University of Newcastle

Cultural Maturity Modelling for Lean Organisations

By

B. L. Chesworth. B.ConMan (Building) [Hons 1]

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Abstract

There has always been in industry a need to address waste and productivity. Researchers and practitioners have approached these issues differently. Although approaching waste and productivity differently, the purpose of change has remained similar in the need for improved productivity and waste elimination. Typically waste is approached through the exploration and transferring of manufacturing based management strategies such as lean production. Despite this common goal of waste elimination and improved productivity researchers and practitioners have fallen into similar patterns of misunderstanding through the transferring of theory from manufacturing into construction, also referred to as the adoption of innovation. Misunderstanding of theory is occurs through three common factors the direction, process and practice or in other words how the process is interpreted, how the workforce responds to the innovation and why this may happen. The latter why is addressing the change that occurs culturally when innovation is diffused into the organisation. From a lean construction perspective these issues are often aligned to how the process is interpreted in research. This is representative of two approaches of lean construction either being interpreted as an engineering process of human relations approach and is about culture. Rarely are these two approaches ever viewed harmoniously. Such processed and cultural approaches of lean construction implementation tend to highlight the relationships within the organisation as aggressive, for example senior management are often described as neglecting the opinions of the workforce. Such aggressive representations of lean implementation leads the culture to be described as the workforce rejecting rather than accepting the principles of lean construction, and in some instances increasing waste. What is needed in research is a theoretical framework that identifies and explores those relationships in the organisation on a deeper level as the innovation is diffused. This introduces the conceptual framework of diffusion theory, particularly the use of theoretical constructs of communication and the social system to investigate, explore and understand lean diffusion within and across multiple organisations. In approaching cultural understanding the research considers cultural maturity over cultural change, this maturity perspective provides a framework that views the diffusion of an innovation evolutionary rather than statically. A cultural maturity model has been developed and proposed to explore the diffusion of lean and cultural maturity concurrently and aligned. Based on existing research and the conceptual framework and model the research is qualitative. A qualitative approach allows lean diffusion and cultural maturity to be explored simultaneously across multiple organisations from multiple perspectives. This constructivist approach allows a deeper and richer understanding of the process and maturing cultures and sub-cultures in the organisation. Nineteen interviews and three focus groups were conducted as part of the study, representing seven construction
organisations in Australia and the United States of America. The research proposes two research questions, with a thematic analysis used to assess and analyse the collected data. The research highlights a direct correlation between the diffusion of lean and cultural maturity, with lean to be diffused through three interconnected phases and maturity to be interrelated within four maturing phases. The research concludes by identifying a number of future research opportunities particularly relating to lean diffusion and cultural maturity.