

Organizational learning – the missing link in successful continuous improvement?

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Thesis for Licentiate degree in Quality Management

Mid Sweden University

Sundsvall/Östersund, 2025-10-02

Akademisk avhandling som med tillstånd av Mittuniversitetet i Sundsvall/Östersund framläggs till offentlig granskning för avläggande av filosofie licentiatexamen torsdagen, 2 oktober 2025, klockan 13.15, i sal Q340/Zoom, Mittuniversitetet Östersund. Seminariet kommer att hållas på engelska.

Organizational learning – the missing link in successful continuous improvement?

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Printed by Mid Sweden University, Sundsvall

ISSN: 1652-8948

ISBN: 978-91-90017-28-9

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Mid Sweden University Licentiate Thesis 209

Acknowledgement

This thesis would not have existed if it weren't for the support and help from people around me, and I would like to thank all of you for making this thesis possible. First of all, I would like to thank the Knowledge Foundation, and everyone involved in the Multidisciplinary National Health Innovation Research School.

A special thanks goes to the County Council of Västernorrland, for providing me with this opportunity to be an industrial doctoral student and combine a research education with working in practice. A big thank you to my manager Anne Thelander, my mentor Sofie Lidehäll and Helene Hillborg who served as my co-supervisor in the beginning, and all other interested, engaged and involved employees.

I would also like to thank my colleagues at the Department of Communication, Quality Management and Information Systems, especially my supervisors Pernilla Ingelsson and Christer Hedlund for your unwavering support, optimism and willingness to share your wisdom.

Finally, I would like to thank Johan for always being there and listening to my constant thoughts and ideas.

Ninni Löfqvist

Sundsvall, October 2025

Table of contents

Abstract	vii
Summary in Swedish	ix
List of papers	xiii
1 Introduction	1
1.1 Background	1
1.2 Purpose and research questions	4
1.3 Scope	5
1.4 Connection between research questions and papers	5
1.5 Structure of the thesis.....	6
2 Theoretical frame of reference	7
2.1 Quality management	7
2.2 Continuous improvement.....	9
2.3 Quality management in healthcare and the public sector.....	12
2.4 Organizational learning.....	13
2.5 Continuous organizational improvements and learning (COIL)	25
2.6 COIL capability	26
2.7 Contextual factors.....	29
3 Research methodology	33
3.1 Philosophical worldview.....	33
3.2 My experiences and preunderstanding	34
3.3 The purpose of the research	36
3.4 Research approach	37
3.5 Research design.....	39
3.6 Quality in research.....	49
3.7 Ethics in research	51
4 Results	53
4.1 Paper A.....	54
4.2 Paper B.....	56
4.3 Paper C	58
4.4 Summary of main findings	60

5 Discussion	63
5.1 Organizational learning and continuous improvement	63
5.2 Importance of context	66
5.3 Enhancing COIL capability	67
5.4 Organizations struggling with improvement work	68
5.5 Methodological discussion.....	68
5.6 Suggestions for future research	70
6 Conclusions	73
6.1 RQ 1: What attributes of interventions are important for enhancing COIL capability?.....	74
6.2 RQ 2: What conditions within an organization are important for supporting COIL?	74
References	77

Abstract

Organizations in general, and healthcare organizations in particular, are constantly facing various challenges, and continuous improvement (CI) is considered important if organizations are to tackle these challenges and achieve organizational success. CI is a core principle of quality management and is frequently used in healthcare organizations. However, the success of CI has not produced clearly demonstrable positive effects. One proposed reason for this is the lack of focus on the learning integral to CI.

In this thesis, the importance of integrating learning with CI is emphasized through use of the term *continuous organizational improvements and learning* (COIL). For success with COIL, organizations also need enough people with the right capabilities.

The purpose of this licentiate thesis is to explore important factors for supporting COIL and the enhancement of COIL capability in organizations. To address the purpose of the study, the following research questions were formulated: RQ 1. What attributes of interventions are important for enhancing COIL capability?, and RQ 2. What conditions within an organization are important for supporting COIL?

A systematic literature review and a qualitative longitudinal case study were conducted in order to fulfil the purpose of the study. The literature review explored the research topic from the perspective of what has already been done regarding interventions that enhance COIL capability in healthcare organizations; while the case study explored the research topic from the perspective of what occurs organically within an organization striving to improve its work with

CI and was conducted within a Swedish County Council over a period of 18 months.

Common attributes of interventions that enhance COIL capability are that they have engaged managers who adopt a strategic approach; utilization of external training and guidance from coaches and facilitators, for example, to develop internal knowledge, skills and confidence; use of a process and structure (quality management methodology) to bring about improvements and learning; and autonomy, accountability and safety for both individuals and teams. Important conditions within the organization that support COIL are an understanding of the concept; knowledge about and habit of reflection; using existing knowledge; being open to knowledge from others; and safety and trust.

Both the literature review and the case study suggest close relationships and interactions between attributes of interventions and organizational contextual factors that either support and facilitate or hinder and obstruct. Consideration of these interactions appears essential in order to develop COIL and COIL capability. The findings emphasize the importance of incorporating learning aspects into CI. COIL represents a potential approach to integration of organizational learning and CI, thereby contributing to enhanced capability and capacity to successfully support development and improvements within organizations.

Keywords: continuous improvement, organizational learning, continuous organizational improvements and learning, reflection, healthcare, public sector, contextual factors

Summary in Swedish

Organisationer i allmänhet, och hälso- och sjukvårdsorganisationer i synnerhet möter ständigt olika utmaningar och ständiga förbättringar anses viktigt för att organisationer ska kunna tackla dessa utmaningar och uppnå organisatorisk framgång. Ständiga förbättringar är en grundläggande värdering inom kvalitetsteknik och används frekvent inom hälso- och sjukvårdens organisationer. Däremot har ständiga förbättringar inte producerat tydliga positiva effekter. En föreslagen anledning till detta är avsaknaden av fokus på det lärande som anses vara en väsentlig del av ständiga förbättringar.

I den här avhandlingen betonas vikten av att integrera lärande med ständiga förbättringar genom användandet av begreppet kontinuerliga organisatoriska förbättringar och lärande (förkortat COIL). För att lyckas med COIL behöver organisationer också tillräckligt med individer som har rätt kapabilitet, dvs kunskap, förmågor och självförtroende.

Syftet med den här licentiatavhandlingen är att utforska viktiga faktorer som stödjer COIL och ökning av COIL-kapabilitet i organisationer. För att besvara syftet formulerades följande forskningsfrågor: 1. Vilka egenskaper (karaktäristika) hos interventioner är viktiga för att öka COIL-kapabilitet?, och 2. Vilka förutsättningar i en organisation är viktiga för att stödja COIL?

För att uppfylla syftet utfördes en systematisk litteraturgranskning och en kvalitativ longitudinell fallstudie. Den systematiska litteraturgranskningen utforskade forskningsområdet från perspektivet av vad som redan har gjorts när det kommer till interventioner som ökar COIL-kapabiliteten i hälso- och sjukvårdsorganisationer, medan fallstudien utforskade

forskningsområdet från perspektivet av vad som händer organiskt i en organisation som strävar efter att förbättra sitt arbete med ständiga förbättringar. Fallstudien genomfördes i en svensk Region över 18 månader.

Gemensamma egenskaper för interventioner som ökar COIL-kapabiliteten är att de har engagerade ledare med ett strategiskt förhållningssätt; de använder extern träning och guidning från till exempel coacher och facilitatorer för att utveckla interna kunskaper, förmågor och självförtroende; de använder en process och struktur (kvalitetsteknisk metodologi) för att skapa förbättringar och lärande; och autonomi, ansvarighet och säkerhet bland både individer och team. Viktiga organisatoriska förhållanden som stödjer COIL är en förståelse för begreppet; kunskap om och vana av att reflektera; använda befintlig kunskap; vara öppen för kunskap från andra; och säkerhet och trygghet.

Både litteraturgranskningen och fallstudien tyder på nära relationer och interaktioner mellan interventioners egenskaper och organisatoriska kontextuella faktorer som antingen stödjer och underlättar eller hindrar och försvårar. Det förefaller nödvändigt att ta hänsyn till dessa interaktioner för att kunna utveckla COIL och COIL-kapabilitet. Resultaten betonar vikten av att inkludera lärandeaspekter med ständiga förbättringar. COIL representerar en potentiell metod för att integrera organisatoriskt lärande och ständiga förbättringar, och bidrar därigenom till ökad förmåga och kapacitet för att framgångsrikt stödja utveckling och förbättringsarbete inom organisationer.

Nyckelord: ständiga förbättringar, organisatoriskt lärande,
kontinuerliga organisatoriska förbättringar och lärande, reflektion,
hälso- och sjukvård, offentlig sektor, kontextuella faktorer

List of papers

Paper A

Löfqvist, N. (2024). Enhancing capability for continuous organisational improvement and learning in healthcare organisations: a systematic review of the literature 2013–2022. *BMJ Open Quality*. 13(2):e002566.

Paper B

Löfqvist, N. (2024). Exploring interactions between healthcare contextual factors and continuous organizational improvement and learning using iterative thematic inquiry [Conference paper]. 31st *International EurOMA Conference: Transforming people and processes for a better world*, 1–3 July 2024, Barcelona.

Paper C

Löfqvist, N., Hedlund, C. & Ingelsson, P. Exploring conditions that are important to support the development of continuous organizational improvement and learning: A qualitative longitudinal case study in a Swedish County Council. Submitted for publication.

1 Introduction

This chapter presents the background, purpose, research questions and scope of the research, connections between research questions and studies/papers, and the structure of the thesis.

1.1 Background

Organizations today are surrounded by a rapidly changing environment in which the pace of technological change is fast and unpredictable (Folger et al., 2022), the climate is changing, new epidemics and pandemics are emerging (WHO, 2020b) and the population is increasingly ageing (Lee et al., 2015). To tackle these challenges, continuous improvement (CI) is considered important for organizational success and is used in many organizations, including healthcare, through different approaches, tools and methodologies such as Lean, Six Sigma and Total Quality Management (TQM) (Gutierrez-Gutierrez & Antony, 2020).

Healthcare in particular needs to make improvements in a number of areas in their aim for quality of care that is safe, people-centred, equitable, integrated, effective and efficient (WHO, 2020a). For instance, it was estimated that as many as 9.5 per cent of all deaths in the United States in 2013 were caused by medical errors (Chegini & Shariful Islam, 2021). Healthcare organizations also need to provide a healthy and appealing work environment to support employee well-being and reduce staff turnover (Søvold et al., 2021).

Medical outcomes in Swedish healthcare are considered excellent, but there are still severe problems with accessibility and rising costs (Bergman et al., 2024). Rising costs are a problematic issue globally, and a significant portion of these costs makes no actual positive

contribution to health outcomes (OECD, 2017). Some 20 to 30 per cent of healthcare costs are classified as waste (Nordenström, 2022; Shrank et al., 2019), so there is great potential for spending less money without adversely affecting the quality of healthcare. This could be achieved by reducing preventable errors and low-value care, for instance (OECD, 2017). By way of example, the estimated annual costs resulting from extended periods of care in Sweden due to preventable healthcare-associated infections in 2017 was SEK 1.5 to 2.2 billion (SALAR, 2019) (roughly EUR 125 to 180 million) out of the total SEK 400 billion annual cost of healthcare in Sweden (Nordenström, 2022).

Areas related to reducing waste and solving problems are commonly targeted by means of various CI approaches and methodologies such as Lean, where eliminating and reducing waste is a fundamental element (Liker, 2021). Interventions to reduce healthcare waste and costs can have a major impact, although the pace of such transformations has not been as fast as expected (Shrank et al., 2019). It also takes a long time to implement new research evidence in healthcare; as long as 15 years on average, according to a study by Khan et al. (2021).

Previous literature reveals that the use of CI approaches and methodologies in healthcare has not yielded convincing positive effects (Dixon-Woods & Martin, 2016; Hill et al., 2020). It is suggested that this is due to several factors, including failing to use the methods as intended; failing to solve underlying problems; focusing too extensively on innovation and insufficiently on replication, with the risk of initial results fading when the focus shifts to the next innovation; treating the initiative as a series of local projects instead of a continuous and common effort, thereby creating many different

solutions to the same problem (re-inventing the wheel); failing to consider the impact of different contexts; and failing to assess and take advantage of lessons learned from both successes and failures (Dixon-Woods & Martin, 2016).

It is proposed that a lack of success for CI is due to a lack of focus on learning within organizations (Jurburg et al., 2015; Kullberg et al., 2022; Lebcir & Sideras, 2021; Saabye et al., 2022). A study among organizations in Sweden revealed that a challenge that has recently gained attention is to develop a culture that supports both learning and development (Fundin & Eriksson, 2024).

Learning is an integral part of CI and is essential for real and sustainable improvements (Bergman et al., 2022). Bessant et al. (2001) considered that enabling and capturing learning at all organizational levels was a key ability for CI. The commonly used Plan-Do-Study-Act cycle, or the Deming Wheel, was referred to as “the Shewhart cycle for Learning and Improvement” by Deming (1994), thereby highlighting the emphasis on both improvement *and* learning. The term *continuous organizational learning and improvement* (COIL) (Nyström et al., 2018) is used in this thesis to emphasize this connection between improvement and learning, and to counter the tendency to overlook the learning aspects of CI.

To achieve increased performance through COIL, organizations need sufficient capacity – that is, the requisite resources – including a sufficient number of capable individuals at the appropriate levels of the organization (Babich et al., 2016; Bevan, 2010; Kaminski et al., 2014). Capability involves individuals having the knowledge, skills, abilities and confidence (Sarff & O’Brien, 2020) to engage in the actions and behaviours associated with COIL. Furnival et al. (2017)

have suggested that the concept of “improvement capability” needs further research, as does the development of instruments and frameworks for assessing such capability.

Further, the need for research into how different quality management efforts are influenced by context has been emphasized (Fundin et al., 2018). Specifically, calls have been made for more research on how capacity and capability for improvements and learning within healthcare organizations are affected by contextual factors (Loper et al., 2022).

1.2 Purpose and research questions

The purpose of this licentiate thesis is to explore important factors for supporting COIL and the enhancement of COIL capability within organizations.

To address the purpose, the following research questions were formulated:

RQ 1: What attributes of interventions are important for enhancing COIL capability?

RQ 2: What conditions within an organization are important for supporting COIL?

In this thesis, factors are considered to be facts or situations that influence outcomes, with attributes and conditions being different types of factors. Attributes are the qualities or characteristics of interventions, and conditions are factors associated with the situation in which someone works and which affect them.

1.3 Scope

This thesis focuses on healthcare organizations in the systematic literature review; and, in the case study, one Swedish public sector organization concerned mainly with healthcare.

Regarding the conditions within an organization that are important for supporting COIL, this thesis primarily focus on contextual factors internal to the organization; that is, contextual factors at the organizational, team and individual level. However, extra-organizational contextual factors have also been considered insofar as they have been mentioned by participants.

1.4 Connection between research questions and papers

Figure 1.1 shows an overview of the relationship between studies, papers and research questions. Paper A explores RQ 1. Paper B was written in the middle of the case study and describes the methodology and preliminary results, and is therefore not connected directly to any of the research questions. Paper C explores RQ 2.

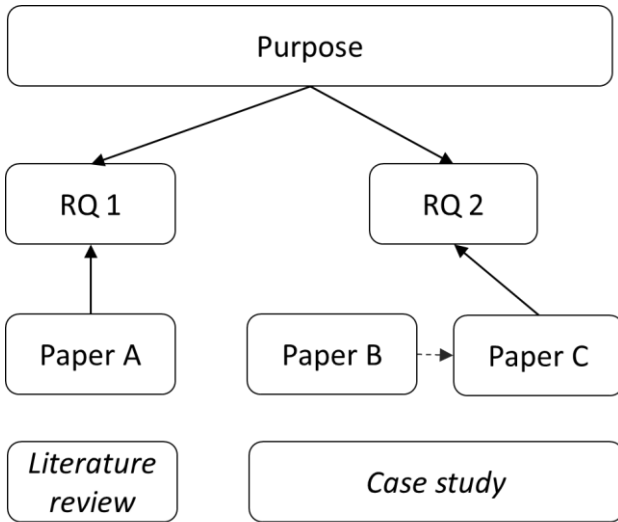


Figure 1.1. Connections between studies conducted, appended papers and research questions.

1.5 Structure of the thesis

This thesis consists of six chapters, as follows. Chapter 1 presents the background, purpose and scope of the research. Chapter 2 presents the theoretical frame of reference and Chapter 3 the methodological choices made during the research process. Chapter 4 presents the main results of the appended papers, and Chapter 5 contains a discussion section and suggestions for future research. Finally, the conclusions are presented in Chapter 6.

2 Theoretical frame of reference

This chapter introduces the research field of quality management and the concepts of continuous improvement and organizational learning, as well as continuous organizational improvements and learning (COIL). The chapter ends with the concepts of capability and context.

2.1 Quality management

The research field of quality management concerns issues related to quality (Bergman et al., 2022) and the management of quality within organizations (Klefsjö et al., 2008). The concept of quality has been around for a long time (Chatterjee & Yilmaz, 1993), but it does not have just one clear definition (Bergquist et al., 2005). One widespread definition of quality is “The quality of a product [or service] is its ability to satisfy, or preferably exceed, the needs and expectations of the customer” (Bergman et al., 2022, p. 33).

In the early quality management era quality was concerned with products and later developed to include quality of services which are considered to be co-produced together with the customer at the same time as the consumption takes place (Grönroos, 1984). Quality has also evolved over time, from conformance to specifications or standards to delighting customers (Jensen et al., 2018). The recent evolution into Quality 5.0 has begun explicitly to include sustainable practices, human and social dimensions such as ethical considerations, human skills and values, and knowledge-based innovation and continuous learning; not only to increase productivity, but also to improve quality of life (Maljugić et al., 2024).

An abundance of information, activities and perspectives is associated with quality management, which may be confusing for

both academics and practitioners (Miller et al., 2018). It has also been argued that there is not enough quality management theory (Singh & Smith, 2006); although others disagree, claiming that quality management does indeed have a solid epistemological basis (Barouch & Ponsignon, 2016). A lack of agreed theory and definitions makes it difficult to understand the reasons why organizations fail when trying to implement quality management, since evaluations may not compare like with like (Singh & Smith, 2006). When people assign different meanings to the words they use, they may find it challenging to understand each other and discuss the usefulness of the concepts (Bergquist et al., 2005). These differences in interpretation of words and concepts are not uncommon, although we need operational definitions to be able to understand, evaluate and discuss the *same* meaning (Barouch & Ponsignon, 2016). Quality management is an ambiguous concept, making it difficult to evaluate different quality management initiatives (Fundin et al., 2018). In fact, lack of understanding of concepts related to quality management may be one of the main causes of failure to implement quality management (Barouch & Ponsignon, 2016; Mamoojee-Khatib et al., 2025).

The evolution of quality management involves many different terms and concepts. Many of these concepts have remained much the same over time, but in new guises and with new names (Schonberger, 2007). Examples of this include Just-in-Time, which evolved into Lean, and statistical process improvement methods and tools that evolved into Six Sigma (ibid.). Or, as Gibson and Tesone (2001) state, “new practices are often old fads”. Organizations frequently seem to jump on these trendy fads without analysing what their needs are – is this really the product/service that will help us solve our problem and

reach our goals? – and they are then rarely used as intended and lead merely to marginal results (Sandholm, 1999). These initiatives are frequently also said to have failed (Gibson & Tesone, 2001). Common obstacles to implementation appear to be a lack of knowledge, fear of what the concept might entail, acknowledging and communicating only rare positive outcomes, failing to integrate the concept as part of regular organizational processes, and staff turnover (Zbaracki, 1998). Maintaining clear goals, defining priorities, listening to concerns and allocating resources are all important aspects (Carsten et al., 2023).

A common view is that the deepest level of quality management consists of values that guide the organization's decisions and behaviours (Lagrosen & Lagrosen, 2019). These values are commonly described as leadership commitment, customer orientation, participation of everyone, process orientation, base decisions on fact and CI (ibid.). The rest of this thesis will focus on CI.

2.2 Continuous improvement

CI is an ambiguous concept with no genuine theoretical foundation (Carnerud et al., 2018). It has been used and defined in various ways over the past 40 years, and has been regarded as an ability, a process or a culture (ibid.). The definition by Bessant et al. (1994, p. 18) is used in this thesis, where CI is seen as an “[organization]-wide process of focused and continuous incremental innovation”. Improvements range from small and incremental to radical innovations, and are accomplished through the use of methods, tools and methodologies such as Lean, Six Sigma and Balanced Scorecards (Bhuiyan & Baghel, 2005). CI has been widely used on account of its perceived importance for organizational success, although it has not

consistently generated the desired positive effects on organizational performance (Gutierrez-Gutierrez & Antony, 2020).

CI is intended gradually to increase organizational knowledge through iterative cycles of small tests of learning by alternating between thought and action (Senge, 1992), and is most impactful when everybody in the organization strives to achieve common goals and targets (Imai, 1997). Various methods have been used, such as the Plan-Do-Study-Act (PDSA) cycle or Define, Measure, Analyse, Improve, Control (DMAIC) (Gutierrez-Gutierrez & Antony, 2020). These methods all seem to include common steps: 1) observation, 2) hypothesis, 3) experimentation, 4) comparing and contrasting outcome with hypothesis, and 5) reviewing and assessing the results (Saabye et al., 2022). These steps are similar to Dewey's concept of inquiry (Dewey, 1993) and Kolb's cycle of experiential learning (Kolb, 1984). In fact, Deming (1994) called the widespread PDSA cycle "the Shewhart Cycle for Learning and Improvement", but the roots of this cycle go back at least to John Dewey (Senge, 1992).

PDSA cycles have been claimed to fail frequently, but the results are difficult to assess as they do not appear to have been used as intended (Knudsen et al., 2019; Taylor et al., 2013). Instead of focusing on learning and development for long-term success, organizations often display a short-term focus on productivity (Kullberg et al., 2022). People tend to want to move hastily from "plan" to "do" (Deming, 1994), and there is also a tendency to jump directly from "plan" to "act" and make big changes without having conducted small tests, making the change so big and rare that it is hard to learn from it (Senge, 1992). Perla and Parry (2011) suggest that one cause of failure when trying to transfer successful experiments accomplished through PDSA cycles to new settings is failing to consider the beliefs

of people in those settings. They may receive the scientific evidence but lack the beliefs, and perhaps they also need the opportunity to test the experiment in a safe environment in order to “know” that it works (ibid.).

It has long been suggested that it would be beneficial to shift the focus away from CI to a commitment to learning (Garvin, 1993). For example, the European Foundation for Quality Management’s (EFQM) Excellence Model has gradually included greater focus on organizational learning (OL) over the years (Dahlgard et al., 2019). According to Senge (1992), the common theme of the quality movement is actually “to make continual learning a way of organizational life, especially improving the performance of the organization as a total system”; and the greatest benefits are ultimately produced by improving ourselves.

CI also needs to include actual improvement and learning processes within the organization; that is, there is a need to “learn how to learn” (Senge, 1992). This concept of “meta learning” has been described in various ways: for example, as deutero-learning (Argyris & Schön, 1978), critical reflection (Høyrup, 2004), or system Gamma (Saabye et al., 2022). Also, the aim at Toyota is to develop people who think and learn to learn (Imai, 1997; Kullberg et al., 2022), and it has been suggested that Lean should be regarded as a learning system rather than a production system (Saabye et al., 2022). Many organizations striving for CI and enhanced quality have not developed the OL processes needed to support their CI work (Lebcir & Sideras, 2021). For example, not including tacit knowledge in knowledge sharing practices, using training methods that do not encourage innovative thinking, and not including reflection have

been mentioned as obstructing successful work with CI and quality management (ibid.).

2.3 Quality management in healthcare and the public sector

In Sweden, healthcare is financed by taxes and is managed by 21 counties throughout the country. Each county is governed by a political body that is elected by citizens every four years. The political body of the county decides on the county's overall goals, direction and budget. One of the counties' primary tasks is to provide healthcare to the county's citizens.

Quality management emerged in Swedish healthcare in the late 1990s (Bergman et al., 2024). A widely recognized framework for working with CI in healthcare is The Model for Improvement (Langley et al., 2009): this includes questions regarding the objective of the improvement, how to measure progress, what changes can be made to achieve the objective, and the PDSA cycle.

In healthcare, most activities involve services that are co-produced with users (such as patients) (Batalden & Foster, 2021), and the results for external customers are created in the direct interaction between internal and external customers (Grönroos & Gummerus, 2014). Batalden (2018) defines co-production of health as “the interdependent work of users and professionals who are creating, designing, producing, delivering, assessing, and evaluating the relationships and actions that contribute to the health of individuals and populations”. Co-production in healthcare is important for improving quality (Sahlström et al., 2019) by increasing patient autonomy and saving time and money, for example (Elwyn et al., 2020).

A significant problem in healthcare is the gap between scientific evidence of best practices, or what is considered the best way to do something, and what is actually done (Perla & Parry, 2011). This knowing-doing gap (Pfeffer & Sutton, 2000) or performance paradox (Cohen, 1998) has been acknowledged for a long time, with the average time for research evidence to become implemented in practice indicated as being as long as 15 years in a recent study (Khan et al., 2021).

2.4 Organizational learning

The previous sections have recognized the need to integrate learning aspects into CI for greater success within organizations. Therefore, this section introduces the concept of organizational learning (OL).

Research into OL originates from several different fields, such as organizational behaviour, operations management and systems dynamic (Roche, 2002). OL is not easily defined (Elkjaer, 2022); and as regards quality management and CI, a lack of clear and agreed definitions and descriptions has obstructed the advancement of both research and practice (Lyman, Hammond et al., 2019). Since learning takes many different forms, it has been proposed that we should not try to include all of it in one single definition, but rather distinguish between different types and provide a relevant definition for the work at hand (Corley & Gioia, 2003).

The definition by Lyman, Hammond et al. (2019, p. 643) is used in this research, where OL is seen as “a process of positive change in an organization’s collective knowledge, cognition and actions, which enhances the organization’s ability to achieve its desired outcomes”. In other words, OL is the process that generates the content of knowledge, skills and actions needed to achieve the desired outcome

in the form of improvement and enhanced performance within the organization (Easterby-Smith & Lyles, 2003). From this definition, it is clear that there is a close connection between OL and CI. Although the definition of OL used here relates only to the positive change that enhances the ability of organizations to reach their goals, it is evident that organizations can, in fact, produce learning that is superstitious and myopic (Miner & O'Toole, 2020) and have a negative impact on performance (Levine & Argote, 2020; Locke & Jain, 1995).

Learning is considered a psychological phenomenon that occurs within an individual and leads to changes in knowledge and skills (Kozlowski & Bell, 2020), and it includes the creation of meaning from experiences; that is, making sense of the relationships between past and current experiences in a way that connects them to, and guides, future behaviour (Dewey, 1993; Knipfer et al., 2013). Learning within organizations and groups involves an interplay between individual psychological learning processes and social learning processes such as interaction, information exchange and collaboration; it is individual *and* organizational learning (Kozlowski & Bell, 2020). OL consists of individual and team learning that is embedded in the organization's structure, systems and routines in such a way that it guides the future behaviour of the organization's members (Auqui-Caceres & Furlan, 2023).

2.4.1 Learning as a knowledge-creating process

To achieve OL, members of the organization need to acquire or create, retain, disseminate and use knowledge of relevance to the organization (Argote, 2011; Garvin, 2000; Oliver, 2009): see Figure 2.1 for a schematic overview. Learning can result in observable or non-observable changes in knowledge (Desai et al., 2020). Knowledge can be explicit and easy to articulate and share with others, or tacit

(Nonaka, 1994) and difficult to share because it is unconscious and exists in the body rather than the conscious mind (Levine & Argote, 2020).

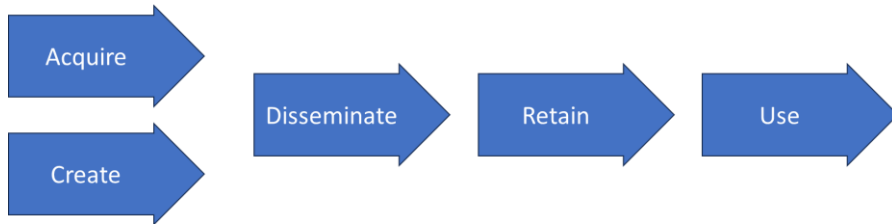


Figure 2.1. Schematic view of the knowledge-related subprocesses of learning.

Learning can occur through conscious and deliberate learning activities and processing of information, but also through unconscious automatic processes (Lapr e & Nembhard, 2020; Levine & Argote, 2020). It can be online, meaning the learning occurs from personal experience, or offline, where the individual learns from the experiences of others (also known as vicarious learning) or via knowledge transfer (Puranam & Maciejovsky, 2020).

The information used for acquiring and creating knowledge can come from cognitive search, inquiry and observation of previous knowledge or others' experiences, from personal experience, or from experimentation (Garvin, 2000). The knowledge needs to be disseminated and shared with others through formal or informal activities (Granerud & Rocha, 2011), and then it needs to be retained and saved within the organizational memory for future use even if the individual(s) who acquired or created the knowledge leave the organization (Argote, 2011). Knowledge can be embedded in the organizational memory through different ways, such as formal standards, transactive memory systems (knowledge of "who knows what"), social networks (Argote, 2011) and collective habits referred

to as organizational routines (Becker, 2020). Then, perhaps obviously, the knowledge should also be used when needed in order to have any positive effects (Oliver, 2009).

2.4.2 Reflection: learning as a meaning-making process

OL also involves continuous attempts at meaning-making (Elkjaer, 2022) – that is, reflection (Rodgers, 2002; Schippers et al., 2020) – which is considered to be a core aspect of adult learning (Hilden & Tikkamäki, 2013). Like previous concepts in this paper, reflection does not have just one clear definition (Høystrup, 2004). In this research, reflection is defined as “a complex, active, and purposeful mental process of becoming aware of old meanings, exploring alternative interpretations, engaging in dialogue and shifting modes of thinking, feeling, and acting” (Hilden & Tikkamäki, 2013, p. 82).

Reflection is initiated by an awareness of some kind of discrepancy (Knipfer et al., 2013), or an experience that is perceived as being potentially significant (Rodgers, 2002). The individual then uses his or her existing beliefs and knowledge from previous experiences to try to resolve the issue at hand by reflecting on potential solutions and their consequences (Morgan & Nica, 2020). A deliberate choice of intelligent action is made to try to reach desired goals (Morgan, 2014b). For learning to occur, the hypothesis is then tested through actions, after which reflection is needed to establish a relationship between the tested action, its consequence(s), and the present experiences (Elkjaer, 2003). This process of testing hypotheses and gaining new knowledge that either alters or reinforces previous beliefs, continues until the situation that initiated the reflection has been resolved (Morgan & Nica, 2020). The PDSA cycle is one example

of a construct that includes reflection (Schippers et al., 2020). See Figure 2.2 for a schematic overview of the reflection process.



Figure 2.2. An overview of the process of reflection / meaning-making.

Dialogue, discussion and collective reflection are needed if individuals' thoughts and ideas are to be integrated within a group of people (Crossan et al., 1999; Hilden & Tikkamäki, 2013; Snyder et al., 2024). The degree of joint reflection has been suggested to be the factor that determines the degree of collective learning (Arnesson & Albinsson, 2019). The likelihood of learning from experiences can be increased by using structured and guided reflection approaches, and it appears to be relatively easy to get teams to reflect by using small, structured interventions (Kozlowski & Bell, 2020; Schippers et al., 2020). Clear goals can improve the quality and outcome of reflection, as can motivation among individuals to participate in reflection (ibid.). Unless individuals are willing to be wrong, and thereby open to new meanings and "truths", structures and guidelines for reflection will be unsuccessful in changing the mental models, the theories-in-use, that guide their behaviour (Senge, 1992).

2.4.3 The action science perspective

OL, according to Argyris and Schön (1978), is about detecting and correcting errors. They see OL as always including both action and effectiveness (Argyris, 2003), and claim that organizations normally fail to learn (Argyris & Schön, 1978).

With their theory of action science perspective, Argyris and Schön (1978) aimed to help organizations develop what they called double-

loop learning capabilities. Double-loop learning means finding and correcting underlying causes of problems – as opposed to single-loop learning, which focuses only on correcting the obvious problem at hand – and learning can be seen as taking place within a continuum between these two states (ibid.). In connection with this, they describe different behaviours that relate to single-loop (Model I) or double-loop learning (Model II) (ibid.). Model I behaviour involves – for example – withholding negative information, seeking to protect oneself and others, and avoiding direct confrontation (ibid.). Model II behaviour, on the other hand, involves actions that help to generate relevant information and solve problems in ways that ensure they remain solved (ibid.). When conditions within the organization promote Model I behaviours, the resulting learning and actions typically reinforce these conditions, making the inhibition of Model II behaviours even stronger (ibid.).

One important aspect of their theory is the theories in action that human beings have inside their heads; that is, programmes that state how we should act effectively (Argyris, 1999). They distinguish between what “we say” in the form of stated beliefs and values (espoused theory) and what theories are actually used for guiding behaviour (theory-in-use); it is not uncommon for individuals to state that they would employ Model II behaviours, but in reality they employ Model I behaviours (Argyris & Schön, 1978).

For individuals and organizations to overcome their Model I behaviours, they need to become aware of their hidden assumptions and beliefs, start talking about the areas they consider taboo, encourage testing of the information they share, learn to use dilemmas as a basis for learning and deal with negative feelings connected to these actions, such as embarrassment and inadequacy

(Argyris & Schön, 1978). To make a change, they need to reflect on their behaviour and how they might be contributing to the organization’s problems (Argyris, 1999). This process would form part of the type of learning known as deuterio-learning – that is, learning about learning – and how to improve one’s own learning system (Argyris & Schön, 1978); or, in other words, “by going meta on single or double-loop learning” (Argyris, 2003, p. 1179). Figure 2.3 shows the relationship between single-loop, double-loop and deuterio-learning. Deuterio-learning on single-loop issues is much less complicated than double-loop learning (Argyris, 2003).

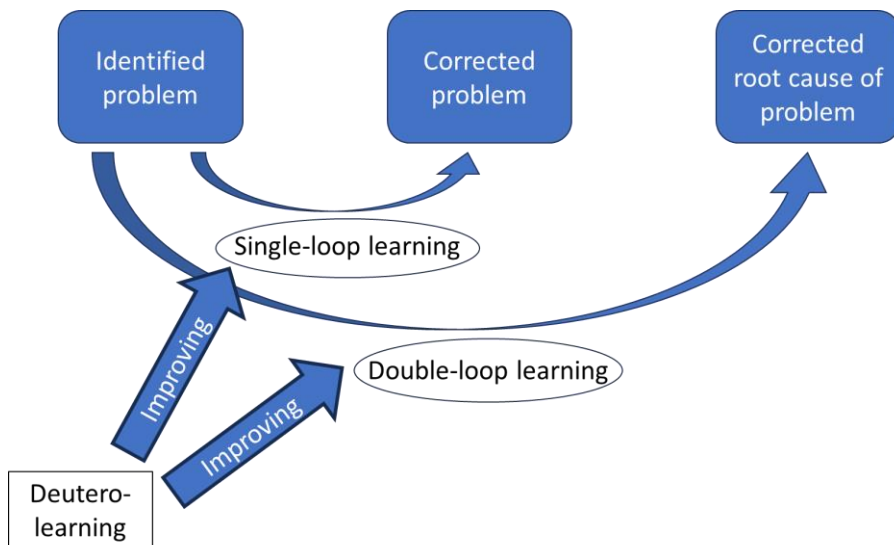


Figure 2.3. The author’s illustration of relationships between problem solving, or error correction, and Argyris and Schön’s (1978) concepts of single-loop, double-loop and deuterio-learning.

The action science perspective is one of the most cited in the literature about OL, and the concept of double-loop learning has also received wide attention in the management literature, but it has had a remarkably superficial impact in both research and practice (Auqui-

Caceres & Furlan, 2023). This could be due to the fact that it is difficult for individuals to see the discrepancy between their own espoused theory and theory-in-use, which makes it hard to implement double-loop learning (Argyris, 1999), that the defensive routines connected to Model I are very strong, and that researchers or interventionists lack the skills to efficiently deal with individuals' defensive routines (Argyris, 2003). See Figure 2.4 for an overview of Model I and II, together with defensive reasoning. Another reason that has been proposed is the lack of focus on the context when designing interventions, and the lack of knowledge about sets of contextual factors that might affect these interventions (Auqui-Caceres & Furlan, 2023).

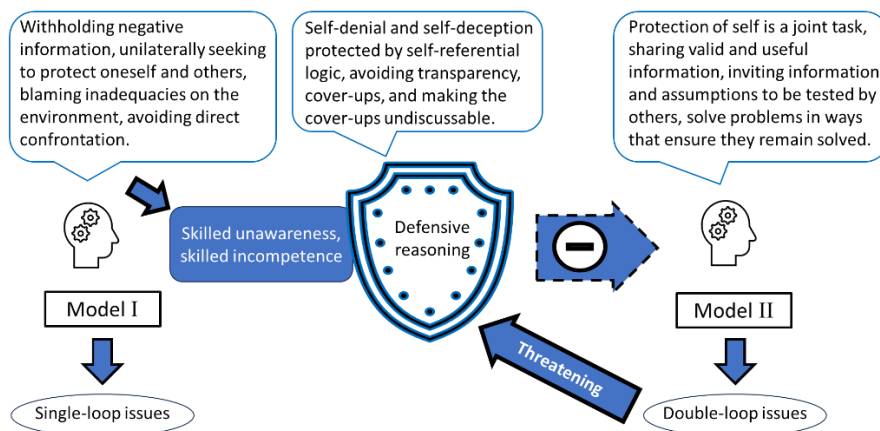


Figure 2.4. The author's illustration of an overview of Model I and II behaviour, and defensive reasoning as described by Argyris and Schön (1978) and Argyris (2003). The theories-in-use of Model I lead to skilled unawareness and incompetence, which is protected by a defensive reasoning mindset when double-loop issues emerge. The concurrent Model I behavioural systems inhibit Model II theories-in-use and behaviour, as well as double-loop learning.

One difference among individuals who utilize double-loop learning more extensively than others is that they are more thoughtful and

reflective, and feel safe to explore behaviours, assumptions and values (Mazur et al., 2019). Argyris (1999) argues that although solving problems is important, it is critical that we learn to reflect on our own behaviours and alter them if they prevent us from learning effectively. The apparent difficulties in developing this self-reflection and double-loop learning capability have been suggested to depend on the fact that we are mostly unaware of our own behaviour and biases, and perhaps also unaware that we are not open to having our ideas challenged (Auqui-Caceres & Furlan, 2023). It is indeed still common to find gaps between what is said and what is done within organizations (Kullberg et al., 2022).

To practise double-loop learning, individuals need to be able to question their current ways of thinking and behaving (Argyris & Schön, 1978); that is, they need the ability to reflect (Hilden & Tikkamäki, 2013). Besides this ability, they also need the time and opportunity to reflect if learning and improvements are to be successful (Lapré & Nembhard, 2020). For deutero-learning to occur, there is a need to reflect upon reflection; that is, reflecting on the ways in which we reflect on and explore the underlying assumptions and hidden biases affecting the ways in which we engage in reflection, problem-solving and learning (Argyris & Schön, 1978; Holdo, 2023).

2.4.4 The 4I framework

Crossan et al. (1999) view OL as a means of achieving the goal of organizational renewal. Their 4I framework describes OL as four connected subprocesses that link the individual, group and organizational levels (ibid.). These processes are intuiting (individual recognition of patterns, which is cognitive and partly subconscious); interpreting (explaining the idea to oneself and others, occurs

through words or actions); integrating (developing shared understanding to be able to take coordinated action, occurs through dialogue and joint action); and institutionalizing (embedding the learning in the organization's systems, routines and structures) (ibid.). The first three of these subprocesses are continuous and quite fluid, moving back and forth; while institutionalizing happens more seldom but instead usually persists over a longer period (ibid.).

One important aspect of this dynamic process is that there is both a feed-forward dimension, where new learning is created and eventually institutionalized (exploration), and a feed-back dimension, where the institutionalized learning affects individuals and groups in ways that also allow the new learning to be used to reap rewards in the form of performance improvements (exploitation) (Crossan et al., 1999). During feed-forward and feed-back, there is a critical and constant interplay between understanding that guides action and action that informs understanding (ibid.). Managing the tensions between feed-forward and feed-back is crucial for organizations both to explore new knowledge and to exploit and use that new learning to reap the potential benefits associated with it (ibid.). See Figure 2.5 for an overview of the feed-forward and feed-back dimensions of the 4I framework.

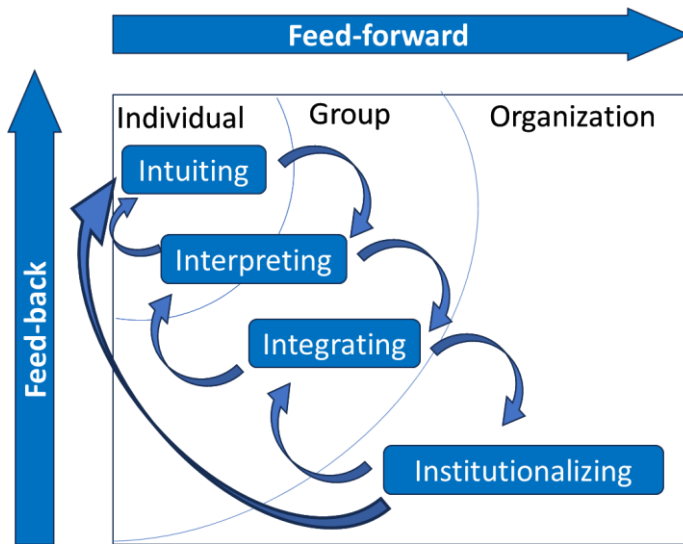


Figure 2.5. Overview of the 4I framework (modified from Crossan et al. (1999)).

Balarezo et al. (2024) have expanded the 4I framework with the three additional I's of intervening, inducing and inquiring practices aimed at reducing cognitive barriers to learning at different levels within the organization. Intervening is a means by which managers deliberately try to influence organizational members to switch their information processing from automatic to conscious and engage in reflexive practice regarding their own behaviour (ibid.). Inducing involves both rewarding learning and using nudging to influence people to make the decision to engage in learning behaviours (ibid.). Inquiring in the form of both self-reflexivity and collaborative inquiry are necessary to overcome individual and organizational-level defensive reasoning as described in Argyris and Schön (1978) and Argyris (2003) (Balarezo et al., 2024).

2.4.5 Organizational learning in healthcare and the public sector

OL is viewed as a promising approach for improvement within healthcare organizations by adopting, developing and adapting tailored, evidence-based solutions, subsequently achieving better patient outcomes (Lyman, Hammond et al., 2019). A context in which individuals have a sense of purpose, motivation, psychologically safe relationships, supportive infrastructure, the skills associated with OL, and experience from working together in teams are considered beneficial for OL (Lyman, Jacobs et al., 2019). Managers within healthcare organizations also need to make sure the learning is retained within the organization by incorporating it in clinical policies, for example, and promoting desired behaviours (Lyman, Hammond et al., 2019).

In Sweden, most healthcare organizations are positioned in the public sector. There are various differences between organizations in the public sector and the private sector: public sector organizations, for example, are highly bureaucratic with formalized structures, are influenced by politicians, have multiple stakeholders and lack competition (Anand & Brix, 2022). Because of the prevalent high levels of professionalism and the learning that occurs through collective processes, OL is argued to be particularly well-suited to public sector organizations (ibid.). There has been a slow increase in publications on OL in the public sector, but there are fewer publications than for private sector organizations (ibid.). Different theoretical constructs have been used in research on OL in the public sector, considering aspects such as absorptive capacity, the 4I framework and how balance can be achieved between exploration and exploitation (ibid.).

2.5 Continuous organizational improvements and learning (COIL)

The previous sections have demonstrated a close relationship between CI and OL and introduced the two concepts separately. Now the term COIL will be used to emphasize the need for CI to include OL aspects. A summary of what aspects are considered to be part of COIL within this thesis is presented below. See Figure 2.6 for a visual overview.

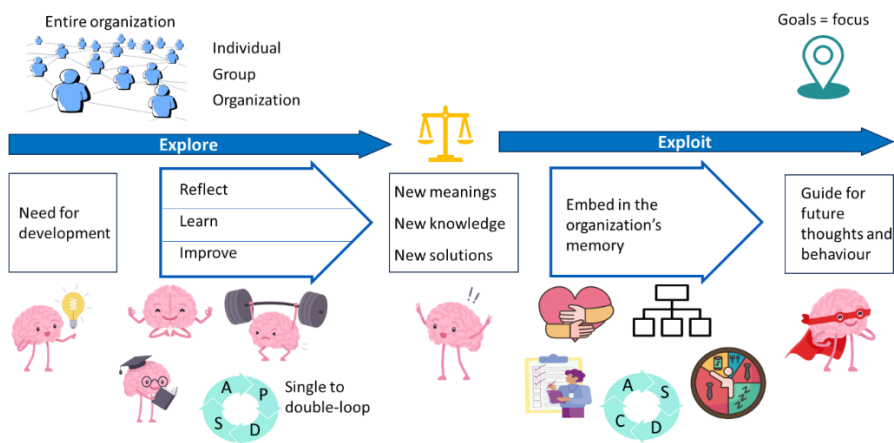


Figure 2.6. Overview of COIL, as conceptualized in this thesis.

COIL includes the entire organization – individual, group and organizational level – and focuses on shared goals. It comprises continuous learning processes in the form of reflection and knowledge creation, and improving. It generates new meanings, new knowledge and new solutions (exploration). These processes are based on a structured methodology for improvements and learning, such as the PDSA cycle, and generate learning on a continuum from single-loop to double-loop learning. New meaning, knowledge and solutions are embedded in the organization's memory through

culture, structure, routines, standards and habits and serve as a guide for future thoughts and behaviour for the members of the organization (exploitation). COIL also includes deuterio-learning, or meta-learning; that is, reflecting on, learning about, and improving the current ways of performing COIL.

Apart from being conducted and affected by the organizational members themselves, COIL is also impacted by contextual factors that are both internal and external to the organization.

2.6 COIL capability

To be able to detect and solve various problems, it is imperative to have capacity in healthcare, as in other industries, to improve quality (Dixon-Woods & Martin, 2016). Indeed, building capability and capacity for quality improvement (QI) in a systematic manner is significant for high-performing healthcare organizations (Hibbert et al., 2021). More research is needed, however, on how to build enough of this capacity (Loper et al., 2022) and capability (de Kok et al., 2023). For organizations to have enough capacity, they need to have enough people with the associated capabilities (Bevan, 2010). Having capability means being able to perform the actions needed to achieve desired goals (Sen, 2005), which in this research concerns the knowledge, skills, abilities and confidence needed to perform COIL as described in the previous section.

Several factors appear to be important for building COIL capability and capacity. Loper et al. (2022) performed a systematic review of studies in a public health setting where they found that the use of didactic instruction and experiential learning, the use of expert faculty and coaches, the use of an established QI methodology and the use of teams for experiential learning and carrying out

improvement work could support the development of capacity for continuous QI. In a recent scoping review, de Kok et al. (2023) found five themes relating to internal organizational attributes that could either facilitate or hinder improvement and learning capability in healthcare organizations: perceived leadership commitment, open culture, room for team development, initiating and monitoring change, and strategic client focus.

Hibbert et al. (2021) performed a qualitative study within a network of health services in Australia and found that an agreed and robust QI methodology, a skilled faculty to assist improvement teams, active involvement of leadership and management, and a deep understanding that teams matter were important for successfully building QI capacity. Another empirical example is Jönköping County in Sweden, who are well-known for their long-term efforts with QI (Staines et al., 2015). By using the story of Esther and asking the question “What is best for Esther?”, they have promoted systems thinking in a complex context, encouraged and maintained employee motivation, created a desire to learn with the aim of providing better and safer care for Esther; and eventually, Esther – that is, patients – has also been included as a co-producer of the improvement work (Vackerberg et al., 2023).

Training employees for various capabilities associated with COIL is common, but only occasionally successful in creating the desired results (Diamantidis & Chatzoglou, 2014). One contributing factor could be that attention is a prerequisite for learning, since it appears that only information and experiences that attract attention can become part of a person’s consciousness, which is necessary for learning (other than procedural learning) (Ocasio et al., 2020). Humans have a limited capacity for attention which consequently

limits the amount of information that can be used for learning, and so focusing too narrowly on a specific task involves a clear risk of missing other relevant information; as illustrated by the experiment by Simons and Chabris (1999) involving “the invisible gorilla”.

While attention is needed for organizational members to be able to discover knowledge, they also need a certain level of absorptive capacity to make use of that knowledge (Ocasio et al., 2020). Absorptive capacity includes recognizing that certain knowledge contains value, and being able to acquire and use it (ibid.). Previously existing related knowledge affects absorptive capacity, and so increased knowledge can increase the level of absorptive capacity, thereby enhancing the future ability for learning (DeFillippi & Ornstein, 2003; Eriksson et al., 2025).

While having enough people with the right capabilities within an organization is a prerequisite for COIL, this may not suffice. The difference between what people say they will do (espoused theory) and what they actually do (theories-in-use) has been described as an important challenge for behavioural change among individuals and organizations (Argyris & Schön, 1978), and it still appears to be a problem (Kullberg et al., 2022). Similarly, there is a need to overcome the gap between what we know and what we do (the knowing-doing gap) (Pfeffer & Sutton, 2000). Neither knowledge nor motivation appears to be enough, since we often fail to do the things we want to do, say we will do, and know are good for us, even if they are offered to us for free (Milkman, 2021). It also appears to be difficult to build up the self-discipline needed to sustain beneficial habits and routines over time (Imai, 1997).

2.7 Contextual factors

Context has been identified as influencing COIL and capability related to COIL (Loper et al., 2022), as well as other healthcare-related QI initiatives – see, for example, Kaplan et al. (2010), Øvretveit (2011), Dixon-Woods (2014), Shea et al. (2018), and Coles et al. (2020) – and also in other industries (Fundin et al., 2018).

Context is a term that often lacks an explicit definition in research, and it is both defined and operationalized in different ways (Paparini et al., 2021). This research has been influenced by the definition provided by Craig et al. (2018, p. 6), where context is seen as “any feature of the circumstances in which an intervention is implemented that may interact with the intervention to produce variation in outcomes”. Although this research attempts to distinguish between the context and the part of the organization that is studied, it is recognized that the multiple links between an organization and its environmental context make it difficult to draw clear boundaries between them (Schein, 1980).

The context is a dynamic entity that changes over time, and there are interactions between the context, the agents within the organization who are trying to implement changes (such as COIL) and the implementation of those changes (Mielke et al., 2022). The importance of different contextual factors may also change with different stages of the process (Coles et al., 2020). The organizational context helps to shape the beliefs, values and identities of its organizational members, which then guides their actions; and in turn, their actions affect their surrounding context (Mielke et al., 2022).

Further, COIL takes place within a specific context that affects what type of learning is possible through existing organizational routines

(Becker, 2020), sociocultural delimitations (Elkjaer, 2003) and the experiences that organizational members may encounter as a basis for their learning (Levine & Argote, 2020). Through the learning activities, the organizational members in turn affect the context, changing it and thereby altering the conditions for future learning (ibid.). The organizational members themselves are also affected and may experience changes in aspects such as personality, motives and values (Schein, 1980). In other words, contextual factors interact with each other, as well as with the processes such as COIL that take place during QI: both the context and the processes are all interrelated and constantly changing (Coles et al., 2020).

Contextual factors can be divided into individual, team and organizational factors (Shea et al., 2018). Organizational-level contextual factors include the organization's culture (Lebcir & Sideras, 2021) and infrastructure for COIL support, such as support from managers, prioritization, and capabilities related to COIL (Shea et al., 2018). Team-level contextual factors include team composition (such as cross-functional teams), teamwork attitudes and climate, and the degree of shared purpose among team members (ibid.).

Individual-level contextual factors include awareness and acceptance of COIL work, knowledge and skills to do this work, a sense of self-efficacy and confidence in one's own ability (ibid.) and motivation and commitment (Lebcir & Sideras, 2021). Both individual and organizational factors affect employees' motivation for participating in COIL (Jurburg et al., 2017), and interactions between individual and organizational factors can impact aspects such as the innovative behaviour of employees (Slåtten et al., 2020).

Strong emotions related to fear or a strong desire for a certain outcome can affect the quality of reflection by directing people's

inquiry only towards what they wish, or fear, to find (Arnesson & Albinsson, 2019; Rodgers, 2002), and by consuming cognitive functions so they have less capacity for analytical thinking, creativity and problem-solving (Edmondson & Holmén, 2019). They may also turn reflection into perseverative negative thinking – that is, worrying –which can reduce individuals’ ability to solve problems- by focusing merely on their own negative and threatening experience and rendering them unable to see the bigger picture and identify solutions (Kross et al., 2023).

A certain level of psychological safety is essential for people to be able to deal with the social risks associated with experimentation for reflection, learning and improvements (Edmondson & Holmén, 2019). To create psychological safety and overcome fear, trust between organizational members is also required (Hubbart, 2024; Mitterer & Mitterer, 2023). Guided reflection approaches can help individuals to reflect on their own emotions and difficult situations (Nakamura et al., 2023), and coaches can help to reduce the levels of perceived anxiety and stress, thereby making reflection more productive (Kross et al., 2023).

It would appear to be clear that quality initiatives and COIL are affected by contextual factors, but which aspects of the context are critical, or what conditions assert a stronger or weaker influence, is not as clear (Øvretveit, 2014). One possible reason for this lack of knowledge could be that research often tries to exclude and minimize the impact of context on studies (Shekelle et al., 2010). Examples of proposed facilitating factors for CI include senior management support and commitment, strategic focus, using the right methodology, and support and commitment from employees (Jurburg et al., 2017), while a lack of knowledge about CI methods

and failing to share knowledge are proposed barriers (Lodgaard et al., 2016). Lyman, Jacobs et al. (2019) suggest that – in healthcare organizations, at least – it is most beneficial when both supporting contextual factors and mechanisms for OL converge and interact.

3 Research methodology

This chapter describes the research methodology of the thesis from the philosophical worldview, my experiences and understanding, the purpose of the research, the research approach and design, and quality and ethics in research.

3.1 Philosophical worldview

The aim of science is to create and apply knowledge (Pruzan, 2016). As researchers, we bring with us assumptions and beliefs about the world and the truth (ontology) and what knowledge is (epistemology) (Creswell & Poth, 2018). These assumptions and beliefs make up our worldview, or research paradigm, and guide our actions while conducting research (Guba, 1990).

This research is conducted from a research paradigm of pragmatism. Pragmatism is oriented towards solving practical problems in the real world (Kaushik & Walsh, 2019), and an important aspect concerns the definition of value; that is, what is considered useful, for whom it is useful, and the ways in which the researcher's values influence the research (Feilzer, 2010). Feelings about what constitutes a problem or what is considered right or wrong, for example, affect our research (Morgan, 2014b). This thesis is concerned with the need to increase practical and useable knowledge on how to build capability for improving organizations, and to increase theoretical knowledge of what is needed for organizations to enhance their COIL capability. It is intended for leaders and employees within organizations that are struggling to implement the improvements/learning needed, for decision-makers and politicians in public service, and for the research community.

The ontological basis of pragmatism states that there are multiple co-existing layers of reality that exist within a specific context, ranging from objective and stable to subjective, uncertain, and dependent on human perception (Creswell, 2014; Feilzer, 2010). The notion of “truth” relates to what is useful and works in a certain situation and at a certain point in time (Feilzer, 2010), and it is more relevant with *what works*, rather than whether or not the reality is independent of the mind (Creswell, 2014).

The epistemology of pragmatism considers the need to investigate the different layers of realities (Feilzer, 2010). Knowledge is seen as always being based on experience, and as being a construct that allows people to manage their existence more effectively, rather than being *the reality* (Kaushik & Walsh, 2019). In pragmatism, the focus is not on producing a specific kind of knowledge; instead, knowledge produced in opposing paradigms such as post-positivism and constructivism are viewed as different aspects of knowledge, created in different social contexts (Morgan, 2014b).

3.2 My experiences and preunderstanding

Developing knowledge through research involves building on current knowledge, and researchers’ preunderstanding of the phenomenon investigated provides a basis for such knowledge development (Alvesson & Sandberg, 2022). Comments about researchers’ background and reflections on how that background has influenced their interpretations of the findings are part of good qualitative research (Creswell, 2014). Alvesson and Sandberg (2022) also emphasize the potential benefits of using researchers’ preunderstanding to add value to the research, together with theory and data.

One part of a researcher's preunderstanding is his or her values, and the evaluation of how these values might influence the research is an important part of pragmatic research (Feilzer, 2010). My values, for example, concern the belief that change is always possible, that actions can be viewed as meaningful based on their consequences, and that nothing exists in a vacuum; human action is dependent on prior experience and knowledge, values and beliefs, as well as the surrounding context. This has influenced the research to include multiple organizational layers, to consider people's lived experiences, their actions and their surroundings.

While conducting the studies in this thesis, I was working in the healthcare sector as an organizational developer, and I conducted the research within the field of Quality Management as a participant of the Multidisciplinary National Health Innovation Research School. This has affected the area of the research and the formulation of the aim. My previous knowledge and experience of COIL, the healthcare sector, and the organization in the case study have impacted the design of the study, the collection of data and the interpretation of the findings.

Since I was working in the same organization as the case during the empirical study, albeit in a different operational area, I had brief contact with the departments prior to the start of the study. This provided an opportunity to investigate whether this case was suitable and to build a relationship with participants where additional contact was enabled, for instance, in case more information was needed or participants wanted to add anything after their interviews. According to Hong and Cross Francis (2020), building relationships and trust is likely to enhance data collection quality. For this case study, this was particularly evident during the second data collection period. These

relationships may also have been beneficial for the case, allowing individuals to complete their participation in the research study, as proposed by Hong and Cross Francis (2020).

This also means that I, in my capacity as the researcher, and the individuals participating in the research may have affected one another in more complex ways than if the researcher had been entirely external. This involved the risk of both negative effects in terms of problems with describing the interaction and positive effects such as more appropriate adjustment of the research design as the study takes place, for example.

With regard to data collection and interview quality, I have had many years of training in conducting the form of interview that takes place between veterinary surgeon and pet owner, I have attended university lectures on communication and received a coaching diploma. Hence, I have to some extent developed the skills related to the art of conducting interviews as described by Brinkmann and Kvale (2015).

3.3 The purpose of the research

Together with the research paradigm, the purpose of the study guides the choices made in setting up the research design (Creswell, 2014). The purpose statement describes the intent of the study and what the researchers want to accomplish (ibid.). Research can have many goals, some of the major ones being exploration, description, explanation, prediction and influence (Onwuegbuzie & Leech, 2006). Exploration is useful for gaining insights and clarifying one's understanding of a problem (Saunders et al., 2012). Description provides a clearer picture of the phenomenon studied, including – for example – its precursors and origin (Onwuegbuzie & Leech, 2006).

Explanation seeks to establish how different variables affect each other (Saunders et al., 2012). Prediction involves using existing knowledge to foresee what will happen, while influence involves manipulating a situation to achieve a desired outcome (Onwuegbuzie & Leech, 2006).

Once the purpose of the research has been determined, a strategy – or research design – is developed, which describes a plan for how the purpose is to be achieved (Saunders et al., 2012). However, it is common for the initial aim of the study to evolve along with its development (Alvesson & Sandberg, 2022), making it more of a hermeneutic than a linear development.

The purpose of this licentiate thesis is to *explore* important factors for supporting COIL and the enhancement of COIL capability in organizations. To achieve this purpose, the research process started with a literature review in which shared attributes of interventions contributing to the development of COIL capability in healthcare organizations were explored, together with potentially facilitating or hindering factors. The second step was to conduct an empirical study within a public sector healthcare organization to explore what conditions present in an organization are important in order to support COIL.

3.4 Research approach

The research approach comprises a certain stance towards theory that can be deductive, inductive or abductive (Saunders et al., 2012). With a deductive model, existing knowledge is used as a basis for building hypotheses that can be tested; then relevant variables are identified, an experiment is conducted, and the results from the experiment help inform theory and advance science (Park et al., 2020). An inductive

model instead uses interpretations of empirical data to create a theory (Wedin & Sandell, 2004). A third model, abduction, involves moving back and forth between theory and empirical data, thus constituting a combination of deduction and induction (Saunders et al., 2012).

During the work on this thesis, there was constant interplay between existing theory and empirical data from the studies; hence, an abductive stance towards theory has been employed. The work began by collecting data by means of a systematic literature review, which was then compared with existing theory. This generated new insights and impacted the research question and the design of the second study, the case study. The case study in itself used the Iterative Thematic Inquiry analysis method (Morgan & Nica, 2020) in an inductive manner, starting from the researcher's preconceptions and then gathering data to revise those initial preconceptions.

Different approaches to research also guide the research design to focus primarily on quantitative, qualitative or mixed methods (Creswell, 2014). Quantitative research generates numerical data (Quick & Hall, 2015) that can be verified and repeated, and it is based on the paradigm of positivism (Maksimovic & Evtimov, 2023). The aim is to find general explanations and causalities that help to explain phenomena, in the form of laws of nature, whereby phenomena can be controlled and predicted (Park et al., 2020). Qualitative research, on the other hand, is "a form of social inquiry that tends to adopt a flexible and data-driven research design, to use relatively unstructured data, to emphasize the essential role of subjectivity in the research process, to study a small number of naturally occurring cases in detail, and to use verbal rather than statistical forms of analysis" (Hammersley, 2012, p. 12). When the use of quantitative or qualitative research methods on their own will not generate sufficient

data about the issue or problem at hand, then mixed methods research – that is, combining the two approaches and their different advantages – is most appropriate (Creswell, 2014). Since these two approaches are based on opposing paradigms, some consider it impossible to mix them, while others choose to adapt the methods they use to the situation (Merriam & Tisdell, 2016).

To fulfil the purpose and answer the explorative research questions in this thesis, a qualitative approach was deemed to be most appropriate. A qualitative approach is suitable when we want to explore an issue, when measurable variables are not easily identifiable, when a complex and detailed understanding is desired, when we want to understand a certain context or setting, and when existing theories do not cover the issue fully (Creswell & Poth, 2018). In the case study in particular, where the Iterative Thematic Inquiry analysis method was used (Morgan & Nica, 2020), analysis of the data started early in the research process and was conducted alongside data collection. The purpose, research questions and research design evolved as the research then progressed.

3.5 Research design

The research design is crucial for connecting the methods chosen with the possibility of answering the research questions and achieving the purpose and goal of the research (Morgan, 2014a). There is no requirement for particular approaches or methods within the research paradigm of pragmatism, and it is considered most important to design the research in a way that is believed to have the best possible chance of achieving the purpose (Feilzer, 2010).

To achieve the overall purpose of this thesis, the first step was to conduct a systematic literature review in order to synthesize findings

from previous research. The findings from the literature review indicated a close relationship between attributes of successful interventions and the organizational or contextual factors that affect those interventions. One proposition was that it might not even be possible to enhance COIL capability if the ratio between hindering and facilitating factors is unfavourable. Therefore, the second study was designed to explore conditions within the organization that are important for supporting COIL, and a qualitative case study was developed to enable a deep understanding of the phenomenon. A longitudinal case study was chosen since the context is dynamic and changing, and development of COIL takes place over time. See Figure 3.1 for an overview of the timeline.

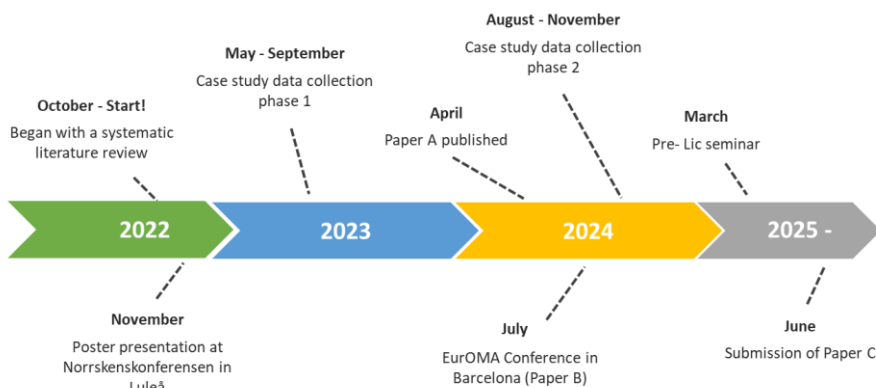


Figure 3.1. Axis showing the timeline for major events during the thesis.

3.5.1 Literature review

When conducting research, it is common to describe the existing body of knowledge upon which the research builds (Alvesson & Sandberg, 2022). A literature review can be considered research in its own right when combining information from several studies and new insights and theories are created (Elsbach & van Knippenberg, 2020). Gough et al. (2017, p. 2) define a systematic review as “a review of

research literature using systematic and explicit, accountable methods". The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) is a guideline indicating how to build a protocol for describing the planning of the review, highlighting the need to make *a priori* decisions about eligibility criteria (Page et al., 2021). Depending on the purpose of the review, the researcher also needs to decide whether to use quality appraisal to exclude reports from the review or to retain them, and then to assess and describe the quality of the reports as part of the results (Dixon-Woods et al., 2006).

The systematic literature review in this thesis followed recognized guidance and reporting (Page et al., 2021) and synthesized data using coding and themes. See Paper A for a more thorough description.

3.5.2 Case study

A case study was considered appropriate as the second study because COIL is a complex phenomenon that needs to be studied together with its equally complex context (Paparini et al., 2021) and case studies aim to develop an understanding of "a phenomenon within its real-world context" (Yin, 2012, p. 12). The longitudinal design was chosen as this makes it possible to capture changes regarding the phenomenon – the development of COIL, for example – and the context (Hong & Cross Francis, 2020). The unit of analysis for this case study was the phenomenon of COIL. See the appended Paper B for a more elaborate discussion regarding complex phenomena and their contexts.

3.5.2.1 Sampling and eligibility criteria

The sampling strategy was guided by pragmatism. The case was chosen because the individuals within the organization were willing to participate, they were already engaged in the process of working

with CI in their natural setting, and it was possible to study them in practice. It was also believed that they would provide useful and practice-based information, with the possibility of many differing perspectives. The same strategy was used for data collection, where individuals from all departments and with different levels of involvement were included. Considering many different aspects of the case studied helps to enhance information power and credibility (Malterud et al., 2016).

3.5.2.2 The case

The case consisted of the operational area's three departments, departments A, B and C, along with the management team: see Figure 3.2 for an organizational chart. They were situated within a County Council in Sweden and worked with different supportive and strategic functions. They had recently realized that they needed to work more systematically with CI in order to avoid encountering multiple flaws in their departments in the future, as had already happened. Approximately six months prior to the start of the case study, they launched an initiative to work more systematically with CI. The departments had all chosen different approaches to the initiative. See the appended Papers B and C for further descriptions of the case.

Regarding the influence of the organizational context, these departments all operated within the same public sector healthcare organization in Sweden, hence experiencing a lot of similarities regarding the context. There were, however, differences between the three departments regarding aspects such as the focus of their assignments, their size, how long they had existed in their current embodiments, and how they worked with quality management and CI prior to this initiative to work more systematically with CI.

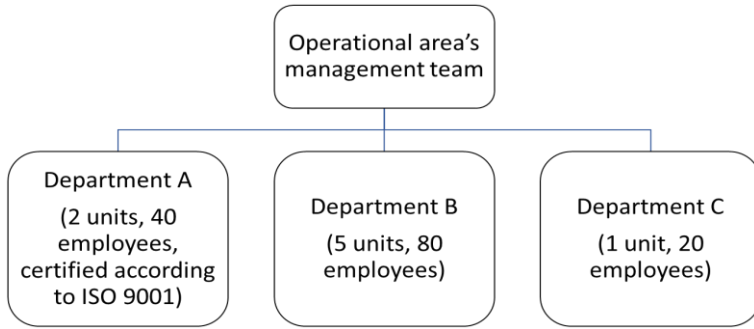


Figure 3.2. Organizational chart for the case studied. The operational area comprised a management team and three departments.

3.5.2.3 Data collection

A combination of individual interviews, observations, document studies and a workshop were used to address the purpose of the study. Figure 3.3 shows the timeframe for the case study, while Table 3.1 shows the number of interviews, observations and documents studied during data collection periods 1 and 2.

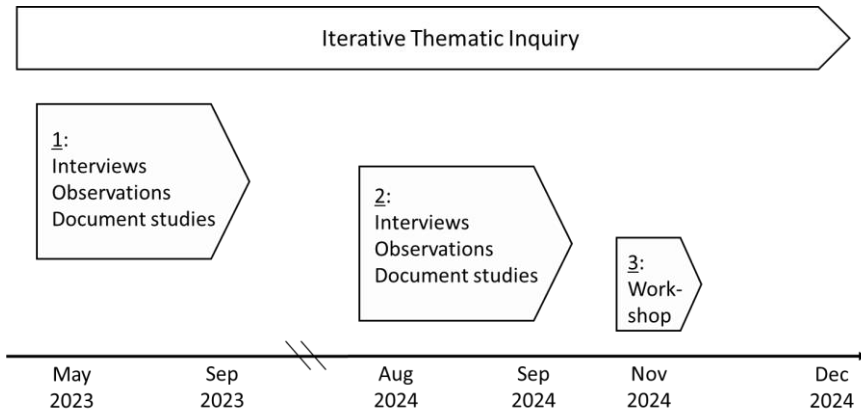


Figure 3.3. Timeframe for the case study's data collection and Iterative Thematic Inquiry.

Participants and data sources were selected by means of strategic sampling operations, followed by a snowball sampling approach in

which participants identified additional relevant participants, observation forums and documents. To capture a broader range of perspectives and increase variation, I also actively sought out employees who were not directly involved in the initiative and included additional documents that were found on the County Council’s intranet.

Table 3.1. Number of interviews, observations and documents studied during data collection periods 1 and 2.

Data collection method	Period 1	Period 2
Individual interviews	12	10
Observations	7	8
Documents studied	16	6

Interviews

Qualitative interviews were conducted consisting of open-ended questions, with a short interview guide to help the interviewer remember the topics to be covered in the first period. The topics were chosen based on different types of questions that are possible to ask, according to Patton (2015), with emphasis on experience/behaviour, knowledge, opinions/values, and feelings/emotions. The predetermined questions that were the same for all participants in period 1, and the first-time participants in period 2, were “Can you tell me a little about yourself and your role?” and “How do you work with improvements in your organization/unit?”. Follow-up questions were then asked based on the topics mentioned previously. Prior to

the interviews in the second period, transcripts from the first period were re-read by the interviewer, and topics to follow up were written down and served as interview guides. The interview structure was designed to be as open as possible while remaining focused on the topic, in order to gain an in-depth understanding of the phenomenon. To address any anxiety that participants might have felt when being selected for a research interview (Argyris, 1999), all interviewees received information and had the opportunity to ask questions about the study and the interview prior to the official start of the interviews.

The sample size for the interviews was estimated before the study started (Malterud et al., 2016). Given the aim of the study, it was decided that interviews should be conducted with managers and employees in all three departments who were directly and not directly involved in the CI work, and with the development strategist in the management group. This meant that approximately ten to fifteen people were to be interviewed in each period. This estimate was evaluated after a few interviews had been conducted (*ibid.*) in each period and was deemed sufficient. All interviews were conducted by me and were recorded and transcribed verbatim, after which the recordings were deleted.

Observations

Unstructured observations where I adopted the role of “observer as participant” (Mulhall, 2003) were chosen, since the purpose was to explore conditions present in the organization that were not predetermined by the researcher. The observations were conducted for all the different meeting forums that took place within the designated periods 1 and 2 which the participants themselves considered relevant and related to CI. Key individuals within the case

proactively informed me about suitable meetings to observe, where they believed that topics related to improvements and development would be included.

The purpose of the observations was to observe actions and behaviours so familiar to the interviewees that it would not occur to them to mention them, as well as behaviours they might prefer not to mention to the researcher (Merriam & Nilsson, 1994). It is far more difficult for people to alter their behaviour simply because they are being observed, than it is to modify their accounts of their behaviour when asked to describe it (Argyris, 1999).

Document studies

Documents created within the case as part of regular work and not specifically created for the study nor influenced by the researcher, as is inevitable with both interviews and observations where participants are aware of the researcher's presence, provide a more stable source of information (Merriam & Nilsson, 1994). Key individuals within the case were asked to provide documents related to their initiative of working more systematically with CI. Department A provided most of the documents collected, with several reports from external and internal audits related to their quality management system (both periods). Department B provided documents related to the establishment of their Council for CI (period 1) and the suggestions for improvement that were collected by the Council (period 2). Department C provided no documents, but some information was available to view on the organization's intranet. The operational area's management team provided documentation from their quarterly evaluations of the CI initiative (both periods).

Workshop

The purpose of the concluding workshop was to present results identified regarding the observed state of COIL within the case, provide the management team with an opportunity to reflect on their work with CI, and to observe their reflections. To encourage participants to begin thinking about the subject and reflect independently, they received an e-mail prior to the workshop in which they were asked to think about what went as expected in their initiative to work more systematically with CI, and what did not. They were also asked to provide a specific example of an action that had affected that work.

I led the workshop, and the other researchers observed the dialogues and interactions that took place during the workshop, with emphasis on both context and signs of reflection. The workshop concluded with a question about what they would take with them in their future work with CI, as individuals and as leaders.

The findings regarding the state of COIL within the case were also summarized in a written internal research report that was sent to the operational area's management team after the workshop.

3.5.2.4 Iterative Thematic Inquiry

The analysis method of Iterative Thematic Inquiry (Morgan & Nica, 2020) was used for the case study in order to draw on my preconceptions. Based on a pragmatic research paradigm, it links the existing beliefs of the researcher with the data being collected, with the explicit goal of producing themes that can be used for communicating the results of the research (Morgan & Nica, 2020). This analysis method deliberately and explicitly draws and builds on

the researchers' prior understanding in order to utilize that preunderstanding as positive input in the research process (Alvesson & Sandberg, 2022).

Given that the Iterative Thematic Inquiry method (Morgan and Nica, 2020) is relatively new and emerging, its main steps are described in detail here, and also in appended Paper C, to indicate how its iterative structure aligns with the aims of a longitudinal case study.

Phase 1: Before data collection began, I wrote down initial preliminary themes that addressed the research purpose. These answers came from my previous knowledge, experiences and beliefs; and by writing them down and reflecting on their origin, these preconceptions became an explicit part of the research process that could be shared and discussed with the other researchers. **Phase 2:** The initial preliminary themes were then continuously revised on the basis of information that reinforced, challenged or expanded them. After the first and second period of data collection had been conducted, parts of the notes and transcriptions were read and analysed by the three authors together. The remaining data was analysed by me alone and then discussed again by all three researchers. **Phase 3:** Once we had collaboratively judged that data collection had reached saturation and that the interpretation of the themes was sufficiently robust and coherent, the themes were formalized as the proposed set of themes. **Phase 4:** The proposed set of themes was converted into codes that were deductively examined against the data to ensure that the data supported the themes, and that the themes represented the main body of the data. This was done by coding the data collected and the memos generated during the analysis. The complete dataset from the study was then matched against the proposed set of themes, and as the data aligned well,

these themes were established as the final set of themes and were presented in the results section in Paper C.

3.6 Quality in research

Methods used in qualitative research result in text rather than numerical data, with the researcher as the main research instrument. Thus, certain concerns such as bias and credibility cannot be addressed in the same way as in quantitative approaches (Creswell, 2014). Since qualitative research consists of many varying methodologies, it is difficult to use general quality appraisal criteria that are applicable to all methods, particularly as the quality of the process and data analysis can be very hard to assess (Dixon-Woods et al., 2004). It is, however, suggested that the core criterion for evaluating the methodological quality of qualitative studies is researcher bias, which makes it important for researchers to provide the reader with an audit trail that describes the assumptions made and possible researcher influence on the study (Hannes, 2011). Patton (2015) adds the matter of paradigms and philosophical beliefs to the discussion of quality in qualitative studies, since this concerns the question of what knowledge and evidence is deemed acceptable, believable and useful, and what the “truth” is. For the pragmatic paradigm, for example, what is useful can be seen as true; while a constructivist sees the truth as created in the minds of individuals (ibid.).

The description of measures to ensure the quality of the research in this thesis uses the terms *credibility* (measuring what is relevant for the purpose and fit between the data and the views of the participants studied), *transferability* (if the findings are transferable to other settings), *dependability* (logical, traceable, and clearly

documented research process) and *confirmability* (if the findings are neutral, objective and grounded in the data) (Hannes, 2011).

3.6.1 Credibility

In this research, strategies were employed to ensure measurement of aspects relevant for the purpose and fit between the data and the views of the participants studied. In particular, the interviewees for the case study were able to review and validate the findings prior to the publication of Papers B and C respectively. The findings were analysed by more than one researcher, and quotations were presented verbatim. The use of a combination of different data sources – that is, interviews, observations, document studies and a workshop – also contributed to the credibility of the case study. Moreover, both the case and the interviewees for the case study were chosen in order to capture insights from various participants and perspectives, thereby ensuring strong information power (Malterud et al., 2016).

3.6.2 Transferability

The contextual background of the case has been described in order to contribute to the transferability of this research, and the findings in the papers have been described with as much richness and depth as possible while protecting participant anonymity. Readers can then judge for themselves the extent to which the findings are transferable to other settings.

3.6.3 Dependability

To ensure dependability, the research proposals and papers were subjected to peer review through PhD course discussions, feedback from supervisors, and peer review of published papers, and the literature review followed recognized guidance and reporting (Page

et al., 2021). The papers provide an audit trail in the form of descriptions of how data collection and analysis were performed and may thereby allow other researchers to conduct similar studies; although qualitative studies, such as the case study, cannot be replicated exactly as they are not controlled to the same degree as experiments.

3.6.4 Confirmability

In this thesis, the researcher ensured that ample information was included about the researcher's background and perspective. Throughout the research process, the researcher has assessed the effects the researcher might have on the various actions. In particular, the use of Iterative Thematic Inquiry as the analysis method in the case study provided an opportunity to reflect explicitly on preconceptions and put them to the test during data collection.

3.7 Ethics in research

Ethics concerns the norms that define what behaviour is morally right or wrong; hence, research ethics guide researchers to the ideal way of conducting research (Swedish Research Council, 2024). Unlike ethics that declare what we ought to do, laws and regulations declare what we must do. In Sweden, the Ethical Review Act of Research Involving Humans (2003:460) states what is legally permissible or prohibited in research involving human participants. The research community adheres to codes of conduct such as the Declaration of Helsinki, and an important purpose for these is to protect the welfare of individuals participating in research studies so that they are not exploited for the sake of research (Greaney et al., 2012).

The research conducted for this thesis collected no sensitive personal data and did not aim to influence the research subjects, either

physically or psychologically. The empirical case study was deemed not to require ethical approval from the Swedish Ethical Review Authority. The Research Ethics Committee of Mid Sweden University reviewed the study (19 September 2023) and raised no objections from an ethical standpoint. Information about the study was provided to participants, and oral approval was sought before the various research activities were conducted. Interviews were recorded, and the recordings were deleted after they had been transcribed. To protect participant confidentiality, it may sometimes be necessary to override the scientific obligation to save data and instead delete it (Resnik, 1998). Interviewees were able to view the results prior to publication in order to validate the results and make sure they recognized and approved of their own quotations. To protect their anonymity, a decision was made not to include as much background and contextual information regarding the case and participants as was possible. A representative for the case also reviewed the manuscript for Paper C prior to submission and signed a consent form for publication.

4 Results

This chapter presents a summary of each of the appended papers (see Table 4.1 for an overview of the papers and my contribution to each) and ends with a section on the overall results that summarizes the main findings. The full papers can be found in the appendix.

Table 4.1. Overview of appended papers and my contribution to each paper.

	A	B	C
Author (year)	Löfqvist, N. (2024)	Löfqvist, N. (2024)	Löfqvist, N., Hedlund, C. & Ingelsson, P.
Title	Enhancing capability for continuous organisational improvement and learning in healthcare organisations: a systematic review of the literature 2013–2022.	Exploring interactions between healthcare contextual factors and continuous organizational improvement and learning using iterative thematic inquiry.	Exploring conditions that are important to support the development of continuous organizational improvement and learning: A qualitative longitudinal case study in a Swedish County Council.
Purpose	The aim of this study was to explore common attributes of interventions that contribute to the development of COIL capability in healthcare organizations, and to explore possible facilitating or hindering factors.	The purpose of this paper was to describe a qualitative research design where Iterative Thematic Inquiry is used as the analysis method.	The purpose of this paper was to explore conditions present in an organization that are important to support COIL within a public sector healthcare organization.

Methodology	A systematic literature review	A qualitative longitudinal case study (after the first data collection period)	A qualitative longitudinal case study (after completion of data collection and analysis)
My contribution	Designed the study, collected data and wrote the article. The analysis was performed together with two other researchers, as stated in the paper.	Single author.	Designed the study and collected data from interviews, observations and documents. The final workshop was planned and conducted by all authors. Data sessions for analysis were held with all authors after data collection periods 1 and 2, and also after the final workshop. The paper was written by all three authors, with the first author leading the writing process.

4.1 Paper A

Löfqvist, N. (2024). Enhancing capability for continuous organisational improvement and learning in healthcare organisations: a systematic review of the literature 2013–2022. *BMJ Open Quality*. 13(2):e002566.

4.1.1 Background

Healthcare organizations are endeavouring to address their current and future challenges and need to increase their capacity for meeting these challenges. CI is commonly used in healthcare, and the need for

OL is recognized. It is essential for healthcare organizations to build capability among staff to achieve COIL, but there is limited research on how to develop this capability.

4.1.2 Purpose

The aim of this study was to explore common attributes of interventions that contribute to the development of COIL capability in healthcare organizations and to explore possible facilitating or hindering factors.

4.1.3 Methodology

For this systematic literature review, a comprehensive search was conducted in Scopus, MEDLINE and Business Source Complete for primary research studies in English or Swedish, in peer-reviewed journals, focusing on organizational improvements and learning in healthcare organizations. Studies were included if they were published between 2013 and 23 November 2022, reported outcomes on COIL capability, included organizations or groups, and were conducted in high-income countries. The articles included were analysed to identify the common attributes of interventions contributing to the development of COIL capability, referring to the characteristics shared between the interventions, as well as the factors identified in the included articles as either facilitating or hindering the interventions.

4.1.4 Findings

Thirty-six articles were included, with two studies reporting unsuccessful attempts at increasing COIL capability. The studies were conducted in nine different countries, encompassing diverse units, with timeframes varying from 15 weeks to eight years, and they employed quantitative (n=10), qualitative (n=11) and mixed

methods (n=15). Analysis of the included articles identified four themes for both attributes of interventions that succeeded in developing COIL capability and the factors that facilitated or hindered interventions: (1) engaged managers with a strategic approach, (2) external training and guidance to develop internal knowledge, skills and confidence, (3) process and structure to achieve improvements and learning, and (4) individuals and teams with autonomy, accountability and safety.

4.1.5 Practical implications and value

This review provides insights about attributes, or characteristics, of interventions that have been associated with building COIL capability in healthcare organizations in previous research and adds to the knowledge about potential facilitating and hindering factors for such interventions. The findings suggest that strategic management, external support, structured processes and empowered individuals and teams are key aspects in enhancing COIL capability, and that further research is needed to explore their interactions and assess the significance of the various attributes and potential influencing factors in practice.

4.2 Paper B

Löfqvist, N. (2024). Exploring interactions between healthcare contextual factors and continuous organizational improvement and learning using iterative thematic inquiry [Conference paper presentation]. *31st International EurOMA Conference: Transforming people and processes for a better world*, 1-3 July 2024, Barcelona.

4.2.1 Background

For phenomena such as COIL that occur within complex contexts, there is a need for studies that consider context in order to investigate

interactions between the phenomenon and its context. Moreover, in qualitative research, there is a need for further descriptions on how to develop themes.

4.2.2 Purpose

The purpose of this paper was to describe a qualitative research design where Iterative Thematic Inquiry was used as the analysis method for an ongoing study concerning the phenomenon of COIL in its natural setting (that is, the case study presented in Paper C).

4.2.3 Methodology

A qualitative longitudinal case study (after the first data collection period: the completed study is presented in Paper C) with a great deal of emphasis on describing connections between phenomena and their context, as well as the Iterative Thematic Inquiry analysis method.

4.2.4 Findings

The main findings in this paper are the author's reflections on the research design. Examples from this study include the option of exploring individuals' thoughts, feelings, motivations, perceptions, expectations and lived experiences in interviews, and assessment of participants' actual behaviours in their natural context through observations and documents.

4.2.5 Practical implications and value

This paper describes a research design where a qualitative longitudinal case study is combined with the Iterative Thematic Inquiry analysis method for the study of a phenomenon within its dynamic context, the rationale for the choice of this research design being its capacity to deepen the understanding of the phenomenon

together with its context, while deliberately and explicitly taking advantage of the qualitative researcher's contribution to the research process.

4.3 Paper C

Löfqvist, N., Hedlund, C. & Ingelsson, P. Exploring conditions that are important to support the development of continuous organizational improvement and learning: A qualitative longitudinal case study in a Swedish County Council [submitted to The Learning Organization].

4.3.1 Background

Healthcare organizations, like organizations in other industries, are constantly under pressure to adapt and innovate, and CI is frequently applied as part of various quality management approaches such as Lean and Six Sigma. Despite this, the success of CI has not been convincingly positive, and researchers argue that this is due to a narrow focus on specific methods and techniques and a lack of focus on learning within the organization. Therefore, the COIL concept is used in this study to emphasize the importance of the learning aspects of CI. Previous research has also suggested that contextual factors have a substantial influence on COIL.

4.3.2 Purpose

The purpose of this study was to explore conditions present in an organization that are important to support COIL within a public sector healthcare organization.

4.3.3 Methodology

A qualitative longitudinal case study was conducted over 18 months. The case involved one operational area within a Swedish County

Council, with its management team and three departments. Data were collected through interviews, observations and document studies over two periods, concluding with a workshop. The Iterative Thematic Inquiry analysis method was used.

4.3.4 Findings

Use of the Iterative Thematic Inquiry analysis method resulted in generation of five themes describing conditions present in an organization that are important to support COIL. These themes were: An understanding of the concept; Knowledge about and habit of reflection; Using existing knowledge; Being open to knowledge from others; and Safety and trust.

4.3.5 Practical implications and value

This study contributes to the understanding of connections between COIL and the organizational context, as well as connections between CI and OL. Organizations striving for successful development and improvement work will benefit from considering the findings of this study, creating an understanding of the concept, utilizing their own and others' existing knowledge, fostering a climate of safety and trust, and integrating reflection in their organizational routines.

This was an empirical qualitative longitudinal case study within a typical public sector healthcare organization facing competing priorities, limited resources and inconsistent prior experience with CI, which aspired to independently adopt a more systematic approach to CI. The study offers insights relating to organizational factors that influence COIL amidst the conditions and challenges of everyday work.

4.4 Summary of main findings

4.4.1 RQ 1: What attributes of interventions are important for enhancing COIL capability?

The systematic literature review (Paper A) identified 34 articles where interventions within healthcare organizations successfully increased COIL capability, and two articles that were unsuccessful. The attributes – that is, the qualities or characteristics – of successful interventions were grouped in four themes; 1. Engaged managers with a strategic approach; 2. External training and guidance to develop internal knowledge, skills and confidence; 3. Process and structure to achieve improvements and learning; and 4. Individuals and teams with autonomy, accountability and safety.

The systematic literature review also explored what factors – on any level and of any type – were identified as either facilitating or hindering the interventions in the included studies. The results showed that the factors referred to displayed numerous similarities with the attributes of the interventions. They were therefore organized under the same four themes as the attributes.

The interventions of the two studies that did not report an increase in COIL capability shared many of the attributes of those that were successful, but differed in some respects. These two articles accounted for one-fifth of all the hindering factors within the dataset. Most of these obstacles were related to managerial roles and strategic issues.

4.4.2 RQ 2: What conditions within an organization are important for supporting COIL?

The longitudinal qualitative case study (presented in Papers B and C) explored what conditions present within the public sector healthcare

organization studied were important for supporting COIL. The Iterative Thematic Inquiry approach generated five themes: 1. An understanding of the concept; 2. Knowledge about and habit of reflection; 3. Using existing knowledge; 4. Being open to knowledge from others; and 5. Safety and trust.

An understanding of the concept captures how the departments and the operational area's management team understood, or struggled to understand, the concept of CI in general and the extent to which the concept was understood in relation to its practical implementation within the organization.

Knowledge about and habit of reflection captures how the departments and the operational area's management team displayed, or failed to display, signs of reflection in dialogues, individually or in groups, as a way of becoming aware of their own "truths", exploring alternative interpretations, and altering their ways of thinking and behaving.

Using existing knowledge captures how the departments and the operational area's management team sometimes built on their existing knowledge and experience in their CI work, while missing opportunities to exploit prior knowledge at other times.

Being open to knowledge from others captures how the departments and operational area's management team searched for knowledge outside their own departments, and their motivation to inspire others by disseminating their own knowledge and experience.

Finally, the *safety and trust* theme captures how the participants demonstrated feelings of safety and trust; as opposed to signs of uncertainty and mistrust, which appeared to affect their CI work.

5 Discussion

This chapter discusses the findings from the viewpoint of the overall purpose of the thesis, before then going on to discuss the methodology and present ideas for further research.

Organizations constantly need to improve, adapt and evolve in order to survive and thrive. CI has frequently been used, but the results have not been convincingly successful. The need for organizations in general, and healthcare organizations in particular, to develop the capacity and capability to succeed with CI forms the basis of this thesis. Including and emphasizing the learning aspects of CI which appear often to be marginalized or neglected served as the starting point. The term COIL was used in this thesis, therefore, and a description of how OL can be integrated into CI has been provided.

5.1 Organizational learning and continuous improvement

The results from the literature review highlighted the importance of having a structure or process to follow that helps to generate both improvements and learning, as well as having a coach or facilitator who supports the reflection needed for learning. Small, structured interventions can help teams reflect (Kozlowski & Bell, 2020; Schippers et al., 2020), and coaches and facilitators can make reflection more productive by reducing the levels of stress and anxiety experienced (Kross et al., 2023). Many of the participants in the case study appeared to find it difficult to reflect on *how* they made improvements, rather than *what* improvements they were working on. Nor did they make much use of their own expertise or the support of their strategic developer in their work with CI. They appeared to be unused to engaging in deuterio-learning (learning

about how they learn) (Argyris, 2003; Argyris & Schön, 1978; Holdo, 2023). However, the ISO 9001-accredited department in the case study appeared intentionally to use the ISO structure as a basis for continuously reflecting on, and improving, their ways of working. This was also the department where the researchers noticed the most signs of COIL during the case study.

The OL areas of using existing knowledge and being open to knowledge from others were recognized in the case study as conditions that support COIL. Those who displayed few signs of paying attention to prior knowledge tended to begin with entirely new ways of working instead of using what they had learned previously in other situations, forums and contexts. This appeared to obstruct the development of their work with CI. It even led to demotivation among employees involved who found out about previous work on improvements that had not been communicated to them. Conversely, the department with a well-developed routine and structure for knowledge retention referred to several instances in which efforts were made to draw on prior learning within the department. A tendency not to follow through and utilize the knowledge amassed leads to an imbalance between exploitation and exploration, making it harder to reap the benefits of improvement and learning efforts (Crossan et al., 1999).

The departments also appeared to differ in terms of how inclined they were to gather information deliberately and remain open to knowledge from others. It is likely that this is connected to the degree of understanding of different concepts. Most of the case study participants had no clear understanding of what CI meant. If there is no prior understanding of what information is relevant, relevant information may go unnoticed (Ocasio et al., 2020); and even if there

is a prior understanding, there may be none of the absorptive capacity needed to make use of it (DeFillippi & Ornstein, 2003; Eriksson et al., 2025).

Understanding what the COIL concept means, what it amounts to, and what it implies for a specific organization, in its specific context, at a certain point in time appears to be essential to success with COIL. The lack of such understanding has been proposed as one of the major reasons as to why quality management initiatives fail (Barouch & Ponsignon, 2016; Mamoojee-Khatib et al., 2025). In the case study, participants gradually engaged in more and deeper reflection regarding the concepts of CI and the Model for Improvement, as well as their meanings and implications. During the concluding workshop, the operational area's management team reflected on this need to deepen their own understanding of the concept and model, and on how they had no clear definition or understanding of CI despite having many years of experience of development work. Engaging in dialogue and reflection is essential in order to develop a shared understanding, as well as shared mental models, meaning and collective learning (Balarezo et al., 2024; Crossan et al., 1999; Snyder et al., 2024).

For reflection to be successful, individuals need to be willing to be wrong (Senge, 1992). They need to experience psychological safety to be able to deal with the associated social risks (Edmondson & Holmén, 2019). Moreover, trust and trusting relationships are essential for psychological safety (Hubbart, 2024; Mitterer & Mitterer, 2023). Safety was identified as an attribute of interventions that enhanced COIL capability in the literature review in this thesis. In the case study, a history of some issues regarding safety and trust was mentioned briefly but not explicitly addressed. There were also signs

of lack of trust during the study, mainly within one of the departments, where this appeared to impact aspects such as how managers chose to delegate responsibility to employees in a way that was supposed to demonstrate trust in them. Instead, employees perceived a lack of clarity regarding goals and expectations and felt that they received insufficient support from their managers.

5.2 Importance of context

The results from the literature review indicated a close connection between attributes of interventions that enhanced COIL capability and the various factors that might facilitate or hinder such interventions. Similarly, the findings from the case study indicated that the conditions present in organizations that support COIL are interconnected and influence each other. Previous research highlights the importance of context for developing COIL capability (Auqui-Caceres & Furlan, 2023; Loper et al., 2022) and suggests close relationships and multiple interactions between the organizational context, its members, and the changes they are trying to implement (Mielke et al., 2022). Organizational members are influenced – and restrained – by the organizational context in which they try to make changes, and those changes will, in turn, affect both the context and the organizational members (Levine & Argote, 2020; Mielke et al., 2022).

Ambiguities regarding what constitutes context as opposed to intervention may complicate studies of COIL interventions. In the literature review, support from managers and prioritization were classified as aspects of the interventions, for example, but they could also have been classified as organizational-level contextual factors as described by Shea et al. (2018). Findings in this thesis are in line with

the proposition by Lyman, Jacobs et al. (2019) that supportive contextual factors and attributes of interventions are most beneficial when they supplement and reinforce each other.

5.3 Enhancing COIL capability

The results from the literature review indicated that the recognized attributes of interventions need to be present to some extent for organizations to build COIL capability, and that a lack of them hinders the interventions and thus the enhancement of COIL capability. Previous research has proposed important attributes for building COIL capability and capacity within healthcare organizations that align with the findings in the literature review. Examples include:

- **Engaged managers with a strategic approach:** perceived leadership commitment (de Kok et al., 2023), initiating and monitoring change (ibid.) and active involvement of leadership and management (Hibbert et al., 2021).
- **External training and guidance to develop internal knowledge, skills and confidence:** the use of expert faculty and coaches (Loper et al., 2022), and a skilled faculty to assist improvement teams (Hibbert et al., 2021).
- **Process and structure to achieve improvements and learning:** the use of didactic instruction and experiential learning (Loper et al., 2022), the use of an established QI methodology (ibid.), and an agreed and robust QI methodology (Hibbert et al., 2021).
- **Individuals and teams with autonomy, accountability and safety:** open culture, room for team development (de Kok et al., 2023), the use of teams for experiential learning and

performing the improvement (Loper et al., 2022), and a deep understanding that teams matter (Hibbert et al., 2021).

Previous research has also identified other attributes that are important, such as strategic client focus (de Kok et al., 2023).

5.4 Organizations struggling with improvement work

A key feature of the case studied was that it involved a typical healthcare organization within the public sector in Sweden, not a high-performing benchmark case. Instead, the case represented an organization struggling with limited resources, competing priorities, changes in organizational structure and inconsistent prior experience with CI. The case therefore presents the reality and challenges facing many organizations when they attempt to build their capacity and capability for improvement work under everyday conditions, as well as a culture that supports both development and learning (Fundin & Eriksson, 2024).

The findings from these studies suggest that reflection, understanding COIL, and building trust and psychological safety may be key capabilities for COIL, while also providing important organizational conditions for supporting COIL. By integrating these OL and psychological safety aspects into CI and emphasizing their importance, we can advance our understanding of what is needed for organizations to succeed in their improvement work.

5.5 Methodological discussion

Publication bias means that it is not always easy to find previous published research with negative results (Jerke et al., 2025). One strength in this thesis was that two non-successful studies were found

in the literature review. Furthermore, the outcomes achieved by the participants in the case study could be perceived as both failures and successes.

Using a longitudinal research design in the case study made it possible to follow the development of COIL and the actions, thoughts and feelings among participants, rather than merely exploring the situation at a single point in time. It also allowed relationships to form between the researcher and the participants. It is likely that this helped to ensure that data collection sessions were more relaxed during the second period, perhaps made it possible for the researcher to attend meetings where sensitive information was discussed, and made it easier for the researcher to follow up on information provided previously by the participants.

As an industrial doctoral student within the Multidisciplinary National Health Innovation Research School, it was important for the results from the thesis to be beneficial for my organization, and choosing to conduct the case study at the County Council where I worked was believed to accomplish that. However, conducting research within a part of my own organization posed a challenge regarding these relationships and the need to try to set aside my own assumptions about the organization. Rather than viewing this as a weakness and limitation, the Iterative Thematic Inquiry analysis method was chosen in order to make use of my preconceptions. Writing down prior assumptions at the start of the study made it possible to reflect explicitly upon them, thereby adding value to the research (Alvesson & Sandberg, 2022). Having other external researchers involved in the research process also helped to mitigate the bias associated with working in the same organization as the case studied.

Participants' feelings of insecurity presented another challenge when performing the case study. Participants sometimes showed signs of worrying about how their statements would be perceived by the people viewing the study results. These feelings were addressed by allowing participants to validate the results prior to publication.

The challenge of balancing different needs from different stakeholders was also apparent while writing papers B and C. Case studies are supposed to provide rich and deep information about the case while also protecting participants' anonymity. How much information can be provided without risking participant anonymity was discussed on a number of occasions. Eventually, a decision was made to prioritize protection of participant anonymity and therefore to include less information about the case than may be desirable for readers of the papers.

Since this thesis includes only healthcare organizations in the systematic literature review, and one Swedish public sector organization mainly concerned with healthcare in the case study, it may be difficult to establish the transferability of the findings to organizations in other settings.

5.6 Suggestions for future research

This thesis has focused on exploring attributes that contribute to successful enhancement of COIL capability and organizational conditions that are important for supporting COIL. The aspiration for the next half of the doctoral thesis is to identify a possible solution that can help organizations in their quest for COIL.

Suggestions for further research include developing appropriate ways of measuring COIL for more objective evaluation and

assessment of COIL within organizations and during interventions. It would also be helpful to be able to measure influencing contextual factors at organizational, group and individual level, perhaps informed by methods from implementation science. With such measurement opportunities, it may be possible to achieve more extensive study of complex interactions between COIL context, capability and interventions. Comparing different interventions to enhance COIL and COIL capability could generate further understanding of what works, for whom, and in what situation. Comparing healthcare and public sector organizations with organizations from other industries and other countries could also add to the knowledge regarding COIL and its influencing factors.

Further research could also explore how interventions involving structured and guided reflection approaches could be designed to support COIL. Studying the importance of understanding a concept such as COIL could help generate knowledge to overcome the challenge of failure due to a lack of understanding. Another interesting avenue for future research is how OL aspects, such as using existing knowledge and being open to knowledge from others, can impact the success of CI initiatives. It also appears essential to explore further how trust and psychological safety can be enhanced in order to support COIL.

6 Conclusions

This final chapter presents the conclusions from the studies related to the purpose of the thesis, followed by conclusions specific to each research question.

The purpose of this licentiate thesis is to explore important factors for supporting COIL and the enhancement of COIL capability within organizations. Both the literature review and the case study suggest close relationships and interactions between attributes of interventions and organizational conditions that either support and facilitate or hinder and obstruct. It appears essential to consider these interactions when designing interventions aimed at supporting COIL and COIL capability.

By explicitly integrating aspects of OL into CI, the often overlooked or ignored aspects of learning integral to CI can be revived. This can assist organizations in their endeavours to continuously improve and address various challenges. The concept of COIL represents a possible approach to integrating OL and CI. Definitions and descriptions provided in this thesis can serve as a basis for practitioners in defining and understanding what the COIL concept means to them, and how to operationalize it. COIL can also help to expand the definition of CI to include learning aspects frequently referred to as imperative for CI success.

Use of the Iterative Thematic Inquiry analysis method allows researchers to explicitly analyse, use and build on their preconceptions. The ongoing, iterative approach also makes it possible to gradually adapt data collection in order to answer the research questions and fulfil the purpose of the research. The clear aim of this recently developed data analysis method for qualitative

research is to generate themes for communicating the results of the research, thereby making it a promising approach to data analysis in quality management.

6.1 RQ 1: What attributes of interventions are important for enhancing COIL capability?

It has been concluded from the literature review presented that the following attributes or characteristics are important for the success of interventions in enhancing COIL capability:

- Engaged managers with a strategic approach.
- External training and guidance to develop internal knowledge, skills and confidence.
- Process and structure to achieve improvements and learning.
- Individuals and teams with autonomy, accountability and safety.

The attributes of interventions are also intertwined with the factors that were referred to as facilitating or hindering interventions, making it difficult to distinguish clearly between them.

6.2 RQ 2: What conditions within an organization are important for supporting COIL?

It has been concluded from the case study that the following conditions within an organization are important for supporting COIL:

- An understanding of the concept.

- Knowledge about and habit of reflection.
- Using existing knowledge.
- Being open to knowledge from others.
- Safety and trust.

These conditions appear to interact with and reinforce one another. Reflection, for example, makes it possible to develop an understanding of the concept, while safety and trust are prerequisites for constructive reflection. It is likely that these conditions will have the greatest supportive effect when all of them are present to a sufficient degree.

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