation of FMT
RQ (Research Question)	How does an organization successfully implement FMT?
F (Conceptual Framework)	Technology, Organization, and Environment (TOE) Framework (Tornatzky et al. 1990)
M (Research Method)	A retrospective, case study design, as proposed by Yin (2018), in conjunction with an engaged scholarship approach, as advocated by Van de Ven (2007)
C (Contribution)	<ol style="list-style-type: none">1) Outlines effective strategies to overcome implementation barriers, such as feedback mechanisms and phased rollout approaches, and2) Provides a tool to determine the degree of assimilation of FMT into standard business practices.

Literature Review

Implementation of FMT

Organizational Adoption of Technology

- Diffusion of Innovation (Rogers, 1962)
- Technology-Organization-Environment Framework (Tornatzky et al., 1990)

Mandated Technology

- Mandatoriness, control, and information security (Boss et al, 2009)
- Mandating IT use in large organizational networks (Carugati et al., 2018)

Technology Frame of Reference

- Technological frames: making sense of information technology in organizations (Orlikowski & Gash, 1994).

Implementation Process

- Unifying the fragmented models of information systems implementation (Kwon & Zmud, 1987).
- Information technology implementation research: A technological diffusion approach. (Cooper & Zmud, 1990).

Theoretical Framework

The TOE framework has been used to explain adoption and innovation of technology in multiple interdisciplinary systems in a host of industries and across developed and developing countries (Baker, 2012). In each of the studies, researchers have used slightly different factors for the technological, organizational and environmental contexts (Baker, 2012).

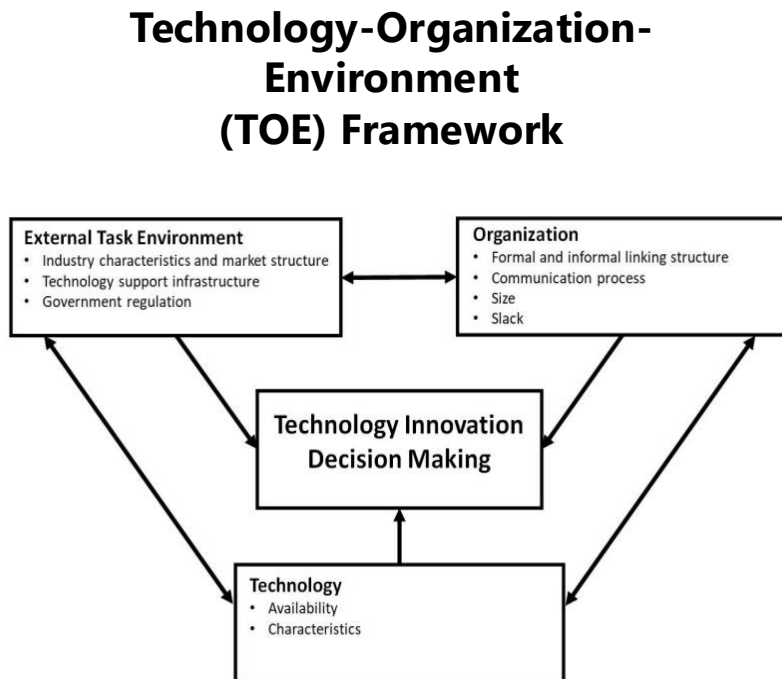
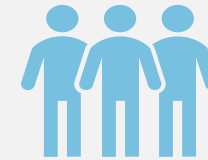


Fig. 5: TOE framework.



Technology



Organization



Environment

Research Methodology

DATA ANALYSIS:

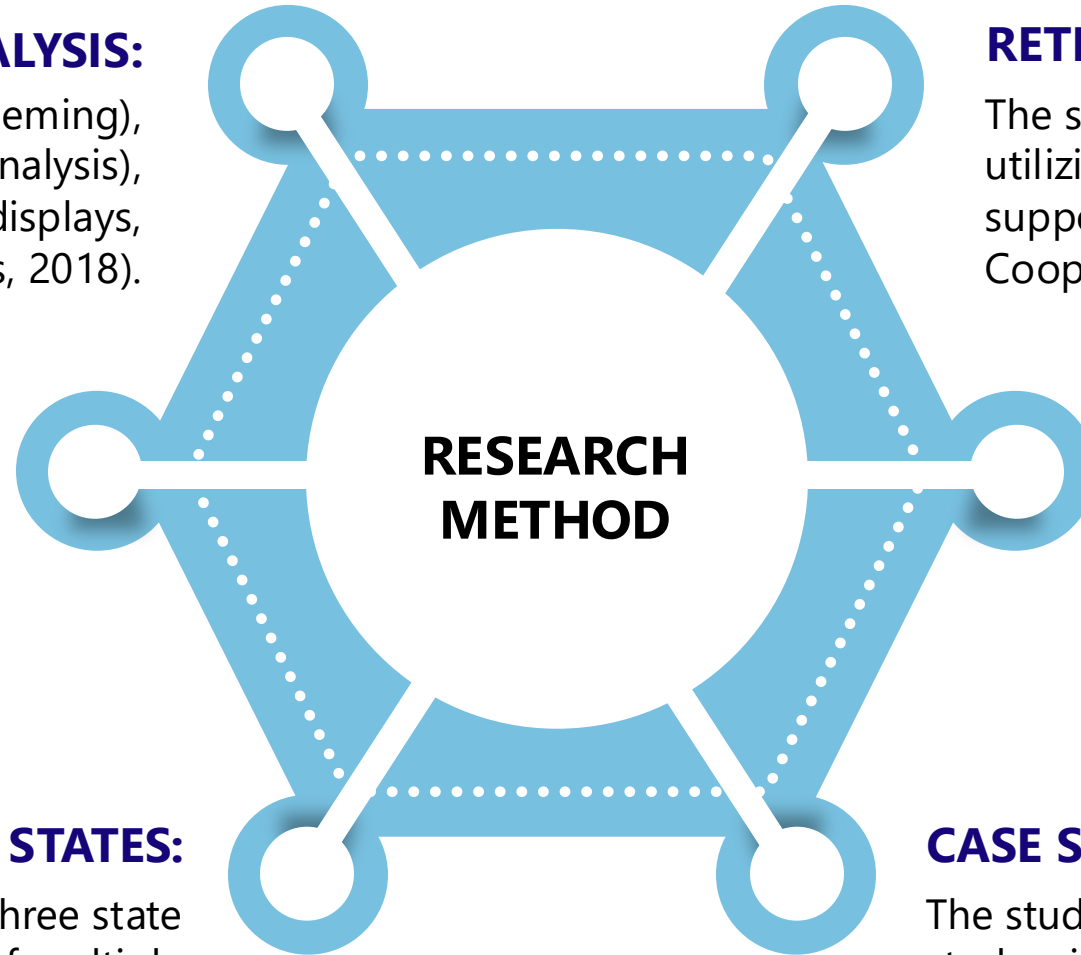
First level coding (descriptive and theming), second level coding (pattern analysis), NVIVO, narrative description and displays, charts and graphs (Miles, 2018).

SECONDARY DATA:

Release notes, data diagrams, transcripts, meeting notes and implementation data from October 2021 to April 2023 (Myers, 2019).

ACROSS MULTIPLE STATES:

The study focused on three state implementations comprised of multiple agencies within one organization (Myers, 2019).



RETROSPECTIVE:

The study was conducted retrospectively utilizing implementation as the concept supported by Kwon and Zmud, 1987, and Cooper and Zmud, 1990

QUALITATIVE:

Semi-structured interviews were conducted with 20 employees from all levels of the organization and IT department (Myers, 2019).

CASE STUDY:

The study was an organizational case study with focus on the implementation of the FMT (Myers, 2019; Yin, 2018).

Results

OBSERVATION	DESCRIPTION	TACTIC	POSITION IN LITERATURE
STATE BY STATE	Driven by Federal Mandate Deadline (differed by state)	Coercion	As coercive pressure increases, the speed of adoption also increases. (Carugati et al., 2018; Tolbert & Zucker, 1983) [DOI & IT Institutionalization]
PHASED ROLLOUT	Middle managers used to translate and “transform new ideas” about the mandated technology.	Institutionalization	Middle managers act as agents to “promote the travel of ideas” within the organization such that the ideas are “transformed and legitimized over time.” (Nielsen, Mathiassen & Newell, 2014) [Theorization and Translation in IT Institutionalization]
AGILE CUSTOMIZATION	Agile software development for customizing MT	Customization	Resistance can be lessened or avoided if the mandated technology can be customized (Carugati et al., 2018; Nielsen et al., 2014) [Resistance to IT Institutional Logic]

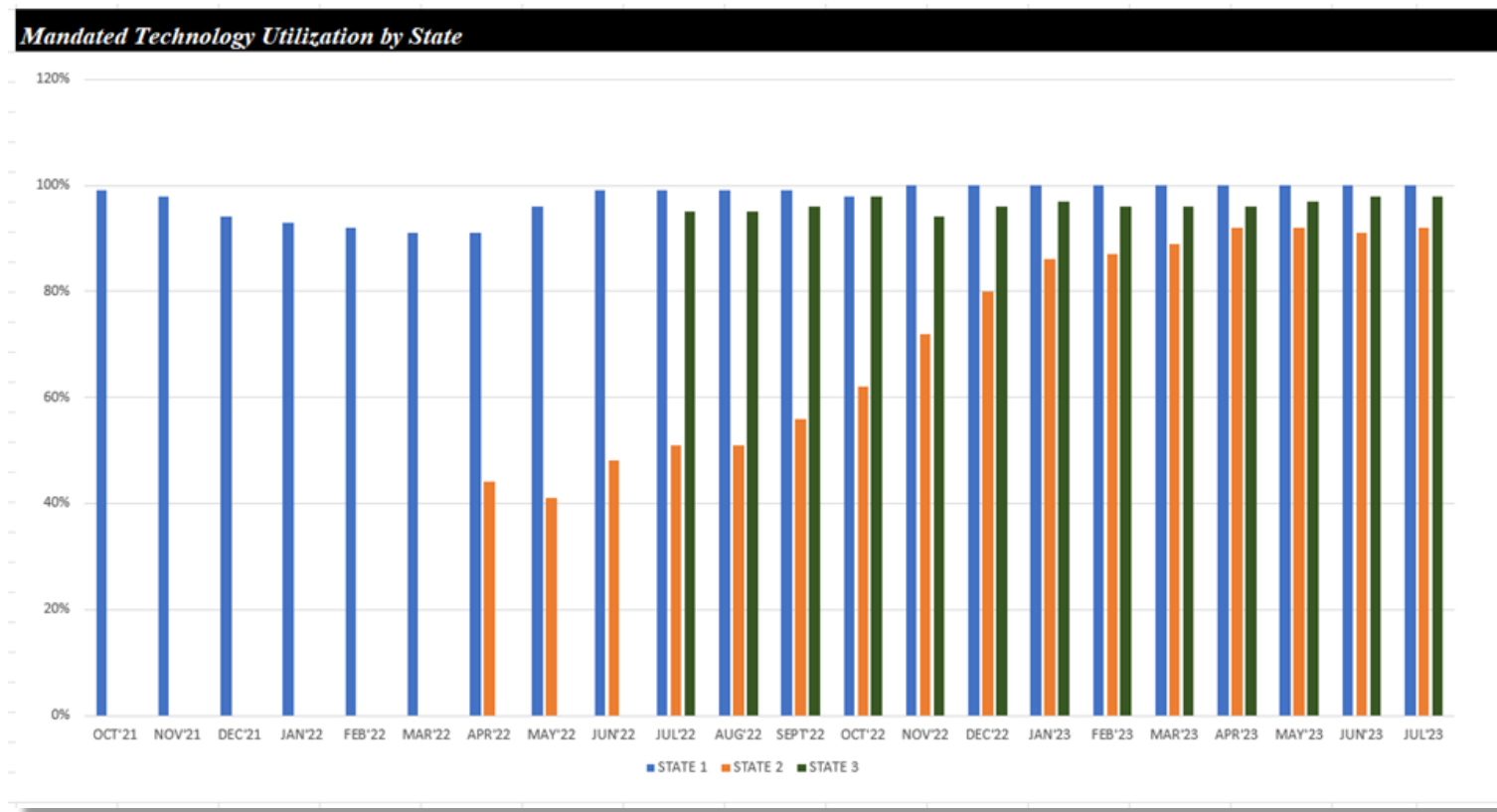
Results

FEEDBACK MECHANISM	DESCRIPTION
USABILITY STUDIES	Testing the features and functionality technology by observing end users
STAKEHOLDER MEETINGS	Meetings with stakeholders: to gather requirements, prioritize releases and provide updates on implementation status
RELEASE COMMUNICATION	Communications regarding the release of functions and features in the implemented technology

TACTIC	POSITION IN LITERATURE
Local Customization	Resistance can be lessened or avoided if the mandated technology can be customized (Carugati et al., 2018; Nielsen et al., 2014) [Resistance to IT Institutional Logic]
Increased communication between stakeholders	The feedback mechanism decreased resistance by aligning the technical frames of the multiple stakeholders and increasing the flow and frequency of communication. (Murungi & Káganer, 2023; Davidson & Pai, 2004; Ghobadi & Mathiassen, 2023) [Technical Frame of Reference]

Results

- Utilization data was captured to assess the degree of assimilation of FMT into standard business practices.
- HHS Inc. obtained a rate of 90% utilization or better – signaling a transformation in business operations.
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Discussion



For Organizations:



Pre-Adaptation:

- Plan Strategies for Mandated Technology Implementation
- Align Technology with Organizational Culture



Adaptation:

- Empower Stakeholders
- Manage Resistance through Customization



Post Adaptation:

- Monitor and Evaluate Performance
- Learn from Experience



For Policy Makers:



Policy Formulation:

- Establish Clear and Feasible Mandates
- Create Feedback Mechanisms



Implementation:

- Allow Flexibility in Implementation
- Deploy Pilot Programs and Phased Rollouts



Policy Evaluation:

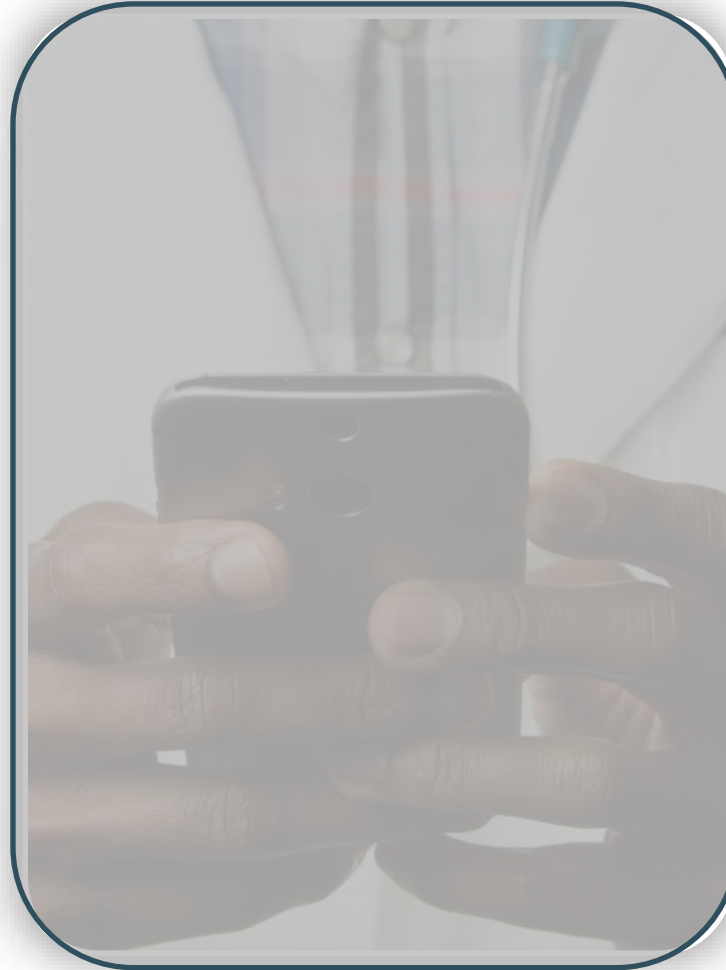
- Asses Economic and Social Impact
- Future-Proof Policies

Discussion



Limitations

- Generalizability to other organizations
- Recall Bias
- Change in Technology over Time
- Multifaceted View of Resistance
- Other Factors (ie. Service Quality)



Future Research

- Comparative Study with Multiple Types of Organizations
- Quantitative Study
- Longitudinal Research Design
- Individual and Group Dynamics in Resistance of Technology
- Unintended Consequences of Regulatory Compliance

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