Making Organizational Learning Work: Lessons from a High Reliability Organization

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ABSTRACT

This paper reports findings from an ongoing study to understand the dynamics of operational reliability. Previously, the study identified weaknesses in organizational settings that inhibited learning opportunities, specifically the ability to learn from failure (Sullivan et al., 2008). Effective organizational learning strategies are critical in promoting operational reliability, specifically recovering from operational failures or preventing them altogether (Sullivan, 2007). There is considerable debate over the effectiveness of organizational learning and there is evidence that shows that it can, and in some cases must, work. The U.S. Navy demonstrates exceptional learning capabilities, learning from failure and even learning without failure. Further, the Navy’s knowledge management practices have proven effective over time as generations of military personnel, civil servants, and contractors learn from the experiences of their predecessors (Sullivan, 2007).

Keywords: High Reliability Organizations, Knowledge Management, Operational Reliability, Organizational Learning, Organizational Memory

1. INTRODUCTION

This research is part of an on-going study to develop an understanding of operational reliability. The organizational factors that contribute to operational reliability and the dynamic relationships that exist between them influence how reliable an organization is. HROs are not always reliable, but the way they respond to failure, or potential failure, sets them apart from traditionally less critical organizations (Sullivan & Beach, 2009; Sullivan, 2007).

To make a positive impact on operational reliability, organizational learning has to be considered in relation to knowledge management and organizational memory (Jennex & Olfman, 2002). Organizational learning is used to improve critical activities and remain competitive based on past performance. Thus, organizational effectiveness can be improved when management monitors organizational performance and establishes knowledge requirements. Knowledge workers use knowledge
management systems to identify meaningful information that needs to be retained and capturing it for future use. Thus, organizational memory is said to be the physical IT infrastructure that facilitates the storing, searching, and retrieving of factual information (Jennex, 2005, 2008; Jennex & Olfman, 2002).

While there are critics of the notion that organizational learning contributes to operational reliability (Baumard & Starbuck, 2005; Mellahi, 2005; Husted & Michailova, 2002; Busby, 1999; Starbuck, 1993; Milliken et al., 1992), this study provides evidence that organizations can learn from past experiences and that those with highly evolved cultures of reliability can mitigate imagined failure scenarios by developing strategies in advance, essentially learning without failure (Jennex, 2008; Sullivan, 2007).

When organizations learn from failure, they become more competent. Conversely, operating environments that demonstrate a propensity for repeated failures show signs of an inability to learn from past mistakes (Sullivan, 2007) raising the question - why do some organizations fail to learn from failure when others do not? In the following sections we provide the background to an ethnographic study which was conducted over a six month period with an organization working in a high reliability environment. The data gathered from this study was analyzed using the Sullivan-Beach Model for High Reliability Organizations (HROs) (Sullivan & Beach, 2009). The principles behind the model are briefly explained and the remedial action taken as a consequence of the analysis is described. Insights into why organizations fail to learn when others do not, are also presented.

2. METHODOLOGY

Having previously developed a framework to explain the dynamics of High Reliability Organizations (HROs) and the factors that contribute to, and threaten the reliability of, an organization’s operations, opportunities to engage in an ethnographic study were of interest. As a methodology, ethnography can help researchers develop a much deeper understanding of a particular environment and social phenomenon than other approaches; the researcher becomes integrated into the community in which the observations are made (Morvaridi, 1998). Post-September 11, 2001 access to military facilities has become difficult so when the opportunity to study an organization in a high reliability environment allied to the military arose it was eagerly embraced. Obtaining the richness of this qualitative data would have been impossible by any other practical means.

3. BACKGROUND

The organization involved in this study manufactures outboard cables for US Navy submarines. Outboard cables carry signals between electronic devices and must remain reliable under the intense pressures of the harsh underwater environment. While these cables do not represent a single point of failure for a submarine, cable failures can limit a submarine’s ability to carry out its mission.

The manufacturing process for these cables involves several processes, at least three manager level checkpoints, and government inspection and acceptance. All processes and checkpoints are documented and signed by the worker who performs the task. Once assembled, the cables are pressure tested beyond the operating pressures they would encounter in their service life cycle before being scrutinized by Government representatives. If accepted, the cables are entered into the inventory system for the US Navy Submarine Fleet where every activity concerned with a cable’s installation and maintenance is documented. The Navy maintains complete traceability for each cable and its component parts. If at any time a cable fails, it is replaced, and either repaired or destroyed. When cables reach the end of their design life, they are replaced and destroyed.

The prime directive of the case organization is to build, test and document reliable outboard cables for the US Navy Submarine Fleet. To that end, it is the responsibility of the
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