Value-Based Approach to Support Technical Debt Management in Software Development

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Ficha do trabalho

Título	Value-Based Approach to Support Technical Debt Management in Software Development
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Context

- The decision-making process in software organizations has shifted over the years.
- VBSE emphasizes the role of value in software-related decisions.
- TD managment is a critical issue for organizations.
- The application of theories in software engineering.

Problem

- The concept of TD has been expanded to cover different phases of the software development process.
- TD managment has been influenced by the concepts of motivation and value proposition.
- There is a need for theories that help us understand the impact of individual values on TD management.

Objective

A theory aimed at describing and explaining the motivations of stakeholders when making decisions related to TD during the software development process.

Research Questions

RQ1: How can a value-based approach support TDM in software project development, considering the stakeholders' value propositions during the contraction and payment of debt items?

RQ 1.1 What are the value criteria key stakeholders use when making decisions related to TD during the software development process?

RQ 1.2 What are the overlapping and distinct value criteria used by stakeholders in identifying and repairing TD?

RQ 1.3 Are there value criteria that are specific to a group of stakeholders? Which?

RQ 1.4 Are there different value criteria between different types of TD? Which?

Results from mapping study on theory use in SE

- Extracted 44 theories of 42 studies
- Inconsistent terminology use
- Main researched topic:
  - Human resource managment is the
- Main research method:
  - GTM
- Main role:
  - Solution proposal
- Main theroy type:
  - Explanation and prediction

Results from mapping study on theory use in SE
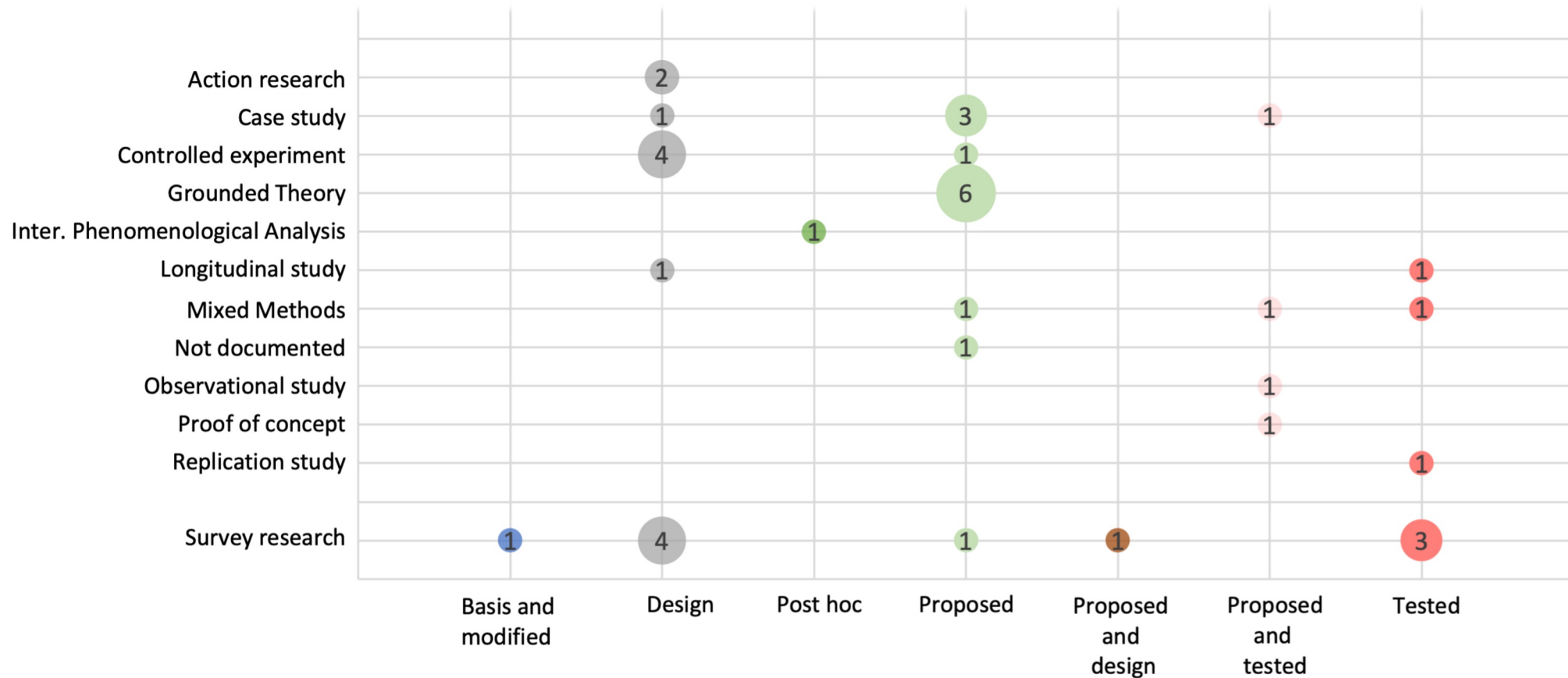
Next Steps

Conducting an interview-based study on the role of motivation in TD decision-making

Paper submission

Qualifying exam

Develop a value-based approach for managing TD

Evaluate the effectiveness of our proposed approach

Formulate a new theory

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