

Problem



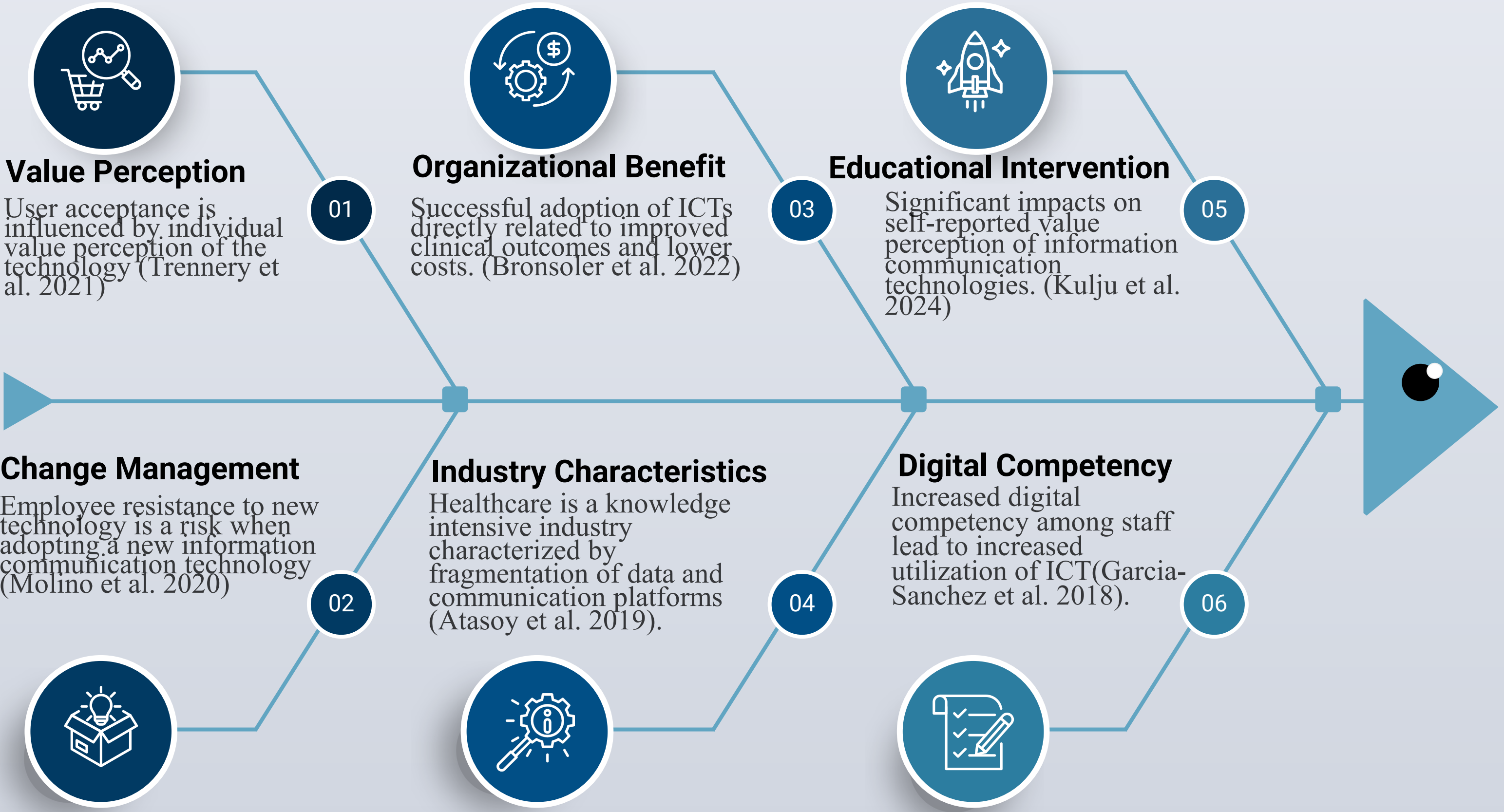
Low user adoption of Information Communication Technology (ICT) Microsoft Teams.

Purpose



Increase user adoption and value perception of Microsoft Teams.

Available Knowledge & Rationale



Methods

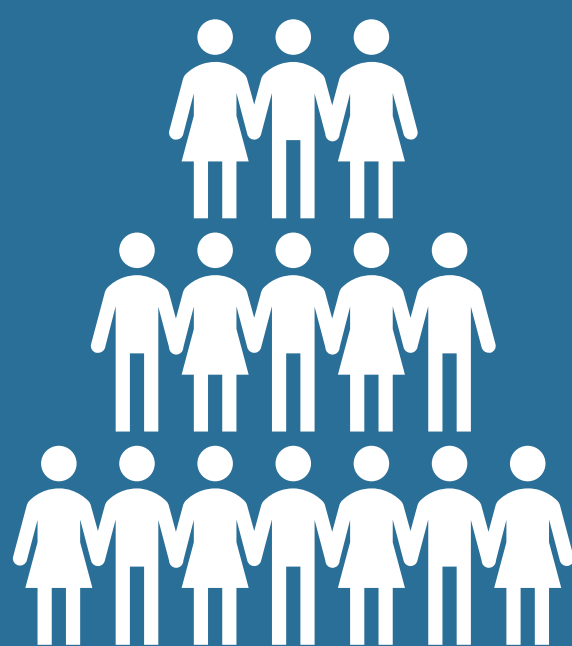
Context

This project took place at a Midwestern United States health system composed of four acute care hospitals with a combined licensed bed count over 800 beds. The facilities provide services such as elective and emergency surgery, inpatient care, inpatient psychiatric care, fetal and maternal health, as well as general medical care. None of the hospitals in the system are designated as trauma centers. In addition to the hospitals, there are affiliated primary and specialty care clinics. The health system utilized various clinical applications and ICT tools. A new primary ICT tool, Microsoft Teams was adopted within the last five years.

Intervention



One 90-minute synchronous virtual educational session



Target population: Directors, Department Heads, Clinical Educators, and Quality staff at the health system

Study of Intervention

Pre and post intervention assessments were conducted via short survey utilizing Likert-scale questions. Assessment was conducted prior to each educational session, with a survey sent 1 week prior to the training. A survey was also conducted immediately following educational sessions in the final 10 minutes of the session, and 30 days post educational intervention

Measures

Technology Acceptance Module (TAM )and the associated tool (modified 13 question survey) were used to measure value perception, behavioral intention, and utilization (Alfadda & Mahdi, 2021).


Survey Question	TAM Domain	Related Outcome
I believe Microsoft Teams helps me collaborate with colleagues.	Current Usage	ICT Utilization
I received training on Microsoft Teams	Self-efficacy	Self-efficacy
Microsoft Teams improves my work performance	Perceived Usefulness	Value Perception
Microsoft Teams helps me work more efficiently	Perceived Usefulness	Value Perception
I like using Microsoft Teams for work	Attitude	Value Perception
I consider myself confident in my ability to learn and use technology	Self-efficacy	Self-efficacy
I am likely to use Microsoft Teams in the Future	Behavioral Intention	ICT Utilization
I believe Microsoft Teams is useful for me as an employee	Behavioral Intention	ICT Utilization
I find it easy to use Microsoft Teams for communication	Perceived ease of use	Self-efficacy

Data Analysis

A total of 95 members of the organizational leadership team participated in the educational sessions. Twenty-six participants completed pre, post, and 30-day post surveys necessary to complete a paired samples t-test.

Results

The results below so survey items with significant results between the pre intervention survey and the post survey. All results available at QR code below.

<b>Perceived Usefulness</b> Microsoft Teams helps me work more efficiently $t(26) = -5.76, p < .001$ Microsoft Teams improves my work performance. $t(26) = -2.39, p < .001$	<b>Behavioral Intention</b> I am likely to use Microsoft Teams in the Future $t(26) = -5.14, p = .004$ I believe Microsoft Teams is useful for me as an employee. $t(26) = -2.00, p = .05$ I feel comfortable using Microsoft Teams to improve my daily work. $t(26) = -2.39, p = .02$
<b>Self-efficacy</b> I received training on Microsoft Teams $t(26) = -14.3, p < .001$ I believe Microsoft Teams is useful for me as an employee. $t(26) = -2.00, p = .05$	<b>Full Results Table</b> 
<b>Attitude</b> I like using Microsoft Teams for work. $t(26) = -4.90, p < .001$	

Discussion

Many of the results of this study align with existing literature on technology adoption. In their 2021 study on technology adoption, Alfadda and Mahdi found a positive correlation between user efficacy and intention to use a technology. Though not significant, this study on ICT adoption found improvements in self-reported efficacy 30 days post intervention ( $t(25) = -1.97, p = .07$ ). This improvement in technological self-efficacy and significant improvement in behavioral intention ( $t(25) = -2.19, p = .038$ ) aligns with the findings in the Technology Acceptance Model study conducted by Alfadda and Hassan.

Survey results from this study indicated that none of the participants had received training on Microsoft Teams prior, leading to a significant result in self-reported training ( $t(26) = -9.36, p < 0.001$ ). This reinforces similar findings from the existing literature, that one barrier to adoption of ICTs in healthcare is a lack of training on technology systems (Bronsoler et al.,2022).

Conclusions

The revised standards for quality improvement reporting excellence (SQUIRE 2.0) were used as a framework for reporting this project. The adoption and effective utilization of information communication technologies (ICT) are vital for modern organizations, especially in complex and knowledge-intensive industries like healthcare. This project utilized evidence-based pedagogical interventions aimed to improve user adoption and value perception of ICT tools as well as other technologies. By focusing on practical skills, relevance to the employees’ work, and demonstrating the organizational benefits of technology, the intervention aligned with the principles of Transformative Learning Theory, which emphasizes the importance of meaningful and personalized learning experiences.

In conclusion, the integration of thoughtfully designed pedagogical interventions can empower organizational leaders to maximize the benefits of ICT, ultimately improving both individual and organizational performance. This approach may serve as a model for organizations seeking to navigate the challenges of digital transformation effectively.

References

