Knowledge Driven Quality Improvement

Amit Shankar Mukherjee • Michael A. Lapré • Luk N. Van Wassenhove
125 Summer Street, Watertown, Massachusetts 02472
Boston University, School of Management, 595 Commonwealth Avenue, Boston, Massachusetts 02215
INSEAD, Boulevard de Constance, 77305 Fontainebleau Cedex, France

Little is known about the processes that make TQM effective. Why are some quality improvement projects more effective than others? We argue that TQM processes affect the way people create new knowledge, which in turn determines organizational effectiveness. We explore this by studying 62 quality improvement projects undertaken in one factory over a decade. Using a factor analysis we identify three learning constructs that characterize the learning process: scope, conceptual learning, and operational learning. We use OLS regressions to study the impact of these learning constructs on project performance. Conceptual and operational learning are found to play a crucial role in achieving goals, creating new technological knowledge, and changing factory personnel's attention. Contrary to the common practice of relying on operational learning, we suggest the application of conceptual learning as well, particularly if the technology is poorly understood. It facilitates the codification of knowledge, which enhances its dissemination for both present and future use.
(*Quality*; *Organizational Learning*; *Technological Knowledge*; *Learning by Experimentation*)