Week 7: Constructive Research Strategies

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# Constructive Research Strategies

Constructive design is one of the most common research methods for information systems and technology (Silvestrini et al., 2012). These studies identify a problem, build solution artifacts, and communicate the implementation’s unique value (Henver et al., 2004). For example, high-speed broadband internet is not available within many developing countries. These challenges promote researches to create new compression algorithms and improve the optimize the existing infrastructure. Typically, these results (artifacts) originate from specific Proofs-Of-Concept (POCs) or directed case-studies.

# Literature Review

Northcentral University’s Library contains thousands of articles, and five using constructive design methods were selected. These articles identify a specific problem within technology areas (e.g., networking) and then produce reusable artifacts (e.g., business processes).

## Emergency Communication (2016)

Abruawi et al. (2016)

## Measuring Cybersecurity Wellness (2018)

Jazri et al. (2018)

## Learning Strategies for Business Programs (2018)

Luna et al. (2018)

## Menu Analysis (2020)

Nemeschansky et al. (2020)

## Self-Service Analytics (2018)

Lizotte-Latendresse and Beuregard (2018)

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| Article | Problem Statement | Artifacts Produced | Effectiveness of Solution | Broader contributions |
| Emergency Communication | Communication systems are least reliable when they are most critical | Smartphone enhancements to address these scenarios | Addresses the problem with low power requirements | Reusable for other long-range / low-bandwidth scenarios |
| Measuring Cybersecurity | Comparing orgs. and prioritizing security posture is challenging | Qualitative bottoms-up framework | Reduces operational overhead | Competes with many existing standards |
| Learning Strategies | Increasing student engagement produces better test results |  |  |  |