

Organizational Systems and Technology: Technological, Educational, and Organizational Impacts of Global Crises Mini Track

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Abstract

This is the third time that the mini track on "Technological, Educational, and Organizational Impacts of Global Crises" is featured in the Organizational Systems and Technology track. This year, the mini track expanded its topical coverage to include broad-based emergencies beyond the pandemic focus of the prior two years. The mini track comprises five papers, two of which address technology's role in global crises, while the remaining three examine impacts of technology use during the COVID-19 pandemic.

1. Introduction

The world has faced an unprecedented catastrophe in the COVID-19 pandemic. The unusual circumstances created by COVID-19's rapid spread provide a unique opportunity to study the role of Information Systems and Technology in supporting people through this pandemic and beyond to other global crises. This minitrack considers topics related to a global crisis' impacts on jobs and work (for both employers and employees), education and educational institutions (including learners and educators), family and home life (including life-changes for adults and children), and global society.

The mini track welcomed submissions of full research papers or research in progress, including theory articles, literature reviews, teaching cases, or studies employing qualitative, quantitative, mixed methods, and design science research methods. Topics of interest included, but were not limited to, technology's role in addressing:

- Opportunities and challenges in the era of COVID-19 and global crises
- Consequences of global crises, such as COVID-19, on work, education, and society
- Working from home during lockdowns
- Adjusting to the "new normal"
- Best practices in education and work contexts

- Digital transformation and the future of work and education
- Using ICT to foster learning, working, and social activities
- Social isolation and well-being
- Work-life boundaries and conflicts
- Implications for policy and practice
- Nontraditional virtual teams
- Social and business norms
- Disaster plans and business continuity planning
- Resource sharing challenges
- COVID-19-related financial implications for businesses and software vendors

2. Mini Track Papers

The mini track received 11 submissions, of which five were accepted for an acceptance rate of 45%. The first two papers support the broader perspective of the mini track theme, discussing the role of technology in any global crises. The first paper, entitled *Infrastructure in Crisis: A Values-Driven Framework for Transparent Contextual Decision-Making in Emergency Situations*, suggests that crises that lean on techno-solutionism often conflict with user privacy concerns. The technology industry frequently applies user expectations in an ad hoc manner, such as after a scandal or legal repercussions. Users have technology and tools thrust upon them with little or no choice as they attend school, go to work, and participate in society. This is compounded with a sense of urgency where privacy is an after-thought in the design of technology solutions. The authors propose a values-driven framework to guide implementors to identify core values that connect to the technical functionality. The paper also prompts decision-makers and implementors to transparently define the lifecycle of data as it traverses their technology by describing the stages that users will encounter. This framework aims to bring higher level ideas and values directly into the

decision-making process as it situates and connects human values within the data lifecycle to functionality within the technology.

The second paper is titled *Operationalizing Digital Resilience – A Systematic Literature Review on Opportunities and Challenges*. In it, the authors describe how building a digital resilience (i.e., capabilities to design, deploy and use information systems (IS) to adjust to changes caused by external shocks) may prepare individuals, organizations and other institutions for future disruptions caused by global crises. To be able to monitor the emergence and development of digital resilience, one needs to be able to measure it. Currently, there is no consensus in IS literature on how to conceptualize or operationalize resilience. By conducting a systematic literature review, the authors identify traditional and innovative operationalization approaches. They find scale-based quantitative methods to be most prominent, followed by qualitative analyses of resilience indicators through interviews and case studies. They identify advantages and limitations of each approach and encourage future research that moves beyond the boundaries of traditional methods to operationalize digital resilience in a tailored, context-specific way.

The remaining three papers present research on the global crisis that permeated everyone's lives over the past couple of years: the COVID-19 pandemic. The third paper looks at *Social Media Use Purposes and Psychological Wellbeing in Times of Crises*. This study investigates the effect of social media (SM) use purposes and user characteristics on individual psychological wellbeing (PWB) during the coronavirus pandemic (COVID-19). Informed by the uses and gratifications theory and PWB research, this study analyzed survey data collected from 282 SM users in the United States in March-April 2020. Quantitative data analysis showed that social media can be used to improve the quality of personal experiences during the COVID-19 crisis through three mechanisms — connectedness (i.e., social), engagement (i.e., collaborative), and entertainment (i.e., hedonic). However, the effect varied by gender, SM usage level, and individual concern about COVID-19 risk. Their findings provide implications of technology use for enhancing public mental health during crises.

The fourth paper, entitled *What Drives Workers to Learn Online during COVID 19 Pandemics?*, focuses on one of the common practices during the COVID-19 pandemic, when many of us were forced to work or study from home. This study aims to reexamine the factors affecting individual continuance intention of e-learning. During the pandemic, via a survey conducted in 2022, the authors assessed workers' continuance

intention of e-learning from different sectors in Taiwan. This research brought motivations as mediators in continuance intention to e-learning. Through statistical analysis of the survey results, the authors identified the mediation effect of motivations based on self-determination theory. Results show that autonomous motivation facilitates learners' computer self-efficacy, the quality of the system and content toward continuance intention; controlled motivation mediates the monetary award in influencing the continuance intention. The internalization of motivation is also an effective mediator. The obtained results not only add new knowledge of what affected the continuance intention of e-learning during the pandemic but also provide guidance for employers to allocate resources to boost e-learning after the pandemic.

The final paper investigates the impact of COVID-19 on education by studying *How Videoconferencing and its Affordances Transformed Teaching in Schools During COVID-19 Pandemic*. The COVID-19 pandemic has brought about major changes in digitization in many areas of life and professions. New areas were digitized almost overnight. The authors note that the school system in Germany was no exception leading to a demand for videoconferencing tools and communication platforms. These technologies have many different functionalities that need to be discovered, explored, and exploited by the user. Given the disruptive events that the COVID pandemic brought to bear, this paper aims to shed light on how the dynamics of discovery, exploration, and exploitation unfolds. The authors use a functional affordance theory perspective to analyze and understand how users learn to use new technologies. To do this, they conducted an exploratory case-study-based research design including interviews with teachers from various schools to analyze how they appropriate new technologies to develop an explanatory theoretical model.

3. Future Research Contributions

COVID-19 continues to affect society in many ways, as information technology capabilities allowed many sectors to temporarily alter work and educational practices. In some cases, worker and student response has led to permanent changes to office and educational settings, demonstrating the continued need for research on digital resilience across known and future global crises. The papers in this mini track continue to alert researchers and practice to the many implications of crisis-driven technology adoption.