THE EFFECT OF COVID-19 ON CONSTRUCTION LABOR PRODUCTIVITY AT THE STUDENT HEALTH AND WELLNESS CENTER

THE EFFECT OF MEDIA REPRESENTATION OF COVID-19 ON THE CONSTRUCTION INDUSTRY

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SOCIOTECHINCAL SYNTHESIS

The COVID-19 “infodemic” has had a dramatic impact on global economic progress and industries, particularly the construction industry. The objective of the technical research report is to observe the impact COVID-19 had on construction labor productivity and develop a real-time productivity tracking system that factors in pandemics. Labor productivity can be difficult to track on larger projects with many activities going on at once, especially during the COVID-19 pandemic, a time in which the construction industry felt a noticeable obstruction in being able to effectively communicate between the general contractor and subcontractors. The objective of the STS research project is to evaluate the effect of the social media representation of COVID-19 on the construction industry. With social media being one of the most rapid and impactful ways of obtaining and delivering information in the modern era, the COVID-19 pandemic caused a complementary infodemic that resulted in lower on-site performance and productivity. The technical research report and STS research project are tightly coupled together by observing how COVID-19 has impacted the construction industry. By viewing social media through a lens, COVID-19 has been a major contributing factor to the misinformation throughout the construction industry.

In preparation for the next major global event that will impact the construction industry, Barton Malow wanted to examine how the COVID-19 pandemic impacted Barton Malow’s subcontractors, how labor productivity at the Student Health and Wellness Center at the University of Virginia was affected, and what could have been done differently to preserve project continuity throughout the pandemic. The primary source of quantitative data for the Student Health and Wellness Center was the project documentation and interviews with major stakeholders. This project documentation includes requests for information, specifications,

project schedules, submittals, construction documents, and a detailed manpower summary. Given this information, qualitative data was created through analysis work of the project documentation and key insights of varying viewpoints through interviews.

Through the interviews and analysis work, results revealed that COVID-19 had significantly impacted communication, prevented subcontractors from working on-site, delayed schedules, increased safety incidents, and altered costs. From the request to information analysis, the decrease in general communication can be explained by the loss of face-to-face meetings and management being distracted by concerns for their health. The schedule comparison was performed by focusing on construction tasks that had been delayed due to supply chain disruptions for materials and crew quarantines from virus contraction. The COVID-19 pandemic has had significant negative impacts on the Student Health and Wellness Center project that ultimately made Barton Malow consider new predictability, safety, and risk-aversion tactics.

The overarching question is to reveal social media's impact on the construction industry of viruses and pandemics, in particular COVID-19. With social media being one of the most rapid and impactful ways of obtaining and delivering information in the modern era, scientific misinformation and political disinformation have been spreading across platforms like wildfire. The construction industry has been highly disrupted by the spread of this misinformation by delaying and halting construction projects. The system in which media representation of COVID-19 can be examined through a view of Pinch and Bijker's framework of the Social Construction of Technology. Through the Social Construction of Technology framework, the lack of communication between stakeholders with the use of social media can be explained.

During the COVID-19 pandemic, there were many uncertainties and concerns about any information being posted on social media. Through new methods and technologies, scientific

misinformation and political disinformation can be easily identified. Society must reform scientific platforms and communications to effectively educate the construction industry through social media. A perfect balance must be fostered to ensure the success of an informed society. With the reformation of scientific communication, society can be better connected and play a bigger role in news platforms.

Barton Malow and the rest of the construction industry took a major hit from misinformation on social media by delaying project schedules, impairing communication, and increasing total costs. Through new technologies and methodologies, scientific communication on social media platforms can be reformed and create a well-connected society. By viewing social media through a lens, COVID-19 has been a major contributing factor to the misinformation throughout the construction industry.

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