Empathic Knowledge Management: reverse simulation experiments in a learning laboratory

Ravi S. Behara*

IT and Operations Management Department
College of Business
Florida Atlantic University
Boca Raton, FL 33431, USA
E-mail: rbehara@fau.edu
*Corresponding author

Tojo Thatchenkery

School of Public Policy
George Mason University
Fairfax, VA 22030–4444, USA
E-mail: thatchen@gmu.edu

Con Kenney

Federal Aviation Administration
800 Independence Avenue
Washington, DC 20591, USA
E-mail: con.kenney@faa.gov

Abstract: The effective management of knowledge has emerged as a critical competency for organisations. This paper presents a methodology for managing knowledge in information- and knowledge-intensive services. The Empathic Knowledge Management methodology was developed on the foundation of an appreciative inquiry framework that surfaces and utilises tacit knowledge of participants in the context of process design efforts in a learning laboratory environment. Behavioural and analytic interventions were used to elicit and formalise the knowledge of the participants. The behavioural interventions created and maintained a learning climate for reverse simulation using appreciative inquiry, while the analytic interventions included systemic problem formulation, service blueprint development and system specification using appropriate software tools. The methodology was tested successfully in the design of two distinct product delivery processes in a large financial services company in the USA.

Keywords: knowledge acquisition; organisational learning systems; process choice/design.

Reference to this paper should be made as follows: Behara, R.S., Thatchenkery, T. and Kenney, C. (2008) 'Empathic Knowledge Management: reverse simulation experiments in a learning laboratory', *Int. J. Information Technology and Management*, Vol. 7, No. 3, pp.283–314.

Biographical notes: Ravi S. Behara is an Associate Professor of Operations Management at Florida Atlantic University's College of Business in Boca Raton, FL. He has been a faculty member at business schools for over 15 years in the USA and UK, and has consulted for various organisations. His research interests include new service development, managing knowledge-intensive services and projects, and operational risk and resilience in complex services. He holds a PhD in Service Operations Management from England and a Bachelor's degree in Electrical Engineering from the Indian Institute of Science.

Tojo Thatchenkery is a Professor of Organisational Learning and Knowledge Management at the School of Public Policy, George Mason University, Fairfax, Virginia, USA. His current research interests include Information Communication Technology (ICT) and economic development of South Asian countries, social capital and organisational mobility of Asian Americans, and appreciative inquiry and hermeneutics as methodologies for understanding organisational change. Thatchenkery's recent books are *Appreciative Sharing for Knowledge: Leveraging Knowledge Management for Strategic Change* (2005), *Appreciative Intelligence: Seeing the Mighty Oak in the Acorn* (coauthored, 2006) and *Information Communication Technology and Economic Development: Lessons from the Indian Experience* (coedited). He is currently studying the role of appreciative intelligence in fostering innovation at the global level.

Con Kenney is Chief Enterprise Architect for the Federal Aviation Administration in the United States Department of Transportation. Formerly, he was the Chief Technology Officer of a startup software company in the USA and an executive at Fannie Mae, the US mortgage finance company. Kenney's research interests include organisational learning and change, strategy, product development, and IT. He has collaborated in research projects with several universities such as Stanford, George Mason, University of Texas at Austin and New Jersey Institute of Technology. Kenney has also presented papers at the *Academy of Management*, *Society for Process and Design Science*, and various other international IT research conferences.

1 Introduction

The significance of knowledge has been discussed in ancient Indian philosophic discourse, where it is stated that (written in *Sanskrit*, the ancient Indian language) *vidya dhanam sarva dhana pradanam* – which translates to 'the wealth of knowledge is the supreme wealth'. The commentary implies that knowledge is unique in that it is indestructible and increases the more it is given away. This is the sentiment expressed by the late Drucker (1991, p.26) when he said, "we now know that the source of wealth is something specifically human: knowledge". Davenport and Prusak (2000, p.17) also state that knowledge assets, unlike material assets, increase with use. Similarly, Romer (1993) argues that in the field of knowledge economics only knowledge resources have unlimited potential for growth. The impact of knowledge on economic growth has been recognised and studied over the past few decades (Penrose, 1959; Denison, 1985). The preeminence of human knowledge is now being recognised once again in human history.

Murakami (1993) suggests that we are now at the threshold of the age of creation in which creativity and innovation are the key sources of value-added and competitive advantage. Drucker (1991) described our present reality as a knowledge society and considers that most people working therein are knowledge workers. In this environment, he considers that raising productivity of service work is the first social responsibility of management in the knowledge society. He goes on to define productivity as applying knowledge to known tasks and innovation as the application of knowledge to tasks that are new and different. Understanding and managing knowledge, which is at the core of such activities, is therefore a strategic capability that distinguishes a firm from its competitors (Leonard-Barton, 1995). It is therefore no surprise that corporations are looking to knowledge management as a way to sustain growth through productivity and innovation. Much of that attention has been focused on the creation of tangible products, although the economies of the USA and other developed countries are dominated by services, many of which are knowledge-intensive organisations. Hence there exists a need to study knowledge management in such service organisations.

Three priority areas of research and experimentation have been identified as being pivotal to the success of knowledge management from a business perspective (Holtshouse, 1998). The first of these areas involves the tapping into and unlocking of the tacit knowledge of individuals. Tacit knowledge is the unspoken internalised knowledge about the product, service or process that is held by the employee. Tapping into and unlocking individual tacit knowledge requires a highly interactive social process between individuals in a co-located and face-to-face environment. However, fragmented work environments are not conducive to obtaining and using tacit knowledge because of business forces such as organisational restructuring and the organisational power structure. In addition, business realities such as outsourcing are disruptive forces that could oppose such interactive environments. The second area of research involves the flow or transfer of knowledge in an organisation between the seekers of specific knowledge and those able to provide it. This involves issues related to the awareness of what is needed, and access to such knowledge. When the technological solutions for knowledge exchange are usually addressed (Davenport and Prusak, 2000), the social and cultural attributes of the organisational environment are equally significant. The adoption of systemic practices that address the social and technical reality of the workplace is essential. The third area of research is to formalise or transform fuzzy and intangible knowledge into visible and concrete knowledge. Collective knowledge in communities of workers and among suppliers and alliance partners has to be made explicit and visible in the business process. The research discussed in this article addresses some of these challenges. It considers these three phases of extracting, transferring and formalising tacit knowledge to be equally valid at the business process level and discusses an approach to capture and then embed knowledge in the new processes through design.

Recent research in knowledge management has shown a dichotomy in the approaches being adopted. Western research has emphasised the identification, measurement and distribution of explicit knowledge, while Eastern researchers (mainly Japanese) have focused on new knowledge creation through the social sharing of tacit knowledge, which is highly personal and difficult to formalise (Cohen, 1998). Nonaka and Konno (1998) have adapted the concept of *ba*, originally proposed by Japanese philosopher Nishida (1970) and developed by Shimizu (1995), to their model of knowledge creation. *Ba* can be thought of as a shared space, a space that can be physical, virtual, mental,

or a combination of these three spaces. This shared space is the context in which knowledge is created through a process that involves a sequence of four conversions. These four conversions are socialisation that involves sharing of tacit knowledge, externalisation or translation of tacit knowledge to others, combination or conversion to explicit knowledge, and finally the internalisation of the new explicit knowledge into the existing tacit knowledge (Von Krogh *et al.*, 2000). The methodology developed in this study has some parallels with the *ba* concept in that shared mental models in a positive social environment form the shared space in which the knowledge management effort is undertaken.

Our study also addresses the limitations associated with knowledge management as identified in the literature (Fahey and Prusak, 1998). Tacit knowledge, which includes perspectives, perceptions, beliefs and values, is usually downplayed or ignored in organisations (Sparrow, 1998; Von Krogh *et al.*, 2000). Few organisations also explicitly engage in experiments for knowledge creation and often do not have the willingness to explore. While the power of information and communication technologies continues to grow dramatically, they are not yet powerful enough to substitute for the rich interactivity, communication and learning inherent in a social conversation. Our study attempts to remedy these limitations in typical organisational knowledge management efforts by creating a methodology that focuses on tapping into tacit knowledge through conversations in the experimental context of a learning laboratory.

Another major issue in knowledge management relates to learning. Nonaka and Takeuchi (1995) highlight the distinctions between individual learning and organisational learning. While the former is carried in the heads of individuals, the latter is realised only when it is embedded in organisational processes (Levitt and March, 1988). Our research provides an approach in which tacit individual knowledge can be made explicit and then embedded in organisational processes. Some progress is being made to overcome the uncertainty of outcomes and the absence of facilitating tools that have typically been barriers for companies to engage in the more challenging but essential aspects of knowledge management. This study presents the creation of a theory-based methodology to facilitate knowledge creation and uses appropriate technology to formalise it in organisational processes.

Process innovation as knowledge management

Creativity, the generation of new and useful ideas by individuals or teams, can appear in many forms and functional areas in a firm, from fledgling entrepreneurial efforts to well-established corporations. New ideas, however, need to be operationalised to provide firms with a competitive advantage. Innovation can be defined as the successful commercialisation of new or improved products and services and requires a systematic approach to develop and sell new ideas. Service innovation also involves two distinct yet interdependent elements, the creation of an intangible service product and an effective process to deliver it to customers. This study presents a methodology for knowledge management, and explores it in the context of process innovation in financial services.

The intangibility of services is well recognised, but the nature of that intangibility and its implications for managing services must be better understood. We will argue that the essence of service intangibility is information and knowledge, which may be classified as either human-centred or technically based. Service management research has traditionally focused on the former intangibility related to knowledge about the customer-provider

interactions that are prevalent in services. This is illustrated by the dominant role of human expectations and perceptions in service quality research, which in turn can be traced to the dominant role played by marketing during the early stages of research in this field. The business environment is dominated by information and knowledge, so it is essential that researchers also address issues related to technical intangibility and its implications for the management of services. Such issues are also of significant concern to practising managers. These concerns are addressed in this study by looking at technical intangibility in process innovation for financial services. The information- and knowledge-based intangibility in services can be addressed when process innovation efforts are conducted as knowledge management activities. The methodology developed here has implications for other service process design efforts and in the management of information- and knowledge-intensive services.

Ruggles (1998) applies a process-based view of the firm to identify four types of knowledge-focused activities:

1 generating and accessing of knowledge (sourcing)

2 using accessible knowledge in decision making, embedding knowledge in products/services/processes, and representing knowledge in databases/software (capturing)

3 facilitating growth and transfer of knowledge (sharing)

4 measuring the value of the knowledge assets (evaluating).

His study of 431 US and European firms showed that less than one-third of the firms considered themselves to be good or excellent at these activities. Only 30% of the respondents, for example, considered themselves effective at using accessible knowledge in decision making and 29% believed they excelled at embedding knowledge in products, services or processes. This highlights one of the main challenges in effective process design in services. Most firms are unable to use and embed knowledge in processes, even if they can generate or access it. Three-quarters of the organisations in the study, however, are focusing their efforts on making knowledge explicit by capturing it in data warehouses and knowledge repositories and by sharing this knowledge through corporate intranets. These technology-centred efforts are necessary and should be continued, but as we noted earlier, the more challenging issue of embedding knowledge in processes is not adequately addressed as reflected in the many failures in corporate process-reengineering efforts.

We postulate that service process innovation in information- and knowledge-intensive services should be undertaken as a knowledge management activity to address the technically oriented intangibility. Therefore tacit knowledge must be captured and shared among participants to make it concrete, and subsequently embedded in the process. This approach to process innovation can be accomplished by integrating a diverse array of concepts, including systems thinking and design, organisational learning, service blueprinting and process modelling.

2 Conceptual foundations

2.1 Appreciative inquiry

Appreciative inquiry is the overall interpretive scheme (Bartunek, 1984) used in this study. According to appreciative inquiry (Cooperrider and Srivastva, 1987; Barrett and Fry, 2005; Watkins and Mohr, 2001), most approaches to understanding organisations are embedded in a 'problem-solving' paradigm. It is assumed that organisations are full of problems that need to be solved and that research/consulting equals problem solving. To do good research is to solve 'real' problems. Similarly, the notion of organisational diagnosis implies the existence of a basic clinical condition that characterises organisations. This deficiency model of organisational research calls for researchers and consultants to develop techniques to accurately identify and diagnose problems.

In contrast to this clinical or problem-solving focus, appreciative inquiry focuses on what is working well in an organisation or group. By exploring events when employees are at their best, appreciative inquiry identifies the core values that people cherish and attempts to find ways to channel their fundamental desire to contribute (Thatchenkery, 2005). The inquiry begins with a process of affirmation of the basic 'goodness' that exists in the group and tries to create a climate of collaboration and true inquiry within the unit. In summary, appreciative inquiry is an attempt to co-create a shared consensus of a new future by exploring the core competencies and values that are resident in an organisation or group. Appreciative inquiry seeks out the very best of 'what is' to provide an impetus for imagining 'what might be' (Thatchenkery, 2002).

When employees are engaged in an appreciative inquiry learning effort, they attempt to discover, describe and explain exceptional moments during which the system in which they function worked well. They also rediscover when their competencies and capabilities were engaged. In this process, characteristics that give life to the organisation are discovered and valued. Appreciative inquiry involves the investment of emotional and cognitive energy by participants as they create a positive image of a desired future. Knowledge-intensive organisations need to go beyond adapting to competitive challenges and problem solving, and direct their energies towards learning and inquiring into possibilities. Appreciative inquiry and learning approaches in organisations nurture innovative thinking by "fostering an affirmative focus, expansive thinking, a generative sense of meaning, and creative collaborative systems" (Barrett, 1995).

The appreciative inquiry approach is in contrast to the traditional approach taken by Psychology over the last half century, in which the discipline focused almost entirely on pathology, using the science of medicine as its model. Most theories in the field have generally focused on damage, wherein negative characteristics are assumed to be authentic and human strengths are considered coping mechanisms. Appreciative inquiry is consistent with some streams of psychology that are returning to the roots of the field whose original goals were to identify genius, to heal the sick and to help people live better, happier lives (Gillham, 1999). There is a growing need to focus on growth and strengths, rather than on phobias and fears.

2.2 Reverse simulations and the learning laboratory

Simulations have long been used as a way to mitigate the risk of the real world in a wide variety of contexts. Military and business simulations that are used in training and teaching are typical examples. The use of simulations to solve business problems has been more successful in some contexts, such as manufacturing, where the problems, though complex, are more structured. However, industry has long been sceptical of the efficacy of simulations to solve real-world organisational problems. They are usually welcome in technical areas but not in organisational change efforts, which are perceived as unpredictable, subjective, subtle and problematic. Several new simulations have been introduced in the organisational landscape over the last decade and have made some progress in reducing resistance and doubt (Keys *et al.*, 1996). All these modelling and simulation efforts are based on an overarching assumption that they are simulating the real world. The criteria for effectiveness are usually the extent to which the simulation represents the real world. Therefore, a simulation designer must be a careful observer with a highly developed skill for prediction by transforming the simulation into a microcosm of the real world. In this paper we question this assumption and propose an alternative called *reverse simulation*.

To make the case for reverse simulations, the question that must be addressed is, 'what is *real*?' This is a question philosophers have debated inconclusively for many centuries. Some have even considered it to be the wrong question to ask. With the emergence of modernism as the dominant scientific discourse, language is seen as an objective reification, a medium to accurately represent the objective world outside. However, ever since the proposition of the 'social construction of reality' (Berger and Luckmann, 1966) and the postmodern turn (Boje *et al.*, 1996; Gergen and Thatchenkery, 2004), a better appreciation of the 'self-referentiality' (Baudrillard, 1985) of reality has emerged. According to this view, there is nothing enduring or 'foundational' about the way organisational realities exist (Astley, 1985; Gergen, 1994). They are the creation of language and human imagination. Many of the organisational practices are embedded in history mediated by rules of engagement and social conventions. Thatchenkery (1992) has argued that organisations are texts that can be 'read' differently depending on the interpretive lenses the readers (stakeholders) bring to the context. Thus, when we use appreciative inquiry we are intentionally evoking a new language practice or discourse, so that organisational stakeholders may create outcomes that were initially thought to be impossible.

In the Organisational Learning Laboratory, the metaphor of the science laboratory is applied with particular focus on creating new futures or possibilities for organisations. As stated above, the underlying assumption here is that organisational realities are socially constructed and therefore amenable to change. Owing to the postmodern and social constructionist discourses in organisation science, there is now a better appreciation that the paradigms in which the organisational stakeholders participate determine and limit what they are capable of seeing and realising. By stepping out of the self-referentiality of the paradigm, at least in theory, one could imagine and possibly create different organisational realities. The Organisational Learning Laboratory has been conceived as one place to try such experimentations.

However, the challenge is to demonstrate these theoretical propositions at the organisational level. To explore this, we return to one of the foundations of science – the laboratory. In a laboratory a scientist experiments with new possibilities. S/he is less

constrained by the limitations set by the natural world. As a result, the scientist is willing to try out things that s/he will not in the real world. While a large number of such experiments do not result in any discoveries or products, a few end up producing new findings and possibilities with an impact that is significant enough to compensate for the failures of the rest. In the Organisational Learning Laboratory, the metaphor of the science laboratory is applied with particular focus on creating new futures or possibilities for organisations using reverse simulations. Thus, in a learning laboratory, one can experiment with new organisational possibilities through carefully designed simulations and modelling. According to Leonard-Barton (1992), a learning laboratory is an organisation dedicated to knowledge creation, collection and control. Contribution to knowledge is a key criterion for all activities. She also indicates that a significant amount of knowledge and skills are embedded in physical equipment and in people processes in a learning laboratory.

Weick (1976) was the first to write about the notion of reverse simulation in organisations. He suggests that instead of trying to simulate reality, the opposite be done by letting the real world operate like a laboratory. Thus, the questions we encounter in the laboratory are how to create and model new forms of organisational processes and structures that are very different from what are available outside, and make those possibilities replicated in the real world. This is accomplished by observing the nature of the relationship that allows phenomena to occur in the laboratory and later figuring out how to transplant, not just the phenomena but more importantly, the nature of the relationship. Consider a deliberately oversimplified example: After a few days of specially structured group interactions, a small group of laboratory participants may learn several key principles of open communication, giving and receiving feedback, and impacting others. Yet when they try to apply the learning in the real world, they don't achieve the desired objectives, leading them to question the relevancy of academic knowledge. If we are to apply the principle of reverse simulation, we will only consider application as a function of the participants' ability to replicate first the conditions that facilitated the emergence of the learning and not the learning as such. For example, participants might have noticed that a certain level of trust had to develop in their small group before a member is willing to give or receive feedback. Therefore, what they need to transfer to the outside world is not a technique of giving feedback, but the conditions that allow trust to develop in a group and then apply the technique of giving feedback.

Another dimension in the Learning Laboratory is the stakeholder view of the environment. It is believed that the environment is an entity that exists outside that they must respond to. An alternative scenario is that organisations invent the environment they in turn respond to. The environment is not something that is concretely 'out there', but created by organisational imagination. A good articulation of this view is made by Daft and Weick (1984), who conceptualised a model of organisations based on how managers interpret their environment. Two key dimensions of this framework are the managers' beliefs about the analysability of the external environment, and the extent to which the organisation intrudes into the environment to understand it. Figure 1 shows the possibilities based on these two dimensions.

Figure 1 Organisational interpretation modes

Undirected viewing Constrained interpretations. Non-routine, informal data. Hunch, rumor, chance opportunities. Much equivocality reduction, reactor strategy	**Enacting** Experimentation, testing, coercion, invent environment. Learn by doing. Some equivocality reduction, prospector strategy	Unanalysable
Conditioned viewing Interprets within traditional boundaries. Passive detection, Routine, formal data. Little equivocality reduction. Defender strategy.	**Discovering** Formal search, Questioning, surveys, data gathering. Active detection. Little equivocality reduction. Analyser strategy.	**Environment** Analysable
Passive	Active	

Organisational intrusiveness

Source: Adapted from Daft and Weick (1984)

In *undirected viewing*, the organisation typically does not engage in aggressive searches, and does not depend on hard, objective data sources because of the belief that the environment is essentially unanalysable. In *conditioned viewing*, the assumption about organisational intrusiveness is the same, but the environment is perceived to be analysable. In the *discovering* mode, organisations are active invaders into the market with powerful analytic strategies and methodologies. The fourth category, which is the focus of this paper, is called the *enacting* mode that reveals an active, intrusive strategy as well as the belief that the environment is unanalysable. Such organisations construct their own environments by active interpretation. They look at the same sets of data that others do and yet generate widely different interpretations that enable them to enact a future they desire. In the methodology developed in this study, the interpretive view of organisations is integrated with information technology to create powerful learning simulations. The objective is to make the best use of advances in information technology to model actual and possible behaviours in organisations and understand the role of language and interpretations in shaping organisational realities.

3 Methodology

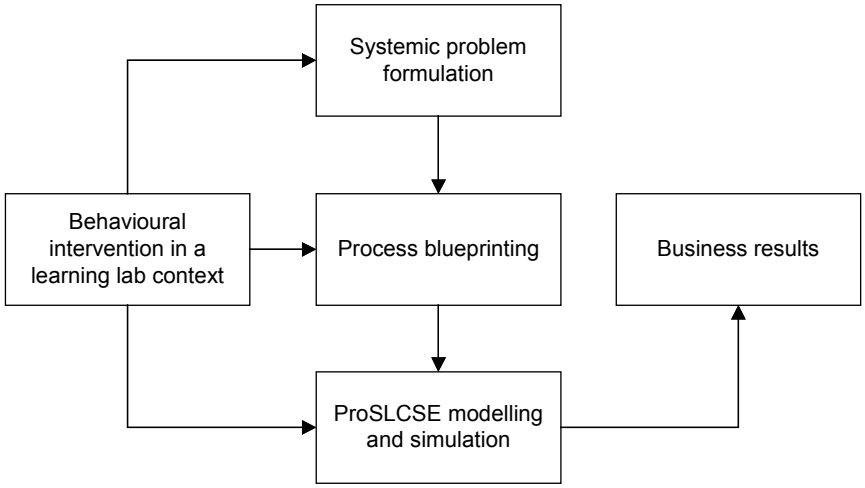
Companies have a capability gap when strategically important technical expertise is inadequate or unavailable internally. Capability gaps appear for many reasons, such as reduced focus on research, technological maturity and obsolescence due to increasing technical innovation, and the opportunity to combine new technologies. Firms typically seek knowledge from the outside in their attempt to overcome such capability gaps (Leonard-Barton, 1995).

The organisation in this study sought a different approach to process innovation so it could take advantage of advanced technical and management ideas. It had some required capabilities, but not among an adequate number of people. Other capabilities were unavailable. The company's objective was to establish both an expertise in the area of

process innovation and a way of learning to develop a new capability. The academic team helped to design a comprehensive methodology for knowledge management to facilitate service process innovation. The methodology developed was to be the basis of experiments in which it could be tested. Such a working relationship between academia and industry requires a high degree of mutual commitment between the parties and has a good potential for developing new capabilities. Co-development is appropriate for new product and process development because it usually results in knowledge 'bleed-through' from one party to the other (Harrigan, 1985). In this study, there was a high degree of commitment from the company's project team and the academic team. The co-development effort at the project level was under a strict completion date dictated by business reality. A conscious effort was made, however, to design an effective methodology from the very beginning to allow for a customised solution for each of the projects of process innovation to emerge during experimentation.

The *Empathic Knowledge Management* methodology developed in this study is shown schematically in Figure 2. The term 'empathic' is used because the facilitators and other team members used appreciative inquiry and associated behavioural intervention methods consistently during the project to obtain a deep and empathic understanding of the participants and their points of view. It also highlights the creation of a reflective learning experience for the individual team members. This formed the core of the behavioural dimension of the methodology. A further discussion of this aspect of the methodology follows. The operational and technical dimension of the methodology is included in the following section, which discusses the actual project. This involved a systemic approach to problem formulation, the development of a service blueprint based on the system defined in the formulation, the development of a detailed process diagram with specifications using the Process Oriented Software Life Cycle Support Environment or ProSLCSE software tool, and an appropriate business solution to the formulated problem.

Figure 2 Empathic knowledge management methodology



3.1 Steps in appreciative inquiry implementation

The following steps were adopted to keep the design close to the theoretical concepts of appreciative inquiry and reverse simulation. The steps are explained in the context of the actual approach adopted on the case studies that are described in the following section.

Step 1 Obtaining commitment and support from top management

The organisation made a commitment that the team members would be released from work to be at the laboratory site for the entire duration of the project for up to four weeks for a half-day every day. It turned out that most members went back to their office after the lab experience to attend to pressing matters. Yet the realisation that this was a real project where real products were going to be created played a key role in shaping the right mindset among members. The authors were also told that the project was an important one for the organisation. In addition, one of the authors played the role of project champion within the organisation.

Step 2 Initiation into the laboratory philosophy

In addition to talking about the principles behind laboratory experimentation, the concept of reverse simulation was also explained to the participants. The authors acting as laboratory facilitators underscored the importance of 'thinking outside the box', looking at problems with a fresh eye, and the role language plays in creating reality. Other issues highlighted were that the laboratory environment provided a safe place for experimentation and that it was acceptable to make mistakes. The fear of failure issue was also addressed. There were questions about the artificiality of the laboratory environment and how this 'unreality' could be made real.

Step 3 Creating the learning climate for the reverse simulation using appreciative inquiry

The project started with an introduction of appreciative inquiry, and applying it among pairs of team members. After explaining the intellectual, philosophical and methodological issues behind appreciative inquiry, members were asked to think about a few recent positive experiences they have had in their organisation – events when they felt most alive, excited, valued or appreciated. They probed further as to what made that event a significant positive experience and what they learned from the experience. Finally, they were also asked to think about their images for the future of the organisation and what they would contribute to make that happen. By thematically analysing the data, one of the authors derived the 'core values' in the appreciative inquiry. Metaphorically, core values are the glue or connective tissue that holds an organisation or group together. It was important to recognise and enhance them since they would later form the fundamental elements of the climate that we would hope to recreate later in the real organisation. Throughout the duration of the case studies, participants got several occasions to practice appreciative inquiry and discover its value in organisational transformation.

Step 4 Paying attention to the content and process at the same time

Throughout the two case studies, participants were taught to pay attention to both the content and the process of their deliberations. The primary task of the group was to design the financial product delivery processes. However, thanks to the appreciative inquiry framework, gradually the participants learned to bring up process issues along with content issues without hesitation or embarrassment. In the end, they learned a methodology for completing complex projects in record time by tapping into the resources of everyone. There were reflection sessions where the participants talked about what allowed them to do whatever they did and how to 'take away' the learning to their work environment. It was at this point that they developed a sophisticated understanding of reverse simulation. They discovered that the secret is not in any technique but in their ability to create conditions similar to the one that existed in the laboratory. Subsequently, the discussion was on how exactly to do that. They participated and reflected on what they had learned, occasions when things worked and did not, and the overall climate requirements for transferability.

3.2 Empathic group design

For any group to be effective, it should have a healthy balance between two interdependent activities known as the task maintenance and group maintenance activities. If group members or leaders focus only on one aspect, the long-term efficacy of the group will decline. So, by focusing on both aspects, a unique design called Empathic Group Design was created.

There are five dimensions to the *task maintenance activities*, as shown in Table 1. They are initiating, seeking or giving information, clarifying and elaborating, summarising and consensus testing. By engaging in these activities, the group is able to self-manage or be facilitated by a team leader and stay focused on goal accomplishment. This task orientation is very important for the survival of any group. However, a second set of activities called the *group maintenance activities* focuses more on the emotional and affective side of the group process. The four dimensions here are gate keeping, encouraging, harmonising and compromising, and standard setting and testing, as shown in Table 2. When a group becomes too task oriented and neglects the climate of its processes, member morale, loyalty and commitment will decline. Only by deliberately focusing on the affective aspects of the group dynamics can a group leader or facilitator bring its true power to fruition.

Recent research on emotional intelligence (Goleman, 1997; Goleman *et al.*, 2002) and appreciative inquiry (Thatchenkery, 2002; 2005) has underscored the need for what we call empathic design. The emotional intelligence literature has conclusively proved that managers or groups that are able to take care of the interpersonal and emotional aspects of individuals and the group tend to perform much better than those that do not. Similarly, appreciative inquiry research has pointed out that when the inner strength of a group is intentionally affirmed and recognised, more enduring and innovative ideas emerge while at the same time enhancing member satisfaction.

A unique characteristic of the methodology developed in this study is the constant and consistent behavioural and analytic intervention in a learning laboratory environment during all phases of the process using the task and group maintenance activities discussed above. In a knowledge-intensive service situation, the project

team shares significant tacit knowledge. A deep appreciation and understanding of the unarticulated tacit knowledge of the team members is critical to a successful process innovation, which includes comprehensive design, cohesive development and ultimate acceptance of the new process.

Table 1 Task maintenance activities

Stage	*Activity*	*Examples*
1	Initiating	Let us build an agenda How do we do this? Let us start with this plan
2	Seeking or giving information/openness	I have some ideas that may be useful My experience with such matters is . . . Does someone know anything about this?
3	Clarifying and elaborating	Let me give an example . . . Let me explain In other words . . . I mean to say . . .
4	Summarising	Let us summarise here . . . So, what we have been saying so far amount to . . .
5	Consensus testing	Have we made a decision on that point? Do we all agree on that? Is that the consensus of this group?

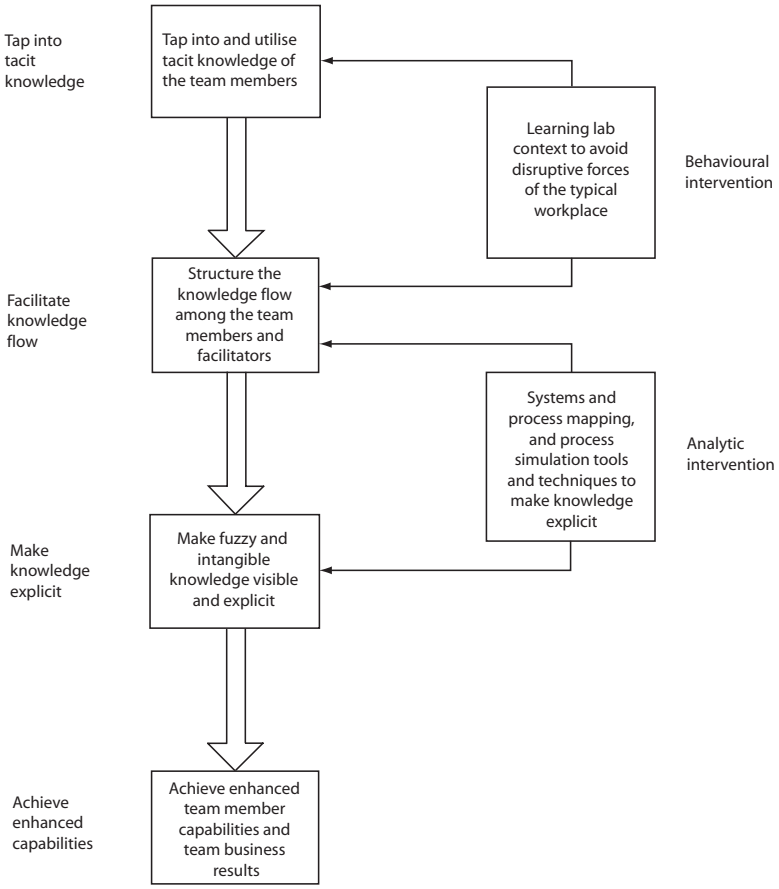
Table 2 Group maintenance activities

Stage	*Activity*	*Examples*
1	Gate keeping	Let us give Sandy a chance If people would talk one at a time . . . Everybody should not take more than five minutes to talk
2	Encouraging	I haven't heard you speaking Before we conclude, do you have anything to say? It's your turn, Joe
3	Harmonising and compromising	So you two are saying the same thing We all agree on the objectives If we don't take these extreme positions, we could decide that . . .
4	Standard setting and testing: match between task group and maintenance activities	Something doesn't feel right here. I'm losing track, can somebody tell me what's happening?

3.3 Empathic knowledge management framework

The essence of the methodology is the exchange of knowledge among the academic facilitators and team members, and capturing and embedding that knowledge in the product delivery process. This exchange of knowledge in the knowledge management methodology is summarised in Figure 3.

Figure 3 Knowledge exchange in the empathic KM methodology



The four stages of knowledge management are:

1 tapping into the tacit knowledge of the participants

2 facilitating the flow of knowledge among participants

3 making fuzzy knowledge explicit for all participants to see and understand

4 enhancing the company's capabilities with an effective process, and the participants' capabilities with learning.

Such a knowledge exchange is achieved with this methodology through a combination of behavioural and analytic interventions.

4 Case studies in financial services

To illustrate our approach to process innovation, we will discuss two case studies in a leading Fortune 50 financial services company. These case studies were reverse simulation experiments conducted in a university-based learning laboratory using the methodology discussed in this paper. The first case study involved designing the delivery

process of a new type of consumer loan product for the financial services company, and the second case was the redesign of a loan liquidation process. Both studies had two purposes. The first and narrower purpose was to address the immediate need to develop a new service process for implementing the specific financial product. Product development in financial services usually has two primary phases: conducting the financial engineering to create the appropriate financial product and developing a process for delivering the product. The product delivery process is a computer-based application system that contains the appropriate information process. Process innovation in financial services, therefore, is about designing, developing and implementing a computer-based service delivery system. The service delivery system includes the delivery process, managerial controls for the process, and specifications of the computer-based system that make the process tangible or operational. Our project includes all aspects of the process except the actual software coding and implementation.

The second and broader purpose of the case studies was to help the company to develop a process innovation methodology through effective knowledge management that could be used in subsequent new product development.

The company is a leader in the mortgage industry whose portfolio of products includes securities, loan products and debt instruments. Their annual information systems budget was about $200 million and they spent an estimated $150 million annually on new product development at the time of this study. However, they face significant challenges in the new product development domain in the form of abandoned projects and systems applications, and resistance and suspicion from many participants in the process. Specifically, the new product development process lacks documentation, is done differently each time, has many gatekeepers, adopts a top-down waterfall methodology, is executed through informal networks, and involves many secretive and political decisions. In addition, the technology environment is characterised by a diversity of platforms from mainframes to client-server and stand-alone desktop applications.

Earlier attempts by the company to improve the new product development process included the use of rapid consensus development workshops and attempting to adopt a phase-gate approach to development. But these attempts faced many barriers that included confusion about the customer, unresolved organisational rivalries, diffusion of responsibility, fragmentation and implicit knowledge, and conflicting stakeholder interests.

In addition, the new product development process in the financial services space that the company operates in is a complex and difficult one by its very nature. The products are inherently abstract. There are many stakeholders and a variety of expertise is required. Different business functions such as IT, audit, operations, finance, sales and marketing, credit analysis, legal, governmental relations, community development and human resources are routinely and significantly involved in the development process. The product and delivery process requirements fluctuate, and many are implicit. In addition, the field is dominated by an oral, discursive culture where many issues are forgotten during the process.

The company encountered significant problems in its product development lifecycle that typically lasted about three years. The duration exacerbated some of the traditional challenges faced in product development such as team turnover, technology shifts, change in product demand and business cycle changes. The initial specification development phase of such projects typically took six months for completion. Further,

early decisions about scope and technology usually become constraints during later phases of product development. Such problems were further increased by difficulties in getting expert support when needed in the process.

The company decided to participate in experiments to help address some of the challenges, specifically in the early and crucial product/process specification stage. The project team in each of the case studies from the company consisted of 12 to 16 members from marketing, operations, corporate accounting, information systems, audit, corporate development and accounting. Other participants included the two academic facilitators (authors), a key change agent from the company (author) and the process owners who were also the new product champions. The project was conducted over a four-week period in the first case and a two-week period in the second case. The actual work was done for one-half of each workday in a university-based learning laboratory outside the corporate environment. These two unique issues, of time and location, were designed into the methodology. They provided a time between work sessions for reflection by participants, and a physical environment that facilitated learning through openness in thought and expression of ideas.

5 Experiments

The two case studies were investigated through experiments in the learning laboratory using the appreciative inquiry-based methodology discussed above. Both experiments had the following major task-related stages: systemic problem formulation, process mapping and system specifications. As per the methodology, behavioural interventions using group maintenance activities were conducted throughout the process. Midway through the experiments the participants were asked for feedback regarding their experiences in the learning laboratory reverse simulation experiments. The various phases of the experiments are discussed below in the context of the case studies.

5.1 Systemic problem formulation

A systems theoretic approach to problem formulation is essential for a multifaceted problem situation that involves a variety of players. The new loan product project, for example, had multiple players who had different areas of functional expertise and worldviews. The reality of the company's new product delivery process was considered to be an integration of these differences. The problem and its business context, moreover, were ill defined because a new financial product was being considered. In such situations, a rigid and highly structured approach to problem formulation is not appropriate. It was necessary, therefore, to allow the problem formulation to emerge from the project team. So we adopted a soft systems approach (Checkland, 1985; Behara, 1995) that is discussed below.

Initially, a systems map was developed to provide a 'rich picture' that identified all primary and secondary players involved in the delivery of the new product. The 'rich picture' is a soft systems concept that is used to express the problem context in a way that is beneficial to problem formulation. The map included areas from within the company and from many outside organisations. The map helped to identify all key perspectives and to formulate the problem during the project. It was also used as a guide

to ensure that these views were directly or indirectly available. The next step was the development of a 'root definition' that would provide a common and acceptable formulation of the problem. The 'root definition' is a commonly agreed-upon definition of the purpose of the system that is being designed. The agreement is among the key players of the system and is a reflection of an acceptable and mutually agreeable worldview among the players involved.

In the first case of the new loan delivery process, the root definition was to develop a process that:

- increased revenue through customer focus
- was inexpensive through low transaction costs and the resource structure
- was efficient by being automated, maintainable, robust and with customer training
- controlled risk through audit trail, exception reporting, data integrity and cash management.

The main purpose of the new loan product delivery process was to increase revenue, to operate inexpensively and efficiently, and to control risk. This root definition emerged from the team during a discussion that was guided both for technical content and for behavioural interactions.

In the second case involving a loan liquidation process redesign, the root definition was to design a new process that:

- ensured expeditious and accurate processing of data to minimise risk associated with liquidated properties
- established efficient workflow, elimination of manual activity and redundant activity
- enhanced flexibility for nontraditional products
- implemented process management metrics and controls
- maximised automated processing through system integration and increased functions.

The customer was identified as the risk management group of the company. This enabled the participants to place the highest priority on process flows that would have the greatest impact in reducing exposure.

The meaning of the terms used in this root definition was discussed in detail to develop a common understanding. A good problem formulation should mean the same thing to all the players involved, because the formulation guides the remainder of the process development effort and keeps discussions focused.

The remainder of the stages in the experiment is illustrated through the new loan delivery process design case study. This facilitated keeping the discussion focused on the experimental steps and not being diverted to the details of the specific process that was being designed. Both case studies followed the same steps, but differed in the details of their specific processes.

5.2 Process mapping

Service blueprinting is a well-recognised flowcharting tool for mapping service processes and was extremely beneficial to this phase of the project. It provided a visual aid for the team to 'see' the overall process, which helped to overcome the functional myopia of some team members. Lines of interaction helped to identify the roles played by process participants. This graphical representation also brought individual contributions and responsibilities into sharp focus. Figure 4 identifies all the major phases of the service blueprint and Figure 5 provides a detailed diagram of the Remittances phase of the new loan process.

The service blueprint provides a good 'big picture' of the process, but it has two major limitations in mapping knowledge- and information-intensive service processes. The first limitation is that the blueprint does not provide many of the process details. These details are required in many situations because such financial service processes are ultimately implemented through a computer-based information system. Process maps, therefore, guide the information system development effort. The second limitation of the service blueprint is its two-dimensional and static nature, *i.e.*, there is no explicit dimension of time in the process. The identification of stages in the process is an attempt to address this limitation. Processes, by definition, flow and represent a sequence of activities. Maps identify the activity sequencing, but they do not help recreate the process and workflow. The first limitation can be overcome by adding more detail to the map and the second limitation can be addressed by process simulation. ProSLCSE, for example, is one mapping and simulation tool that addresses both limitations simultaneously. The next phase of the methodology discusses the use of this tool in developing the new loan product delivery process.

Figure 4 Stages of the new loan product delivery process

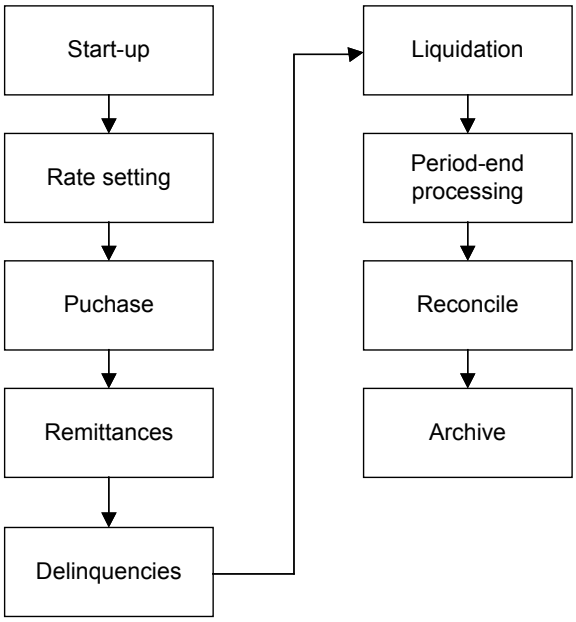
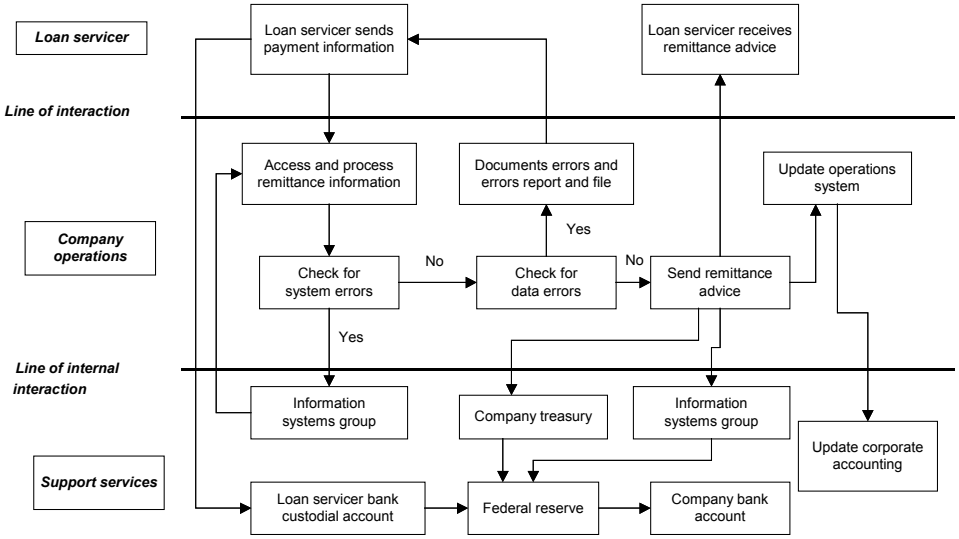


Figure 5 Service blueprint for the remittance process



5.3 System specification

ProSLCSE (Process Oriented Software Life Cycle Support Environment) helps users to define and develop processes (ProSLCSE, 1995). It also lets users define resource requirements, and simulate the process. ProSLCSE has two components, ProBUILDER and ProSIMULATOR. ProBUILDER is a structure-oriented graphical editor that helps users construct process models rapidly and correctly. It consists of individual and composite activities that use artifacts, messages, documents and folders as inputs and outputs. Human and machine resources can be assigned to the activities according to the resource requirements. The graphic interface is an excellent communication tool for facilitating team effort. This tool is suited for modelling information-intensive service processes.

Figure 6 shows basic elements of a process diagram in ProBUILDER. We used these elements to develop the detailed process diagram for the loan product delivery process shown in Figure 7. The activities, such as production start-up, purchase, remittances and liquidation, are composite activities that represent a more detailed lower-level process. A detailed specification is associated with each input, activity and output element on the process diagram. All of this detailed information is captured and used to develop the system specifications for the process, which in turn support the computer information system development that implements the loan product.

When a process is complete, ProSIMULATOR allows users to simulate the process just designed. However, in this case study, the process was not simulated because a new process was being designed and therefore there was insufficient data to simulate. Also, a sufficiently valid and detailed process model was developed at the end of the modelling phase in both case studies using ProBUILDER. This was sufficient from the teams' perspective, in both cases, for the development of the computer-based information system to operationalise the process without further computer-based process simulation studies.

Figure 6 ProSLCSE process model graphical icons

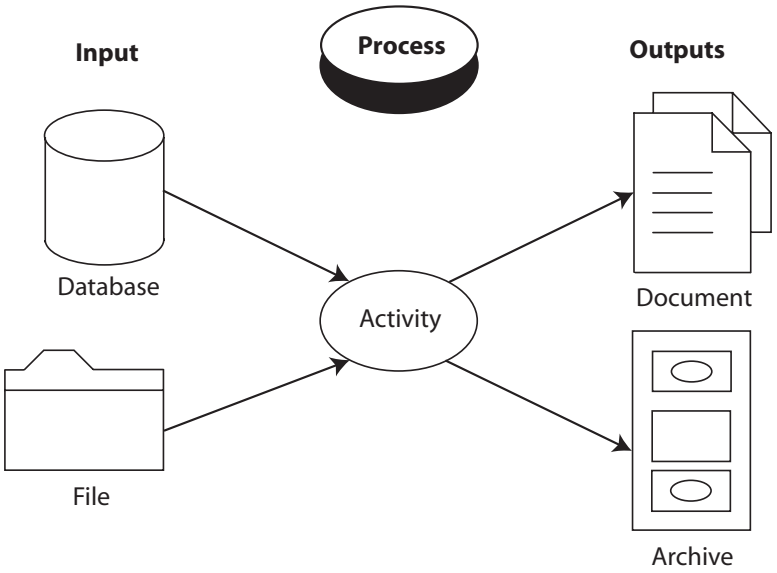
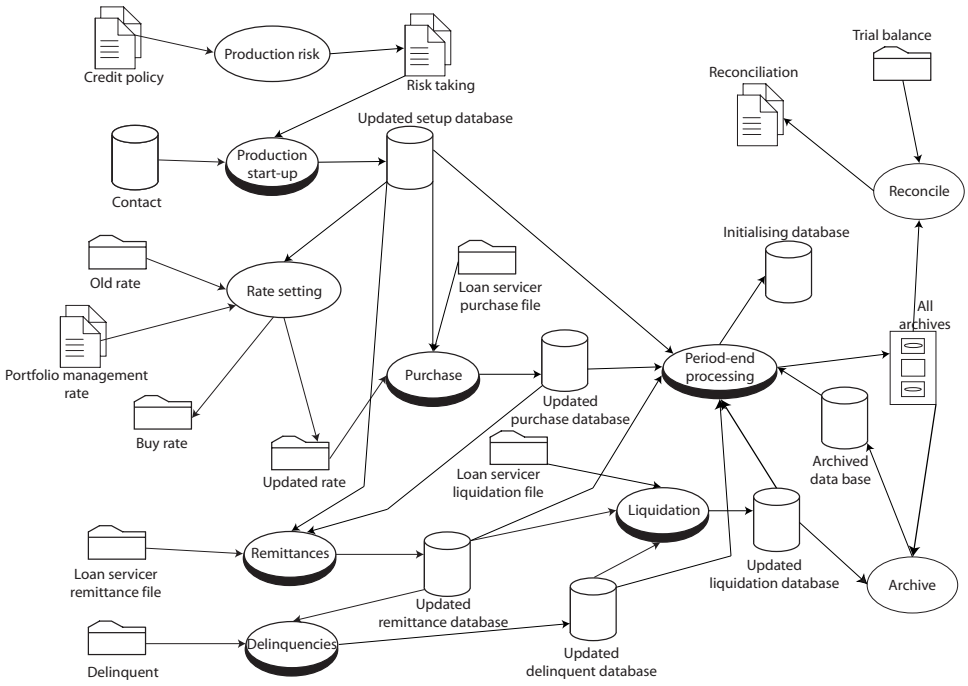


Figure 7 New loan product delivery process model



6 Discussion

The primary outcome of this study was the development and testing of a new and empathic approach to knowledge management based on the principles of appreciative inquiry and reverse simulation. The methodology was tested in two different new process design case studies in a leading financial services company.

The immediate business objective of each of the case studies was to develop a product delivery process and develop a complete set of specifications for the subsequent development of an information system. The university-based learning laboratory environment used behavioural interventions that led to collaborative effort and successful completion, and acceptance, of the system specifications for the process. The empathic knowledge management methodology we developed and adopted was key to completing the project in four weeks for the new loan product and about two weeks for the loan liquidation process design, instead of the six months that a similar process development effort usually takes in the company. The methodology developed in this study was used equally successfully when applied to subsequent projects within the company, attesting to its transferability. The success of this methodology demonstrates that reflection is a necessary part of designing business processes successfully. The learning laboratory context in this methodology, and the process of developing a commonly accepted problem formulation, provide an opportunity for such reflection. The responses of participants in the two experiments are summarised below.

6.1 New loan process design case

A learning climate evaluation was done midway through the four-week process (Appendix 1). The participants showed a remarkable level of awareness of the objectives of the learning process in the laboratory and of their ability to impact on the process. Some of them reported that they were able to impact on the process owing to their experience in similar operations and owing to their ability to understand the existing flows in the system. Others reported that the unique environment in the laboratory allowed them to learn.

Participants described the learning environment in the laboratory as highly interactive, well organised, intensive, and fostering a team effort that encouraged participation by every member. Some thought that the environment allowed a set of diversified players to get a well-rounded picture of the process. People also felt very engaged with the process and were able to freely share their feelings with one another.

Participants also commented about various things working well for them in the laboratory. They included ‘good communication of business process’, ‘appropriate guidance by facilitators’, ‘each division realising their needs as well as needs of other divisions’, and the ‘synergy out of the project being focused’. In terms of suggestions for future laboratories, some of them thought continuously reminding participants about the purpose of the laboratory would be helpful.

6.2 Loan liquidation process redesign case

A learning climate evaluation was done midway through the two-week process (Appendix 2). Participants stated that because of the ‘buy in’ of the project by management, the learning laboratory environment allowed them to feel removed from

their work environment and created a focused approach to the task at hand. They also felt that they got some time to think 'out of the box' and look at the whole process in a more relaxed yet concentrated, non-threatening environment. Many other aspects helped in this process, such as knowing the regulations involved, willingness to learn and share knowledge, and not worrying about tasks awaiting them at the office. Many reported that participants did not act territorially and developed an appreciation for the amount of research and workarounds performed by the liquidations operations group.

Participants reported that their attitudes about this project and the people involved changed in positive ways since they came to the laboratory. Some felt that the laboratory was a fun environment and a welcome change from work, and allowed them to learn about their own behaviour and learning styles.

Several participants felt that it was different coming to the university-based learning laboratory and working as a team sharing their knowledge, compared to working alone in their area of work. They also felt it enabled them to acquire previously unknown knowledge about the liquidation process. A participant also indicated that team members were looking at the process and 'not attacking the messenger, which was a step in the right direction'. Others felt that they were moving towards becoming a team by sharing the same goals, learning to respect each other's ideas, and learning to listen to each other.

Other learning from the laboratory experience included the awareness that when working as a team, one must remember that there are different personalities and opinions and that respecting that diversity was important. As a result, many felt that they had learned a great deal from each other. "Not only the conversation but visually seeing the process and its gaps, rework, *etc.* is enlightening. This process does not allow one to sit back and be a victim", reported one participant. As the participants started to listen better and respect others' knowledge, sharing of opinions became progressively better. People who did not communicate at the beginning of the work started to contribute as the process continued. One participant summarised it well: "It was an exhilarating experience, 1st day what curiosity, 2nd day anxiety, 3rd day excitement, 4th day more excitement, 5th day satisfaction".

7 Conclusion

Many theoretical issues surfaced and were reinforced during the development and use of the empathic knowledge management methodology. This methodology allows participant's latent knowledge to be included in the process designs by creating an atmosphere that encourages such behaviour. This is of special significance in knowledge- and information-intensive services such as financial services, but it also can be adapted for all services that have a high degree of technical intangibility. The methodology demonstrates the advantages and limitations of the service blueprinting approach to process design by identifying the need to incorporate more detailed specifications and the possibility of simulating the process. A software tool called ProSLCSE was used to address the limitations. The methodology addressed many of the limitations the company faced in its existing approaches to new product/process development that were discussed earlier in the case studies section of this discussion. It not only successfully tapped into the tacit knowledge of participants, but it was also able to embed that knowledge into specifications for information systems development to

execute the appropriate financial product delivery processes. This methodology for knowledge management also provides an approach that can address related issues in information system design.

Rigorous theoretical constructs that effectively address a real operational challenge within the time constraint of business reality lend strength to the methodology. It provided in actual use a viable and effective solution to a problem that was formulated by those who had business responsibility. We believe it reflects an optimal blend of academic rigour and business pragmatism that should be the cornerstone for applied research in knowledge management.

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Appendix 1 Participant responses to the learning climate evaluation (midway through the four-week process, Case 1: N = 6)

1 What is your awareness of the objectives of the learning process in the lab?

- P1 No response
- P2 I believe the objectives are to design business process for energy loans that makes sense within the Company environment. Furthermore the objective is to identify requirements for an automated system to support that process.
- P3 No response
- P4 I understand and comprehend the goals of the learning lab. Your objectives were made clear.
- P5 The objectives are to determine current process used to manage energy loans, use that information and create/determine new environment for these loans.
- P6 No response

2 What is your ability to impact the process?

- P1 Good input ability
- P2 I believe I have ample opportunity to impact the process and the outcome.
- P3 Very Good
- P4 To take this knowledge and apply it to my job
- P5 I have some ability to impact process because I work in a similar operation and understand the current flows as well as Company's environments.
- P6 Great. I am the subject expert concerning operations impact, so therefore my input is valuable for the existing as well as future process.

3 How would you describe the learning environment for this week?

- P1 Highly interactive
- P2 I think the environment has been one that fosters a team effort and encourages participation by all.
- P3 It has been professionally well organised, and well maintained.
- P4 Very intensive
- P5 Entire group seem enthralled with facilitator's technique.
- P6 Excellent, small enough to learn and enough diversified players to get a well-rounded picture

4 How engaged are you in this process?

- P1 Full attention, but have higher priorities at office so cannot attend full-time
- P2 I believe I have been significantly engaged without dominating the agenda.
- P3 I believe sometimes you may need to seize side arguments, which may not be very much related to the specific argument but overall excellent.
- P4 Too early to tell, this was only my first week.
- P5 Very engaged. Facilitators are very knowledgeable and keeps sessions interesting.
- P6 One hundred percent. I am responsible for daily operations as well as planning for the future.

5 Are you able to freely share with the group during the project so far?

P1 Yes
P2 Absolutely! But I think it is also important to note that the group has not been permitted to go too far off tract.
P3 Yes
P4 Yes
P5 Yes
P6 Absolutely. I've been involved since day one and have been waiting for support, so I'm more than willing to freely share.

6 What is working well in the project so far?

P1 Good communication of business process. Appropriate guidance by Facilitators. Interesting and useful methodologies have been presented.
P2 Individuals are working well together to identify all impacts and interferes.
P3 System map, outlining process, deficiencies were very good.
P4 Each division realising their needs as well as needs of other divisions.
P5 Every participant knowledgeable of what is needed to successfully service these loans. Group is congenial.
P6 The synergy, the project is focused and the deliverables are consistent as well as the 'to do' task are manageable

7 What would you suggest the group do differently?

P1 Buy a coffee machine.
P2 I can't think of anything right now.
P3 No response
P4 I think the group is interacting well, no changes need to be made.
P5 Nothing
P6 At this point, all is going well. I would like to stay at the big picture level until we acre actually ready for drill down.

8 Your comments on how the group is functioning?

P1 Appropriately
P2 I think the group is functioning very well.
P3 They have all participated positively.
P4 Each division is contributing and demonstrating the need to further promote the Energy Loan Programme
P5 Group is functioning as a team. Everyone offering input from his or her area of expertise/view. Lively most often.
P6 Very well. Its important that all group members stay involved from the beginning as to minimise the learning/informational curve.

9 Is everyone engaged adequately?

P1 Yes
P2 I believe so but, I wold like to see more questions from those less familiar with the project.
P3 Yes

P4 Yes, since this is my first week with the Company, I am trying to understand the concepts and functionality of the Energy Loan Process.
P5 Yes
P6 Yes, for the first time

10 Given the time-schedule, are you satisfied with the progress so far? If not, what are your suggestions?

P1 Some concern that necessary level of detail will exceed capacity to complete on schedule. Encourage group to focus on necessary information and avoid tangents. Clearly define day's objective. Remind group hourly.
P2 I think we are making satisfactory progress. I also feel that our Company imposed schedule forces us to move at a pace that does not allow us to take full advantage of the logical process flow.
P3 Within the same existing time frame
P4 Yes this has given an understanding of what the needs are of each division and general concept to where we are going.
P5 I don't know. I was part of original group determining time frames.
P6 Yes I'm satisfied, more is always accomplished when you are away from the worksite and a third party is facilitating.

Appendix 2 Participant responses to the learning laboratory process (midway through the two-week process, Case 2: N = 8)

1 Is there anything different about the learning environment in the lab compared to the Company or other environment/facilities you are familiar with?

P1 No
P2 This environment allows us to be removed from our work environment which creates a more focused approach to the task at hand. In addition, outside facilitators remove the politics from the process.
P3 Yes. You are allowed the time to think about the process, amp it out and the 100% class participation is great.
P4 more relaxed and concentrated
P5 Yes, it is better to be in the lab, reason being you are not distracted by work or other people.
P6 not really – except food court!
P7 No. It's pretty similar
P8 Team members are able to focus on the task at hand since they have been given the time commitment away from office distractions. There is a respect for the facilitators knowledge which helps create a non-threatening environment. They large dry erase boards encourage trial and error; the Company has very small boards.

2 What are some of the conditions/requirements for you to do your job right at the lab for this project?

P1 No response
P2 'Buy in' of the project by management

P3 To think out of the box and look at the whole process not just your individual process.
P4 Knowing the regulations involved; willingness to learn and share knowledge, as well as how some systems at company work.
P5 I think we are on the Right track right now. We will get other people when the right time comes along for their process.
P6 Information needs to be captured correctly, subject matter experts need to participate.
P7 I will like a schedule or plan a few days ahead of each session, so I can prepare for the next day's session. Also at the beginning of the day lay out the agenda for the day, tell us when there will be breaks.
P8 Not worrying about tasks awaiting at the office. Territory not guarded, members attitude and willingness to look at entire process. Meeting mechanics (agenda, objective, minutes, review action items).

3 Do you feel you have been able to participate adequately in this group?

P1 Yes
P2 Yes, open discussion to everyone
P3 Yes
P4 Yes, but I am one who speak when I have something to add.
P5 Yes
P6 Yes, so far
P7 Yes, the facilitators do encourage discussion.
P8 Yes

4 Have your attitudes (about this project and the people involved) changed in anyway since you came to this lab? If yes, what are the changes?

P1 No response
P2 An appreciation for the amount of research and workarounds performed by the liquidations operations group.
P3 Yes I understand the scope, boundaries of the project.
P4 Yes, I did not realise what the 'rewrite' would entail. Some people involved are even more knowledgeable than I realised.
P5 No
P6 System/application rewrite is not initially what I thought it would be.
P7 Yes I feel I have greater control or rather impact on this project by actively participating.
P8 I was worried too many people would be involved and the team would be unable to reach consensus; the size is good now. I still think the timetable is too aggressive so I am not confident of the quality of the project.

5 Do you feel you are able to impact/influence the process?

P1 Yes and no
P2 Not entirely because of others areas affected and the political agenda behind the rewrite project.
P3 Yes, by sharing my knowledge with the team
P4 Yes, with my 'claims' knowledge
P5 Yes

P6 Yes, by adding my knowledge to the pool
P7 Yes
P8 I feel somewhat empowered. The impact/influence will come from the requirements meeting with all players (which we will not attend).

6 How do you feel about coming here?

P1 Ok
P2 It's fun. It is a welcome change to work.
P3 I think the experience is great and it has expanded my; knowledge of liquidations operations.
P4 I like it, except for having to go back to work and change my mode to catch up.
P5 I like coming out here, the only problem is transportation.
P6 Okay! But keeping up with my daily production functions is somewhat stressful.
P7 It is a bit of an inconvenience, but I do enjoy the seclusion from the office.
P8 I enjoy the process and believe the process management exercise and team development exercises are beneficial to the team members. Physical environment is very comfortable.

7 Is there anything different about this process of coming to the lab and working as a team sharing your knowledge compared to working alone in your area of work?

P1 No, I work in a team environment and share knowledge daily.
P2 Enabling me to acquire additional knowledge about the liquidation process that I didn't know before. Having 'experts' facilitate the rewrite instead of 'run of the mill' company personnel.
P3 Yes, I feel my knowledge ideas are neither right or wrong. My team members are looking at the process and not attacking the messenger, which is a step in the right direction.
P4 We are solving things together and sharing ideas and knowledge.
P5 I do like the team environment in the lab.
P6 When working as a team you must remember that there are different personalities, opinions, *etc.*
P7 Yes, You are free from interruptions out here vs. at work. You are constantly bombarded. I am more focused here.
P8 We all have learned so much from each other already. Not only the conversation but visually seeing the process and its gaps, rework, *etc.* Is enlightening. This process does not allow one to sit back and be a 'victim'.

8 In addition to getting the 'System Rewrite' right, is there anything else you would like to get out of the lab?

P1 Pro-Slcse (the software used)
P2 Knowledge of the process, meeting the players, and learning about my own behaviour (learning style, *etc.*).
P3 How to review the process correctly and learn how to use proslcse to create business requirements?
P4 Learn more about how to map a process and analyse it upon completion and determine what it means and if it is correct
P5 Well, I think what you are doing is ok. Right now in reference to behaviour and team concepts, we need that in our group.

P6 No response
P7 Learn a little about Proslcse and this process of requirements development in an accelerated mode.
P8 I hope individuals see the value in mapping processes as well as discover how an effective team operates. I have already learned a variation to mapping in bands, use of just three bands.

9 What needs to happen in this group to make it a team? Are their boundaries that are preventing you from becoming a team?

P1 No/regular office, budget
P2 To understand the benefit they will achieve from this, not the benefit that management will receive.
P3 I think we are moving toward becoming a team by sharing the same goals and learning to respect each others ideas and not attacking each other and learning to listen.
P4 Individual willingness to become a team, individual effort to achieve the goal set and commitment. No.
P5 No, I think we are a team right now.
P6 So far, I feel we are functioning as a team.
P7 We need to have the same objective as our main goal. Different groups of people have different agendas. We should be reminded that we work for the same company.
P8 True sense of empowerment which will lead to ownership/accountability. Three member will be moving to another department under a different VP around month end. So my feeling is that this is a temporary project. Claims may be reassigned to another area in the coming months.

10 What needs to happen in your Company environment to make your group a team? (This group may be different than what you have in the lab)

P1 No response
P2 My group is very small (3 people) and we already have a knowledge sharing concept, we currently work as a team.
P3 Same as above
P4 Each person must be willing to work together, instead of individually, give up competing with one another.
P5 People need to be honest with themselves and others.
P6 No response
P7 We need our leaders to restate the department goals.
P8 An understanding of process management and someone to facilitate the team using skills. Utilise basic meeting mechanics, empowerment; clear objective from senior management, team member accountability.

11 How have you been communicating?

P1 Ok
P2 Openly; however some ideas have been repressed due to a perceived agenda by the owners of the process.
P3 Better each day. Learning to listen and digesting the information prior to responding.

P4 Fairly well. I usually speak when I feel I have something to add or offer.
P5 Where? Are you talking about in the lab or at the Company?
P6 Okay so far
P7 Very well
P8 We are starting to listen better and respect knowledge.

12 What have you liked so far? About the team? About the process?

P1 No response
P2 No response
P3 Getting to know the team members outside of the workplace, I am learning how the process really works.
P4 Working together, sharing info. To achieve the desired result. The mapping and working together to complete the process.
P5 It is a good team, it is going at a good smooth pace.
P6 Everyone sharing their knowledge, discussing what to do, why is it that way, and how should it be.
P7 No response
P8 Wealth of knowledge, methodical, logical structure.

13 Is there anything you would like to change?

P1 No
P2 The length of time (I think we need more time) and the participation of personnel in the 'connecting Processes'.
P3 No response
P4 Involvement of individuals from each business area.
P5 No, not really
P6 Not at this point
P7 Yes, more frequent breaks. We go for too long without a break. I know we have a tight schedule, but we do get tired.
P8 Physically seat group as team. Force movement of who sits next to whom.

14 Think about the time you have spent here. Can you make some process observations regarding how you and others have/must have felt during the week? If you were to do a debriefing of each day all over again, what will those be?

P1 No response
P2 The sharing of our opinions has gotten progressively better. People who didn't communicate at the beginning of the work are starting to contribute.
P3 We are listening more and once the scope was defined we are sharing the same goal.
P4 Some of us did not know what to expect, some are jumping ahead of the gun.
P5 I felt good about the week, I need to think longer and harder, not enough time right now.
P6 All team members seem to be interested in this project
P7 It was an exhilarating experience, 1st day what curiosity, 2nd day anxiety, 3rd day excitement, 4th day more excitement, 5th day satisfaction.
P8 Chaos trying to figure out scope and what we've been charged with. Calming once an understanding was gained by all, then rolling with mapping.

15 Do you expect to have a truly changed process/system rewrite at the end of the lab?

P1 Yes
P2 No
P3 Hopefully, It's a very aggressive schedule, but I'm sure we will come away with a great project.
P4 Not completely, but I will try to give all I have to get as close as possible.
P5 Yes, I do hope so after spending all this time here, I hope something good comes out of this.
P6 Although all the subject matter experts are not able to participate. With the time and effort we are spending on this rewrite I do anticipate a changed process.
P7 Yes, I certainly do.
P8 No, I expect that our basic requirements will be documented. It all depends on what happens at the requirements review with all players.

16 Have you been involved in a 'rewrite' Before (at the Company or elsewhere)? If so, how is this experience different?

P1 Indirectly
P2 Again being physically removed from the work environment and having outside facilitators allows more free flowing ideas and concepts to emerge.
P3 Yes we are looking at the process instead of fixes first
P4 No
P5 No
P6 No
P7 I've been involved in major enhancements. It was not called a rewrite. It was different because the business specs took three months.
P8 Team members had been formally educated on the quality principles. The concept of customer/supplier requirements was understood. Basic meeting mechanics were utilised; the team was empowered and knew they would have the president's ear during a formal presentation. The team had a sense of ownership. This group behaves like it was brought together to perform a task, and soon it will be over.