LESSONS LEARNED FOR ORGANIZATIONAL CHANGE

Context

Organizational knowledge is being lost at an alarming rate as businesses continue to downsize, to outsource, and to draw from a pool of increasingly mobile knowledge workers. The average length of time a highly skilled and experienced employee spends at a particular company has shortened considerably. Kransdorff (1998) coined the term “corporate amnesia” to refer to the loss of accumulated expertise and know-how due to employee turnover as people take what they know with them when they leave. The costs of employee turnover to the organization have been well documented (e.g., separation costs, recruitment and selection costs, training of replacements, initial lack of productivity of new hires, and the loss of productivity of co-workers during the transition). Far less research attention has been paid to the cost to the firm of losing know-how that resides within the minds of individual employees who depart (Kransdorff & Williams, 2000). In an era of knowledge workers, learning organizations, and service economies, individuals are increasingly responsible for value creation. Although many organizations have succession plans in place, the process usually involves transferring know-how from the departing employee to their successor, but the whole process has to be repeated again for the next departure. Organizations need to “capture” this know-how and transfer it to a stable, easily accessible, cumulative knowledge base—an organizational memory—to retain and make accessible valuable knowledge gained through the experiences of all knowledge in a continuous and uninterrupted manner.

Organizations need to effectively manage their organizational memory in order to prevent the loss of essential knowledge, particularly knowledge that resides predominantly in the heads of their knowledge workers and less in documents, procedures, and other tangible forms. More often than not, it is difficult to articulate this “know-how” that is of greatest value in organizational competitiveness and viability. The National Aeronautics and Space Administration (NASA), for example, has publicly admitted that the knowledge of how to put a man on the moon has been lost.

*If NASA wanted to send a man to the moon or Mars today, it couldn’t do it. All the knowledge and experience is gone. NASA would literally have to start from scratch. How did a worldclass organization like NASA lose the ability to recreate one of the greatest achievements in the history of mankind? (Vilet, 2012)*

The lessons that were learned and the innovations that were sparked cannot be found in the collective organizational memory of NASA. This means that NASA’s organizational memory cannot be used
as a resource to plan a more effective mission to send another manned flight to the moon or to Mars. A well-designed and well-managed organizational memory does not only combat corporate amnesia, but it ensures knowledge continuity: the effective transfer of know-how amongst peers and to future generations of knowledge workers. A better understanding of the nature of organizational memory, what it should include (content), how it can best be retained (technological containers), and how the accumulated lessons learned and best practices can be used by newcomers (connections) will help mitigate the cost of lost, forgotten, or un-transferred knowledge and know-how.

DeLong (2004) used the term “lost knowledge” to refer to knowledge that was not adequately identified as being critical and then subsequently shared and preserved so that others in the organization could make use of the lessons learned not only today but also so that future employees could retrieve and make use of this valuable knowledge. There is a particular vulnerability as baby boomers continue to retire in greater numbers. The end result is often the loss of a critical mass of valuable knowledge, especially in organizations where team members were hired at about the same time. As they become eligible to retire, there is a risk that they will do so at the same time. Of course, employees leave for reasons other than retirement, and in some sectors, such as the military, there is a systematic turnover due to planned rotation of personnel. Leibowitz (2004), for example, points to the “human capital crisis” in the U.S. Federal government due to the fact that so many baby boomers will retire en masse and in particular, senior managers, leading to a loss of substantial critical knowledge.

There is a greater vulnerability when it comes to the tacit form of knowledge. Experts such as Leonard (1995) typically divide critical knowledge into two parts: explicit and tacit. Explicit knowledge is knowledge that has been rendered tangible in some form such as a document, manual, or audiovisual recording. This knowledge has been identified as being valuable and an effort has been made to “capture” it in some physical form. Sullivan (1998) discusses an organization’s explicit knowledge that takes the form of intellectual assets, which he defines as:

…the codified, tangible, or physical descriptions of specific knowledge to which the company can assert ownership rights. Any piece of knowledge that becomes defined, usually by being written down or entered into a computer, qualifies as an intellectual asset and can be protected. Intellectual assets are the source of innovations that the firm commercializes. (p. 23)

Tacit knowledge, on the other hand, continues to reside solely “within” people, typically as learning, experience, expertise, and memory. Choo (2000) defines tacit knowledge as:

In organizations, tacit knowledge is the personal knowledge used by members to perform their work and to make sense of their worlds. It is learned through extended periods of experiencing and doing a task, during which the individual develops a feel for and a capacity to make intuitive judgements about the successful execution of the activity. (p. 395)

Tacit knowledge is therefore much harder to identify, capture, and pass. We need to know who knows what, interview them, and try to document what tends to be produced in the form of judgment calls, stories, intuition, creative or innovative solutions, perceptions, and evidence-based decision-making. Tacit knowledge is also much harder to get from people because it accumulates over years of experience, and they may not even know how to verbalize it, let alone know that they possess it! In fact, the more expert the person is, the harder it will be for them to “explain” what they know.
One of the best ways to be proactive rather than reactive is to ensure that the organization institutes a time and a place to reflect on the past, to analyze what worked well and what did not, and to extract from this analysis a lesson learned. A “Lessons Learned” process is a knowledge management approach for organizational learning and improved performance and productivity. Knowledge Management (KM) is a systematic way of identifying, leveraging, and preserving the valuable intellectual assets of an organization, which typically reside in documented physical artifacts such as files and databases but also remain largely un-articulated or tacit in the minds of experienced professionals. KM aims to ensure that best practices and lessons learned (positive and negative learning scenarios) that ensue from organizational learning activities such as project post-mortems or after action reviews are widely disseminated so that all employees can benefit from them. This is often referred to as the re-use of knowledge or organizational efficiency objective of KM. Equally important is to not only incrementally increase operational efficiencies but to engage in innovative and creative activities, a second KM objective.

Organizational learning that is mediated through lessons learned thus refers to both incremental and more radical changes that result from a reflective process to analyze what worked well and what did not, in order to make the changed needed to improve performance and productivity. The major process in this is learning from experience, called “experiential learning” when referring to individual learning and called “organizational learning or collective learning” when it occurs at the level of a team or whole organization. Lessons learned are the key components to organizational learning as they are typically the tangible embodiment of the process used to reflect upon and analyze past performance.

**Challenges**

The topic of lessons learned has not been tackled by the profession nor by academic scholars in any systematic way; the literature on the topic is sparse and practitioners have little empirically based guidance. Organizations, in general, tend to not know how to do lessons learned effectively nor have they been able to implement these processes for learning. The implications are that lessons tend not to be “learned” in the organizational setting because management understands neither the process nor the need for rigour. Further, practitioners have little theoretically based guidance as existing theories have not necessarily been validated to any great extent. Millway and Saxton (2011) note that the major challenge of organizational learning is:

*Reinventing the wheel—this well-worn phrase describes one of the oldest of human follies: undertaking a project or activity without tapping into the knowledge that already exists within a culture or community. Individuals are blessed with a brain that, some of the time, remembers what we’ve already learned—or at least that we’ve learned something. But what about organizations?”* (para. 1)

They define organizational learning as the intentional practice of collecting information, reflecting on it, and sharing the findings, to improve the performance of an organization. If lessons from the past are not learned, then an organization cannot be said to learn and it cannot improve: it is condemned to repeat the mistakes of the past (in addition, of course, to making entirely novel mistakes too!). Millway and Saxton (2011) focused on challenges faced by non-profit organizations and found that it requires a lot of hard work, strong leadership, and an organizational culture that rewards learning. Leaders need to set explicit learning goals, and they also need to be good role models. Mistakes should be seen as opportunities to learn rather than occasion to blame or reprimand. The need to engage their employees
in the processes required identifying, documenting, sharing, learning from, and acting upon the lessons from the past. The authors also note that technology advances will help address some of these challenges by making it easier to share knowledge more broadly and preserve valuable knowledge in organizational memory systems. A well designed and implemented lessons learned system will provide the needed context, advice, and collaboration (people-to-people as well as people-to-content) to facilitate organizational learning.

Senge (1990) developed the concept of a learning organization, one that fosters learning, experimenting, and risk taking. Implicit in this concept is that failure is expected, tolerated, and seized upon as an opportunity to learn and to improve, both as an individual and as an organization. However, Senge (2003) also found that becoming a learning organization is quite challenging. He too found that learning organizations require leaders to be open to challenges about their vision and behaviour and to be prepared to change when necessary. Learning organizations also require a reflective approach that is not present in most organizational cultures. Finally, learning organizations must have a long-term focus rather than one focused on deadlines and deliverables: again, not easily found in most organizational contexts.

Argyis and Schön (1978), in their theory on organizations, describe learning as detecting and correcting errors. Giesecke (2004) notes that:

Error correction is a very personal process. To correct an error, an individual must admit that he/she made a mistake. A manager has to admit that he/she is not infallible. The manager risks losing credibility. In most of our organizations, mistakes are viewed as personal failings to be fixed. Many performance evaluation systems emphasize error rates and limiting the number of mistakes, further creating a culture where denying errors is in the individual’s best interest. To succeed and grow, however, organizations must change this culture so that successes are emphasized and rewarded. Errors become opportunities to find better ways to accomplish tasks. Failures can become opportunities to learn and improve rather than career-ending events. Learning, then, is about action. It is about taking the information we gather and using it to create knowledge management systems and statistical databases and then using that knowledge to improve the organization. Learning is about moving from data gathering to using data to affect needed changes. (p. 56)

Objective

The objective of this book is to link the theoretical basis of lessons learned as an organizational learning tool with descriptions and examples of processes to establish best practices in the discipline. Lessons are learned when changes are made that result in tangible organizational improvements or productivity. Fundamental to these changes are robust processes from observation and analysis through to lesson identification, implementation, and validation. The book will take the reader through the entire process and outline critical success factors and potential pitfalls to avoid in implementing a successful lessons learned process within their organization.

The editors have brought together a collection of chapters from researchers and practitioners to help promote the implementation of a comprehensive and evidence-based lesson learned practice. Managers and practitioners will be able to successfully implement lessons learned as an organizational learning tool for enhanced innovation and organizational change. The objectives are to provide, in one publication, a comprehensive resource that would enable readers to apply the theory of lessons learned in a practical sense; to distill the key components of the theory so that it is more readily accessible to the practitioner;
Scope

The focus is on the examination of the entire lessons learned cycle in situ, from the time a lesson is identified to the time when it is actually learned. The ways in which lessons learned can act as a catalyst for innovation and add value to the organizational change process, whether from a project management, productivity improvement, knowledge management, or other perspective, are illustrated through a number of case studies. The chapters primarily focus on the application of theory in practical and meaningful applications, and each examines the factors that help or hinder the successful completion of the learning cycle.

These chapters collectively contribute to multiple disciplines and fields of practice, including information, knowledge, change and project management, along with organizational design, science, and learning. The authors comprise a multi-disciplinary team that brings forth academic, military, and civilian expertise, providing a value-added synthesis and holistic approach to the topic. The general approach is to select models, and then compare and contrast them. This form of meta- or second-order analysis of lessons learned approaches has not been done previously in any rigorous way. The result is therefore not simply a collection of case studies but also an in-depth analysis of trends in lessons learned processes.

The authors all contribute different ways of addressing the gap in the literature on theory, particularly as there are few models, let alone those empirically tested or put into action. Together, the practical and research studies presented here combine theory and practice through an evidence-informed methodology, which will result in better informed and equipped practitioners, enlightened and empowered managers, more fruitful future research avenues, and more effective resources for trainers and educators.

The series of chapters that follow provide a form of “Lessons Learned 101” and as such could be used by practitioners as a guidebook for implementing or improving their lessons learned processes. The book could also be used as a textbook for students in Knowledge Management or by organizations wishing to instill a knowledge management culture. Project Managers could use it to integrate lessons learned more effectively into their project management cycle, particularly in the risk management and quality control processes. Finally, case studies will be useful to managers, educators, trainers, and researchers, as they will be designed as study chapters to be used alone.

Overview of Chapters

The chapters are divided into three sections:

1. Defining Lessons Learned;
2. Good Practices in Lessons Learned; and
3. Critical Success Factors

The first section begins with a comprehensive literature review in Chapter 1 by Irene Kitimbo that summarizes the fundamental studies that contributed to our understanding of the meaning of lessons
learned and their implications for organizational innovation and change as well as what the current state-of-the-art is today. This chapter draws from the fields of organizational learning, especially experiential learning, as well as project-based lessons learned. A typology of different types of lesson learned is presented from both the academic and practitioner literature. Chapter 2, by Susan McIntyre, provides an overview of the different approaches to lessons learned for process improvement and innovation. The lessons learned process is delineated from other process improvement and evaluation methods used in organizations, namely the participatory nature of those who lived the original experience and those who document the lessons to be learned from it. The scope of a lesson learned is described, and the role they play in triggering organizational learning is explained. Chapter 3, the final chapter in this section, is by Perry Paul, and it outlines the different models of lessons learned life cycles, comparing and contrasting the features of each, in order to identify the critical components of a successful lessons learned process. The resulting prescriptive lessons learned process model is derived from what worked and what did not succeed in existing studies to date.

The second section summarizes the major best practices in successfully implementing all the major stages of a lessons learned cycle, from both academic and practitioner studies. In Chapter 4, Peter Avis and Joe Sharpe outline the key stage of operationalizing the process so that lessons are not just observed but they are also in fact integrated into organizational learning and continuous improvement over time. They demonstrate this using the case of interdepartmental collaboration by a number of Canadian federal government departments. In Chapter 5, the author (Ditte Kolbaek) is a former manager of organizational learning, and she describes the Proactive Review approach, which is an educational design approach to initiate learning from experience. She uses as context an implementation carried out in an information technology company to illustrate how Proactive Review can be used to share individual experiences to resolve project issues and form a collective organizational memory.

Dr. Nick Milton provides a model of evidence-based learning in Chapter 6 that incorporates stages of observation, insight, learning, action assignment, validation, and change. He makes use of three different case studies, each at a different scale to illustrate how lessons learned can be collected in a standard format, using the same workflow and development process but the level of complexity and governance varying with the project scale. In Chapter 7, Dr. Pierrette Champoux provides an extensive review of the role that information technology can play in the lessons learned process. She uses an approach based on identifying user requirements and the organizational context in order to select the optimal tools and technologies to support the gathering, analysis, dissemination, decision-making, and change initiative stages. Dr. Champoux provides a framework that can be used to categorize the types of information, requirements, models, and tools required for each stage of the lessons learned process cycle.

The second section continues with Chapter 8 by Melissa Bowers and Gwen Cherne on how differences in organizational culture, language, processes, and behaviours can both help and hinder understanding and collaboration. The authors look at the Australian Civil-Military Centre (ACMC) as a case study to illustrate a holistic lessons learned approach that includes government, military, police, and the aid community as stakeholders in responding to conflict and disaster management events. The lessons learned collected and implemented addressed improvements in training, preparedness, exercises, and future research to be done. The following chapter, Chapter 9, by Mark Reid and Dan Ashcraft, make use of the U.S. Air Force’s (USAF) Pacific Air Forces unit as a case study to illustrate how lessons observed can be translated into actions and mission improvements. A number of evidence-based good practices emerge from their analysis such as how to motivate senior decision-makers to participate and to buy into the lessons learned process as well as how to ensure follow-through on the documented lessons so that they are
truly learned. In Chapter 10, Kimiz Dalkir relates her experience in using digital storytelling as a means of encapsulating, sharing, and learning of lessons in a utility company. The use of narrative databases and simulation games proved to be an effective means of embedding lessons learned in employee orientation and professional development activities and thus helping to institutionalize the collective learning. The final chapter in this section, Chapter 11, by Susan McIntyre, outlines an analytical framework for meta-organizational lessons, or lessons that span multiple organizations. The case study organizations she uses are from the Canadian and allied governments for “whole-of-government” lessons learned. This chapter addresses the crucial need to extend the scope of lessons learned from individuals or individual organizations to more comprehensive lessons that apply to inter-organizational interactions. The author describes a possible framework to guide the process of gathering and analyzing lessons from multiple organizations and multiple operations.

Section three focuses on the critical success factors that have been identified using the same evidence-based approach from both academic and practitioner studies. Ian Fry in Chapter 12 outlines some of the major pitfalls and shortcomings in the lessons learned process. He presents the results of an ongoing online survey by Knoco, which has gathered data on the effectiveness of lessons learned programs over a significant period of time. The author does not only identify issues but also presents recommended mitigation strategies to address each type of problem. Chapter 13 by Saša Baškarada, Jamie Watson, and Jason Cromarty discusses a number of factors that determine the leadership style adopted by organizational decision-makers. The type of leadership exercised can have a significant impact on whether an organization can effectively improve and/or innovate using lessons learned. The authors also provide recommended objectives for lessons learned for each type of leadership style. The section concludes with Chapter 14 by Ian Nicholls and Perry Paul on how the type of organizational culture can radically influence whether or not positive changes can be quickly implemented following a lessons learned process.

The concluding chapter summarizes the key recommendations from these studies, suggested avenues for future research, as well as additional resources and tools for further investigation.

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REFERENCES


