

Leadership Development in Process Management:
Relationship to Mastery-Oriented Leadership, a Mastery
Climate and Employee Self-Efficacy

Lars Vegheim Haraldsen



Master's thesis at the Department of Psychology

UNIVERSITY OF OSLO

13.05.2022

© Lars Vegheim Haraldsen
2022

Leadership Development in Process Management:
Relation to Mastery-Oriented Leadership, a Mastery Climate and Employee Self-efficacy.

Lars Vegheim Haraldsen
<https://www.duo.uio.no/>

Abstract

Author: Lars Vegheim Haraldsen

Title: Leadership Development in Process Management: Relationship to Mastery-Oriented Leadership, a Mastery Climate and Employee Self-Efficacy

Internal supervisor: Cato Alexander Bjørkli

External supervisor: Torkjell Winje

The aim of this study is to investigate leadership development in process management on the leader, group, and individual level of analysis, as well as broaden the knowledge surrounding process management and the variables of mastery-oriented leadership, a mastery climate, and self-efficacy. Training in process management is hypothesized to lead to a change in the leader's mastery-oriented leadership, which then influence the unit's mastery climate and the employee's self-efficacy. The study utilizes a mixed-methods design, using data from an employee survey administered in a Norwegian municipality for the quantitative analyses, supplemented by qualitative data from semi-structured interviews. Three analyses will be conducted: 1) t-tests investigating potential changes on the variables due to the training (N intervention group pre-test = 22 and N post-test = 23, N control group pre-test = 13, and N post-test = 16), 2) mediation and moderation analysis investigating the relationship between the three variables ($N = 289$), and 3) thematic analysis for the semi-structured interviews ($N = 4$). Three hypotheses are proposed for investigating process management and the chosen variables, while five are proposed for investigating the relationship between the three chosen variables. Results indicate no change due to the process management training. Investigation surrounding the variables show a significant positive relationship between them – in addition to the moderating role of high levels of mastery climate on the relationship between mastery-oriented leadership and self-efficacy. The thematic analysis supplements these findings, indicating process management has associations to leadership and psychological safety in common with mastery-oriented leadership, cooperation with a mastery climate, and leadership with self-efficacy – and that the three chosen variables are related. These results have theoretical and practical implications regarding how leadership development in process management might impact a leader's mastery-oriented leadership - which again can impact on the unit's mastery climate and employee's self-efficacy.

Keywords: Leadership development, process management, mastery-oriented leadership, mastery climate, self-efficacy

Acknowledgements

Writing a master's thesis which is both theoretically and practically oriented has been an exciting challenge and experience. The process of planning and writing this master's thesis has been immensely rewarding both academically and professionally, as well as given me knowledge and perspectives I am sure will be valuable to both me and the labor market in the future.

There are several people who I would like to express my gratitude to. First, I would like to thank my internal supervisor Cato Alexander Bjørkli for all the valuable and constructive feedback, interesting discussions, and academic guidance throughout the work with this thesis. I also want to thank my external supervisor Torkjell Winje for making this thesis possible, and for the dedication and interest you have showed in my work. Additionally, I want to show my gratitude to the HR-department, leaders, and employees of the Norwegian municipality – your contributions and participation was vital for this thesis. Anne-Marie Hallberg also deserves acknowledgements for all the valuable guidance regarding methods and analysis on this complicated real-life dataset and quasi-experimental analyses.

A special thank you also to my fellow student Cornelia Bohmann Wiik for the cooperation in the data-gathering of this project. Finally, a special thank you to my friends and family for all your support and optimism throughout this process.

May, 2022

Lars Vegheim Haraldsen

A handwritten signature in black ink, reading "Lars Vegheim Haraldsen". The signature is written in a cursive, flowing style.

Table of Content

Introduction.....	1
Theoretical Background.....	2
Leadership	2
Leadership development	3
Process management.....	3
Mastery-oriented leadership.....	7
Mastery Climate.....	8
Self-efficacy.....	9
Development of Hypotheses	11
Aim of this Study.....	15
Method.....	15
The project.....	15
Data collection.....	16
Quantitative Data Method.....	17
Qualitative Data Method.....	24
Ethical considerations.....	26
Results.....	26
Analysis 1: T-tests.....	26
Analysis 2: Mediation and moderation analysis.....	29
Thematic analysis.....	31
Discussion.....	36
Theoretical Implications.....	38
Practical Implications.....	44
Limitations.....	47
Future research.....	49
Conclusion.....	50
References.....	51
APPENDIX 1: Consent form.....	58
APPENDIX 2: Interview guide.....	61
APPENDIX 3: Codebook for transcription in Norwegian.....	65

Introduction

Organizations spend significant amounts of both time and resources on leader and leadership development each year, expecting it to have positive outcomes for the organization (Avolio, Avery & Quisenberry, 2010; Day, 2000). The available leadership development programs range from being custom designed for the specific organizations and leaders, to being pre-made to fit as many leaders and organizations as possible. Knowing which of these programs work, and how they work is important to get the desired effect. Without this knowledge companies are risking spending significant amounts of both time and resources on leadership development programs which will not yield the desired outcomes. There are a wide variety of leader and leadership development programs here in Norway as well, which makes the choice of the right program highly relevant also in a Norwegian context. In the context of the public sector, applying an effective program can potentially improve the leadership, work environment and the services provided - while the choice of an un-effective program can be seen as poor use of the public's resources - already known to be a limitation on day-to-day activities and services.

Training in process management has been increasingly used as a leadership development program in the public sector in Norway. The resources spent on this training makes the effectiveness and outcomes highly relevant for all stakeholders. Given that the cost of a leadership development program is not only the monetary resources spent on it, but also the time spent by leaders participating in the program, the total cost of the program not fitting the leader's and organization's needs can be high (Avolio, Avery & Quisenberry, 2010), and lead to poor transfer of the training (Lacerenza, Reyes, Marlow, Joseph & Salas, 2017).

This thesis's focus will be to investigate the potential effects of a leadership development program in process management in a Norwegian municipality – which can provide a better foundation for understanding how these programs affect organizations. These findings can be helpful and valuable for organizations in deciding on future leadership development initiatives, as well as help leadership development companies design their programs to be as effectful as possible. The variables used as measures for the process management training are mastery-oriented leadership, a mastery climate, and employee self-efficacy. These variables are chosen because they represent the leader, group, and individual level of analysis, and because of their positive outcomes and associations in a work setting (Lai, 2020, 2021). The process management training is hypothesized to lead to a change in the leader's mastery-oriented leadership, which

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

then influence the unit's mastery climate and the employee's self-efficacy. The relationship between these three variables will therefore also be investigated, to broaden the knowledge of how a leadership development program might impact on the different levels of analysis in a unit.

The following section will first present relevant theory and definitions surrounding leadership development and process management, followed by theory on mastery-oriented leadership, a mastery climate, and self-efficacy. This theory will be used to generate hypotheses which will be utilized to answer the research question: *“Can leadership development in process management lead to a positive change in the leader's mastery-oriented leadership, a mastery climate in the unit, and the employee's self-efficacy?”*.

Theoretical Background

This section will elaborate on the theory of leadership, leadership development and process management – followed by theory on mastery-oriented leadership, a mastery climate and self-efficacy.

Leadership

The definition of leadership which will be used in this thesis is provided by Northouse (2018, p. 5) who defines leadership as being *“a process whereby an individual influences a group of individuals to achieve a common goal”*. This is a definition which views leadership as a process involving interaction between leader and followers. Northouse bases this definition on four components he states to be central to the phenomenon of leadership: (1) leadership is a process, (2) leadership involves influence, (3) leadership occurs in groups, and (4) leadership involves common goals. These four components describe leadership as an ongoing transactional process among several individuals, where the leader and employee both affect each other, and work toward the common goal. This definition of leadership is the opposite of the trait definition, which views leadership as innate, special properties residing in people. The focus of this thesis will be on the process definition of leadership, rather than the trait definition.

Northouse's process definition entails leadership is available to everyone, that it can be learned, as well as observed in leader behaviors (Jago, 1982). The fact that leadership can be learned and observed means leadership development might impact these observable leader behaviors. One assumption of this thesis is therefore that leadership can be learned, and that it is not just to be regarded as an innate personality trait.

Leadership development

Day (2000) differentiates leader and leadership development as being focused on improving two different dimensions: the human capital and the social capital, which can also be seen as the trait and process view on leadership. Leader development focus on improving human capital through the development of individual and intrapersonal skills and is different from leadership development which focus on creating organizational value through cooperation, relationships among individuals and the use of interpersonal skills. Even though there is a differentiation in the literature between leader and leadership development, they are often used interchangeably (Laceranza et al., 2017). Leadership development will therefore be used in this thesis as a term encompassing both constructs and can be defined as “*expanding the collective capacity of organizational members to engage effectively in leadership roles and processes*” (McCauley, Moxley and Van Velsor, 1998, in Day, 2000). The literature on leadership development provides valuable information for discussing the process management training.

A meta-analysis by Lacarenza et al. (2017) of 335 studies on leadership trainings provide support for leadership development’s effectiveness. Based on the results of the meta-analysis, Lacarenza et al. lists recommendations for practitioners to use when designing a leadership development program. These recommendations state that a leadership development program will be most effective when the training is based on (1) a needs analysis that identifies the desired outcome and the needs of the organization, (2) provide feedback within the training, (3) use spaced out training sessions instead of one single and comprehensive session, (4) incorporate multiple delivery methods, like practice, demonstration, and information, (5) use an internal or external trainer instead of self-administered training, and (6) utilize face-to-face, on-site training over virtual training. These six recommendations for an effective leadership development training are relevant for discussing the practical implications of this thesis, and for understanding how the leader’s training in process management can influence the chosen variables.

Process Management

This section will introduce process management, locate it among other leadership theories, and lastly describe six principles of leader behavior in process management. *Process Management (Prosessledelse)* by Tanggaard (2016) will be the main source for process management in this thesis. This book is the foundation for the process management training in question, and the main source for process management used in Norwegian municipalities.

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

According to Tanggaard (2016, p 63), process management is mainly based on theory from three areas: positive psychology, system theory and social constructionism. Based on the length and focus of this paper, these will not be enveloped upon here. The theory used to describe process management will be the relevant definitions, as well as the six principles of leader behavior, as listed by Tanggaard (2016, p. 48). This is because this is seen as most relevant in answering the research question.

Process management is about planning, facilitating and leading processes where the results are dependent on human interaction and cooperation (Tanggaard, 2016, p. 23). It is implied that the leader of the process will take responsibility for the form and structure of the process, while the participants will contribute to the content. The definition of a process used by Tanggaard is from Høier et al (2011) where a process is described as:

“An intervention in the organizational day-to-day practice – that be a meeting, a strategy seminar, theme day, idea-development, a workshop and more – where the purpose is to develop from one state to another – from A to B – and where the way we get there is what separates each process from the other.”

Tanggaard’s book and the process management training relevant for this thesis use this definition.

The fact that the leader is to facilitate the process implies the leader might not be the expert, and that the participants might know more about the subject at hand. Tanggaard (2016, p. 28) gives three different perspectives on process management that is (1) neutral, (2) toward common goals and creativity, and (3) a strength-based approach. This thesis will use the strength-based approach, as this is the approach which best describe the content of the training and leadership development in question. This strength-based definition is: *“Strength-based process management is skills in appreciating and using the participants strengths in ways that triggers common potential”*. The process leader will devote more time to find the participants strengths, potentials and resources and use these to create results.

Tools of process management

The process management training also teaches several different tools and methods for facilitating the process, ensure participation and reach the best results possible. These tools will not be a focus of this thesis - as there are no way of ensuring individual tools have been used by

the individual leaders. The focus will rather be on the behavioral aspects of process management, in the form of the principles presented later.

This theory and descriptions of process management is useful in placing it on the leadership spectrum, as well as describe its role in today's trends.

Placing process management on the leadership spectrum

Process management can be seen an expression of the tradition within theory and practice on leadership, where the focus has shifted from the attributes and traits of individual leaders, towards a more systemic approach viewing leadership as a social process emerging through the interactions of team members (Bolden, 2011; Gronn, 2000) – which is also why the process definition of leadership is used in this thesis.

Two leadership approaches can be used to place process management on the leadership spectrum: distributed leadership and participative leadership. These will be described briefly as an additional way to conceptualize process management.

Distributed and shared leadership

Distributed leadership has been interpreted as being almost identical as team leadership (Day, Gronn & Salas, 2004), where effective team leaders can be described as possessing skills in defining what the critical leadership activities and responses are for particular team situations (Zaccaro, 2002 in Zaccaro, Ritman & Marks, 2001). Other approaches see its shared leadership as being a both vertical and lateral “*dynamic, interactive influence process among individuals in work groups in which the objective is to lead one another to the achievement of group goals*” (Conquer & Pearce, 2003, p. 286). Distributed leadership can be seen as a way to access the leadership repertoire of the entire team (Day, Gronn & Salas, 2004), and can be associated with process management through the facilitating role of the leader and the involvement of all participants in the processes (Tanggaard, 2016, p. 23).

Participative leadership

Wagner (1994) defines participation as “*a process in which influence is shared among individuals who are otherwise hierarchical unequals*”, and that it concerns “*the involvement of managers and their subordinates in information-processing, decision-making, or problem-solving endeavors.*” Participative leadership is often used interchangeably with employee involvement (Kaufman, 2001), and its behaviors entail paying particular attention to employees and to provide employees with personalized support (Nystrom, 1990). These descriptions are

similar to the six leadership behaviors of process management described in the next section - focusing on including as many participants as possible in lateral decision-making and problem-solving, as well as paying attention to the employees.

Leadership behaviors of process management

Process management has six principles which provides a description of the leader behaviors. These leadership behaviors will be beneficial in understanding process management as a systemic approach to leadership and is essential for the hypotheses of this thesis.

The six principles and leader behaviors of process management are: (1) Finding the dream behind the problem, (2) Investigate and understand what works, (3) Recognize and appreciate everyone's contributions, (4) Find or create words, pictures, and metaphors which open-up for new understandings, (5) Look for the big picture – include a diversity of perspectives and people, and (6) Use the effect of positive emotions (Tanggaard, 2016, p. 48).

(1) Finding the dream behind the problem entails focusing on what the participants really want to achieve, rather than what the problem is (Tanggaard, 2016, p. 49). Research show having collective conversations regarding what the individual or organization wants to achieve is more important than collective conversations on problems and causes behind them (Cameron, Dutton & Quinn, 2003, p. 10) – in addition to giving more power and energy in the right direction. If enough employees start picturing their desired future, the likelihood of performing daily actions leading there increases (Senge, 1999, in Tanggaard, 2016, p. 50).

(2) Investigating and understanding what works, entails using the strengths and resources of everyone involved (Tanggaard, 2016, p. 51). This can be done on the individual, group, and organizational level. Focusing on participants strengths and resources in process management means structuring the processes so that they identify and use individual's good qualities, performances, and strengths. Using these strengths have several benefits, like the feeling of contribution and value, lack of fear of speaking up and openness to other participant's perspectives. At the team or organizational level, seeing each other's strengths can make it easier to utilize them in a productive way later.

(3) Recognize and appreciate everyone's contributions entails valuing each participant's skill, knowledge, and contribution in the process (Tanggaard, 2016, p. 53). Being recognized for one's relevant contributions and skills can lead to a feeling of safety among the participants, which again can lead to the participants contributing more to the process.

(4) Finding or creating words, pictures, and metaphors which open-up for new understandings is important in process management, because it shapes how participants act and see the world (Tanggaard, 2016, p. 56). What kind of words, pictures and metaphors are used can therefore have an impact on how participant's see each other, what opportunities the organization or participants see, and what the future goal might be.

(5) Looking for the big picture by including a diverse number of persons and perspectives will according to Tanggaard (2016, p. 57), lead to the best solutions. The chance of seeing the bigger picture increases with the number of participants and perspectives included in the process - which also increases the likelihood of creating new possibilities and solutions, by using the collective creativity and intelligence of everyone involved. Cooperrider, Godwin, Boland and Avital (2012) call this whole-system-thinking, which has been proven effective. The inclusion of several participants can have a potential benefit on the ownership of the solutions – which again increases the chance of the solutions being accepted and realized in the group or organization.

(6) Using the effects of positive emotions is important in process management because of the benefits positive feelings can have on the individual and group level (Tanggaard, 2016, p. 60). Some of these benefits are that positive emotions are linked to increased creativity, problem solving, openness and alertness (Fredrickson, 2010 in Tanggaard, 2016, p. 60). When these positive emotions are shared among participants in a group, Fredrickson (2013) calls it “*micro-moments of love*”, which can connect participants together through positive experiences and emotions, help them feel safe, and motivate them to contribute for the best of the group.

Understanding the leader behaviors of process management makes it easier to see why mastery-oriented leadership, a mastery climate and self-efficacy are used as the variables to investigate a potential effect of the training. The relationship between these variables will also be investigated in order to broaden the knowledge of how a leadership development program affecting the leader's mastery-oriented leadership might further affect other levels of analysis in a unit. Theory on the three variables will be presented, before the generation of hypotheses.

Mastery-Oriented Leadership

Mastery-oriented leadership is focused on fulfilling the employee's basic needs for self-efficacy, autonomy, and motivating relations (Lai, 2021, s. 174). It can be described as a supportive leadership, which involves the leader supporting the employees to achieve the highest possible development, effort, performance, and motivation – as well as the quality of the relation

between the leader and employee (Lai, 2021, s. 174). There are many different terms and names within research describing aspects of supportive leadership, where the main difference between them is which elements they focus on and attempt to measure. Examples are transformational leadership, servant leadership, developmental leadership, and mastery-oriented leadership. Transformational leadership is a heavily researched leadership theory with similarities to mastery-oriented leadership, based on the focus of creating a vision and direction, motivating the employees, and the individualized consideration (Bass, 1985; Bass & Avolio, 1994). Because of the items used to gather data on mastery-oriented leadership, this thesis will focus on mastery-oriented leadership as described by Lai (2020, 2021, p. 174).

The reason why this variable is named mastery-oriented leadership is to highlight the aspect of mastery - since research on supporting mastery and development has been shown most effective to achieve high motivation and performance (Ng, 2017 in Lai, 2021, s. 175).

Employees being mastery-oriented means their goals are intrinsic and referenced towards themselves, their motivation to learn, improve and master tasks based on their personal strengths and weaknesses. The opposite is a performance-orientation, where employees are motivated by external goals, performing better than others, demonstrating competence, compete or compare oneself with others (Dweck, 1986; Riou et al., 2012; Nerstad, Roberts & Richardson, 2013).

Traits and behaviors of mastery-oriented leaders

Leaders who score high in mastery-oriented leadership often have three common features. They are good at providing (1) a direction, (2) meaning, and (3) individual consideration to their employees (Lai, 2020). First, they give direction to their employees by communicating goals, providing structure, and organizing the activities needed to achieve defined goals. Second, they give meaning to their employees by engaging, inspiring, and creating common effort, and in this way make goals and tasks meaningful and motivating. In their communication with employees, they also use positive words and expressions. Third, they provide individualized consideration by showing interest in every employee and offer them help and support where necessary.

An important part of mastery-oriented leadership is also to facilitate for the creation of a motivational climate characterized by mastery (Lai, 2020), which makes these traits and behaviors relevant with regards to the creation of a mastery climate in the unit.

Mastery Climate

A mastery climate supports effort and cooperation, and it emphasizes learning, mastery, and skill development (Ames, 1992). It is also known as mastery-oriented support from the closest colleagues (Lai, 2021, s. 177), and entails that the employees are encouraged to develop themselves, cooperate and share competence in order to achieve good results (Lai, 2020).

Studies show that a mastery climate provides a solid foundation for perseverance over time, motivation to learn and intrinsic motivation for the tasks (Černe, Nerstad, Dysvik & Škerlavaj, 2014; Roberts, 2012 in Lai, 2021, p. 177). Cooperation and knowledge sharing are some of the positive effects of a mastery climate (Černe et al., 2014; Lai, 2020). Černe et al. argues that leaders can create a mastery climate by having a focus on mastery over performance, and that the creation of a mastery climate can prevent knowledge hiding and lead to more creative behaviors and trust among employees. According to Ames' (1992) research on motivation in the classroom, having a mastery-orientation can yield several benefits like learning, improved effort, motivation, tolerance to failure and engagement.

A mastery climate is one of two dimensions of a motivational climate – the opposite being a performance climate (Černe et al., 2014). A performance climate is present when employees are performance oriented, and there is competition among the employees to be the best (Lai, 2020). Due to the scope of this thesis, a performance climate and the organizational aspects related to it will not be further discussed.

Like a mastery climate, mastery and skill development is also important with regard to employee self-efficacy, and how this can be improved.

Self-Efficacy

The term self-efficacy was first introduced by Albert Bandura (1986) and involves how an individual perceives one's own competence and abilities to handle challenges and solve tasks. Bandura (1994) defines self-efficacy as *“people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives.”* This definition shows the importance of own beliefs of capabilities regarding different levels of performance – which can be seen as important in an organizational setting.

An employee's degree of self-efficacy is linked to various levels of mastery and performance (Judge & Bono, 2001; Judge, Jackson, Shaw, Scott & Rich, 2007; Stajkovic & Luthans, 1998). When employees have the same or slightly lower level of skill and knowledge, the employees with a higher level of self-efficacy will usually outperform the employees with a

lower level of self-efficacy. The degree of self-efficacy is also related to the amount of effort an employee is willing to put into a task – where an employee with high self-efficacy will invest more and work harder, while an employee with low self-efficacy usually will accept a worse result and give up faster (Lai, 2021, p. 160). Self-efficacy is also dependent on the domain in question and can be low or high depending on the role or task. Lai (2021, p. 159) therefore argue for the importance of evaluating self-efficacy not only with regards to the job role, but also the specific tasks it entails.

Improvement of self-efficacy

Bandura's (1986 in Lai, 2020) research points to four effective ways to improve self-efficacy: (1) Experience; offer opportunities for employees to experience mastery and accomplishments, (2) Role models; give employees access to good role models who can demonstrate mastery, (3) Feedback; give employees recognition and constructive feedback, and (4) Physical awareness; exercise techniques for coping with stress. Lai (2021, p. 164) adds a fifth mean of improving self-efficacy; competency-development.

The first and most effective way to improve an employee's self-efficacy is to provide experiences of mastery, where the employees experiences success and high performance. Second, access to good role models is an effective way to improve self-efficacy and can be done by having high performing colleagues who can inspire and share knowledge and competence. The third way to improve self-efficacy is by giving employees recognition and constructive feedback, which can improve the effort the employee puts in, and then again, the opportunity of success, accomplishment, and mastery. The fourth way to improve self-efficacy is to exercise techniques to cope with stress and how employees interpret bodily signals in situations where they have low self-efficacy.

Lai (2021, p. 164) adds competency-development as a fifth mean for improving self-efficacy. The connection between competency-development and self-efficacy are supported by studies indicating training and learning lead to an increase in self-efficacy (Zimmerman, 2000), which again can lead to improved performance (Arciniega, Servitje & Woehr, 2021; Judge & Bono, 2001; Judge et al., 2007; Sitzman & Yeo, 2013; Stajkovic & Luthans, 1998) work engagement (Federici & Skaalvik, 2011) and resilience (Bakker & van Wingerden, 2021).

All this referenced theory and literature provide the foundation for the development of hypotheses.

Development of Hypotheses

This section will use the aforementioned theory on the different constructs to compare aspects of process management with mastery-oriented leadership, a mastery climate and self-efficacy, in order to create hypotheses for answering the research question. Hypotheses regarding the relationship between the three chosen variables will also be presented.

Process management and mastery-oriented leadership

Mastery-oriented leadership can be seen as a relevant measure of the leadership aspect of process management because of its connections to areas of process management, like mastery and development. Mastery and development originate through the positive potential of process management as a useful tool in learning organizations (Tanggaard, 2016, p. 40; Senge, 1999). This focus on mastery, individual development and learning are important in mastery-oriented leadership (Lai, 2021, p. 175).

The creation of a dream/future vision and the use of positive words and framings in process management can be linked to two of the features found among leaders high in mastery-oriented leadership: providing direction and meaning (Lai, 2020). The third feature of mastery-oriented leaders regarding individualized attention can be seen in the third principle of process management, which states the importance of recognizing every participant's contribution.

Based on these similarities in the literature, process management can be argued to be connected to mastery-oriented leadership based on (1) its relation to mastery and usage as a tool in learning organizations, (2) through the creation of a direction and meaning for the employees, and (3) the recognition of every employee's contribution. The following hypotheses are designed to investigate the potential relationship between process management and mastery-oriented leadership, where H1b is the null hypothesis which will be tested:

H1a: The leader's leadership development in process management is significant and positively related to the employee's perception of their leader's mastery-oriented leadership.

H1b: The leader's leadership development in process management is not significant and not positively related to the employee's perception of their leader's mastery-oriented leadership.

Process management and a mastery climate

Mastery climate can be associated to process management through process managements strong emphasis on cooperation and involvement (Tanggaard, 2016, p. 57). The potential positive effects of process management's focus on plurality and involvement of all participants in processes and decision-making all fit well with the focus of mastery, support and sharing of knowledge within a mastery climate (Ames, 1992; Černe et al., 2014; Lai, 2020).

Process management can also be related to mastery and a learning environment, which can be seen through its usefulness in learning organizations (Tanggaard, 2016, p. 40; Senge, 1999), as well as by using all participants strengths in processes to achieve the best results.

Based on these similarities in the literature, process management can be argued to be connected to a mastery climate by (1) its relation to mastery and learning through its utility in learning organizations, and (2) the importance of cooperation and involvement by as many participants as possible in processes and decision-making. The following hypotheses are designed to investigate the potential relationship between process management and a mastery climate, where H2b is the null hypothesis which will be tested:

H2a: The leader's leadership development in process management is significant and positively related to a mastery climate in the units.

H2b: The leader's leadership development in process management is not significant and not positively related to a mastery climate in the units.

Process management and self-efficacy

Self-efficacy can be argued to have a potential connection to process management through research showing character strengths are connected to general self-efficacy (Ruch, Weber, Park & Peterson, 2014). Since process management is focused on using the strengths of all participants in the process (Tanggaard, 2016, p.51), this link between character strengths and self-efficacy gives basis for investigating if leadership development in process management can influence employee's self-efficacy.

Process management can also be associated to Bandura's (1986) four ways of increasing self-efficacy, through the six leader behaviors which can be seen as providing opportunities for mastery and accomplishments.

Process management can be by argued to be connected to self-efficacy by (1) the use of participant's strengths in processes, (2) participation and cooperation, which potentially can

provide opportunities for employees to experience mastery and accomplishments, and 3) the recognition of the employee's work – which is the third principle of process management.

The following hypotheses are designed to investigate the potential relationship between process management and self-efficacy is, where H3b is the null hypothesis which will be tested:

H3a: The leader's leadership development in process management is significant and positively related to employee's self-efficacy in the units.

H3b: The leader's leadership development in process management is not significant and not positively related to employee's self-efficacy in the units.

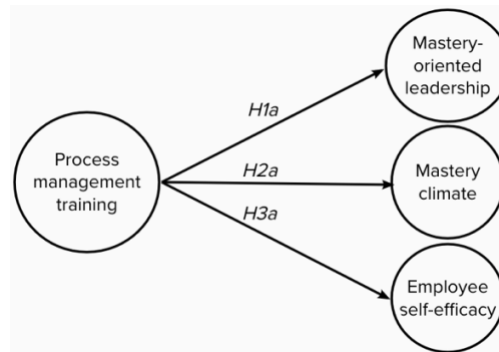


Figure 1. *Graphical representation of the hypothesized relations showing alternative hypotheses.*

Since the leader is the only individual from the unit participating in the process management training, it is hypothesized that a potential change in the three levels of analysis will start with the leader's mastery-oriented leadership, which then affect the unit's mastery climate and the employee's self-efficacy. The relationship between these variables is hypothesized below, based on the aforementioned theory.

Mastery-oriented leadership, a mastery climate, and employee self-efficacy

Because of mastery-oriented leaderships focus on fulfilling the employee's basic needs for self-efficacy, autonomy, and motivating relations (Lai, 2021, s. 174), self-efficacy is hypothesized to be the dependent variable, and mastery-oriented leadership the independent. A mastery climate is hypothesized to have a mediating or moderating role in the relationship between mastery-oriented leadership and employee self-efficacy. This is based on the theory on motivational climates characterized by mastery, which is known as mastery-oriented support from the closest colleagues (Lai, 2021, s. 175), supporting effort and cooperation, and emphasizing learning, mastery, and skill development (Ames, 1992) – which potentially can play

a role between mastery-oriented leadership and self-efficacy. Five hypotheses are proposed to investigate the relationship between the three variables.

Based on the mastery-oriented leaders focus on the development of employees, and the five ways leaders can improve employee self-efficacy - the following hypothesis is proposed:

H4a: The leader's mastery-oriented leadership is positively related to employee's self-efficacy in the units.

Since an important aspect of mastery-oriented leadership is to facilitate for a motivational climate characterized by mastery, the following hypothesis is proposed:

H4b: The leader's mastery-oriented leadership is positively related to a mastery climate in the units.

Because self-efficacy can be improved through access to good role models who can inspire and share knowledge and competence, as well as mastery climate's focus on cooperation and knowledge sharing, the following hypothesis is proposed:

H4c: Employee's self-efficacy and a mastery climate in the unit is positively related.

Based on knowledge sharing, the use of good role models and opportunities for mastery being ways for improving self-efficacy (Bandura, 1986; Lai, 2021, p. 164), a mastery climate is hypothesized to either mediate or moderate the relationship between mastery-oriented leadership and employee self-efficacy. Some of the improvement in self-efficacy can be hypothesized as being explained through or affected by the mastery climate in the unit, and not just the leader's mastery-oriented leadership. The following hypotheses is therefore proposed:

H4d: The positive relationship between the leader's mastery-oriented leadership and self-efficacy is mediated by a mastery climate in the unit.

H4e: The positive relationship between the leader's mastery-oriented leadership and self-efficacy is moderated by a mastery climate in the unit.

The hypotheses regarding how the leaders training in process management might impact on the three constructs representing the three levels of analysis is displayed in Figure 2.

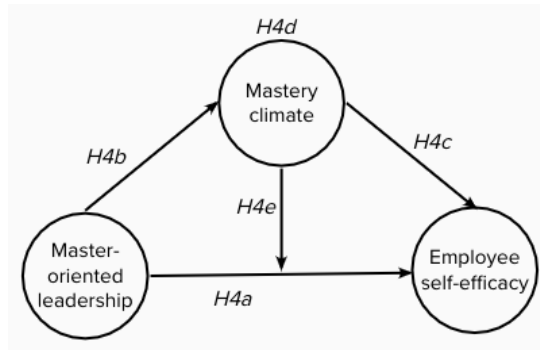


Figure 2. *Graphical representation of the hypothesized relationship among the variables.*

Aim of this study

The aim of this study is to investigate the potential of leadership development in process management on the leader, group, and individual level of analysis, as well as broaden the knowledge surrounding process managements potential relation to mastery-oriented leadership, a mastery climate at work, and employee's self-efficacy. Process management is hypothesized to lead to a change in the leader's mastery-oriented leadership, which then influence the unit's mastery climate and the employee's self-efficacy. The relationship between these three variables will therefore also be investigated. The study utilizes a mixed-methods design, where the quantitative data are meant to be supplemented by the qualitative interview data from the leaders and employees. Both the quantitative data and the qualitative data will be used in discussions on theoretical and practical implications, as well as suggestions for future research.

Method

The Project

This project is in collaboration with (1) a Norwegian leadership development company who train leaders in process management and (2) a Norwegian municipality where several leaders have had training. The project is conducted by two master's students at the University of Oslo and will result in two master's theses' focusing on different factors in relation to process management, and is viewed as a pilot study for future research and master theses on the constructs. The two master's students had relations with the leadership development company before the project in the form of an internship. This company introduced the initial contact with the Norwegian municipality, after which the students were responsible for all further contact, planning and recruitment of participants.

The students cooperated in attaining the raw data, in analyzing the quantitative data regarding the t-tests (Analysis 1 in this thesis), as well as the development of the interview guide and conducting of interviews. The interview guide developed in cooperation with the fellow student contains questions on five variables in addition to process management. This thesis will focus on process management, mastery-oriented leadership, a mastery climate, and self-efficacy.

This is a quasi-experimental project (Shadish, Cook & Campbell, 2002, p. 14), where the current thesis will utilize a mixed-methods approach, combining a total of three datasets: two quantitative datasets and qualitative data from semi-structured interviews. A mixed-methods approach is chosen because the results from the qualitative data can supplement the quantitative data and produce more valid results and inferences (Lund, 2012).

Data Collection

The data was collected from departments in a Norwegian municipality where the leaders had completed leadership development in process management in 2020 – the year between the two measurements of the employee survey 10-Factors (10-FAKTOR) (Arnesen, 2020; Fletre & Frydenlund, 2016). These surveys form the basis of the quantitative data used in this thesis, were completed in 2019 and 2021, and will be described further under measures.

The leadership development company put the students in contact with HR in the municipality, who provided a list of potential departments eligible to participate in the study. This list contained 11 departments; seven had a leader with training in process management, and four had leaders with no training in process management. HR sent the leaders an e-mail encouraging for participation in the study and pressed the benefits this could have for the municipality. After this initial communication, the students took over all contact with the leaders, gathered consent to participate, and information on the departments seen as vital to ensure their inclusion in the analysis regarding differences between groups (see Analysis 1). The investigation of the relationship between the three variables was not affected by these inclusion criteria (see Analysis 2). In addition to the quantitative data, leaders with training in process management and one of each of their employees were invited for interviews. These leaders would have to satisfy all inclusion criteria used for Analysis 1.

The criteria used to ensure the validity and quality of Analysis 1 were that the consenting departments had (1) leaders who had been leading the department both in 2019 and 2021, (2) data from both the survey in 2019 and 2021, (3) leaders with less than 20 direct respondents -

dictating it would be practically possible to perform process management with all employees, and (4) for the intervention group there was also a criterion that the leader had leadership development in process management in 2020. After reviewing consent and inclusion criteria the total number of departments for Analysis 1 was three: two where the leader had training in process management, and one where the leader had no training. A representation of the research design for Analysis 1 can be seen in table 1. The preferred design would have included an active control group, but given the circumstances of this study, this was not achievable. The intervention with process management is further described.

Table 1

Overview of the research design before and after the intervention

Group	Pre-test	Intervention	Post-test
Intervention group (2)	10-Factors 2019	X	10-Factors 2021
Control group (1)	10-Factors 2019		10-Factors 2021

Note: Numbers in parentheses represent the number of units. X signifies an intervention.

The intervention: Process management training

The training was conducted in 2020, between the two quantitative measurements. The focus of the training is on developing both individual and intrapersonal abilities and skills, in addition to using and building interpersonal competencies. Based on the characterizations made by Day (2000) on leader and leadership development, the training can be seen as a mix of both approaches, targeting both the human capital and the social capital. The trainings lasted for six days, divided into three two-day bulks. There was approximately a month between each of these bulks of training, in which the leaders were expected to implement the knowledge and tools they had learned into their daily tasks. Their experiences were then shared and discussed in the next training to enhance learning. Combining the training bulks and the intervals between them, the training lasts for approximately three months. There was no organized form of coaching between the training sessions, or any system for follow-up after the end of the training. The number of participants in each training ranges from 10-40 leaders. Leaders from the Norwegian municipality who participated in the training form the basis for the data collection.

Quantitative analyses

Sample

There will be two samples of quantitative data in this study: one for the t-tests investigating a potential difference between the intervention and control group (see Analysis 1), and one for the mediation and moderation analysis between the three constructs (see Analysis 2).

The sample for the first analysis (Analysis 1) consist of employees from a total of three departments in a Norwegian municipality – two where the leader had training in process management, and one where the leader had no training. The intervention group comprising the two departments where the leader had training in process management consisted of 22 employees pre-test and 23 employees post-test, while the control group pre-test consisted of 13 employees and 16 employees post-test. The reason for changes in the number of employees from 2019 to 2021 is not known. Because of the nature of the data being gathered from an employee survey, it is not possible to identify employee scores from the pre-test and compare them to the post-test. There is neither any data on the response rate in each department, the specific demographics, tenure, or role of each employee. This is up to the municipality to include or not when conducting the survey and is not included in this dataset.

The second sample of quantitative data (Analysis 2) will be for investigating the relationship between mastery-oriented leadership, mastery climate and self-efficacy. Since the sample size used in the t-tests is too small to provide significant findings in a mediation and moderation analysis (Field, 2008, p. 391), the relationship between the three constructs will be investigated independently from the first analysis and the process management intervention. This will be performed by using the full post-test sample of all eleven groups - consisting of 289 employees. The findings from this analysis will be able to say something about the relationship between mastery-oriented leadership, a mastery climate and self-efficacy, which can be relevant in discussing how the leader's training in process management relates to the three variables.

Measures

The items used for mastery-oriented leadership, mastery climate and self-efficacy are from the employee survey 10-Factors. The exact measures used in the 10-Factors survey is not shared due to maintaining the validity of the test and preventing learning effects and bias (Frydenlund & Fletre, p. 10). However, Lai (2021, p. 160) gives examples of measures in her book *Strategic Competency Management (Strategisk kompetanseledelse)*, which makes it possible to provide examples of the items used, although not the exact items or in which order. This will be done to maintain the quality of the scale, by avoiding translation by the researcher.

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

All measures are divided into five on a Likert-scale, ranging from “strongly disagree” to “strongly agree” (Fletre & Frydenlund, 2016, p. 10). The literature on 10-Factors state there are supposed to be 36 items, with the number of items ranging from three to five for each factor. The dataset used in this thesis only contains 35 – with the missing item identified to be on self-efficacy. This will be addressed later in the reporting of internal consistency.

Mastery-oriented leadership

Mastery-oriented leadership is measured on five items. According to Lai (2021, p. 175) these items are based on items from Greenhaus, Parasuraman and Wormley (1990). Examples of items are: (1) My closest leader gives me useful feedback on my performance, (2) My closest leader gives me challenges that develops and strengthens my knowledge.

Mastery climate

Four items are used to measure mastery climate. Lai (2021, p. 178) are referencing Nerstad et al. (2013) for examples on items. Examples of these are: (1) In my department/work group, one is encouraged to cooperate and exchange thoughts and ideas mutually, (2) In my department/work group, cooperation and mutual exchange of knowledge are encouraged.

Self-efficacy

Self-efficacy is measured on three items in this dataset. Lai (2021, p. 160) gives examples of what these items might be, where two examples are: (1) When I am confronted with a problem, I can usually find several solutions, (2) Thanks to my resourcefulness, I know how to handle unforeseen situations. These items are based on the scale of Schyns and von Collani (2002), developed to measure occupational self-efficacy.

Internal consistency of the constructs

A reliability analysis of the internal consistency of the constructs was conducted separately in both the pre-test and post-test sample used in Analysis 1, as well as the full post-test sample used in Analysis 2. This is an important step in testing homogeneity of the items measuring each construct, which is important for commenting on the effect size later (Henson, 2001). The internal consistency stated in Chronbach’s Alpha is listed in the table 2 below.

Table 2.

Chronbach’s Alpha in Analysis 1 (pre-test and post-test) and Analysis 2 (full post-test).

Construct	α pre-test	α post-test	α full post-test
Mastery-oriented leadership	.936	.939	.925

Mastery climate	.956	.880	.929
Self-efficacy	.601	.652	.858

The Chronbach's Alpha for all samples of mastery-oriented leadership and mastery climate are within acceptable values (Field, 2018, p. 823; Henson, 2001). Self-efficacy on the other hand has an $\alpha = .601$ and $.652$ in the samples used for the t-test, while $.858$ in the full post-test sample. These values are within the acceptable range set by Nunnally (1967 in Peterson, 1994), who proposed reliabilities of $.50$ and $.60$ could be sufficient. However, the values for the t-tests are not within the readjusted acceptable range of $.70$ (Nunnally, 1978 in Peterson, 1994).

There are three items measuring self-efficacy in the given data set, while literature on 10-Factors report it being four (Fletre & Frydenlund, 2016). The reason for this change in the number of measuring items was not found but could potentially have an impact on self-efficacy's Chronbach's Alpha in the samples used for the t-tests. In this case, the scale of self-efficacy will still be used because it is within Nunnally's limit from 1967, and because researchers also argue to be careful using these general guidelines and urges to consider the items value within the research context (Pedhazur & Schmelkin 1991, in Field, 2018, p. 823) – as well as Peterson's (1994) findings regarding the magnitude of reliability coefficients in behavior research.

Factor analysis

A factor analysis of the entire raw dataset was considered, to verify that the constructs in the survey are separate constructs also in this sample. The decision was to not perform a factor analysis. This was due to the scope of this thesis, and the fact that the provider of the 10-Factors survey already has done a factor analysis in an extensive pilot study – with the results presented on their website, showing the reliability and difference of each construct (Vatten, 2021).

Analysis 1: T-tests

Preliminary analysis

All quantitative analysis was conducted using IBM's SPSS version 28.0. Before investigating the potential difference between groups, a data screening, preliminary and descriptive analysis was conducted. The descriptive analyses are presented in the results section, while the data screenings and preliminary analyses are presented below.

The dataset was screened for a substantial number of missing values, wrong plotted values, and other issues. Only a few missing values were found, but not enough to exclude any of the respondents. Neither was it found any wrong plotted values which could have caused outliers

or unintentional skewness. The dataset had some missing respondents. In the control group pre-test, there was one less respondent on mastery-oriented leadership compared to the other variables, and in the post-test the intervention group has two less respondents on mastery climate, compared to the other variables. This dataset had already been processed by the provider of the 10-Factors survey before providing the Norwegian municipality their results, and before providing the data to this project. Departments with an insufficient number of respondents or respondents with too many missing values had therefore already been removed.

The normality of the dataset was assessed, investigating the skewness and the kurtosis for the items. This was done by splitting the dataset into the pre-test from 2019 and post-test from 2021. The highest skewness was -1.85 in the pre-test, and -2.29 in the post-test, while the highest kurtosis was 4.69 in the pre-test and 5.15 in the post-test. Both the pre-test and post-test is negatively skewed. These values show the skewness and kurtosis to be high, but all below the range of severe skewness ($|>3.0|$) and severe kurtosis ($|>10.0|$) (Kline, 2016).

Choice of inferential statistics

The most suitable analysis was considered to be the t-test. Based on the available data, a two-tailed independent sample t-test was chosen. The basis for the use of a two-tailed independent sample t-test with an $\alpha = 0.05$ is that: (1) the data can be seen to fulfill the three assumptions which need to be present to perform parametric tests (see section below), (2) the subjects in this sample being divided into two independent groups: one intervention group and one control group (Field, 2018, p. 448; Kim, 2015), (3) a two-tailed t-test is necessary, since it is not certain that the effect of training goes only one way, (4) based on the data and circumstances of this study, an alpha-level of 0.05 is found to be the best fit for avoiding type-1 and type-2 errors, and 5) other statistical analysis were not found to fit this dataset.

A Mixed-Method ANOVA and a paired sample t-test was also considered but were excluded as a potential method due to the demand for $n > 2$. This was because of the need to restructure the dataset from vertical to horizontal, which would have meant the control group would only have a $n = 1$, due to the control group only consisting of one department.

Non-parametric tests were also considered to investigate a potential difference between the groups but were not decided to be suitable for this quasi-experimental setting.

Assumptions for parametric statistics

The three parametric assumptions which need to be present to avoid making a wrong

statistical conclusion are: (1) the observations are based in a random sample from the population, (2) the sample distributions of the means are normally distributed, and (3) the variance in the groups is homogenic (Boneau, 1960; Field, 2018, p. 229).

The observations in this study lack random assignment, given that it has a quasi-experimental design (Shadish, Cook & Campbell, 2002, p. 14). The decisions surrounding which leader or units should take part in the study was up to the municipality – meaning the groups were not randomly formed. Despite the observations not being randomly formed or assigned given the quasi-experimental design and the inclusion criteria, the observations can be argued to be randomly sampled from the population within the municipality (Shadish, Cook & Campbell, 2002, p. 248). This can potentially provide information about the population in focus: units in organizations where the leader has had training in process management. The first assumption can therefore be viewed as fulfilled. This sample will be further discussed under limitations.

Even though the samples lack normality and are negatively skewed, the sample distribution of the means can be argued to be normal based on the central limit theorem. This is due to the central limit theorem as described by Field (2018, p. 63): *“as the sample gets larger (usually defined as larger than 30), the sampling distribution has a normal distribution with a mean equal to the population mean”*. Which mean that a small sample with a skewed distribution like this one can be argued to be normally distributed, if the sample was large enough. In addition to this, Blanca, Arnau, Lopez-Montiel, Bono and Bendayan (2013) found that skewness and kurtosis are to be expected with such a small real-life sample. Bootstrapping the sample were considered but were not found to provide any additional statistical strength to the analysis. Boneau (1960) argues that the lack of importance of the assumption of normality for the results of t-test makes the t-test functionally non-parametric and distribution-free. Based on these arguments, this real-life quasi-experimental data will be used for further analysis.

The assumption of homogeneity of variance was tested and satisfied in the Levene’s test (see results of Analysis 1), making present the third assumption about homogeneity of variance - the groups are similar enough to perform a t-test. Field (2018, p. 259) strongly argue for caution with using the Levene’s test, and states that it is less effective with unequal group sizes and smaller samples – like in the case of this dataset. However, Levene’s test will still be used as a measurement of the homogeneity of variance between the groups pre and post-test.

On the other hand, Kim (2015) argues to be careful about unquestionably neglecting these assumptions for the t-test and urges researchers to test and use statistical assumptions and methods to be able to draw valid statistical conclusions from the data. Despite the warnings of Kim (2015), the t-test will still be used. This is based on the arguments of Boneau (1960) in combination with the nature and purpose of this study - which have a quasi-experimental design and is viewed as a pilot study for future research and master theses on the constructs.

Cohen's d

Cohen's d will be used to investigate the effect sizes - as an additional way of investigating the means between the groups (Field, 2018, p. 113). Cohen's (1988, 1992) suggestion of how to interpret the effect sizes will be used in this thesis - where a small effect is when $d = .20$, medium $d = .50$ and a large effect $d = .80$. According to Fritz, Morris and Richler (2012) effect sizes allow to provide a more quantitative and interpretable size of an effect, which can be independent of what they call a possibly misleading sample size. This makes the presentation of effect sizes relevant for the t-tests, because of the small sample size.

Analysis 2: Mediation and moderation

Preliminary analysis

For the dataset used to investigate the relationship between mastery-oriented leadership, mastery climate and self-efficacy, all distributions were negatively skewed. The highest skewness was -2.32 and the highest kurtosis was 8.69. There were variations on skewness and kurtosis on each item, but all were below the range of severe skewness (>3.0) and severe kurtosis (>10.0) (Kline, 2016). The dataset had some missing respondents. There were two less respondents on mastery-oriented leadership and five less on mastery climate, compared to self-efficacy's $N = 289$. The reason for these missing respondents is not known.

Mediation and moderation analysis

Mediation and moderation analysis will be performed to investigate how a potential impact of training in process management on the leader's mastery-oriented leadership further can influence on the group and individual level of a unit. To investigate these relationships a correlation analysis between the variables will be conducted, as well as a mediation and moderation analysis using Hayes' PROCESS v4.0 tool in SPSS. Model 4 was used for the mediation analysis, while model 1 was used for the moderation analysis. PROCESS uses 5000 bootstrap samples as a default, which is kept in these analyses.

The mediation analysis is intended to investigate if the relationship between mastery-oriented leadership and self-efficacy can be explained by their relationship to a mastery climate. This will be investigated by assessing the size of the indirect effect and the confidence interval. If the confidence interval is not found to contain zero, a mediation effect is likely to be present - while if it contains zero, a mediation effect is assumed not to be present Field (2018, p. 508).

The role of a mastery climate on the relationship between mastery-oriented leadership and self-efficacy will be investigated by looking at how the interaction between mastery-oriented leadership and a mastery climate can affect self-efficacy as an outcome variable. If the interaction is found to be significant, it is assumed that there is moderation (Field, 2018, p. 484). Based on the program PROCESS by Hayes which remove the worry about heteroscedasticity and allow for centering of variables, this is not seen as an issue here.

Qualitative interview data

Sample

The qualitative sample consist of four participants: two leaders with training in process management and one of each of their employees. Which employee who were to participate in the interview was up to the individual leader. All four participants participated voluntarily and were given information on the project and their rights prior to the interview (Appendix 1). The informed consents were collected from all participants before the interviews took place.

This sample size is a potential limitation, but is what is left from the available departments, after screening them to the inclusion criteria of the study, as well as due to the time scope of this thesis. This means the sample does not provide semantic saturation on the areas of investigation, which is important to keep in mind while regarding the results. Limitations of the qualitative data is further discussed at the end of this thesis.

Interviews

One pilot interview were held prior to the interviews, to investigate for potential interviewer bias and to test the quality of the interview guide. For the pilot interview to be as realistic and valid as possible it was held with a participant with knowledge of both process management and the variables. The pilot interview gave important insight surrounding the functionality of the interview questions, which were found to be leading. These leading questions

were a threat to the validity of the interview guide, by not being open enough surrounding the chosen constructs. The pilot-interview led to improvements of the questions.

Due to the Covid-19 situation all interviews were held online. All interviews were also held in Norwegian. The students had the same roles in all interviews to prevent response variation, where one student asked the interview and follow-up questions, while the other took notes. The interviews were all tape recorded with UiO's app "*Diktafon*", which directly uploads the tape-recorded interview to UiO's safe server. The interviews were all held in accordance with the PEACE model to ensure the quality of both the interview and the data originating from it. The acronym PEACE stands for Planning and Preparation, Engage and Explain, Account, Closure and Evaluation (Clarke & Milne, 2001; Walsh & Milne, 2008).

The interview consisted of seven open-ended questions: two regarding process management, one for mastery-oriented leadership, one for mastery climate, and one for self-efficacy – in addition to the questions for the other student, concerning intrinsic motivation and prosocial motivation. The full interview guide can be seen in Appendix 2 in Norwegian.

Open-ended follow-up questions were asked to make the interviewees elaborate or clarify where seen necessary. Sticking to the interview guide and only asking open-ended follow-up questions on topics already mentioned by the interviewee helped prevent bias to the data through introducing new topics or leading the interviewees (Walsh & Milne, 2008).

The recorded interviews were transcribed verbatim by the two master's students by following agreed-upon codebook for transcription (Appendix 3). This codebook has been used by earlier projects at UiO, has been reviewed but kept the same.

Analysis

Thematic analysis

A thematic analysis was chosen as the method of analysis for the qualitative data. There are several different guidelines available on how to conduct a thematic analysis (Braun & Clarke, 2006, 2012; Fereday & Muir-Cochrane, 2006; Joffe, 2012). Locating the analysis theoretically and epistemologically contributed to choosing Braun and Clark's (2006, 2012) guidelines, which were the best fit for this thesis and research question. A thematic analysis was chosen over other qualitative methods because of several of the advantages listed by Braun and Clarke (2006, 2012). Advantages especially noteworthy here are (1) it being relatively easy to use and quick to

learn, (2) useful in summarizing key features of a dataset, (3) highlight similarities and differences across a dataset, and (4) because it can generate unanticipated insight.

Braun and Clark's guidelines contain six steps, which can all be seen on page 60 of their article on thematic analysis (2012). To prevent researcher bias and differences in coding, the students coded and themed all the transcribed interviews together.

Ethical considerations

This project does have some ethical considerations, which required an application to Norwegian Centre for Research Data (Norsk Senter for Forskningsdata - NSD). The application to NSD was approved (case number: 127427). These considerations is in the form of storage and processing of personally identifiable information in the form of names and audio recordings. This personal information will be stored at UiO's encrypted research server, where the only individuals with access to the data will be the master's students performing the analysis.

The participants were given a form of consent informing about the project, their rights and the storage and handling of their personal information (Appendix 1). This way, all interviewees was informed about the purpose and aim of this study before the interview.

Results

Quantitative results

Analysis 1: T-tests

Descriptive analysis

The results from the descriptive analysis of the dataset intended for the t-test is presented – divided into the intervention and control group in 2019 and 2021. Table 3 and 4 below show descriptives for the intervention group ($N = 22$) and control group ($N = 14$) in 2019.

In the pre-test, the intervention group was associated with numerically higher mastery-oriented leadership $M = 4.44$ ($SD = .89$) than the mastery-oriented leadership in the control group $M = 3.88$ ($SD = 1.07$). The mastery climate is numerically higher also in the intervention group $M = 4.23$ ($SD = 1.05$), compared to the control group $M = 3.77$ ($SD = .96$). For self-efficacy this numerical difference is smaller, with the intervention group having $M = 4.44$ ($SD = .52$) and the control group $M = 4.21$ ($SD = .48$).

Table 3.

Sample, mean, standard deviation and variance for the intervention group pre-test.

Construct	N	Mean	SD	V
-----------	---	------	----	---

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

Mastery-oriented leadership	22	4.44	.89	.80
Mastery climate	22	4.23	1.05	1.11
Self-efficacy	22	4.44	.52	.28

Table 4.

Sample, mean, standard deviation and variance for the control group pre-test.

Construct	N	Mean	SD	V
Mastery-oriented leadership	13	3.88	1.07	1.14
Mastery climate	14	3.77	.96	.92
Self-efficacy	14	4.21	.48	.23

Table 5 and 6 show descriptive statistics for the intervention group ($N = 23$) and control group ($N = 16$) in the post-test. The intervention group was associated with numerically lower mastery-oriented leadership $M = 4.32$ ($SD = .86$) than the mastery-oriented leadership in the control group $M = 4.38$ ($SD = .72$). The mastery climate is numerically lower also in the intervention group $M = 4.48$ ($SD = .68$), compared to the control group $M = 4.50$ ($SD = .60$). The intervention group is associated with higher self-efficacy $M = 4.56$ ($SD = .42$) than the control group $M = 4.50$ ($SD = .49$).

The comparisons of means show the intervention group has higher means in the pre-test, while the control group has higher means on two out of three variables in the post-test.

Table 5.

Sample, mean, standard deviation and variance for the intervention group post-test

Construct	N	Mean	SD	V
Mastery-oriented leadership	23	4.32	.86	.74
Mastery climate	21	4.48	.68	.46
Self-efficacy	23	4.56	.42	.18

Table 6.

Sample, mean, standard deviation and variance for the control group post-test

Construct	N	Mean	SD	V
Mastery-oriented leadership	16	4.38	.72	.52
Mastery climate	16	4.50	.60	.36
Self-efficacy	16	4.50	.49	.24

Independent sample t-tests

To test the three null hypotheses (H1b-H3b) that the leader's leadership development in process management is not significant and not positively related to any of the variables, an

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

independent samples t-test was performed. Table 7 shows the results before the intervention with process management, along with the Levene's test for testing homogeneity of variance.

The results of the Levene's test for the three variables was $F(33) = 2.50, p = .124$ for mastery-oriented leadership, $F(34) = .80, p = .782$ for a mastery climate, and $F(34) = .31, p = .584$ for self-efficacy. This indicate there are not a significant difference in the homogeneity of variance between the groups at our given alpha of 0.05 - the sample therefore fulfills the assumption of variance necessary for the t-test (Field, 2018, p. 230).

The results regarding the independent sample t-test before the intervention indicate there are no significant differences between the intervention and control group on mastery-oriented leadership with $t(33) = 1.66, p = .106$, mastery climate with $t(34) = 1.32, p = .195$, or self-efficacy with $t(34) = 1.29, p = .206$. The numerical differences in means are therefore not significant and the sample is eligible for further analysis.

Table 7.

Independent sample t-test results between the two groups in pre-test

Construct	<i>F</i>	Leven's test	<i>t</i> -value	<i>df</i>	Independent <i>t</i> -test, <i>p</i> -value result	Cohen's <i>d</i>
Mastery-oriented leadership	2.50	.124	1.66	33	.106	.96
Mastery climate	.80	.782	1.32	34	.195	1.02
Self-efficacy	.31	.584	1.29	34	.206	.51

Independent sample t-test is two-tailed.

95% confidence interval.

Results for the post-test are presented in table 8. The Levene's test for mastery-oriented leadership was $F(37) = 9.68, p = .332$, mastery climate was $F(35) = .01, p = .913$, and self-efficacy was $F(37) = .15, p = .699$. This indicate there is not a significant difference in the variance between the groups at our given alpha of 0.05 in the post-test (Field, 2018, p. 230).

The results regarding the independent sample t-test after the intervention indicate there are no significant differences between the intervention and control group on mastery-oriented leadership with $t(37) = -.20, p = .841$, mastery climate with $t(35) = -1.11, p = .912$, or self-efficacy with $t(37) = .45, p = .657$. The numerical differences in means are not significant, and the intervention group is not associated with higher scores on the variables.

Table 8.

Independent sample t-test results between the two groups in post-test

Construct	<i>F</i>	Leven's test	<i>t</i> -value	<i>df</i>	Independent <i>t</i> -test, <i>p</i> -value result	Cohen's <i>d</i>
Mastery-oriented leadership	9.68	.332	-.20	37	.841	.81

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

Mastery climate	.01	.913	-.11	35	.912	.65
Self-efficacy	.15	.699	.45	37	.657	.45

Independent sample t-test is two-tailed.

95% confidence interval.

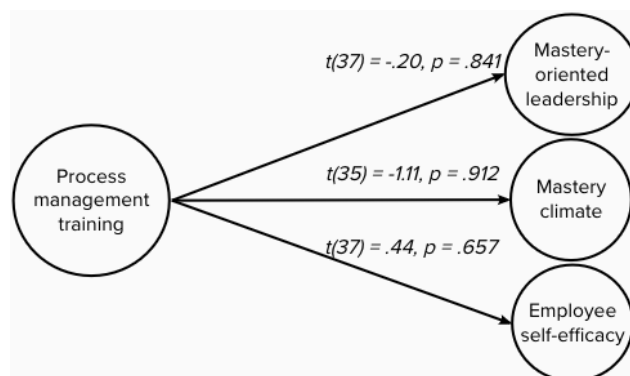


Figure 3. *Graphical representation of the results of the independent samples t-test in post-test.*

Cohens' D

Table 6 and 7 above show the Cohen's d in the pre-test and post-test. For mastery-oriented leadership the effect size was $d = .96$ before the intervention, and $d = .81$ after – maintaining a large effect size (Cohen, 1988, 1992). The effect size for mastery climate decreased from a large effect size of $d = 1.02$, to $d = .65$ after the intervention. For self-efficacy the effect size was medium before the intervention with a $d = .51$ and decreased to $d = .45$ after the intervention - below the limit for medium effect size.

These reductions in the effect sizes between the two groups indicate there is a smaller difference between the two groups after the intervention than before.

Analysis 2: Mediation and moderation analysis

Descriptives

The descriptive statistics for the full post-test sample investigating the relationship between the variables is provided below in table 9. These results show numerically high levels of mastery-oriented leadership, mastery climate and self-efficacy, and that the variables are correlated on the 0.01-level. The correlation between mastery-oriented leadership and self-efficacy, and self-efficacy and mastery climate are both moderate – while the correlation between mastery-oriented leadership and mastery climate has a strong correlation (Taylor, 1990).

Table 9.

Mean, standard deviation, Chronbach's alpha, and zero-order correlation entire post-test

Construct	N	Mean	SD	A	1.	2.	3.
1. Mastery-oriented leadership	287	4.26	.85	.94	1		

2. Mastery climate	284	4.16	.84	.96	.68**	1	
3. Self-efficacy	289	4.51	.61	.60	.32**	.30**	1

** Coefficient is significant at the 0.01 level (2-tailed).

Mediation analysis

The analysis of a mastery climates mediating role on the relationship between mastery-oriented leadership and self-efficacy can be seen in figure 4. The analysis shows mastery-oriented leadership explain 46.3% of the variation in a mastery climate ($R^2 = .463$), while it explains 10.6% of the variation in self-efficacy ($R^2 = .106$). Including both mastery-oriented leadership and a mastery climate in the model predicts 11.5% of the variation in self-efficacy ($R^2 = .115$). The positive b -values in this model indicate that as mastery-oriented leadership and a mastery climate increases, self-efficacy also increases.

The total effect model show mastery-oriented leaderships relationship to self-efficacy when mastery climate is not present in the model, $b = .24$, 95% CI [.16, .32], $p < .001$. However, there was not found a significant indirect effect of mastery-oriented leadership on self-efficacy through mastery climate, $b = .06$, 95% CI [-.03, .16]. The confidence interval for the indirect effect contains zero, which indicate there is not a mediation effect of mastery climate on the relationship between mastery-oriented leadership and self-efficacy.

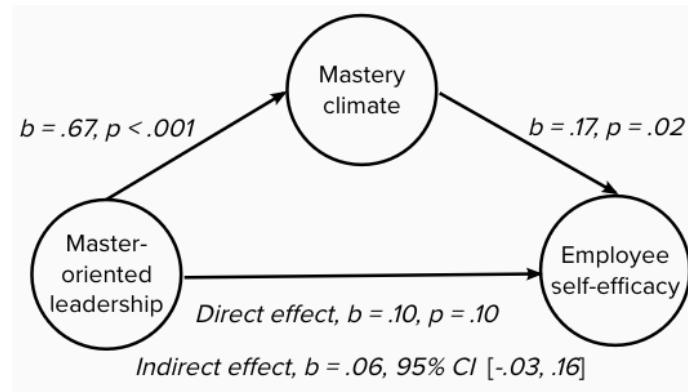


Figure 4. Graphical representation of results from the mediation analysis.

Moderation analysis

The results from the moderation analysis can be seen in table 10. The confidence interval does not include zero and the interaction between mastery-oriented leadership and mastery climate is significant – indicating there is a moderation effect. The b -value is negative, which indicate the moderation is negative. Mastery climate is therefore found to have a moderating role on the relationship between mastery-oriented leadership and self-efficacy.

Table 10.

Linear model of predictors of self-efficacy

Construct	<i>b</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Constant	4.56 [4.49, 4.64]	.04	122.45	.00
Mastery climate	.13 [.02, .24]	.06	2.32	.02
Mastery-oriented leadership	.0294 [-.08, .14]	.06	.51	.61
Mastery-oriented leadership x mastery climate	-.13 [-.19, -.07]	.03	-3.86	.00

Note: $R^2 = 0.16$.

A simple slopes analysis provide information on how this relationship between mastery-oriented leadership and self-efficacy is at low, medium, and high levels of mastery climate. The relationship was found to be significant when the score on mastery climate was one standard deviation below the mean ($p < .001$) and at the mean ($p = .021$), but not significant one standard deviation above the mean ($p = .724$). Indicating high levels of a mastery climate moderates the relationship between mastery-oriented leadership and self-efficacy.

Qualitative results

Thematic analysis

The qualitative data was analyzed using a deductive thematic analysis, where the themes were identified to be the constructs of process management, self-efficacy, mastery-oriented leadership, and mastery climate. These are the same constructs as was asked about in the interview questions, which according to Braun and Clarke (2006, 2012) is a potential pitfall, which means a proper analysis has not been carried out. This was still performed here due to three reasons: (1) the qualitative data is intended to supplement the quantitative data, (2) the constructs of each variable are already specific and broad-reaching, and (3) changing the name and grouping the constructs into different themes for the sake of avoiding a pitfall would not be in the best interest of the research question.

Declarative analysis

This analysis will give an overview of the perceptions and associations the interviewees have to each construct - intended to supplement the quantitative findings. Due to the scope of this thesis, only the associations relevant for answering the research question will be presented.

Process management

Table 11 shows the interviewees associations regarding the interview questions for process management. Listed in the table are a list of codes identified in the thematic analysis.

Table 11.

Theme: Process management

Theme	Code
Process management	Leadership (4)
	Participation (4)
	Involvement (3)
	Cooperation (3)
	Psychological safety (2)
	Suitability of process management (1)

Note: Numbers in parentheses represent the number of interviews in which the code emerged.

The codes identified are in line with literature on process management (Taangaard, 2016). All respondents seemed to have an understanding of process management and linked it to several concepts which can be seen as central to the construct. The aspects mentioned most frequent was involvement, participation, and inclusive leadership – which was mentioned by three out of four interviewees. These three was linked together by one of the leaders stating: *“[...] I would sit down with the group, then I would hear them describe the current situation, and maybe also describe their preferred future situation, [...] and then find potential measures that we could agree upon to move forward.”*

Cooperation and psychological safety were also mentioned by several of the interviewees. One of the interviewees linked the two together while reflecting on the use of process management in the department the interviewee work:

“It is not a given that you need get your wish fulfilled, but that you are allowed to express it and that it is taken up to consideration. That you are allowed to say what you mean, and why you mean what you mean. I think that is an important part of it. To be heard. [...] But at least that you get to say what you think and that we agree on something.”

When reflecting on process management, one of the employees brought up a reflection surrounding the suitability of process management in different work-contexts, saying that: “[...] *maybe it is not very suitable for the unit I am in.*”

The process management training

Table 12 shows the interviewees’ reflections and associations regarding the process management training. This is separated from the theme of process management because of (1) the specifics surrounding the practical aspects of the training, and (2) because the practical information regarding the training does not say anything about the potential relationship between process management and the chosen variables. The process management training is the context where leaders learned process management, not about how they apply and utilize it in a later work-context – and is therefore seen as two separate constructs.

Table 12.

Theme: The process management training

Theme	Code
The training	Learning (2)
	Utilized tools and methods (2)
	Knowledge not remembered (1)
	Not utilized tools and methods (1)
	Disturbances during training (1)

Note: Numbers in parentheses represent the number of interviews in which the code emerged.

The process management training came up with two of the interviewees when asked about usage of methods and principles from process management. One of the leaders stated: «[...] *one of the things I actually have used a lot since the training is the IGP*”, adding that “*the effect of such a simple tool, that surprise me*”.

The other leader stated the opposite: “*When I had the project management training, no process management, then I was unable to follow everything. [...] so I hardly remember all these tools anymore*», which the leader also linked to time pressure while talking about the training: “*The amount of time was what it was*”. Despite stating not remembering specific tools, the leader said: “*But I brought with me the best from that world. I learned, especially for me, it was this with understanding the different opinions behind a lot of people. The differences between us.*”

Mastery-oriented leadership

Table 13 shows the codes regarding the question on mastery-oriented leadership.

Table 13.

Theme: Mastery-oriented leadership

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

Theme	Code
Mastery-oriented leadership	Leadership (4) Autonomy (3) Learning (2) Psychological safety (1)

Note: Numbers in parentheses represent the number of interviews in which the code emerged.

The interviewees' associations can be coded as several forms of leadership which is concurrent with the literature (Lai, 2021, p. 174). One leader links the importance of autonomy in mastery-oriented leadership by stating: *"I personally mean that as a leader I am very concerned with telling what needs to be done [...] but how they do it, that is up to my good colleagues to define themselves."* The same leader follows up later with: *"I think mastery-oriented leadership is much more connected to autonomy than we, at least I have found is the focus in 10-Factors"* and *"I don't think you can do mastery-oriented leadership unless [...] they are allowed to be and to feel independent in their tasks."*

When describing his/her own leadership style, one leader also links supportive and coaching leadership with autonomy and development: *"I try to have a coaching leadership style where they not only come with their questions, but that they have thought out a solution"* and *"Then I try to motivate them to come up with a solution on their own, and we can work on it together."* This was linked to development and learning when talking about a specific incident where an employee had asked a question and had been supported to find a solution on his/her own: *[...] it leads to that the next time that question is asked in the group, it is the person that asked me the question that answer and not me"*. This statement can also be seen as showing mastery and learning, which can be a link to self-efficacy (Lai, 2021, p. 164).

A statement coded as psychological safety was brought up by one of the employees when reflecting on her leader's leadership style in relation to mastery-oriented leadership: *"If there is anything the door is always open, and there are no stupid questions."* This statement shows the support of the leader as well as psychological safety between the leader and employee.

Mastery climate

Table 14 shows the codes regarding the question on mastery climate.

Table 14.

Theme: Mastery climate

Theme	Code
Mastery climate	Learning (2) Cooperation (2)

Conditions (2)

Note: Numbers in parentheses represent the number of interviews in which the code emerged.

When talking about a mastery climate, knowledge sharing and support from colleagues emerged. This was grouped together in the code “*learning*”. Knowledge sharing can be seen by the statement from one leader: “*We share all knowledge together*” and from one of the employees: “*I think we have a good mastery climate. I think we are good at learning from each other.*” This is backed up by support from colleagues, where one leader said in relation to the mastery climate in the unit: “*[...] I know they can [...] go to the neighbor, to the colleague [...] and get help, and I think that is because they have a mastery climate. They cheer each other on.*”

Cooperation and knowledge sharing are mentioned by one of the leaders while bringing up mastery climate in team-meetings: “*[...] I experience that these team-meeting strongly contribute to that, that we ensure good competence with everyone at the same time.*”

Cooperation and knowledge sharing are also mentioned by one of the employees when talking about cooperation across tasks: “*[...] and you can see that we can learn from each other [...]. It can be things that make the workday better and how we can make routines more efficient.*”

Self-efficacy

The codes regarding the question on self-efficacy are presented in table 15.

Table 15.

Theme: Self-efficacy

Theme	Code
Self-efficacy	Learning (3)
	Leadership (2)
	Autonomy (2)
	Mastery climate (2)

Note: Numbers in parentheses represent the number of interviews in which the code emerged.

Self-efficacy was associated with learning by three out of four interviewees. One of the leaders credited the level of self-efficacy in the unit to the increase in competence through formal education: “*[...] and I think that is the reason that the self-efficacy is pretty high with us right now. We feel we have the right competence and tools [...].*”

Self-efficacy was linked to leadership by two of the interviewees. One leader brought up the importance of giving employees challenging tasks: “*[...] it happens that I give them tasks that they don’t think they can manage, and then they manage to complete them after all*”. The need to support and be there for the employees regardless of outcome was emphasized: “*[...] you have to also be there when they don’t succeed. That is incredibly important. It is actually the*

most important thing in the world” and that “If they succeed it is win-win [...].” One leader also associates self-efficacy to mastery-oriented leadership: “[...] I believe my employees think they can achieve things. I think that through mastery-oriented leadership, where I lift them up.”

Mastery climate is also being linked with self-efficacy by one of the leaders: “[...] I believe these [...] it is closely associated with the climate. It is for sure that if we had scored 2 in mastery climate, then we would also lose self-efficacy”. One of the employees also brought up cooperation and initiative when talking about self-efficacy in her unit: “[...] people are good at sharing things and take on work which needs to be done.”

Autonomy emerged from the data when being asked about self-efficacy, brought up by one leader and one employee. The employee reflected around the subjects: “Self-efficacy is also connected with [...] being self-governed in the tasks” and “As said, we work very individually and in fact very autonomous. We don’t have to go in and micro-manage at my part or other parts of the unit. So, I think self-efficacy is a little connected to that autonomy. To do the tasks. »

Discussion

The aim of this study is to investigate the potential outcomes of leadership development in process management on the leader, group, and individual level of analysis, as well as broaden the knowledge surrounding process managements potential relation to mastery-oriented leadership, a mastery climate at work, and employee’s self-efficacy.

Eight hypotheses were derived to answer the research question: three by using t-tests, and five by using mediation and moderation analysis. The quantitative results are regarded as this study’s core findings, while results from the thematic analysis are meant to supplement the quantitative analyses by providing potential relationships between the constructs.

The results of Analysis 1 indicated no difference between the groups after the intervention, Analysis 2 provided knowledge surrounding the relationship between the three chosen variables, and the thematic analysis provided several useful associations for discussing the relationship between the different constructs. The findings are discussed below.

Quantitative findings

The first null hypothesis (H1b) suggested leadership development in process management has no significant positive relationship with the employee’s rating of the leader’s mastery-oriented leadership. T-test results after the intervention showed no significant differences

between the intervention and control group. The effect size on mastery-oriented leadership remained large both before and after the intervention but decreased. The mean decreased slightly from pre-test to post-test for the intervention group, while the control group had an increase. This null hypothesis is therefore supported, since the results indicate there is no change on the leaders score on mastery-oriented leadership due to leadership development in process management.

The second null hypothesis (H2b) proposed leadership development in process management has no significant positive relationship to the mastery climate in the unit. T-tests results indicate also here that there are no significant differences between the intervention and control group. The effect size for mastery climate was large before the intervention, while it reduced to closer to medium after the intervention. The mean increased slightly from pre-test to post-test for the intervention group, while the control group had a bigger increase. These results indicate that there is no change on the employee's rating of the mastery climate in the unit due to leadership development in process management, and the null hypothesis is therefore supported.

The third null hypothesis (H3b) concerned that leadership development in process management has no significant positive relationship to the employee's self-efficacy. T-test results after the intervention showed no significant differences between the intervention and control group. The effect size for self-efficacy was medium before the intervention and decreased to below medium after the intervention. The means for both groups increased to some degree from pre-test to post-test – with the control group having the biggest increase. This indicate that there is no change on the self-efficacy of the employees in the unit due to leadership development in process management, and this null hypothesis is therefore supported.

The fourth hypothesis is divided in five and concern the relationship between mastery-oriented leadership and self-efficacy (H4a), mastery-oriented leadership and a mastery climate (H4b), a mastery climate and self-efficacy (H4c), the potential mediating role (H4d) and the potential moderating role (H4e) of a mastery climate between mastery-oriented leadership and self-efficacy. Based on the positive and significant correlations between the three variables, H4a-4c are all supported. A mastery climate was not found to mediate the relationship between mastery-oriented leadership and self-efficacy, giving reason to not support H4d. However, a mastery climate was found to have a moderating role on mastery-oriented leaderships relationship to self-efficacy. Simple slopes analysis showed a mastery climate has a moderating role on the relationship between mastery-oriented leadership and self-efficacy at high levels of

mastery climate in the unit (above 1 STD) - indicating that the creation of a mastery climate in the unit can be beneficial for the leader, group, and the individual. H4e is therefore supported.

Summarizing the quantitative analyses, the inferential statistics yielded no significant results, and indicate that there are no significant differences between the intervention group and the control group on either the leader, group, or individual level of analysis. These results are supported by the effect sizes, which all decrease after the intervention. Results from the mediation and moderation analysis imply that mastery-oriented leadership is related to both self-efficacy and a mastery climate, and that the relationship between mastery-oriented leadership and self-efficacy is moderated by high levels of mastery climate in the unit.

Qualitative findings

Results from the thematic analysis indicate process management is associated with similar constructs as the chosen variables. For process management and mastery-oriented leadership the similar associations can be coded as psychological safety and leadership, the association on process management and a mastery climate as cooperation, and the associations on process management and self-efficacy as leadership.

Both mastery-oriented leadership and a mastery climate was directly associated with self-efficacy, while mastery-oriented leadership and a mastery climate were not associated. This supplements the quantitative findings that mastery-oriented leadership and a mastery climate are connected to employee self-efficacy, but not regarding mastery-oriented leadership and a mastery climate being connected.

Learning is found to be associated with all the three variables. This is supported in the literature, emphasizing the importance of learning and development in mastery-oriented leadership, a mastery climate and self-efficacy (Bandura 1986 in Lai, 2021, p. 163; Černe et al., 2014; Lai, 2021, p. 177; Nerstad et al., 2017). The role of autonomy in both mastery-oriented leadership and self-efficacy emerged as important from the interviews, which is in accordance with the literature on the three constructs (Lai, 2021, p. 173; Wang & Netemeyer, 2002).

In sum, these quantitative and qualitative findings have several interesting theoretical and practical implications.

Implications

Theoretical implications

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

Given that the t-tests yielded insignificant results, the theoretical implication from this thesis is based on the thematic analysis and the moderation analysis. These analyses contribute to research on process management and leadership development in two ways: (1) by identifying psychological factors which potentially can connect process management to the leader's mastery-oriented leadership, the mastery climate in the unit, and the employee's self-efficacy, and (2) by increasing knowledge surrounding the relationship between mastery-oriented leadership, a mastery climate and self-efficacy.

This section will first discuss the relationship between process management and each variable, before discussing findings regarding the relationship between mastery-oriented leadership, mastery climate and self-efficacy. Process management and mastery-oriented leadership will be given more room since this is hypothesized to be the independent variable in the relationship between the constructs.

Process management and mastery-oriented leadership

The t-tests did not provide any significant evidence that the leader's process management training led to an increase in the leader's mastery-oriented leadership, or that the units with a leader who participated in the training had an increase in mastery climate or self-efficacy compared to the control group. On the contrary, the intervention group had a decrease in mastery-oriented leadership while the control group had an increase – despite the leader having had no leadership training. Reasons for the insignificant findings of process management on mastery-oriented leadership can be (1) problems with the samples and groups included in the study, (2) the process management training leads to a change on aspects not measured on the items for mastery-oriented leadership, or (3) the training does not contribute to any change on the leader's intra or interpersonal skills relevant to the workplace. All these could potentially lead to a change not being detected, or a change not occurring.

Process management and mastery-oriented leadership were not directly associated by the interviewees, but the qualitative data from the thematic analysis offer indications that there might be a connection between them based on their associations to leadership and psychological safety.

Leadership

Both constructs were associated to leadership by the interviewees. Process management was associated with leadership behaviors and actions related to involvement, participation, and cooperation, while mastery-oriented leadership was associated with challenging tasks, autonomy,

and opportunities for mastery. The statements made by the interviewees on process management can be described as inclusive and facilitating leadership, characterized by cooperation on a group level, while the statements on mastery-oriented leadership are oriented towards challenging tasks, coaching, mastery and development on the individual level. The associations are in accordance with the literature on both process management (Tanggaard, 2016) and mastery-oriented leadership (Lai, 2020, 2021, p. 174).

Based on these associations and the literature, they can both be seen as an expression of the tradition viewing leadership as a social process emerging through the interactions of team members (Bolden, 2011; Gronn, 2000) – in accordance with Northouse's process definition (2018, p. 5). Employee involvement associated with process management (Kaufman, 2001), and mastery-oriented leaders behaviors paying particular attention to employees and providing them with personalized support (Nystrom, 1990) can both be argued to have aspects of participative leadership - entailing an interaction between the leader and employees.

These differences in associations indicate that the interviewees do not perceive process management as the same as mastery-oriented leadership – although this cannot be concluded upon because of the lack of semantic saturation. Based on these differences in associations, there might be different needs for the leaders intra and interpersonal skills, which again would indicate a need for different context and focus within a training aimed at improving mastery-oriented leadership, than a training focusing on process management (Day, 2000). Larger samples in future research could establish a clearer picture of the relationship between the two constructs.

Psychological safety

Process management and mastery-oriented leadership are both associated to statements coded as psychological safety - which can be useful in understanding how the process management training might relate to the leader's mastery-oriented leadership.

Psychological safety can be found in the six leader behaviors of process management, stating the importance of appreciating everyone's contribution, include different perspectives, and using everyone's strengths – which can lead to contribution and value, lack of fear of speaking up and openness to other participant's perspectives (Tanggaard, 2016, p. 51).

Mastery-oriented leaderships connection to psychological safety is supported by a meta-analytic study where the relationship between supportive leadership behaviors is connected to psychological safety (Newman, Donohue & Eva, 2017), as well as a study connecting

transformational leadership to psychological safety (Carmeli, Sheaffer, Binyamin, Reiter-Palmon & Shimoni, 2013). This link has been explained by social exchange theory, where employees supported by their leader want to reciprocate with supportive behaviors themselves – creating psychological safety for the rest of the group (Schaubroeck, Lam & Peng, 2011). Other researchers have explained this with social learning theory, arguing that by listening, providing support, and providing consistent and clear directions, the leader models honest communication to employees and that it is safe to take risks (Hirak, Peng, Carmeli & Schaubroeck, 2012; Liu, Hu, Wang & Lin, 2014).

The six leader behaviors of process management, the relationship between mastery-oriented leadership and psychological safety, and the statements made by the interviewees, gives reason to believe the process management training might provide leaders with the skillset to create psychological safety – potentially influencing ratings of the leader's mastery-oriented leadership. This relationship can be an interesting area of focus in future trainings and research.

Process management and a mastery climate

The t-tests did not provide any significant evidence that the training led to a change in the units' mastery climate compared to the control group. In the thematic analysis, the two constructs were not directly associated but were both associated with cooperation – which is supported in the literature and is one of the reasons why process management was argued to be connected to a mastery climate. Process management's link to cooperation is supported by the six behavioral principles of process management, focusing on collective conversations on group and organizations goals, what works, and using everyone's strengths (Tanggaard, 2016, p. 51), while mastery climate's association with cooperation is supported by research on motivational climates showing the importance of cooperation in achieving good results, knowledge sharing, learning and creativity (Černe et al., 2014; Lai, 2021, p. 177; Nerstad et al., 2017).

The training was hypothesized to impact the different units through change in the leader's mastery-oriented leadership, which then impacts the units' mastery climate and employee's self-efficacy. There are similarities between the behaviors of process management and the values and behaviors encouraged in a mastery climate. Based on the role of mastery-oriented leadership in the creation of a mastery climate (Lai, 2020) and the evidence for leadership developments effectiveness (Lacarenza et al., 2017), it is argued that a leader with training in the inter and intrapersonal skills required to create cooperation, might positively influence a unit's mastery

climate. Leaders with skills in process management might therefore be able to create a mastery climate – potentially making employees rate the leader higher in mastery-oriented leadership.

Process management and self-efficacy

The t-tests did not provide any significant evidence that the leader's process management training led to an increase in the employee's self-efficacy compared to the control group. Process management and self-efficacy was not directly associated in the thematic analysis but were both associated with aspects of leadership. Process management was associated with leadership behaviors related to involvement, participation, and cooperation – which is in accordance with the theory and six behaviors of process management (Tanggaard, 2016, p. 48). Self-efficacy was associated with leadership behaviors related to providing challenging tasks, showing support, and using mastery-oriented leadership. This link to leadership is supported through mastery-oriented leadership's focus on fulfilling the employee's basic needs for self-efficacy (Lai, 2021, s. 174), and Bandura's (1986 in Lai, 2020) four ways for improving self-efficacy.

The training was hypothesized to impact the different units through the leader's mastery-oriented leadership, which then impacts the unit's mastery climate and employee's self-efficacy. Leadership actions like the use of participant's strengths, providing opportunities for employees to experience mastery and accomplishment, and recognition of the employee's work (Tanggaard, 2016, p. 48) can potentially influence the employee's self-efficacy (Ruch et al., 2014). The leaders use of these actions might also cause the employees to rate their leader higher in mastery-oriented leadership.

Another potential common construct between process management and self-efficacy is learning – which was associated to all the three chosen variables, except process management.

Process management and learning

The process management training was associated to learning in the thematic analysis, while process management as a construct was not - despite the importance of learning in the literature, and its link to theory on learning organizations (Singe, 1999 in Tanggaard, 2016, p. 40). However, mastery-oriented leadership, a mastery climate and self-efficacy where all associated to learning and development, which is in accordance with the literature (Ames, 1992; Bandura 1986 in Lai, 2021, p. 163; Černe et al., 2014; Lai, 2020; Ng, 2017 in Lai, 2021, s. 175).

Process management and the three variables connection to learning means this could be a potential way the training could influence mastery-oriented leadership, a mastery climate, and

self-efficacy. If the training provides leaders with skills and knowledge to create a learning environment in the units, this could potentially make the leader more mastery-oriented, contribute to a motivational environment characterized by mastery, which both potentially can improve the employee's self-efficacy – making relevant the relationship between the variables.

Mastery-oriented leadership, mastery climate and self-efficacy

The investigation of the relationship between mastery-oriented leadership, mastery climate and self-efficacy provide useful information on how a leadership development program affecting the leader's mastery-oriented leadership might impact on the group and individual level of analysis. All the three variables are positively related, implying there is a positive relationship between them. The result of Analysis 2 revealed the moderating role of a mastery climate on the relationship between mastery-oriented leadership and employee self-efficacy, and when this moderation occurred. This moderation can be of both theoretical and practical value.

The moderating role of a mastery climate

The results show there is only a significant relationship between mastery-oriented leadership and self-efficacy when there are low (below 1 STD) and average levels of mastery climate in the unit, and no significant relationship when the levels of mastery climate are high (above 1 STD). These results indicate that the creation of a mastery climate by the leader might further facilitate the leader's job in creating self-efficacy in the employees – which again is linked to several positive organizational outcomes (Arciniega et al, 2021; Bakker & van Wingerden, 2021; Federici & Skaalvik, 2011; Judge & Bono, 2001; Sitzman & Yeo, 2013).

The connection between mastery-oriented leadership and a mastery climate found in Analysis 2 show a significant correlation between them (.68), and that mastery-oriented leadership explains 46% of the variance in a mastery climate. While the correlation can be considered strong (Taylor, 1990) and the explained variance moderate (Hair, Ringle & Sarstedt, 2013), both indicate that mastery-oriented leaders might have the possibility to increase the unit's mastery climate. The nature of this moderation implies that if a mastery-oriented leader can create and maintain high levels of mastery climate, then this mastery climate might play a more important role in the employee's self-efficacy than the role of the leader.

This can be seen as characteristics of distributed leadership (Day, Gronn & Salas, 2004), where the leader is able to share some of the leadership tasks related to improving self-efficacy with the team. This might be because units with high levels of a mastery climate are

characterized by support, knowledge sharing, learning and cooperation (Černe et al., 2014; Lai, 2021, p. 177; Nerstad et al., 2017) – where team members naturally take over tasks, help and support each other. Improvement in individual employee's self-efficacy might be a natural consequence of these team behaviors and reduce the time or change the tasks needed by the leader to improve self-efficacy one-on-one with each employee. This will be discussed further as a practical implication in the next section.

These shared and distributed leadership characteristics can be relevant with regards to the leader's use of autonomy, which importance was brought up by several of the interviewees.

Role of autonomy

Autonomy was directly associated with both mastery-oriented leadership and self-efficacy, where it was emphasized to have an important role in both. The statements from the interviewees are all concurrent with the literature - showing the role of autonomy in both self-efficacy (Lai, 2021, p. 170; Wang & Netemeyer, 2002) and mastery-oriented leadership (Lai, 2021, p. 175; Ng, 2017).

The moderating role of a mastery climate between mastery-oriented leadership and self-efficacy, might have an impact on how the leader uses autonomy to challenge and motivate employees. If the role of the leader on employee's self-efficacy becomes insignificant at high levels of mastery climate, this might impact how the leader uses autonomy in the unit. Further investigation of this relationship might be valuable to both theory and practice.

Practical implications

The practical implications of the findings in this thesis are the potential effect leadership development in process management can have on the leader, group, and individual level of analysis. The discussion regarding practical implications of this thesis will focus on (1) the design, implementation, and delivery of the training, and (2) the moderating role of mastery climate on the relationship between mastery-oriented leadership and self-efficacy.

Design, implementation, and delivery of the process management training

The t-tests indicate there are no significant difference between the intervention and control group after the intervention, implying that the leaders' training in process management did not have any significant influence on the units. Lacarenza et al. (2017) meta-analysis of 335 studies on leadership trainings found leadership development lead to positive individual, group, and organizational outcomes, as well as indicating leadership training likely improves outcomes

regardless of the design, implementation, or delivery of the program. The six recommendations for successful leadership development trainings will be used to provide potential reasons for the insignificant findings of the t-tests - besides the limitations of this thesis presented later.

Comparing the process management training to these recommendations reveal that the recommendations of multiple delivery methods, spaced out training sessions and external trainers are present. Based on the scope of this thesis, the further discussion regarding the design, implementation and delivery of the training will therefore surround the three recommendations found not to be present: a needs analysis, feedback, and face-to-face on-site training.

Needs analysis

The training not being based on a needs analysis can be a contributing factor to why there was no significant difference between the intervention and control group, given that identifying the desired outcome and the needs of the organization can make the leadership development training more effective, and result in greater learning and transfer (Lazarenca, et al., 2017).

The lack of a needs analysis might have led the content of the training to be irrelevant for the leaders, and the organizations goals. The scores on the three variables was negatively skewed and relatively high - improving these high scores further might have been unrealistic without a thorough needs analysis to identify the needs of the leader, unit, and organization.

Reflections from the thematic analysis is relevant here. One of the leaders mentioned the usefulness of a tool learned in the training, while the other mentioned not remembering nor using tools. This imply that the lack of a needs analysis before the training might potentially cause the skills and knowledge from the training to be relevant for one leader, and not the other. Another statement supporting the potential benefit for a needs analysis is the reflection surrounding the suitability of process managements in different contexts. This was brought up by one employee, stating process management might not be very suitable in the employee's unit.

Feedback

Lacarenza et al. (2017) found that meta-analytic effect sizes based on studies including feedback in the training better improve learning, reactions, and results than studies of trainings that did not include feedback. These results were insignificant, but still a recommendation.

Some of the activities in the process management training do involve the participants providing feedback to each other, although the effect of this feedback compared to the effect of effectively designed feedback from a trainer is debatable. Because of the number of participants

in the trainings, the trainers do not provide effectively designed feedback to each participant. This lack of feedback from the trainers can potentially cause the feedback to be too sparse and not specific enough to influence the leaders learning and transfer (Hattie & Timperley, 2007).

Face-to-face, on-site training

Findings from the meta-analysis of Lacerenza et al. (2017) indicate on-site face-to-face trainings are more effectful than off-site trainings or virtual trainings. A reason for this is argued to be that virtual trainings provide less opportunities for practice and demonstration.

Pre Covid-19, the trainings usually occurred face-to-face and on-site. Since the trainings in this case occurred in 2020 in the middle of the pandemic, all trainings were virtual. Given that the training was not originally designed to be virtual and given that this provided fewer opportunities for practice and demonstration, this might be a cause for the insignificant results.

Having face-to-face, on-site trainings instead of virtual can be supported from the statement of one of the leaders indicating disturbances or time pressure during the training. This can potentially be avoided if the training is face-to-face and on-site, because this might imply having allocated time for the training, make it easier to be present, and reduce disturbances.

Summarized, despite three of the recommendations being present, the lack of a needs analysis may have caused the training to have the wrong focus based on the needs of the leaders and organization. The lack of effectively designed feedback might further have reduced the transfer of the training to the work environment, and the virtual training might again have negatively affected this - as this is found to provide less transfer than face-to-face trainings. This impaired transfer might impact the observable results of the training. Practical implications from these findings are therefore to (1) conduct a proper needs analysis before the commencement of a leadership training program, which is widely supported by research to be important for the effectiveness and transfer (Day, 2000; Lacerenza et al., 2017; Salas, Tannenbaum, Kraiger & Smith-Jentsch, 2012), as well as (2) including effectively designed feedback and (3) having the trainings face-to-face and on-site (Lacerenza et al., 2017).

A properly designed leadership training can also equip the leader to utilize the moderating role of a mastery climate between mastery-oriented leadership and self-efficacy.

Moderating role of mastery climate

The knowledge of how a mastery climate moderates the relationship between mastery-oriented leadership and employee self-efficacy can be used by both leaders and organization to

improve employee's self-efficacy, along with all the positive outcomes related to it, like improved performance (Arciniega et al, 2021; Judge & Bono, 2001; Judge et al., 2007; Sitzman & Yeo, 2013; Stajkovic & Luthans, 1998) work engagement (Federici & Skaalvik, 2011) and resilience (Bakker & van Wingerden, 2021).

This finding means leaders and organizations can focus on improving the mastery climate in the units - indicate that if the leaders and organizations manage to create high levels of a mastery climate, this might lead to higher levels of self-efficacy. Leadership trainings focused on providing the leader with the intra and interpersonal skills needed for the creation of a mastery climate might therefore be argued to be a good investment, because it can potentially provide the benefits of both a mastery climate (Ames, 1992; Černe et al., 2014; Roberts, 2012 in Lai, 2021, p. 177) and self-efficacy (Arciniega, Servitje & Woehr, 2021; Bakker & van Wingerden, 2021; Judge & Bono, 2001; Federici & Skaalvik, 2011; Sitzman & Yeo, 2013). Process management can be seen as a relevant leadership program for improving the leader's skills in creating a mastery climate - based on the focus on cooperation, involvement, and participation.

On the other hand – if a unit or organization already have high levels of mastery climate, investing time and resources on improving this by the leader attending a training in process management might not provide additional increases. Leaders of units high in mastery climate getting training in process management may provide the leader with new ways of keeping the mastery climate in the unit – but increasing it beyond the already high levels may not be a likely outcome due to the ceiling effect (Persaud & Salkind, 2012, p. 133; Shadish, Cook & Campbell, 2002, p. 138). Investment in process management training in these units may not provide measurable changes. This builds on the importance of a needs analysis, which can uncover the needs of both the leader and organization before the start of a leadership development program.

Limitations

This study has several limitations and concerns which need to be addressed when interpreting the results. The first limitation is regarding the t-tests (Analysis 1). This study has a quasi-experimental design and utilize data from a real-life sample – which means the data is not directly suitable for statistical analysis. The criteria for inclusion meant several of the units had to be excluded. This gave a small sample in both groups, making the generalizability and validity of the results minimal. A larger sample in future research can make it more likely the distribution is closer to normal – making it more fit for parametric analysis (Field, 2018, p. 233).

The second limitation is that the means of the t-tests was relatively high for the intervention group in the pre-test, which can be a reason why there was not a significant increase in the means. The intervals of scales can be unequal, meaning changes can be easier to detect at some points of the scale than others (Shadish, Cook & Campbell, 2002, p. 138). This might be due to a ceiling effect (Persaud & Salkind, 2012, p. 133), implying the items might not have the capacity to measure any further improvement or change on the variables after a certain point.

The quasi-experimental design of Analysis 1 also has several limitations (Shadish, Cook & Campbell, 2002, p. 138): (1) Potential differences in the groups might cause different changes over time and add or interact differently to the leaders' intervention, (2) events can have occurred between the pre-test and post-test which affected the observable means, (3) the variances being homogeneous does not prove the groups are unequal - meaning selection bias must be assumed, and (4) the role of unmeasured variables might have an impact on the observable means.

A fourth limitation is regarding the three chosen variables. Process management has similarities to the variables but is not designed to have an impact on them specifically. Mastery-oriented leadership, mastery climate and self-efficacy was chosen because they were the best suitable measures in the available dataset, not because they were a targeted outcome by the training. Using different measures to investigate a potential change caused by the training might provide different results and be more relevant to both the organization and unit.

Fifth, this study only has four interviewees – two leaders and two employees. Ideally, the number of interviewees should be higher, so that semantic saturation could be achieved. Semantic saturation not being achieved is essential to keep in mind when considering the findings. The fact that the leaders themselves chose which employees who were to participate in the interviews is also a limitation and cause for potential bias in the qualitative data.

Lastly, the Covid-19 pandemic might have negatively impacted the process management training in 2020 and the survey results from 2021. A potential change due to the process management training which would normally be measurable, might have been negatively affected. This could be due to lower transfer of the training, or because the survey scores from 2021 was lower than it would be due to the pandemic – concealing any potential difference between the groups due to the training.

These limitations should be regarded as complementing the recommendations for future research.

Future research

Since this thesis could not find significant evidence to support leadership development in process management leads to an increase in the leader's mastery-oriented leadership, future research is recommended to investigate this. This is relevant in the context of this thesis, since the development of the leader's mastery-oriented leadership due to the process management training was hypothesized to lead to changes in units' mastery climate and employees' self-efficacy. Based on the findings showing mastery-oriented leaderships positive relationship to mastery climate and self-efficacy, future research should investigate if there is a relationship between training in process management and the leader's mastery-oriented leadership.

Second, statements on both process management and mastery-oriented leadership were coded as psychological safety in the thematic analysis. These associations, the constructs link to psychological safety in the literature, and the positive outcomes of psychological safety (Edmondson, 2018), gives reason to investigate the relationship between the three constructs.

Third, process management and mastery climate were both associated with cooperation in the thematic analysis. Based on the theory of process management and mastery climate, cooperation can be argued to be important in the relationship between them. An opportunity for future research is therefore to investigate the relationship between the constructs.

Fourth, learning was found to be associated with mastery-oriented leadership, a mastery climate and self-efficacy. Given the focus on development and learning in the literature on process management, mastery-oriented leadership, mastery climate and self-efficacy, future research is encouraged to broaden the knowledge around how learning and the creation of a learning environment relate to the different variables and constructs.

The fifth recommendation is conducting a more comprehensive quantitative analysis to investigate the relationship between process management and the variables - as well as the constructs which emerged from the thematic analysis. Future research should consider use of more advanced analyses - potentially a SEM analysis, allowing for the investigation of several latent variables (Kline, 2016).

Lastly, there are two ways future studies can improve the qualitative data gathering: (1) Including the leaders of the control groups in future studies might provide better insight and give a more nuanced view of the relationship between leadership development in process management and the constructs, and (2) keeping the design of this qualitative data gathering, but

separating the interviewees in groups of leaders and employees – which could provide new insight into the differences in perceptions of the constructs.

Conclusion

Leadership development has been heavily researched, and its effectiveness has been found in several studies. This study aimed to investigate the relationship between leadership development in process management, the leader's mastery-oriented leadership, the unit's mastery climate and employee's self-efficacy. The process management training was hypothesized to lead to a change in the leader's mastery-oriented leadership, which then influenced the unit's mastery climate and the employee's self-efficacy. The t-tests provided no significant results, indicating no measurable changes due to the training. This were found to potentially be due to (1) the sample size and research design, or (2) the design, implementation, and delivery of the process management training – where the lack of a needs analysis before the training, feedback during the training as well as the training being virtual instead of face-to-face might have had an impact on learning and transfer. Although a link between training in process management and mastery-oriented leadership was not established, the investigation of the relationship between the three chosen variables provided results showing positive relationships between them, as well as revealing how high levels of a mastery climate moderate mastery-oriented leaderships relationship to self-efficacy. Furthermore, the thematic analysis indicate process management has associations to leadership and psychological safety in common with mastery-oriented leadership, cooperation in common with a mastery climate, and leadership in common with self-efficacy.

This study's findings indicate how a leadership development program in process management might impact a leader's mastery-oriented leadership, which again impact on the unit's mastery climate and employee's self-efficacy. The findings provide directions for future leaders, organizations and researchers with regards to (1) improving mastery-oriented leadership, a mastery climate and self-efficacy, as well as (2) the design and potential focus of leadership development programs. Future research will hopefully investigate these relationships and potential effects further.

References

- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of educational psychology*, 84(3), 261. <https://doi.org/10.1037/0022-0663.84.3.261>
- Arciniega, L. M., Servitje, A., & Woehr, D. J. (2021). Impacting the bottom line: Exploring the effect of a self-efficacy oriented training intervention on unit-level sales growth. *Human Resource Development Quarterly*, 32(4), 559-576. <https://doi.org/10.1002/hrdq.21433>
- Arnesen, F. R. (2020). *10-FAKTOR er en kort og avgrenset undersøkelse*. 10-FAKTOR. <https://www.10faktor.no/10-faktor-er-en-kort-og-avgrenset-undersokelse>
- Avolio, B. J., Avey, J. B., & Quisenberry, D. (2010). Estimating return on leadership development investment. *The Leadership Quarterly*, 21(4), 633-644. <https://doi.org/10.1016/j.leaqua.2010.06.006>
- Bakker, A. B., & van Wingerden, J. (2021). Do personal resources and strengths use increase work engagement? The effects of a training intervention. *Journal of Occupational Health Psychology*, 26(1), 20. <https://doi.org/10.1037/ocp0000266>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory* (Prentice hall series in social learning theory). Englewood Cliffs, N.J: Prentice-Hall.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press.
- Bass, B. M. (1985). *Leadership and performance: Beyond expectations*. New York, NY: Free Press.
- Bass, B. M., & Avolio, B. J. (Eds.). (1994). *Improving organizational effectiveness through transformational leadership*. Thousand Oaks, CA: SAGE.
- Bergman, J. Z., Rentsch, J. R., Small, E. E., Davenport, S. W., & Bergman, S. M. (2012). The shared leadership process in decision-making teams. *The Journal of social psychology*, 152(1), 17-42. <https://doi.org/10.1080/00224545.2010.538763>
- Blanca, M. J., Arnau, J., López-Montiel, D., Bono, R., & Bendayan, R. (2013). Skewness and kurtosis in real data samples. *Methodology*. <https://doi.org/10.1027/1614-2241/a000057>
- Bolden, R. (2011). Distributed leadership in organizations: A review of theory and research. *International journal of management reviews*, 13(3), 251-269. <https://doi.org/10.1111/j.1468-2370.2011.00306.x>

- Boneau, C. A. (1960). The effects of violations of assumptions underlying the t test. *Psychological bulletin*, 57(1), 49. <https://doi.org/10.1037/h0041412>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2012). *Thematic analysis*. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology*, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological (pp. 57–71). American Psychological Association. <https://doi.org/10.1037/13620-004>
- Cameron, K. S., Dutton, J. E., & Quinn, R. E. (2003). *Positive Organizational Scholarship. Foundations of a new discipline*. (1st edition.). San Francisco, California: Berrett-Koehler
- Carmeli, A., Sheaffer, Z., Binyamin, G., Reiter-Palmon, R., & Shimoni, T. (2014). Transformational leadership and creative problem-solving: The mediating role of psychological safety and reflexivity. *The Journal of Creative Behavior*, 48(2), 115-135. <https://doi.org/10.1002/jocb.43>
- Černe, M., Nerstad, C. G., Dysvik, A., & Škerlavaj, M. (2014). What goes around comes around: Knowledge hiding, perceived motivational climate, and creativity. *Academy of Management Journal*, 57(1), 172-192. <https://doi.org/10.5465/amj.2012.0122>
- Clarke, C., & Milne, B. (2001). *National Evaluation of the PEACE Investigative Interviewing Course*. London, UK: Home Office.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, N. J: Laurence Erlbaum.
- Cohen, J. (1992). A power primer. *Psychological bulletin*, 112(1), 155-159. <https://doi.org/10.1037/0033-2909.112.1.155>
- Cooperrider, D., Godwin, L., Boland, B., & Avital, M. (2012). The Appreciative Inquiry Summit Explorations into the Magic of Macro-Management and Crowdsourcing. *AI Practitioner*, 14(2).
- Day, D. V. (2000). Leadership development:: A review in context. *The leadership quarterly*, 11(4), 581-613. [https://doi.org/10.1016/S1048-9843\(00\)00061-8](https://doi.org/10.1016/S1048-9843(00)00061-8)
- Day, D. V., Gronn, P., & Salas, E. (2004). Leadership capacity in teams. *The leadership quarterly*, 15(6), 857-880. <https://doi.org/10.1016/j.leaqua.2004.09.001>

- Dweck, C. S. (1986). Motivational processes affecting learning. *American psychologist*, 41(10), 1040. <https://doi.org/10.1037/0003-066X.41.10.1040>
- Edmondson, A. C. (2018). *The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth*. Newark: John Wiley & Sons, Incorporated.
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International journal of qualitative methods*, 5(1), 80-92. <https://doi.org/10.1177/160940690600500107>
- Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th ed.). Los Angeles: SAGE.
- Federici, R. A., & Skaalvik, E. M. (2011). Principal self-efficacy and work engagement: Assessing a Norwegian principal self-efficacy scale. *Social psychology of education*, 14(4), 575-600. <https://doi.org/10.1007/s11218-011-9160-4>
- Fletre, A. M., & Frydenlund, L. (2016) 10-Faktor: Håndbok for planlegging, gjennomføring og av KS' medarbeiderundersøkelse. Oslo: Kommuneforlaget.
- Fredrickson, B. (2010). *Positivitet: kilder til vækst i livet*. Dansk Psykologisk Forlag.
- Fredrickson, B. L. (2013). *Love 2.0: Finding happiness and health in moments of connection*. New York, NY: Plume.
- Fritz, C. O., Morris, P. E., & Richler, J. J. (2012). Effect size estimates: current use, calculations, and interpretation. *Journal of experimental psychology: General*, 141(1), 2. <https://doi.org/10.1037/a0026092>
- Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of management Journal*, 33(1), 64-86. <https://doi.org/10.5465/256352>
- Gronn, P. (2000). Distributed properties: A new architecture for leadership. *Educational management & administration*, 28(3), 317-338. <https://doi.org/10.1177/0263211X000283006>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long range planning*, 46(1-2), 1-12. <https://doi.org/10.1016/j.lrp.2013.01.001>

- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of educational research*, 77(1), 81-112. <https://doi.org/10.3102/003465430298487>
- Henson, R. K. (2001). Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. *Measurement and evaluation in counseling and development*, 34(3), 177-189. <https://doi.org/10.1080/07481756.2002.12069034>
- Hirak, R., Peng, A. C., Carmeli, A., & Schaubroeck, J. M. (2012). Linking leader inclusiveness to work unit performance: The importance of psychological safety and learning from failures. *The Leadership Quarterly*, 23(1), 107-117. <https://doi.org/10.1016/j.leaqua.2011.11.009>
- Høier, M. O., Hersted, L., & Laustsen, L. (2011). *Kreativ procesledelse: nye veje til bedre praksis*. Dansk Psykologisk Forlag.
- Jago, A. G. (1982). Leadership: Perspectives in theory and research. *Management science*, 28(3), 315-336. <https://doi.org/10.1287/mnsc.28.3.315>
- Joffe, H. (2012). Thematic analysis. *Qualitative research methods in mental health and psychotherapy: A guide for students and practitioners*, 1, 210-223.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of applied Psychology*, 86(1), 80. <https://doi.org/10.1037/0021-9010.86.1.80>
- Judge, T. A., Jackson, C. L., Shaw, J. C., Scott, B. A., & Rich, B. L. (2007). Self-efficacy and work-related performance: the integral role of individual differences. *Journal of applied psychology*, 92(1), 107. <https://doi.org/10.1037/0021-9010.92.1.107>
- Kaufman, B. E. (2001). The theory and practice of strategic HRM and participative management: Antecedents in early industrial relations. *Human resource management review*, 11(4), 505-533. [https://doi.org/10.1016/S1053-4822\(01\)00051-1](https://doi.org/10.1016/S1053-4822(01)00051-1)
- Kim, T. K. (2015). T test as a parametric statistic. *Korean journal of anesthesiology*, 68(6), 540. <https://doi.org/10.4097/kjae.2015.68.6.540>
- Kline, R. B. (2016). *Principles and Practice of Structural Equation Modeling* (4th ed.). New York: The Guilford Press.

- Lacerenza, C. N., Reyes, D. L., Marlow, S. L., Joseph, D. L., & Salas, E. (2017). Leadership training design, delivery, and implementation: A meta-analysis. *Journal of Applied Psychology, 102*(12), 1686. <https://doi.org/10.1037/apl0000241>
- Lai, L. (2020). 10-FAKTOR: En innføring. 10-FAKTOR KS'medarbeiderundersøkelse.
- Lai, L. (2021) Strategisk kompetanseledelse, 4. utgave. Fagbokforlaget.
- Liu, S., Hu, J., Li, Y., Wang, Z., & Lin, X. (2014). Examining the cross-level relationship between shared leadership and learning in teams: Evidence from China. *The leadership quarterly, 25*(2), 282-295. <https://doi.org/10.1016/j.leaqua.2013.08.006>
- Lund, T. (2012). Combining Qualitative and Quantitative Approaches: Some Arguments for Mixed Methods Research. *Scandinavian Journal of Educational Research, 56*(2), 155-165. <https://doi.org/10.1080/00313831.2011.568674>
- McCauley, C. D., Moxley, R. S., & Van Velsor, E. (Eds.). (1998). The Center for Creative Leadership handbook of leadership development. San Francisco: Jossey-Bass.
- Nerstad, C. G., Roberts, G. C., & Richardsen, A. M. (2013). Achieving success at work: development and validation of the Motivational Climate at Work Questionnaire (MCWQ). *Journal of Applied Social Psychology, 43*(11), 2231-2250. <https://doi.org/10.1111/jasp.12174>
- Northouse, P. G. (2019) *Leadership: Theory and Practice*. (8th ed.) London: SAGE Publications
- Nystrom, P. C. (1990). Vertical exchanges and organizational commitments of American business managers. *Group & Organization Studies, 15*(3), 296-312. <https://doi.org/10.1177/105960119001500305>
- Ng, T. W. (2017). Transformational leadership and performance outcomes: Analyses of multiple mediation pathways. *The leadership quarterly, 28*(3), 385-417. <https://doi.org/10.1016/j.leaqua.2016.11.008>
- Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human resource management review, 27*(3), 521-535. <https://doi.org/10.1016/j.hrmr.2017.01.001>
- Orvis, K. A., Fisher, S. L., & Wasserman, M. E. (2009). Power to the people: Using learner control to improve trainee reactions and learning in web-based instructional environments. *Journal of Applied Psychology, 94*(4), 960. <https://doi.org/10.1037/a0014977>

- Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum.
- Pearce, C. L., Manz, C. C., & Sims Jr, H. P. (2009). Where do we go from here?: Is shared leadership the key to team success?. *Organizational dynamics*.
<https://doi.org/10.1016/j.orgdyn.2009.04.008>
- Persaud, N., & Salkind, N. J. (2012). *Encyclopedia of research design*. Thousand Oaks, United States of America: SAGE Publications, Inc.
- Peterson, R. A. (1994). A meta-analysis of Cronbach's coefficient alpha. *Journal of consumer research*, 21(2), 381-391. <https://doi.org/10.1086/209405>
- Riou, F., Boiché, J., Doron, J., Romain, A. J., Corrion, K., Ninot, G., ... & Gernigon, C. (2012). Development and validation of the French achievement goals questionnaire for sport and exercise (FAGQSE). *European journal of psychological assessment*.
<https://doi.org/10.1027/1015-5759/a000112>
- Roberts, G. C. (2012). Motivation in sport and exercise from an achievement goal theory perspective: After 30 years, where are we. *Advances in motivation in sport and exercise*, 3, 5-58.
- Ruch, W., Weber, M., & Park, N. (2014). Character strengths in children and adolescents. *European Journal of Psychological Assessment*. <https://doi.org/10.1027/1015-5759/a000169>
- Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological science in the public interest*, 13(2), 74-101. <https://doi.org/10.1177/1529100612436661>
- Schaubroeck, J., Lam, S. S., & Peng, A. C. (2011). Cognition-based and affect-based trust as mediators of leader behavior influences on team performance. *Journal of applied psychology*, 96(4), 863. <https://doi.org/10.1037/a0022625>
- Schyns, B., & Von Collani, G. (2002). A new occupational self-efficacy scale and its relation to personality constructs and organizational variables. *European journal of work and organizational psychology*, 11(2), 219-241. <https://doi.org/10.1080/13594320244000148>
- Shadish, W., Cook, T., & Campbell, D. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.

- Senge, P.M. (1999). *The fifth discipline. The art and practice of the learning organization*. London: Random House Business Books.
- Sitzmann, T., & Yeo, G. (2013). A meta-analytic investigation of the within-person self-efficacy domain: Is self-efficacy a product of past performance or a driver of future performance?. *Personnel Psychology*, 66(3), 531-568. <https://doi.org/10.1111/peps.12035>
- Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological bulletin*, 124(2), 240. <https://doi.org/10.1037/0033-2909.124.2.240>
- Tanggaard, P. (2016). *Prosesslederboka: Lær å lede gode prosesser og møter*. (1st ed., Vol. 6) Oslo: Kommuneforlaget.
- Taylor, R. (1990). Interpretation of the correlation coefficient: a basic review. *Journal of diagnostic medical sonography*, 6(1), 35-39. <https://doi.org/10.1177/875647939000600106>
- Vatten, K. (2021). *Statistisk kvalitetssikring 10-FAKTOR*. 10-FAKTOR. <https://www.10faktor.no/statistisk-kvalitetssikring-10-faktor>
- Wagner III, J. A. (1994). Participation's effects on performance and satisfaction: A reconsideration of research evidence. *Academy of management Review*, 19(2), 312-330. <https://doi.org/10.5465/amr.1994.9410210753>
- Walsh, D., & Milne, R. (2008). Keeping the PEACE? A study of investigative interviewing practices in the public sector. *Legal and Criminological Psychology*, 13(1), 39-57. <https://doi.org/10.1348/135532506X157179>
- Wang, G., & Netemeyer, R. G. (2002). The effects of job autonomy, customer demandingness, and trait competitiveness on salesperson learning, self-efficacy, and performance. *Journal of the Academy of Marketing Science*, 30(3), 217-228. <https://doi.org/10.1177/0092070302303003>
- Zaccaro, S. J., Rittman, A. L., & Marks, M. A. (2001). Team leadership. *The leadership quarterly*, 12(4), 451-483. [https://doi.org/10.1016/S1048-9843\(01\)00093-5](https://doi.org/10.1016/S1048-9843(01)00093-5)
- Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary educational psychology*, 25(1), 82-91. <https://doi.org/10.1006/ceps.1999.1016>

APPENDIX 1: Consent form in Norwegian (anonymized with “XXX”)

SAMTYKKESKJEMA

«Sammenhengen mellom prosessledelse som lederutvikling og kompetanseheving, og faktorer knyttet til medarbeiderundersøkelsen 10-FAKTOR»

Dette er en forespørsel til deg om å stille til intervju hvor formålet er å finne ut hvordan du opplever å vurdere Prosessledelse i kombinasjon med sentrale faktorer fra 10-FAKTOR. I dette informasjonsskrivet gir vi deg informasjon om målene for prosjektet og hva deltakelsen innebærer for deg.

Kontaktpersoner

Lars Vegheim Haraldsen	larsvhar@student.sv.uio.no / 48136099
Cornelia H. B. Wiik	chwiik@student.sv.uio.no / 41284259
Cato A. Bjørkli	cato.bjorkli@psykologi.uio.no

Formål

Dette forskningsprosjektet er en del av masteroppgave i Arbeids- og organisasjonspsykologi ved Psykologisk institutt, Universitetet i Oslo. Formålet er å undersøke hvordan et lederutviklingsprogram i prosessledelse kan generere til økning i motivasjon, mestring og kompetanse innad i en avdeling hvor det er fokus på å utøve prosessledelse som en implementert praksis. Prosessledelse har vist seg å være viktig for å implementere funn fra 10-Faktor, og derfor vil deres bidrag være svært nyttig.

Forskningsspørsmålet vi vil forsøke å besvare i denne undersøkelsen er som følge: «*Kan lederutvikling i prosessledelse føre til endring i skår på faktor xxxx i 10-FAKTOR?*» I denne sammenhengen har vi fått tillatelse til å få tilgang til deres resultater fra 10-FAKTOR fra år 2019 og 2021. Dette er forankret og godkjent av kommunedirektøren i XXX kommune. Vi ønsker å belyse funnene fra 10-FAKTOR med et dybdeintervju av en avdelingsleder og en medarbeider i en avdeling hvor lederen har deltatt på prosessledelse studie. Derfor er dette en forespørsel til deg om å stille til et intervju hvor du blir bedt om å svare på spørsmål knyttet til sentrale deler av vår undersøkelse.

Gjennomføring

Under intervjuet vil vi be deg om å svare på noen spørsmål omkring hvordan du opplever å vurdere samtlige fenomener. Vi vil presisere at det ikke er du som individ som blir testet. Vi ønsker din umiddelbare tanke og at du svarer så intuitivt som mulig.

Dersom vi vurderer at det er behov for en grundigere forståelse av ditt svar kan det kan hende vi supplerer med noen oppfølgingsspørsmål. Dette er kun for å forstå dine tanker og opplevelser bedre. Intervjuet vil ta ca. 1 time å gjennomføre. Det vil bli tatt lydopptak av

intervjuet da dette er hensiktsmessig for videre analyse av data. Lydopptaket vil foregå gjennom en applikasjon som sikrer at lydfilen sendes direkte til UiOs forskningsserver der den blir kryptert og sikret for at ingen uvedkommende får tilgang til datafilen.

Det er frivillig å delta

Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg. Dersom intervjuet skulle bli en belastning for deg vil vi avbryte umiddelbart, og dersom du ønsker å ta pause under samtalen vil vi tilrettelegge for dette.

Fordeler

Ved at du stiller opp som intervjuobjekt bidrar du til at dette forskningsprosjektet når sitt potensial med å utvide den empiriske kunnskapen om 10-FAKTOR og Prosessledelse. 10FAKTOR og Prosessledelse viser seg å være et høyt satsningsområde innad i norske offentlige og private sektorer, noe som potensielt betyr at funnene fra denne studien kan ha en svært praktisk verdi for den norske arbeidslivsmodellen og for organisasjoner/instanser som forsker på samme felt. I tillegg karakteriseres dette forskningsprosjektet av å være et nylig etablert samarbeid mellom studentorganisasjonen Forening for Organisasjonspsykologi (FOP), lederutviklingsselskapet XXX og studenter på master i arbeids- og organisasjonspsykologi ved Psykologisk Institutt (PSI). Derfor vil dette prosjektet også gi praktiske implikasjoner for videre utvikling av masterprogrammet i arbeids- og organisasjonspsykologi ved PSI, UiO.

Taushetsplikt og personvern

Prosjektet vil gjennomføres i henhold til gjeldende lovverk og standarder for behandling av personvernopplysninger. Lydopptak fra intervju vil foregå i “Nettskjema - diktafon -appen”. Dette sikrer at lydfil sendes direkte til UiOs forskningsserver der datafilen krypteres. All informasjon som blir samlet inn under intervjuet, herunder personopplysninger og lydopptak, vil bli behandlet konfidensielt, og slettet etter endt prosjekt. Ingen publikasjoner eller rapporter fra dette prosjektet vil inkludere informasjon som kan identifisere deg. Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet.

- Det er kun de behandlingsansvarlige studentene som har tilgang til dataen vi henter inn fra deg.
- Det vil bli gjort tiltak for å sikre at ingen uvedkommende får tilgang til personopplysningene. Ditt navn og kontaktopplysninger vil erstattes med en kode som lagres på egen navneliste adskilt fra øvrige data. Datamaterialet vil bli lagret på UiOs forskningsserver der den er innelåst/kryptert.

Hva gir oss rett til å behandle personopplysninger om deg?

Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Universitetet i Oslo har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Dine rettigheter

Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke opplysninger vi behandler om deg, og å få utlevert en kopi av opplysningene
- å få rettet opplysninger om deg som er feil eller misvisende
- å få slettet personopplysninger om deg
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger

Informasjon

Hvis du har spørsmål om studien, eller ønsker å vite mer om eller benytte deg av dine rettigheter, ta kontakt med ansvarlige for prosjektet. Kontaktinformasjon finner du øverst i dette skrevet.

Norsk senter for forskningsdata (NSD) har vurdert og godkjent dette forskningsprosjektet.

Hvis du lurer på hvorfor NSD har bestemt dette, eller har spørsmål knyttet til NSD sin vurdering av prosjektet, kan du ta kontakt med:

- NSD – Norsk senter for forskningsdata AS på epost (personverntjenester@nsd.no) eller på telefon: 55 58 21 17.

Med vennlig hilsen

Cornelia Wiik

Lars Vegheim Haraldsen

**Jeg har mottatt og forstått informasjon om prosjektet "Prosessledelse som lederutvikling og kompetanseheving: Grunnleggende antagelser om konseptet og assosiasjoner til faktorer knyttet til 10-Faktor modellen", og har fått anledning til å stille spørsmål. Jeg samtykker til:*

**å delta i intervju*

**at Cornelia Wiik og Lars V. Haraldsen kan gi opplysninger om meg til prosjektet – hvis aktuelt*

**at opplysninger om meg publiseres (uten at min identitet kan gjenkjennes)*

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet:

(Signert av prosjektdeltaker, dato)

APPENDIX 2: Interview guide in Norwegian

Intervjuguide

«Sammenhengen mellom prosessledelse som lederutvikling og kompetanseheving, og faktorer knyttet til medarbeiderundersøkelsen 10-FAKTOR»

Intro for intervju av leder:

Takk for at du ønsket å stille til intervju i vårt masterprosjekt. Som skrevet i samtykkeskjemaet som du har godkjent og undertegnet vil lyd fra intervjuet bli tatt opp og senere transkribert og analysert til bruk i vårt masterprosjekt om prosessledelse og 10-Faktor.

- Det er satt av en time til intervjuet, men vi regner med at det vil ta mellom 30-45 min.
- Dersom intervjuet skulle bli en belastning for deg vil vi avbryte umiddelbart, og dersom du ønsker å ta pause under samtalen vil vi tilrettelegge for dette.
- Vi vil minne om at vi garanterer anonymitet og det vil bli gjort tiltak for å sikre at ingen uvedkommende får tilgang til opplysningene fra dette intervjuet.
- I starten av dette intervjuet vil vi først spørre noen generelle spørsmål om prosessledelse, etterfulgt av noen mer konkrete spørsmål knyttet til enkelte faktorer fra 10-Faktor. Disse faktorene er mestringsorientert ledelse, mestringsklima, mestringstro, prososial motivasjon og indre motivasjon.
- Dette vil gi mer kunnskap knyttet til både prosessledelse og 10-Faktor i en norsk arbeidssetting.
- Høres dette greit ut for deg?
- Flott, da setter vi på diktafonen som skal ta opp lyd fra dette intervjuet - Diktafonen er nå startet.

Da går vi i gang med første del, som skal handle om prosessledelse:

Intervju av leder:

- Fortell oss dine tanker rundt prosessledelse.
Svar:
- Har du fått bruk for eller tatt i bruk metoder eller prinsipper innen prosessledelse?
Svar:

Nå er vi ferdig med første del av intervjuet, og vil gå videre til andre del der vi skal snakke litt om mestringsorientert ledelse, mestringsklima, mestringstro, prososial motivasjon og indre motivasjon.

Mestringsorientert ledelse:

Nå skal vi snakke om mestringsorientert ledelse...

- Fortell oss om lederstilen din i forhold til det.
Svar:

Mestringsklima:

Vi går nå videre for å snakke om mestringsklima...

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

- Fortell oss om mestringsklimaet i din enhet.
Svar:

Mestringstro:

Nå skal vi snakke om mestringstro...

- Fortell om mestringstro i din enhet.
Svar:

Prososial atferd:

Vi går videre til prososial atferd...

- Hvordan er den prososiale atferden i din enhet?
Svar:

Indre motivasjon

Til slutt går vi inn på indre motivasjon...

- Fortell om den indre motivasjonen til arbeidsoppgavene i deres enhet.
Svar:

-
- **Nå er vi ferdig med det vi ønsket å spørre om - er det noe mer du vil legge til?**

Svar:

Avslutning

Vi har nå snakket om prosessledelse og faktorer fra 10-FAKTOR. Dersom det ikke er noe mer du ønsker å legge til så har vi fått svar på det vi lurte på. Hvis vi har behov for det, kan vi kontakte deg igjen ved en senere anledning?

- Da skrur vi av diktafonen - den er nå avslått.

Da ønsker vi igjen å takke for at du satt av tid til å delta i dette intervjuet.

Intro for intervju av medarbeider:

Takk for at du ønsket å stille til intervju i vårt masterprosjekt. Som skrevet i samtykkeskjemaet som du har godkjent og undertegnet vil intervjuet bli tatt opp og senere transkribert og analysert til bruk i vårt masterprosjekt om prosessledelse og 10-Faktor.

- Det er satt av en time til intervjuet, men vi regner med at det vil ta mellom 30-45 min.
- Dersom intervjuet skulle bli en belastning for deg vil vi avbryte umiddelbart, og dersom du ønsker å ta pause under samtalen vil vi tilrettelegge for dette.

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

- Vi vil minne om at vi garanterer anonymitet og det vil bli gjort tiltak for å sikre at ingen uvedkommende får tilgang til opplysningene fra dette intervjuet.
 - I starten av dette intervjuet vil vi først spørre noen generelle spørsmål om prosessledelse, etterfulgt av noen mer konkrete spørsmål knyttet til enkelte faktorer fra 10-Faktor. Disse faktorene er mestringsorientert ledelse, mestringsklima, mestringstro, prososial motivasjon og indre motivasjon.
 - Dette vil gi mer kunnskap knyttet til både prosessledelse og 10-Faktor i en norsk arbeidssetting.
 - Høres dette greit ut for deg?
 - Flott, da setter vi på diktafonen som skal ta opp lyd fra dette intervjuet - Diktafonen er nå startet.
-

Da går vi i gang med første del, som handler om prosessledelse:

Intervju av medarbeider:

- Fortell oss dine tanker rundt prosessledelse.
Svar:
 - Tror du lederen din har fått bruk for eller tatt i bruk metodikk eller prinsipper innen prosessledelse?
Svar:
-

Nå er vi ferdig med første del av intervjuet, og vil gå videre til andre del der vi skal snakke om mestringsorientert ledelse, mestringsklima, mestringstro, prososial motivasjon og indre motivasjon.

Mestringsorientert ledelse:

Nå skal vi snakke om mestringsorientert ledelse...

- Fortell oss om lederstilen til din leder i forhold til det
Svar:

Mestringsklima:

Vi går nå videre for å snakke om mestringsklima...

- Fortell oss om mestringsklimaet i deres enhet.
Svar:

Mestringstro:

Nå skal vi snakke om mestringstro...

- Fortell om mestringstro i deres enhet.
Svar:

Prososial atferd:

Vi går videre til prososial atferd...

LEADERSHIP DEVELOPMENT IN PROCESS MANAGEMENT

- Hvordan er den prososiale atferden i deres enhet?
Svar:

Indre motivasjon

Til slutt går vi inn på indre motivasjon...

- Fortell om den indre motivasjonen til arbeidsoppgavene i deres enhet.
Svar:

Nå er vi ferdig med det vi ønsket å spørre om - er det noe mer du vil legge til?

Svar:

Avslutning

Vi har nå snakket om prosessledelse og faktorer fra 10-FAKTOR. Dersom det ikke er noe mer du ønsker å legge til så har vi fått svar på det vi lurte på. Hvis vi har behov for det, kan vi kontakte deg igjen ved en senere anledning?

- Da skrur vi av diktafonen - den er nå avslått.

Da ønsker vi igjen å takke for at du satt av tid til å delta i dette intervjuet.

Tips til oppfølgingsspørsmål:

- Fortell
- Beskriv
- Gi et eksempel
- Hva tenker du er årsaken til det?
- Forklar litt nærmere om..
- Hvordan opplever du det?
- Hvordan gjorde du det?

APPENDIX 3: Codebook for Thematic Analysis

Kodebok: Transkribering

Generelle regler:

1. Transkriberingen skal være konsekvent blant de ulike transkribentene
2. Budskapet i intervjuene skal bevares så godt det lar seg gjøre.

Spesifikke regler:

1. Alle intervju skal gjennomføres med ordrett transkribering i bokmålsform til tross for respondents dialekt. Det gjelder også ”ja” der respondenten sier ”ja” for å bekrefte et spørsmål.
2. Morfemer og andre språklyder (”mm”, ”eh”) som man opplever til å være positive forsterkere skal utelattes fra transkriberingen.
3. Språklyder og andre lyder (eksempelvis sukking, hosting, latter) blir ikke transkribert.
4. Ingen tegnsetting skal brukes for å skildre for eksempel: intonasjon, følelsesmessige aspekt, lengre pauser, punktum for ny setning, hosting eller andre lyder.
5. Hver setning skal stå på hver sin linje, med unntak hvor meningsinnholdet kan forsvinne ved bruk av regelen.

Symboler:

- Symbolet ”R” blir brukt for å representere respondent.
- Symbolet ”I1” blir brukt for å representere hoved-intervjuer.
- Symbolet ”I2” blir brukt for å representere bi-intervjuer.

Anonymisering:

- Navn som blir nevnt i intervjuet blir anonymisert til ”NAVN”.
- Spesifikke stedsnavn blir anonymisert til ”STEDSNAVN”.
- Spesifikke avdelinger blir anonymisert til ”AVDELING”.
- Spesifikke organisasjoner blir anonymisert til ”ORGANISASJON”.
- Det forekommer ikke endring når respondent omtaler en annen avdeling f.eks. i forbindelse med organisatorisk prosedyre. (Hvor det ikke fremkommer sensitive opplysninger)