GRA 19502

Master Thesis

Leader Self-awareness – a Key to Improve Trust?

The Mediating Role of Self-other Rating Discrepancy in the Relationship Between Open-to-Learning Conversations and Relational Trust

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Start:	02.03.2017 09.00
Finish:	01.09.2017 12.00

Master Thesis

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Date of submission:
01.09.2017

Campus:
BI Oslo

Examination code and name:
GRA 1953 Master Thesis

Supervisor:
Ide Katrine Birkeland

Programme:
Master of Science in Leadership and Organizational Psychology

Acknowledgement

The Master Thesis has been a very exciting and enriching journey for us.

First and foremost, we would like to extend our gratitude and appreciation to our supervisor, Assistant Professor Ide Katrine Birkeland, for her professional guidance, constructive feedback, and genuine interest throughout the process of writing our Master Thesis. We could not have done it without you!

In addition, we would like to thank Trieu Tran and Kingsley Dankwah for their proof-reading, critical eye, and support. You guys rock.

We also highly appreciate the love from our families and friends. Thank you for your effort in pushing us forward.

Last, but not least, we would like to thank each other for the mutual support and caring. Our team work has been beyond great, where we have cherished each other's strengths and improved our weaknesses. And even though it has been challenging at times we have managed to remain faithful to our goal and make the best out of it.

Oslo, 30th of August 2017

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Thy Hoai Thi Nguyen   Rikke Kalsveen

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Abstract

Purpose: This study explored the relationship between workshops in Open-to-Learning Conversations (OTL) and relational trust, as well as the mediating role of leader self-awareness, measured by self-other rating discrepancy.

Methodology/ approach/ design: A classic experimental design was applied to evaluate the effect of a workshop in OTL, evaluated by online surveys. A pre- and post-test was conducted, including both a treatment group (those who attended the workshop) and a control group (those who did not attend the workshop). The study was conducted among 49 school leaders and 73 teachers in Norwegian schools, over a 4-month time span. Complete connections used for mediation analysis consisted of 24 school leaders and 49 teachers.

Findings: The results indicate rating discrepancy to be a significant mediator between OTL and relational trust, but no significant effect of OTL training on rating discrepancy nor relational trust was found. Possible explanations for this is discussed.

Originality/ value: Our results indicate that leaders who are self-aware create stronger trusting bonds with their employees. The results also indicate that the effect OTL training has on trust, goes through self-awareness. Thus, there are indications that OTL is a workshop in self-awareness. If so, OTL training is not school specific, and have the possibility of being used outside the school sector to foster trust and organizational effectiveness.

Keywords: self-awareness, self-other rating discrepancy, relational trust, Open-to-Leaning Conversations, leadership, learning.

Introduction

Just as in social life, human relations are critical in organizational life (Altinkurt & Yilmaz, 2012). Particularly, in schools, various individuals and groups are dependent on each other to reach educational goals and run an effective school (Robinson, Hohepa, & Lloyd, 2007; Tschannen-Moran & Gareis, 2015). Studies indicate that in schools where leaders promote and participate in teacher learning and development, both social and academic student outcomes are improved (Robinson, Lloyd, & Rowe, 2008). Thus, the closer school leaders get to the core business of teaching and learning, the greater the possibility they will make a difference to students (Robinson et al., 2007). Furthermore, what is found to be crucial for this type of leadership is relational trust between leader and teacher (Bryk & Schneider, 2003; Robinson et al., 2007). In all types of organizations, trust between leader and subordinate is related to increased confidence in the accuracy of information given by the leader, a greater eagerness to interact with the leader, and a greater satisfaction in communication with the leader (Roberts & O'Reilly, 1975). Consequently, a high level of trust increases student achievement and facilitates for organizational commitment and citizenship behavior among employees (Bryk & Schneider, 2002; DiPaola & Tschannen-Moran, 2001; Ozag, 2006; Yilmaz & Taşdan, 2009).

Robinson, Hohepa and Lloyd (2007) argues that one of the most important determinants for the development of relational trust, is the leader's competence to deal with difficult problems in a respectful manner. Further, it is argued that the essence in developing this competence lies in a leader's ability to be involved in open-to-learning conversations (OTL) (Robinson, 2009). In this paper, we investigate whether educating leaders in such conversations is an effective way to improve trust in organizations. Moreover, we explore the process of why such training may or may not work.

The purpose of OTL is to manage dilemmas within the organization (Robinson, 2009). A dilemma can be defined as something that "arises when one is confronted with decision alternatives in which any choice sacrifices some valued objective in the interest of other objectives" (Robinson, 2009, p. 35). Leaders can for instance experience a dilemma between the wish to change agenda and to

protect their relationships with employees (Argyris & Schön, 1974). When dilemma confrontations are being avoided by leaders, it makes it difficult for the leader to develop a culture of trust and respect in their school (Cardno, 2007; Robinson, 2009). The OTL framework is developed for the purpose to reduce this risk and facilitate trusting relationships. OTL conversations can facilitate relational trust in the way that they uncover dilemmas, detect and challenge people's assumptions in order to deal with conflicts in a constructive manner (Robinson, 2009).

Our second focus in this paper is to investigate how OTL actually increases trust. Gillespie and Mann (2004) found that trust in the leader is strongly associated with leader effectiveness. Further, Sinnema and colleagues (2015) have pointed out how one important characteristic of effective leaders is high self-awareness, which may be described as the discrepancy between self-other ratings of the leader. Effective leaders are familiar with how they are perceived by others, because they have been open to their feedback, and absorbed it to be a part of their self-perception (Sinnema et al., 2015). Consequently, self-aware leaders have been seen to foster trust between leader and follower, as their behavior lays the ground for more authentic relationships, which are characterized by openness, trust, transparency, guidance, and follower development (Atwater & Yammarino, 1997; Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Halverson et al., 2005; Walumbwa, Christensen & Hailey, 2011; Wang & Bird, 2011**;** Neider & Schriesheim, 2011).

The intended contributions of this paper are threefold. Firstly, the study explores the process of how OTL workshops impact relational trust through self-other rating discrepancy. Although there have been studies that have looked into the discrepancy between leaders' and subordinates' perception of principal effectiveness (e.g. Sinnema et al., 2015), there have not been any studies that have investigated this discrepancy as a potential mediator in the relationship between OTL training and relational trust (e.g. Sinnema et al., 2015; Robinson, 2009). Thus, the main contribution of this research is to increase knowledge about how OTL workshops are related to self-awareness, and whether it will, in turn, be a useful facilitator of relational trust in the workplace. Secondly, this study may also

provide some useful insights into how OTL training transfers to the leader's everyday work life. More specifically, we investigate whether a change after the workshop exists, in which will provide us knowledge whether the leaders actually apply what they have learned at the workplace to improve the relationship between them and their followers. Thirdly, from a practical perspective, we believe that implications that are drawn from the OTL workshop can be relatable beyond the educational sector. As dilemma management and rating discrepancy issues appears regardless type of business or sector, it could be reasonable to apply OTL as a general framework to improve organizational effectiveness (Cardno, 2007; Sinnema et al., 2015).

Drawing on previous studies, we suggest that OTL training is likely to enhance relational trust between leader and follower when accompanied by self-awareness. Pre -and post-tests of school leaders participating in OTL training and their employees, provide the basis for analysis in our study. Our research question is:

To what extent does self-other rating discrepancy mediate the relationship between OTL and relational trust?

Theory and Hypotheses

Instructional and Collegial Leadership

The importance of leadership for organizational outcomes is a well-known research area (e.g. Karadağ, 2015; Yukl, 2013). In particular, leadership styles among school leaders play a significant role in school-related outcomes, such as teachers' motivation and well-being, and student engagement (Eyal & Roth, 2011; Mulford, Silins, & Leithwood, 2004). Leadership is often defined as "the ability to enlist, mobilize, and motivate others to apply their abilities and resources to a given cause" (Eyal & Roth, 2011, p. 256). Among various leadership styles, instructional and collegial leadership represents two important, but different, aspects of effective school systems (Hallinger & Murphy, 1985; Tschannen-Moran & Gareis, 2015). The term *instructional leadership* occurred as a consequence of the *Effective School* movement in the 1980s, where the supporters

argue that the principal plays a key role to obtain a productive school (Hallinger & Murphy, 1985). The primary focus of instructional leadership is the improvement of teaching and learning. Moreover, *collegial leadership* also seems to be related to faculty trust and improved school performance (Tschannen-Moran & Gareis, 2015). Collegial leaders are perceived as being supportive, with a focus on teacher's participation and welfare (Eyal & Roth, 2011; Tschannen-Moran & Gareis, 2015). Hence, building on these two views, this paper is based on the idea that leadership can influence the effectiveness of school systems.

There have been developed several models since Hallinger and Murphy first introduced instructional leadership it in 1985 (Alig-Mielcarek & Hoy, 2005). However, there are three essential elements that iterate in the models: 1. Defining and communicating goals; 2. Monitoring and providing feedback on the teaching and learning process; and 3. Promoting and emphasizing the importance of professional development (Alig-Mielcarek & Hoy, 2005). In other words, instructional leadership moves beyond the administrative tasks and focuses on the improvement of teaching and learning, that is, curriculum and instruction (Hallinger, 2005; Robinson, 2009). This type of leadership is also known as "learning leadership", as it has shown to improve development in educational institutions (Editors, 2014). Furthermore, the main desired outcome of this type of management is to enhance learning for the students (Le Fevre & Robinson, 2015; Robinson, 2007). Studies in New Zealand have shown that promoting and participating in teacher learning and development is associated with valued student outcomes, both social and academic outcomes (Le Fevre & Robinson, 2015; Robinson, 2007). However, in order to have an effective leadership policy, one is dependent on support from all parts; principal, teachers and administration (Editors, 2014). This emphasizes the importance of the principal's engagement in teaching, which can take place in conversations with the teachers. Moreover, conversations about the quality of teaching are believed to increase relational trust, which in turn is likely to bring about improvement (Le Fevre & Robinson, 2015). Based on these findings related to instructional leadership, it seems as though principals play a crucial role in order to implement effective school systems, and that teachers' involvement is important to obtain valued student outcomes.

Although focusing on improving curriculum and instructional activities are important to enhance students' performance, putting emphasis on inter-relationships between principals and teachers also seems to be beneficial for facilitating trust in schools (Handford & Leithwood, 2013; Tschannen-Moran & Gareis, 2015). Leaders with a collegial leadership style are perceived by their teachers as being supportive and egalitarian, focusing on the welfare of teachers. Such leaders are open to suggestions and questions from their subordinates, and emphasize a shared vision and professional orientation (Eyal & Roth, 2011; Tschannen-Moran & Gareis, 2015; Yukl, 2013). This approach to decision making is seen as decentralized and friendly, which has shown to be related to relational trust (Handford & Leithwood, 2013; Tschannen-Moran & Gareis, 2015).

Not only have both instructional and collegial leadership been shown to be positively related to school performance and relational trust (Eyal & Roth, 2011; Tschannen-Moran & Gareis, 2015), but more importantly, studies have proved that a greater impact on teaching and learning is achieved when these leadership styles complement each other. Therefore, we may argue the importance of maintaining a balance between instructional activities and relation-enhanced actions. Leaders that are perceived as only competent are not enough to facilitate a successful learning and trust-based culture, they also need to be relational-focused, open, and show their subordinates respect (Handford & Leithwood, 2013).

Trust

Schools consist of individuals and groups dependent on each other, both within each school as well as in the larger school system. Trust is highlighted as an important facilitator for effective interactions and communication within such an organization (Altinkurt & Yilmaz, 2012; Tschannen-Moran & Gareis, 2015). Rousseau and colleagues (1998, p.395) defined trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another". Being vulnerable implies that something meaningful is at stake, and thus involves taking risk (Mayer, Davis & Schoorman,

1995). Trust is not understood as equal to taking risk, but rather as the *willingness* to do so (Mayer et al., 1995). Filstad and Blåka (2007) points out the importance of establishing a learning relationship that promotes trust in knowledge-creating dialogues. In that way, both parties have the courage to be vulnerable, given that respectful behavior is shown to take care of that vulnerability (Filstad & Blåka, 2007).

Educational outcomes in schools are seen related to the collective trust between various actors in the respective school (Tschannen-Moran, 2014b; Zeinabadi, 2014). A situation where principals, teachers, students, and parents trust each other foster a climate for success (Bryk & Schneider, 2003; Tschannen-Moran & Gareis, 2015). Further, when teachers trust their leader, they show a stronger confidence in the accuracy of information given by their leader, a greater eagerness to interact with their leader, and a greater satisfaction in communication with their leader (Roberts & O'Reilly, 1975). Consequently, school leaders who create trusting bonds work better together with teachers when facing challenging problems (Chughtai & Buckley, 2009; Forsyth & Adams, 2014; Handford & Leithwood, 2013; Notman & Henry, 2011; Salfi, 2011; Tschannen-Moran, 2013, 2009; Zeinabadi, 2014). Contrary, a lack of trust between principal and teacher can lead to both parties seeking to minimize their risk and vulnerability by engaging in self-protecting actions. This may consequently end in disengagement from the educational process, and will thus negatively affect student learning (Bryk & Schneider, 2002).

Factors Important for Trust Between Principal and Teacher

A principal works with, for, and through teachers to lead the school and to reach shared educational goals (Tschannen-Moran & Gareis, 2015). In all their activities, a principal is always under scrutiny. Teacher's interactions with, and observations of, the principal creates the ground for judgment of the degree of trust they have for their leader (Tschannen-Moran & Gareis, 2015). With support from various studies (e.g. Handford & Leithwood, 2013), Tschannen-Moran and Gareis (2015) state that judgments on whether the principal is trustworthy or not, are based on how teachers perceive the principal's benevolence, honesty, openness, competence and consistency. These factors correspond with the factors

Bryk & Schneider (2003) pointed out as important for trust in schools, namely respect, personal regard, competence in core role responsibility, and personal integrity.

Benevolence is explained as a generalized spirit of goodwill and a readiness to extend oneself in the support of the well-being of others. In addition, benevolence can also comprise a person's willingness to eschew personal gain if it could harm the other part (Tschannen-Moran & Gareis, 2015). In correspondence with this, Bryk and Schneider (2003) describes *personal regard* as the willingness of participants to extend themselves beyond the formal requirements of their position, for example a school leader reaching out to parents, children, and teachers beyond what is required of him or her. As leader modelling is important to create a healthy climate (Isaksen & Akkermans, 2011), the principal may set the norms through modelling wanted behavior and thus create a more open and trusting climate (Bryk & Schneider, 2003).

How *honest* teachers perceive the principal to be refers to both the traditional view of honesty, namely if the principal is telling the truth, and in addition entails the perceived integrity of the principal (Butler, 1991; Mayer et al., 1995). Factors like consistency in the principal's previous actions, credible references about the principal from outsiders, belief of the principal's sense of justice, and the notion of the coherence between principal's words and action, all influence to what degree he or she is seen as having integrity (Butler, 1991; Mayer et al., 1995). A belief in the principal's sense of fairness and authenticity is underlined as important factors for trust. Thus, a principal who is viewed as being him or herself by truthfully representing a set of beliefs and feelings, and owning up to shortcomings is seen as more trustworthy. Bryk and Schneider (2003) exemplifies this by pointing out that a principal should be guided by what is best for the children, and if his or her actions are not viewed as being in correspondence with that moral, it may decrease relational trust from teachers, even though they see the principal as a nice person. In addition, a principal who is perceived as hiding something may cause teachers to be less willing to show vulnerability, and thus put less trust in the principal (Tschannen-Moran & Gareis, 2015).

Another way in which school leaders gain the trust of teachers is by being *open* with them through sharing information and delegating responsibilities important for school management (Tschannen-Moran & Gareis, 2015). By including teachers in decision-making, principals can facilitate for teachers feeling valued (Tschannen-Moran & Gareis, 2015). In self-determination motivation theory (SDT), support for autonomy in the work environment is seen as a strong determinant for intrinsic motivation (Eyal & Roth, 2011). When employees are intrinsically motivated, they perform an activity because the activity in itself is interesting, and they do so out of free will (Eyal & Roth, 2011). Deci, Connell, and Ryan (1989) found that managers who were trained to be more supportive of autonomy, that is, understanding subordinates' perspectives, encouraging their initiatives, and providing feedback in an autonomy-supportive rather than controlling way, influenced subordinates to become more trusting of the organization, and subordinates also displayed more positive work-related attitudes. Further, when teachers, in addition to being involved in decisions, also have influence over organizational decisions that affect them, conditions that facilitate mutual trust between teachers and principals become unambiguous (Handford & Leithwood, 2013; Mitchell et al., 2011; Tschannen-Moran, 2001). This is especially prominent when issues call for teacher's expertise, such as decisions related to instruction or student learning and wellbeing (Bryk & Schneider, 2002). Zand (1997) pointed out how teachers who trust the principal are more inclined to communicate clearly and completely about problems, and are more prone to engage in problem-solving (Tschannen-Moran & Gareis, 2015).

To what degree teachers trust their principal, also depends on the *competence* of the principal in their position as school leaders (Bryk & Schneider, 2003; Sinnema et al., 2015; Tschannen-Moran & Gareis, 2015). Competence is vital to trust, as people don't listen to or depend upon a leader whose abilities they don't respect (Mayer et al., 1995). The role as a school leader is a complex one, comprising responsibilities such as communicating a convincing vision for the school, coaching employees to align their competence with this vision, modeling wanted behaviors of teachers, managing the school's resources effective and fair, as well as intervene in conflicts that arises (Tschannen-Moran, 2014). Thus, an important aspect of the principal role in leading school improvement is to balance the task dimension and the collegial relationship dimension of leadership (Sinnema et al.,

2015; Tschannen-Moran, 2014). Too much weight on any of the two can affect the amount of trust teachers feel towards the principal. However, when principals show the ability to successfully manage their job, teachers are more prone to trust him or her (Bryk & Schneider, 2003; Mayer et al., 1995; Sinnema et al., 2015; Tschannen-Moran & Gareis, 2015).

Lastly, the *consistency* of which the principal shows benevolence, honesty, openness, and competence, is seen to affect to what degree teachers see them as trustworthy (Butler, 1991; Tschannen-Moran & Gareis, 2015). Consistency and reliability are closely related terms (Handford & Leithwood, 2013). Both Tschannen-Moran (2004a) and Hoy (1992) define reliability as, "[...] being dependable, demonstrating commitment, having dedication, being diligent" (Tschannen-Moran, 2004a, p. 39). The absence of reliability is a good reason for withholding trust, as trust is "to behave as though the future was certain" (Luhmann, 1979, p. 10, cited in Handford & Leithwood, 2013). Consequently, when teachers observe the principal's actions eliciting trust as consistent over time and across settings, they are more likely to see them as trustworthy (Butler, 1991), as consistency and reliability contribute to uncertainty reduction (Mayer et al., 1995).

Self-awareness and Relational Trust

To some degree, trust depends on expectations individuals have of one another, based on formal roles and informal norms (Tschannen-Moran, 2014a). As a consequence of the hierarchical nature of the school system, principals exercise a substantial amount of authority over teachers and staff members (Tschannen-Moran, 2014a). According to Foucault (1979, 1980), power forms and legitimates knowledge, in the same way as knowledge promotes the exercise of power (Heizmann, 2011). The two are mutually established and dynamically influence social relations (Heizmann, 2011). Power is defined as "an individual's ability to guide other's behaviors in an arbitrary way (Greenberg & Baron, 1993; Pfeffer, 1992)". As such, power is a relational term that does not make sense without interactions between people (Altinkurt & Yilmaz, 2012). When power is divided unevenly, such as between leader and employee, it is the responsibility of the part

with more power to take the initiative to build and sustain trusting relationships (Tschannen-Moran, 2014a).

To understand the power relations that may exist in a school, and may therefore influence communication and decision-making, it is important to understand the school as part of a larger system. The principal of the school is more like a middle manager than a top manager. Constrained by municipality and governmental budgets, rules and regulations, the school leader is likely often torn between directions given from above and local needs and wishes in the respective school (Myhre, 2010). Møller (2004) describes the various expectations directed towards the principal, on a macro level (municipality and government) and on a micro level (the specific school and its culture), as consisting of cross-pressures and loyalty conflicts. School owners (municipality) on the one side, sees the principal as part of a hierarchy, expecting him or her to implement decisions passed on a superior level (Myhre, 2010). Conflicting to this, teachers in the respective school expect respect according to their professional autonomy (Myhre, 2010). As a consequence, conflicts between expectations from school owners and teachers can create difficulties and dilemmas for the principal and lead to unwanted outcomes for the school.

Tarter and Hoy (1988) found that to facilitate trust principals needed to protect teachers from unreasonable community demands, and also influence superiors without selling out teachers. In accordance with that, *how* the school leader chooses to handle conflicts and dilemmas that may arise has been highlighted as crucial for developing and maintaining relational trust between leaders and employees in schools (Robinson, 2009; Robinson et al., 2007). A focal point in handling dilemmas is communicating openly and honestly, and exploring other perceptions than one's own (Cardno, 2007; Robinson, 2009). Bass and Yammarino (1991) pointed out that a leader's lack of self-knowledge might influence this, by leading to inappropriate behavior and incorrect assumptions related to their subordinates. Sinnema and colleagues (2015) stated that situations where principals overrate themselves compared to how their employees rate them, could signal an interpersonal climate where the principal's positional power or personality has come in the way for an open flow of information and feedback,

both upwards and downwards in the hierarchy. Bass and Yammarino (1991) has further proposed leadership development and training that promote a more precise insight into one's own leadership behavior to facilitate for a lower gap between self and other ratings of leader effectiveness.

Self-awareness can be defined as "one's awareness of, and trust in, one's own personal characteristics, values, motives, feelings, and cognitions" (Ilies, Morgeson & Nahrgang, 2005, p.377). Particularly, leader self-awareness has shown to increase relational trust between leader and employee, and promote leader effectiveness (Neider & Schriesheim, 2011; Walumbwa, Christensen & Hailey, 2011; Wang & Bird, 2011). Hence, it is arguable that increased self-awareness is beneficial for creating relational trust. One typical way to measure self-awareness, is by studying rating discrepancy, i.e. comparing self- and other-ratings (Brett & Atwater, 2001; Fleenor, McCauley & Brutus, 1996; Sinnema et al., 2015). People with higher self-awareness, or those with in-agreement ratings, are considered as more effective and trustworthy, and reality shows that leader's and subordinate's perception of leader effectiveness are often misaligned (Brett & Atwater, 2001; Sinnema et al., 2015). In addition, employee assessment of leader effectiveness has several times been seen to be more aligned with actual leader effectiveness, than has leader self-assessment (Bass & Yammarino, 1991). Consequently, it has been suggested that increased level of self-awareness, or reduction of rating discrepancy, may have positive outcomes for leader effectiveness and relational trust (Sinnema et al.,2015).

Sinnema and colleagues (2015) studied the discrepancy between teachers' and principals' perceptions of principal effectiveness. According to the study, when principals underestimate themselves, leaders are considered by teachers as effective leaders (i.e. positive discrepancy). However, when principals overestimate themselves, they are rated as less effective by teachers (i.e. negative discrepancy). In addition, Fleenor and colleagues (2010) have shown that in-agreement raters are more effective leaders than individuals who underestimate or overestimate their ratings. Thus, Fleenor and colleagues (2010) concluded that in-agreement raters have a higher degree of self-awareness than other raters. Leaders with a high level of self-awareness are familiar with how they are perceived by others, due to their openness to feedback (Sinnema et al., 2015). They have taken

in feedback from others to be a part of their self-perception (Sinnema et al., 2015). In addition, self-awareness has shown to help leaders set more realistic expectations and goals, which increases the chance for positive employee and organizational outcomes (Atwater & Yammarino, 1997; Halverson et al., 2005).

Based upon the discussion above, we suggest self-other rating discrepancy to be related to relational trust. More specifically, both positive and negative discrepancy (i.e. over-raters and under-raters) is negatively associated with relational trust. Thus, we propose and test the following hypothesis:

Hypothesis 1 Self-other rating discrepancy is negatively related to relational trust between leaders and followers.

Leader-Member-Exchange and Liking

As noted, previous studies suggest that when teachers rate school leaders as more effective than the school leaders actually are, it means that they trust their leader. But at the same time, people are known to often attribute a person favorable characteristics if they like that person (Liden & Maslyn, 1998; Nisbrett and Wilson, 1977). Thorndike (1920) explained this as over-rating of special features with a halo belonging to the individual as a whole. This is therefore often referred as "the halo effect". The halo effect has historically been perceived as a rating error, negatively related to rating accuracy (Nathan & Tippins, 1990). Previous studies also suggest that subjective performance ratings may promote favoritism, which provide inaccurate evaluation (Yustina & Gudono, 2016). Therefore, it is relevant and important in this study to address the halo effect, as teachers may rate their leaders according to their personal liking of them, unrelated to the leader's actual effectiveness (Liden & Maslyn, 1998; Sinnema et al., 2015).

In leader-member-exchange theory (LMX) it is highlighted how leaders develop different relationships, or *exchange* differently, with different employees (Liden & Maslyn, 1998). These relationships are said to vary from formal work-relationships, to relationships based on mutual trust, respect, liking, and reciprocal

influence (Liden & Maslyn, 1998). Dienesch and Liden (1986) referred to this dimension of LMX as affect, and defined it as "the mutual affection members of the dyad have for each other based primarily on interpersonal attraction rather than work or professional values" (Dienesch & Liden, 1986, p. 625). Mutual liking between the leader and employee is believed to influence the development of LMX's in shifting degrees (Dienesch & Liden, 1986; Liden & Maslyn, 1998). Some relationships between leader and employee may even be dominated by affect, for instance when a school leader and a teacher spend time together simply because they enjoy each other's company. Not surprisingly, friendships often blossom through interactions at work (Liden & Maslyn, 1998). More specifically, previous research has uncovered affect as an important factor for LMX development (Dockery & Steiner, 1990; Liden, Wayne, & Stilwell, 1993). Liden and colleagues (1993) found that affect was a better predictor of LMX than the leader's assessment of employee performance. In addition, other studies have shown that supervisor ratings of employee performance have been affected by liking (e.g Tsui & Barry, 1986; Wayne & Ferris, 1990). These findings tell us that affect and liking between leader and follower might influence how they choose to assess one another, which should be taken into account when measuring leader effectiveness by self-other rating.

Open-to-Learning Conversations

Robinson's communication model *Open-to-Learning Conversations* has its origin in Chris Argyris' work on double-loop and single-loop learning. According to Argyris (1993), both learning types are necessary in all organizations. Single-loop learning corrects error by changing routine behavior, so that the organization can carry on its current policies or achieve its current objectives (Argyris, 1993). But in a dynamic environment, organizations cannot simply rely on this type of learning if it is to be effective and keep up to speed. Argyris points out that by opening up more of the inside of our minds to the people around us, we may improve our own effectiveness, enhance the quality of the relationships we enter into, and be able to renew the organizations and social systems we inhabit (Anderson, 1997). Organizations have to be ready to change to meet the demands of the environment, and consequently need to learn by correcting errors through examining their underlying values and policies (Argyris, 1993). Argyris (1993)

stresses that this kind of learning, namely double-loop learning, is unusually found in organizations, because it requires leaders who constantly model it and honour it – leaders who are *leading-learning*.

Professor Viviane Robinson has conducted many studies on school leadership (e.g. Robinson, 2001; Robinson, 2002; Robinson, 2006) and based on her work and the work of Argyris and Schön (1974), she developed a concept called *Open-to-Learning Conversations* (OTL) (Robinson, 2009). OTL is a practical framework that focuses on how people can learn about the quality of their thinking and the information that they use to guide their perception of *what* is happening in the world around them, *why* it is happening, and *how* to respond to it (Robinson, 2009). Open-to-learning communication is prominent when instead of assuming validity of one's own views and imposing these on others, one seeks ways to confirm and make better the quality of one's decision making (Robinson, 2009). By educating leaders on how to communicate in such a way, trust, knowledge sharing, and collegial leadership could be strengthened. In addition, the three elements of instructional leadership: 1. Defining and communicating goals; 2. Monitoring and providing feedback on the teaching and learning process; and 3. Promoting and emphasizing the importance of professional development, could thus better be managed (Alig-Mielcarek & Hoy, 2005). Consequently, OTL conversations could influence the overall effectiveness of the school system.

Based on the above reasoning regarding learning, self-awareness, and relational trust, we therefore make the following hypotheses:

Hypothesis 2   Educating leaders within the Open-to-Learning framework increases relational trust between leaders and followers in respective schools.

Hypothesis 3   Educating leaders within the OTL workshop decreases the self-other rating discrepancy between leader and followers in respective schools.

Combining hypotheses 1, 2, and 3, we further propose a mediation model (see Fig. 1), such that OTL training and self-other rating interactively influence relational trust. Thus, we hypothesize that:

Hypothesis 4   The relationship between leaders who attend the OTL workshop and relational trust is mediated by self-other rating discrepancy.
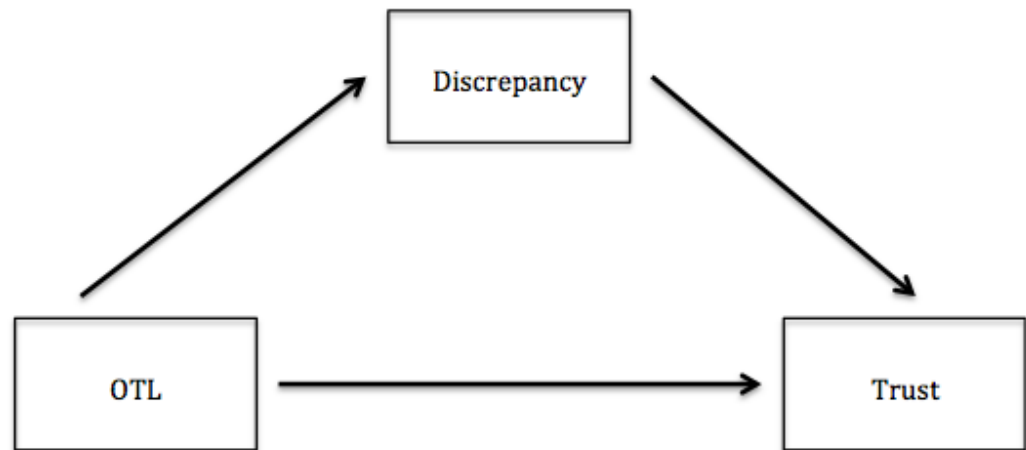
Figure 1: Discrepancy as a mediator between OTL and Trust

Method

Design

This study was designed as a classic experiment, and quantitative data was collected through the online survey system Qualtrics before and after the workshop of OTL. As previous research has identified significant relationships both between OTL training and trust, as well as between self-other rating discrepancy and trust, we had a clear theory on how these relationships would reveal themselves, leading to our hypothesis through deductive reasoning (Bryman & Bell, 2011). Deductive reasoning refers to a top-down approach, working from the more general towards the more specific (Bryman & Bell, 2011). Such reasoning is typical when using an experimental design, and emphasizes quantification in collection and analysis of data (Bryman & Bell, 2011).

In this study, our intention was to measure changes in self- awareness and trust dependent on the OTL workshop, in addition to testing self-awareness as a possible mediator. Therefore, quantitative method was chosen as it allows us to

detect small variations in our constructs and make more precise estimates of the degree of relationships between concepts (Bryman & Bell, 2011). For instance, we are able to measure fine changes in trust, and not only if an employee trusts their leader or not (Bryman & Bell, 2011). Quantitative method also gives us a consistent device for analysis, which allows us to be consistent over time. This is important in our study, as we are conducting a pre- and post-test on the experimental group and on the control group. As that, we can be sure that we are measuring the same in our pre- and post- tests (Bryman & Bell, 2011).

Because this study seeks to capture a possible change in behavior before and after the OTL workshop, we needed to compare the OTL participants with a group that did not participate in the workshop. Therefore, the study was designed as a classic experiment, where two groups were established through random assignment to form the experimental group and control group (Bryman & Bell, 2011). Further, both the experiment and control group were tested both before and after the workshop. As that, we can be more certain that if there is no difference in pre-testing, any changes in the post-tests between the two groups will be caused by the OTL workshop (Bryman & Bell, 2011). Consequently, the presence of a control group and random selection increases our possibility of drawing causal inferences from our data (Bryman & Bell, 2011).

Participants and Sample

Since our goal was to measure the discrepancy between self and other rating, both school leaders and their employees were recruited for this study. All school leaders in the respective county were invited to participate in the study. As leadership is a complex phenomenon, where the subjective views of only one role holder is likely to be partial and to have limited reliability, one should use multiple raters when evaluating leaders (Reeves, 2008). Therefore, in this study, each principal was asked to nominate 5 employees to take part in the study.

Our sample consists of school leaders and their employees from three Norwegian counties. Because of a low response on nominating teachers to the study, in addition to several teachers not responding, our sample did not end up containing 5 employees per principal. The sample included 49 school leaders and 73

employees from various schools in Norway (Appendix 2). Of these, 14 leaders and 18 employees constituted the control group who did not participate in any OTL workshop. The average age of the school leaders who participated in the OTL workshop was 49,8 years, on average they had 2,79 years of experience in their role, and the sample consisted of 42,4% men and 57,6% women. The sample of employees related to these leaders consisted of 29% men and 71% women, had an average age of 49, and had been in their position for an average of 4,2 years. The control leader group consisted of 64,3% women and 35,7% men, on average 53,8 years old, with an average of 2,14 years in their position. Employees related to the leaders in the control group were 44,4% men and 55,6% women, on average 47,6 years old, and had been in their position for an average of 4 years.

Procedure

Data was collected before and after the OTL workshop, with approximately 2 months between the two waves. The Norwegian Social Science Data Services (NSD) evaluated and approved information on the study designs, samples, procedures, and surveys. Participants received an email with an electronic link to the survey, where it was also explained that by participating, they agreed to be invited to a second wave of the same survey. The email also pointed out that participation was voluntary and that personal information would be depersonalized following the study's completion. 110 school leaders were originally enrolled in the OTL workshop, but due to different reasons 17 of them decided not to participate, while 6 only participated in the first workshop, and was therefore excluded before analysis. Our sample (both control and experiment group) consisted of 87 school leaders. The response rate at Time 1 among principals was 76%, and 74,6% of those responding at Time 1 also responded at Time 2. 66% of the principals who responded at both waves, also nominated employees, resulting in 220 employees enrolled in the study. Of these employees, 32,7% responded to both at Time 1 and Time 2 of the study. This resulted in 24 complete two-wave data connections that could be used in measuring rating discrepancy, where both the principal and employee had responded both at Time 1 and Time 2. These connections are made up of 24 leaders and 49 employees, where 5 leaders and 11 employees constitute the control group. 8 of these connections were made up of only one leader and one employee.

Measures

All items were scored on a 7-point Likert scale, either from 1 = Strongly disagree to 7 = strongly agree or 1 = Not at all to 7 = To a great extent.

OTL behavior and conversation outcomes. The effect of the OTL workshop was assessed using Robinson, Sinnema, and LeFevre's (2014) scale that was developed to assess the extent to which leaders used OTL in their baseline and real conversations. The first part of the scale comprises 16 items describing advocacy, inquiry and problem solving behaviors that are consistent with the governing variables of OTL. The advocacy items include behaviors such as open and respectful statements about one's concerns and clear explanation of the reason for one's point of view. Indicators of inquiry that are consistent with OTL, includes inquiry into the other's reasoning and inquiry into their doubts and disagreements. Indicators of problem solving includes items such as specifically checking beliefs about the problem's cause and possible solutions, and inviting the other person's help to better understand the situation. The last 9 items, the agreement scale, is used to assess both task and relationship outcomes of the conversation (e.g. "the problem was thoroughly explored", "the conversation built trust between the parties") (Robinson, Sinnema, & Le Fevre, 2014).

Principal effectiveness (PE) was assessed using Sinnema and colleagues' (2015) PE scale consisting of 16 items. These items ask the follower-respondents to rate how effective their leader is related to decision-making, problem-solving, leading instructional improvement, leading teacher learning, and gaining the respect of employees and parents connected to the school (Sinnema et al., 2015). The school leaders were asked to rate themselves on the same items. These items have their roots in theory on student-centered leadership, which outline the leadership capabilities necessary for school leaders to be effective in their position (Robinson, 2011).

Discrepancy of self-other rating of principal effectiveness. The discrepancy between leader's self-rating and follower rating of PE, can be calculated by

subtracting the average of subordinates scores from school leader's self-rating scores on the PE scale (Metcalfe, 1998). Further, when using the discrepancy as a predictor of outcomes, e.g trust, it has been debated that one should use a continuous rather than categorical variable to capture both the magnitude and direction of the discrepancy (Sinnema et al., 2015). In addition, our sample size was too small to be broken into several categories, and we therefore chose to leave the discrepancy variable as a continuous variable.

Relational trust was assessed using Bryk & Schneider's (2002) scale on trust, which is school specific. Employees were asked to give indications of how they perceive their trusting relationship with their leader to be. The scale consists of 9 items measuring relational trust (e.g. "I believe in what my leader tells me", "my leader respects me", "my leader believes in the competence of the employees").

Control variables. Leader-Member- Exchange theory suggests that leaders do not use the same style when dealing with different employees, but develop a different kind of relationship or "exchange" with each of them. These relationships can range from being strictly based on work contracts, to relationships characterized by respect, mutual trust, liking, and reciprocal influence (Liden & Maslyn, 1998). As these differences in relationships might influence how employees choose to rate their leader, we have chosen to control for this in our study (Liden & Maslyn, 1998). This is done by using the LMX Multidimensional scale developed by Liden & Maslyn (1998). The scales consist of 12 items, measuring affect, loyalty, contribution, and professional respect. We will be only using the first three items of the scale, that is, those related to affection, in order to control for personal liking.

Analytical Procedure

All tests were conducted in IBM SPSS Statistics version 24. Two-tailed tests were used in all the analyses, with a significant level of .05. This was done despite the notion that several of our hypotheses are directional (i.e. hypotheses 1, 2 and 3), we did not want to leave out the possibility of uncovering a relationship with the

opposite direction (Hick, 1952; Burke, 1953; Lombardi & Hurlbert, 2009; Ringwalt, Paschall, Gorman, Derzon, & Kinlaw, 2011).

First, an Exploratory Factor Analysis (EFA) was applied in order to test construct validity of the scales and inter-reliability of the items. Further, we tested the internal consistency of the scales with Cronbach's alpha test. Correlation and descriptive statistics were also tested in order to assess possible associations and patterns among the scales (Tabachnick, Fidell, & Osterlind, 2001).

Several independent samples t-tests were conducted to compare those who attended OTL and the control group conditions. Independent samples t-tests was conducted to uncover possible differences between leader's and followers' scores. Further, in order to test Hypothesis 1, a linear regression was conducted to uncover whether discrepancy predicts relational trust. To test Hypothesis 2 and 3, several paired samples t-tests were tested to compare conditions before and after the OTL workshop (Tabachnick et al., 2001).

For Hypothesis 4, the PROCESS plugin was used in SPSS to assess the mediating role of discrepancy in the relationship between OTL and trust. PROCESS uses bias corrected bootstrapping to create an empirically derived representation of the sampling distribution of the indirect effect (mediation) (Hayes, 2013). Further, this representation is used to construct a confidence interval. Bootstrapping works by resampling the original sample thousands of times with replacement, and some statistic of interest is then calculated in the new sample size (Hayes, 2013). Following expert advice, our analysis comprises 5000 bootstrap samples (Hayes, 2013). This method is different from the normal theory approach, in that it does not make any assumptions about the shape of the sampling distribution (Hayes, 2013). Thus, bootstrap intervals better respect the irregularity of the sampling distribution, and therefore is likely to produce more accurate results than when the normal theory is used (Hayes, 2013). When used to test hypothesis, bootstrapping is claimed to provide results with higher power (Hayes, 2013).

Table 1. Pearson correlations among the research variables for time 1 and time 2

Variables	M	SD	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FPE (T1)	5.56	.61	75	(.94)													
FPE (T2)	5.52	.72	52	.81**	(.96)												
FOTL (T1)	5.16	.83	74	.70**	.45**	(.97)											
FOTL (T2)	5.29	.83	52	.54**	.57**	.64**	(.98)										
TRUST (T1)	5.96	.82	74	.83**	.78**	.59**	.57**	(.92)									
TRUST (T2)	5.94	.84	50	.74**	.78**	.58**	.65**	.85**	(.95)								
LIKING (T1)	5.79	.78	73	.64**	.66**	.48**	.43**	.77**	.65**	(.77)							
LIKING (T2)	5.64	1.03	49	.53**	.73**	.31*	.52**	.65**	.72**	.74**	(.90)						
LPE (T1)	5.42	.42	77	.04	-.02	.04	.30*	.12	.12	-.08	-.06	(.87)					
LPE (T2)	5.52	.35	56	-.05	-.12	-.09	.04	.02	-.03	-.06	-.15	.60**	(.74)				
LOTL (T1)	5.01	.47	77	.07	.04	.06	.18	.10	.06	.04	.02	.54**	.25*	(.90)			
LOTL (T2)	5.02	.54	56	.28*	.10	.29*	.35*	.26*	.07	.15	-.12	.62**	.41**	.78**	(.91)		
DISCREPANCY(T1)	-.13	.74	73	-.82**	-.67**	-.55**	-.25*	-.61**	-.52**	-.57**	-.46**	.55**	.46**	.25*	.21	-	
DISCREPANCY(T2)	-.11	.66	33	-.60**	-.86**	-.39*	-.38*	-.54**	-.58**	-.42**	-.64**	.25	.60**	-.11	.09	.64**	-

Note: The Cronbach's alphas are in parentheses along the diagonal. Significance at: $*p < 0.05$ and $**p < 0.01$ (one-tailed)

Results

Reliability and Correlation Matrix

Table 1 presents descriptive statistics and correlations among the study variables for both time 1 and time 2. As expected, the Cronbach's alphas of the majority of the scales are excellent (above or equal .90), while the rest lies within an acceptable region ($0.8 > \alpha \geq 0.7$) (Tabachnick et al., 2001).

The correlation data seems to provide some indications regarding hypotheses 1, 3 and 4, namely those related to self-other rating discrepancy. As we expected, a significant negative correlation emerged between self-other rating discrepancy and trust. In addition, followers' perception of leader effectiveness, leader liking and experienced leader's OTL behavior were also negatively correlated with self-other rating discrepancy. Since the discrepancy is the difference between leader's and followers' perception of principal effectiveness, it is reasonable to expect the discrepancy to be positively correlated with leader effectiveness, which also emerged in our data.

The correlation matrix also provides insights into other associations, (or the lack of it) among the variables. Leader scales such as principal effectiveness (LPE-T1/T2) and OTL behavior before the workshop (LOTL-T1) do not correlate significantly with the follower scales. This lack of relationship might indicate an existing gap between leader and follower's perceptions. However, a correlation analysis is not sufficient to make this statement. Therefore, several analyses are conducted in order to statistically uncover the possible relationship among the variables.

However, the leader's OTL behavior after the workshop (LOTL-T2) did have a significant positive correlation with follower scales such as principal effectiveness (FPE-T1), OTL behavior (FOTL-T1/T2) and trust (T1). This could be an indication of an improvement among the participations after the workshop. Alike the above reasoning, we cannot draw such conclusions merely from a correlation matrix. In fact, we looked more closely into these variables with t-tests, linear

regression and process analyses. The results from these analyses are elaborated below.

Exploratory Factor Analysis

To conduct a factor analysis, it is recommended to have a sample size of at least 200-300 respondents (Clark & Watson, 1995). Despite our small sample size, we intended to run an exploratory factor analysis (EFA) on all items to explore their underlying relationships, but only received a warning message in SPSS. Therefore, we tried to rerun the analysis, removing one scale each round, but the warning message still occurred in SPSS. As a result, we were not able to complete an EFA. However, as all our scales are well-known and well-used scales in the field of organizational psychology, their reliability and validity is well documented (Bryk & Schneider, 2002; Liden & Maslyn, 1998; Robinson, Sinnema, & LeFevre's, 2014Sinnema et al., 2015). We therefore chose to continue without conducting an EFA. Possible limitations that may be caused by this are elaborated on under limitations.

Checking for Assumptions T-tests

Assumptions were checked prior to the t-tests, whereas the results of Levene's test of Equality of Variances on all dependent variables indicated that variances were equal across conditions. After the assumptions related to t-tests were checked and met, several independent samples t-tests and paired samples t-tests were carried out (Pallant, 2013). The most central results from the t-test analyses are presented in the next section (Full review: Appendix 3).

Experimental versus Control Group – From Followers' Perspective

T-tests were conducted to compare the differences between experimental and control group, based on followers' perspective.

An independent samples t-test was conducted to compare followers' perception of leader effectiveness (FPE-T2) in leaders who attended the OTL workshop and those who did not. There was not a significant difference in the scores for leaders

who attended the OTL workshop (*M* = 5.52, *SD* = .72) and those who did not (*M* = 5.32, *SD* = 1.10) conditions; *t*(67) = .87, *p* = .389.

Another independent samples t-test compared followers' perception of leader's OTL behavior and conversation outcomes (FOTL-T2) in leaders who attended the OTL workshop and those who did not. The results suggest that there was not a significant difference in the scores for leaders who attended the OTL workshop (*M* = 5.29, *SD* = .83) and those who did not (*M* = 4.86, *SD* = 1.24) conditions; *t*(67) = 1.62, *p* =.109. These results suggest that the OTL workshop does not influence followers' experience of leader's OTL behavior and conversation outcomes. Specifically, our results suggest that when leaders attend OTL workshop, followers do not experience their leaders as being more open to learning.

Two independent-samples t-tests was also conducted to compare followers' trust in their leader (Trust-T2) and leader likability (Liking-T2) in leaders who attended the OTL workshop and those who did not. Regarding trust, there was not a significant difference in the scores for leaders who attended the OTL workshop (*M* = 5.94, *SD* = .84) and those who did not (*M* = 5.77, *SD* = 1.31) conditions; *t*(63) = .60, *p* = .553. Similar for leader likability, there was a non-significant difference in the scores for leaders who attended the OTL workshop (*M* = 5.64, *SD* = 1.04) and those who did not (*M* = 5.62, *SD* = 1.0) conditions; *t*(62) = .056, *p* = .478. These results suggest that the OTL workshop does not influence followers' trust in and liking of their leader (Cronk, 2012; Tabachnick et al., 2001).

Experimental versus Control Group – From Leader's Perspective

T-tests were also conducted to compare the differences between experimental and control group, based on leader's own perspective.

An independent-samples t-test was conducted to compare leader's perception of their leader effectiveness (LPE-T2) in leaders who attended the OTL workshop and those who did not. There was not a significant difference in the scores for

leaders who attended the OTL workshop (*M* = 5.52, *SD* = .35) and those who did not (*M* = 5.52, *SD* = .54) conditions; *t*(72) = -.39, *p* =.398.

Another independent-samples t-test compared leader's perception of their OTL behavior with conversation outcomes (LOTL-T2) in leaders who attended the OTL workshop and those who did not. Here, there was (barely) a non-significant difference in the scores for leaders who attended the OTL workshop (*M* = 5.02, *SD* = .54) and those who did not (*M* = 5.30, *SD* = .39) conditions; *t*(72) = -2.0, *p* = .0504. These results suggest that the OTL workshop does not have an effect on leader's perception of their OTL behavior and conversation outcome (Cronk, 2012; Tabachnick et al., 2001). However, the risk of making type 2 errors in this case is discussed later on.

Leader and Followers Comparisons

An independent samples t-test showed a non-significant difference between the leader (*M* = 5.04, *SD* = .60) and teacher means (*M* = 5.2, *SD* = .94) in leader OTL behavior and conversation outcomes time 1 (LOTL/FOTL-T1), with the conditions *t*(165) = -.247 (*n* leaders = 64, *n* followers=97), *p* = .806 This indicate that leaders and followers do not rate leader's competence differently from their own leader before the OTL workshop. Similarly, another independent-samples t-test uncovers a non-significant difference between the leader (*M* = 5.09, *SD* = .56) and follower means (*M* = 5.18, *SD* = .96) in leader's OTL behavior and conversation outcomes time 2 (LOTL/FOLT-T2), with the conditions *t*(120) = .047 (*n* leaders = 48, *n* followers= 69), *p* = .963. Across the two samples, teachers and leaders generally agreed in their overall perceptions of the latter's OTL behavior and conversation outcomes (Cronk, 2012; Tabachnick et al., 2001).

Before and After OTL Workshop Comparisons

Several paired samples t-tests were conducted to uncover possible differences in leader and follower, before and after the OTL workshop. A test revealed that there were no significant change in leader's perception of their leader effectiveness (LPE-T1/T2) before (*M* = 5.45, *SD* = .46) and after the workshop (*M* = 5.52, *SD* = .35) conditions; *t*(55) = -1.260, *p* = .213. Similarly, a non-significant change also

occurred with a t-test on leader's perception of their OTL behavior and conversation outcome (LOTL-T1/T2) before ($M = 5.0$, $SD = .5.17$) and after ($M = 5.02$, $SD = .54$) conditions; $t(55)= -.56$, $p = .58$. Another paired samples t-test compared followers' trust in their leader (Trust-T1/T2), before and after OTL workshop conditions. There was no significant change in the scores for time 1 ($M = 6.0$, $SD = .83$) and time 2 ($M = 6.0$, $SD = .84$) conditions; $t(49) = .81$, $p = .424$. Thus, we can conclude that our data does not support Hypothesis 2 (Cronk, 2012).

Self-other Rating Discrepancy

Several tests were performed to investigate discrepancy and its relation with several variables (Appendix 4 and 5).

Checking for Assumptions Linear Regression

In relation to linear regression analysis, the assumptions of linearity, independence of error, homoscedasticity and normality were also checked and met (Tabachnick et al., 2001) (Appendix 4). Firstly, as required, the scatterplot of standardized residuals against predicted values has a random pattern. This result indicates that the assumptions of linearity and independence of error are met. Secondly, the existence of homoscedasticity is desirable when running a linear regression analysis. In our case, the data indicates a non-violation of the homoscedasticity assumption. This is checked by looking at the residuals statistics, which showcase a residual with a mean that equals to 0 (Tabachnick et al., 2001). Lastly, investigations of normality provided positive results. The histogram generated from our data shows a normal distribution. In addition, the P-P plot of regression standardized residuals shows that our values lie roughly close to the regression line. Since our data does not violate any of the assumptions, there is a low risk that our data generates incorrect or misleading results, and thus, we can go further with the analysis (Tabachnick et al., 2001).

Regression Model

In order to test Hypothesis 1, a simple linear regression was calculated to predict trust on leader based on self-other rating discrepancy. A significant regression

equation was found ($F(1,70) = 42.149$, $p < .000$), with an R^2 of .376 (Appendix 4). Participants' predicted trust in their leaders is equal to 5.862 - .679 (IV rating discrepancy) Likert points when self-other rating is measured as the difference between leader and follower ratings. In other words, followers' trust in their leader decreases -.679 Likert point for each unit of rating discrepancy between leader and follower. When leader's and followers' ratings are aligned (in-agreement), followers' trust on their leader is high, in which is equal to 5.862 Likert points (Cronk, 2012).

Controlling for Liking

To uncover the possible confounding effect of liking, a hierarchical multiple regression was conducted (Appendix 5). Two models were extracted from the analysis, where model 1 is a predictive model of the variable we want to control for, i.e. liking. Liking accounts for 59.3 % of the variance in the outcome. In model 2, the predictor variables include both discrepancy and liking. We see now that the model as a whole explains about 63.8 % of the variability in trust. R^2 change in model 2 show the additional 4,5 %. This means that the independent variable explains an additional 4,5 % of the variance in our outcome, even though liking has been statistically controlled for. In other words, when controlling for liking, discrepancy explains an additional 4.5 % of the variability in trust.

Before and After Workshop

For Hypothesis 3, a paired samples t-test explored rating discrepancy (Discrepancy T1-T2) in before and after OTL workshop conditions, which also revealed a non-significant difference in the scores for time 1 ($M = -.16$, $SD = .58$) and time 2 ($M = -.11$, $SD = .66$) conditions; $t(32) = -.55$, $p = .587$. Specifically, our results suggest that although the leader attended an OTL workshop, the self-other rating discrepancy did not change (Tabachnick et al., 2001).

Discrepancy and Its Mediating Effect

The Process plugin was used in SPSS to investigate Hypothesis 4, that is, whether the discrepancy between self-other rating of leader effectiveness would mediate

the relationship between the OTL workshop and trust or not (Fig. 2). Results for the mediation analysis is shown in Figure 3. Firstly, results indicated that OTL was a significant predictor of trust (T2) when not including the mediator, $b = .89$, $t(38) = 2.54$, $p < .05$. Further, the OTL workshop was also a significant predictor of self-other rating discrepancy (T2), $b = -.68$, $t(38) = -2.28$, $p < .05$, and the discrepancy was a significant predictor of trust, $b = -.89$, $t(37) = -7.07$, $p < .001$. These results support the mediation hypothesis, where those attending the OTL workshop have .68 lower discrepancies than those in the control group, and the size of discrepancy between self-other rating negatively predicts trust. The OTL workshop was no longer a significant predictor of trust after controlling for the mediator, discrepancy of self-other rating, $b = .287$, $t(37) = 1.154$, $p > .05$ (NS), consistent with full mediation. The variance accounted for by our model differed from $R^2 = .15$ to $R^2 = .63$ when including the mediator in the model, pointing to a mediating effect of discrepancy. The indirect effect of discrepancy was tested using bootstrap estimation with 5000 samples (Hayes & Preacher, 2014). The results indicated that the unstandardized indirect coefficient was significant, b=. 61, $SE= 3516$, 95% $CI= [.0153, 1.427]$, meeting the assumptions that the relative indirect effect is deemed statistically different from zero if the confidence interval does not include zero (Hayes & Preacher, 2014).
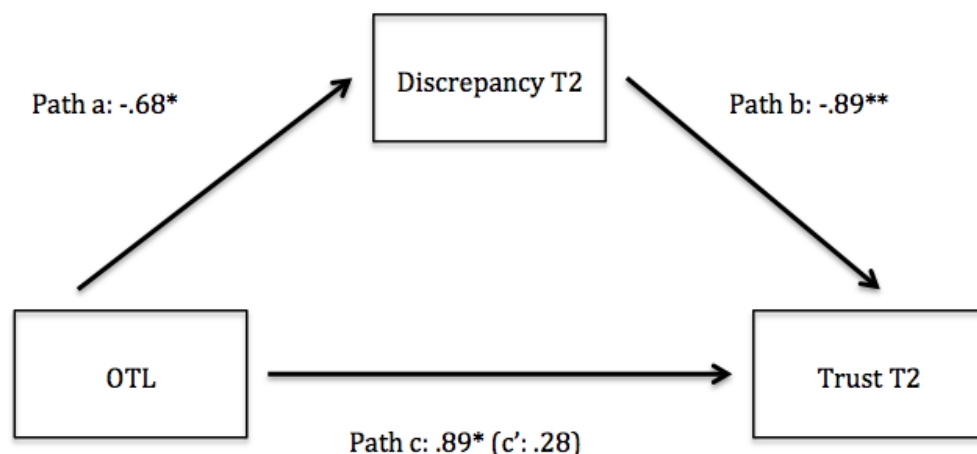

Figure 2: Discrepancy (T2) as a mediator between OTL and Trust (T2)
Notes: *p < 0.05 **p < 0.01

Testing paths	b	SE(b)	95% CI
Path c (x → y): DV = Trust T2			
$R^2 = .15$, $F(1,38) = 6.47$, $p < .01$			
IV = OTL/ Control	0,897	0,35	[.18, 1.61]
Path a (x → m): DV = Discrepancy T2			
$R^2 = .12$, $F(1, 38) = 5.21$, $p < .05$			
IV = OTL/ Control	-0,68	0,3	[- 1.3, - .07]
Path b and c' (x + m → y): DV = Trust T2			
$R^2 = .63$, $F(2, 37) = 32.43$, $p < 0.05$			
IV = OTL/ Control (c')	0,37	0,25	[- .22, .79] (NS)
IV = Discrepancy T2 (b)	-0,89	0,13	[- 1.15, -.64]
Indirect effect x → y (via discrepancy) (Bootstrapping)			
IV = OTL/Control m= Discrepancy T2	0,61	0,35	[.015, 1.43]

Figure 3 (see in relation to figure 2): Process results of direct and indirect paths, DV= Dependent variable IV= Independent variable.

Discussion

The aim of this paper is to make several important contributions within the field of organizational psychology. The main purpose is to explore the effect of a leader training workshop and its impact on relational trust. Our study is the first to explore this relationship with the mediating role of leader's self-awareness. The results provide insights on ways to facilitate relational trust in the workplace, which is an important factor to obtain organizational effectiveness across businesses.

In this study, we drew upon previous research on school leadership, and findings that claim OTL conversations to be closely related to creating and maintaining relational trust between principal and teacher (Robinson, 2009; Robinson et al., 2008). However, few studies have examined the mediating effect of self-awareness on relational trust. This study suggests a mediation model in which OTL training influences relational trust through Although Robinson (2009) has stressed OTL training as a facilitator of relational trust between principal and teacher, our findings suggest this relationship to be strongly mediated by the leader's self-awareness. However, our results from pre- and post- testing does not suggests any significant change in self-awareness nor trust related to the workshop. These findings are surprising, and several possible causes and

explanations are hereby elaborated to understand these outcomes.

In support of previous studies and hypothesis 1, which stated that self-other discrepancy would be negatively related to trust, we found a significant negative relationship between discrepancy and trust. As expected, when the discrepancy between leader and follower rating increases, relational trust decreases. Despite the results that indicate self-other rating discrepancy to be a significant predictor of trust, our findings also indicate that, when controlling for personal liking of the leader, self-other rating discrepancy seems to provide little, but unique, additional variance in trust (4.5 % out of 63.8 %). The purpose of controlling for personal liking in this study is to avoid the halo effect. However, what is quite surprising in our study, is the magnitude of personal liking in the variance in trust (59.3 % out of 63.8 %). According to Nathan and Tippins (1990), liking is not necessarily something that needs to be controlled for, as it reflects the overall impression of a person. They argue that when a rater provides an evaluation of a person, the overall rating is not merely the result of a halo, but a complete judgement of what the rater believe is relevant and necessary for making accurate ratings about a ratee (Nathan & Tippins, 1990). These arguments may explain the big effect of liking in our study. We may therefore argue that statistically controlling for personal liking of the leader might in fact reduce the validity of rating accuracy, and thus not represent a full evaluation of the ratee. On the other side, several school leaders in our study ended up only being evaluated by one employee. Consequently, the one employee who chose to answer, could have done that out of personal attachment and/or liking of their leader, as it is known that leaders develop different relationships with their employees, some more personal and built on affect than others (Liden & Maslyn, 1998). If that is the case, personal biases such as the halo effect, would have an even greater effect on our results than would be expected, and could be the cause of why liking explains such a great amount of the variance in relational trust. In sum, the results suggest self-other rating discrepancy to be a crucial factor in developing relational trust, but the personal relationship between the leader and employee could account for a great deal of the explained variance. Thus, further investigation into these relationships could be of interest to reveal whether liking should be controlled for, or if liking should be included as part of the general impression of a person.

We found no support for hypothesis 2, which suggested that OTL training would increase trust between leader and employee. Subsequently, hypothesis 3 which suggested that OTL training would decrease the rating discrepancy between leader and employee, was not supported. There might be several explanations for these outcomes. One explanation could be that OTL training simply does not influence neither leader self-awareness or trust, but as our mediation analysis implies, that does not seem to be the case. Another explanation could be difficulties in the transfer of training to on-the-job situations. The ultimate goal of all training is for the person involved in the training (the trainee) to transfer what was learned in training to the real-world setting (Blickensderfer, Liu, Macchiarella & Vincenzi, 2008). Transfer of training is used to describe the process of applying skills, abilities, and knowledge to a real-world setting, and maintain these over time at work (Baldwin & Ford, 1988). As leaders are trained in OTL through participating in a workshop, what may influence their ability to actually apply what has been learned to their everyday work life is relevant to this discussion. OTL training teaches participants a framework of open and honest communication, and the objectives of the workshop is therefore seen related to learning so called *open skills* (Blume et al., 2010). *Open skills* are seen connected to training where the goal is to learn principles or guidelines (Yelon & Ford, 1999). In comparison, c*losed skills* relate to training where the goal is to learn specific skills that should be produced identically in the transfer environment as in the learning context (Yelon & Ford, 1999). Previous research has found that predictors of transfer of training, such as trainee motivation and work environment, is especially important for open skills to be transferred and maintained on the job (Blume et al., 2010). When learning open skills, the trainee has more choice as to whether, how, and when to transfer those skills to a work setting. For instance, it is more likely that a trainee who is more motivated to learn an open skill will look for opportunities at work to apply the training and possibly also seek out support from colleagues for applying new skills (Ford, Quinones, Sego, & Sorra, 1992). In addition, previous research has found that employees get differing opportunities to perform trained tasks on the job, and that these differences are related to supervisor attitudes and workgroup support as well as the trainee's self-efficacy and cognitive ability (Ford, Quinones, Sego, & Sorra, 1992). Consequently, several factors may affect how and if participants transfer OTL skills to the job and if they are maintained. These factors may therefore also

have influenced why there was no significant change in discrepancy nor trust after the workshop.

Further, Yelon and Ford (1999) pointed out that with closed skills, the trainee is supposed to respond in one particular way on the job according to a set of rules implemented in a precise way. Open skills are more dynamic, and there is not one single correct way to act, but rather a freedom to perform (Yelon & Ford, 1999). Consequently, with closed skills, the trainee is often given the opportunity to apply learned skills quickly on the job, and the positive aspects of transfer are usually easily seen and understood (e.g., the employee can now use a software program he or she previously could not use). When it comes to opportunities to apply open skills, however, it is less straightforward and may be a function of the trainee seeing the potential to use trained principles and guidelines on the job, as well as the supervisor taking on an active role in offering opportunities to do so (Blume et al., 2010). Drawing on these thoughts, we may argue that applying OTL skills to the job might take time. The time between pre- and post- tests were only 2 months, and participants in the workshop may not have had the opportunity to incorporate new skills into their everyday routines yet. In addition, even though they may already have applied new skills to the job, the effect of this change may have been too premature to measure. Becoming more self-aware is not done by pressing a button, and even more difficult - making your employees see you as more self-aware is not done in the blink of an eye. Further, trust takes time to build (Butler, 1991). To expect to capture a change in relational trust between leader and employee after only attending one workshop and giving leaders 2 months to apply these skills may have been somewhat naive. Consistency in trusting behavior elicited by the leader, such as showing benevolence, honesty, openness and competence, has been highlighted as crucial for employees to trust their leader (Butler, 1991; Tschannen-Moran & Gareis, 2015). Moreover, trust implies a willingness to be vulnerable, and people are only willing to be vulnerable if they know what to expect from the other person (Mayer, Davis & Schoorman, 1995). To be able to show consistency, leaders need to be allowed time to show consistency in their behavior. When leaders apply OTL skills over time at work, teachers will most likely begin to expect that type of behavior from their leader, which entails openness, self-awareness and a reflective mindset. Consequently, teachers risk of being vulnerable decreases, and relational trust

increases. Drawing on these insights, we propose that allowing more time before pre- and post-testing could have generated significant changes in discrepancy ratings and relational trust between school leaders and teachers.

In addition to explanations related to transfer of training and the timespan between post- and pre-tests, statistical and methodological explanations to why there was a significant mediation, but no change before and after the workshop, may be relevant. As mediation analysis was conducted by using the PROCESS plugin in SPSS, bootstrapping is automatically applied to identify the indirect effect (Hayes, 2013). Bootstrapping differs from more traditional parametric approaches to inference, such as the *z-* and *t-* tests, and relies on an analogy between the sample and the population from which it was drawn (Mooney & Duval, 1993). It involves re-sampling the existing data a high number of times (in our study: 5000) to generate an empirical estimate of the whole statistical sampling distribution (Mooney & Duval, 1993). The method of bootstrapping is based on an idea that it may be better to draw conclusions about the characteristics of a population from the sample in use, instead of drawing, what may be, unrealistic assumptions about that population (Hayes, 2014; Mooney & Duval, 1993). Consequently, as our sample size in this study is generally small, it is not surprising that our t-test results differ from our PROCESS- results, where bootstrapping is applied. As bootstrapping creates a larger sample size based on the actual data collected, results may be more accurate than tests reliant on the original small sample (Hayes, 2013). Further, this could indicate type 2 error in several of our hypothesis where other tests have been used. The null hypothesis could have been maintained because of what seem to be insignificant findings, but what is actually caused by a small sample size (Clark, 2014).

Another aspect of the likability that type 2 error occurred is necessary to point out. Independent samples t-tests were performed to compare those who attended OTL and the control group conditions. As mentioned earlier, when investigating leaders' own evaluation of their OTL skills after the workshop (LOTL-T2), one t-test revealed a just barely insignificant difference between those who attended the workshop and those who did not ($t(72) = -2.0$, $p = 0.0504$). The fact that the p-value between time 1 and time 2 changed from .08 to .0504, it almost seems that the leaders did improve their OTL skills. In fact, just because the results of the test

rejects H_0, we cannot be 100 % sure that the conclusions drawn are correct (Clark, 2014). Indeed, the sample size in this study is rather small, and the time span between pre- and post-test was quite short (less than 2 months), which are two major factors could decrease the power of the test and increase the risk of failing to reject H_0 (Clark, 2014; Hazra & Gogtay, 2016; Type 2 Error, 2017).

In hypothesis 4, we suggested the link between OTL training and trust to be mediated by leader self-awareness. This hypothesis was supported, which is not surprising, as the OTL workshop teaches leaders to become more aware of their own actions, taking in other's perceptions and reflecting on their thoughts and actions (Robinson, 2009). Consequently, the way they evaluate their own effectiveness becomes more aligned with how their employees evaluate them. Bass & Yammarino (1991) pointed out how self-awareness was an important characteristic of effective leaders, and suggested leadership development and training that give leaders a greater insight into their own leadership behavior to facilitate for lower discrepancy ratings of leader effectiveness. As our results suggest that the effect of OTL on trust goes through self-awareness, the OTL workshop could be used to develop and train leaders to become more self-aware, also outside the educational sector. Further, as self-aware leaders foster trusting bonds in their organization, the OTL workshop could facilitate trust across hierarchical levels in the organization. Consequently, when employees trust that their leader is honest, open, and competent, positive outcomes such as organizational citizenship behavior is more likely to occur, which may in turn increase organizational effectiveness (Bryk & Schneider, 2002; DiPaola & Tschannen-Moran, 2001; Ozag, 2006; Yilmaz & Taşdan, 2009).

Limitations

The findings in this study should be viewed in the light of several limitations. First, we experienced an overall low response rate, especially in relation to full-range connections that could be included in our mediation analysis. Consequently, this might damage the generalizability of our data, as well as imply misleading findings, through for instance type II errors (Bryman & Bell, 2011). Type II error refers to accepting the null hypothesis when it should be rejected, and can be affected by the sample size (Bryman & Bell, 2011). Consequently, interesting

results that could have occurred despite a low sample size may have been overlooked (Fleenor, Taylor & Chappelow, 2008; Reeves, 2008). Although our purpose was to collect data from 5 employees connected to each leader, the low response rate inflicted with our intentions. In several cases, principals were only rated by one teacher, causing a highly subjective score of perceived principal effectiveness and trust. Thus, our discrepancy data may be victim of personal biases. By controlling for likability, we might however have been able to avoid some of these biases, which in turn strengthens the reliability and validity of our results (Fleenor, Taylor & Chappelow, 2008; Reeves, 2008). Although our purpose was to collect data from 5 employees connected to each leader, the low response rate inflicted with our intentions. In several cases, principals were only rated by one teacher, causing a highly subjective score of perceived principal effectiveness and trust. Thus, our discrepancy data may be victim of personal biases. By controlling for likability, we might however have been able to avoid some of these biases, which in turn strengthens the reliability and validity of our results.

Second, due to the notion that we did not conduct an EFA, we may have missed some important underlying relationships of the items in our scales. Factor analysis could have provided crucial insights into the unidimensionality and discriminant validity of our scales (Clark & Watson, 1995). Consequently, we could have disclosed whether measurements included in this study that are not supposed to be related, are actually performing as unrelated concepts (Bryman & Bell, 2003). Thus, the relationships found between the constructs in our study, could be caused by interrelationships between items from separate scales. However, as mentioned earlier, the scales used in this study are well tested in the field, therefore we may argue that they should perform as separate concepts (Bryk & Schneider, 2002; Liden & Maslyn, 1998; Robinson, Sinnema, & LeFevre's, 2014Sinnema et al., 2015).

Third, by relying exclusively on surveys as our method for collecting data on all constructs, mono-method bias could be evident in our analysis (Spector, 2006). Especially when measuring abstract social constructs, such as trust in our case, space is left for subjectivity and thus various biases (Spector, 2006). However, in our analysis data from several sources were combined, which decreases same-

source bias (Bryman & Bell, 2011). Even so, sampling error such as non-response bias, could still be evident in our data. Those who chose to participate in our study may differ from those who chose not to answer, and these differences may be significant to our research question (Bryman & Bell, 2011). This may have even greater consequences in our study, since bootstrapping is applied in the mediation analysis. As bootstrapping works by resampling the original sample several thousand times, an important condition is that one can trust that the original sample is a reasonable representation of the population from which it was drawn (Hayes, 2013). If not, the bootstrap-based inference might be difficult to trust (Hayes, 2013). However, even if our sample is small, it is based on random selection from the population, which decreases the likeliness of our sample not being representable (Bryman & Bell, 2011; Hayes, 2013). Even so, in order to strengthen the generalizability and reliability of future studies on this topic, a greater sample size is recommended.

Lastly, as our surveys assess both predictor and outcome variables at the same time, data might be influenced by percept-percept inflation (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Method biases could therefore have contributed to the observed relationship between our variables (Podsakoff et al., 2003). However, by including analysis that also comprises data collected at different times (pre- and post- test data), the likeliness of percept-percept inflation decreases (Podsakoff et al., 2003). Even so, the time-span between the two waves of data collection is important to mention as a limitation, as newly learned open skills take time to transfer to the job and trust takes time to build (Blume et al., 2010; Butler, 1991). Therefore, there is a possibility that we could have measured a change before and after the workshop if we had waited longer to record post-test data.

Future Research

Although the present study uncovers the relationship between OTL training, discrepancy and relational trust, it provides limited information regarding the quality of the workshop. Thus, future research will do well to explore this by including a more in-depth, qualitative approach. Not only will a qualitative method help us to understand the results from quantitative data, but also provide insights in issues that cannot be disclosed by quantitative methods, which in turn

will help generating new hypotheses (Bryman, 2015). In this study, the findings suggested the mediating model to be significant, although a significant change after the workshop was not discovered. With such unexpected results, it could be useful to apply a qualitative approach in order to detect possible explanations of how and why the change did not occur.

In this study, we have emphasized the importance of leadership in facilitating organizational effectiveness. However, as both trust and communication are contingent of both parties in a relationship, only training one part in open-to-learning conversations could seem insufficient. In order to make effective communication take place, involvement of followers is considered to be as important as involving leaders (Riggio, Chaleff, & Lipman-Blumen, 2008). We may therefore argue that educating both leaders and followers within the OTL concept will create a mutual awareness from both parties, in which might lead to stronger OTL behavior and conversational outcomes.

As mentioned in the discussion, factors such as time, sample size, and transition of training are possible explanations of why there was no significant difference in rating discrepancy nor trust after the OTL workshop. Therefore, future research should explore factors related to transfer of training to expand the understanding of the effectiveness of OTL training, such as trainee's motivation and support at work (Blume et al., 2010). Moreover, in order to improve generalizability and reliability, it would be beneficial to obtain a bigger sample size and apply a longer time span for the study.

Practical Implications

Despite the limitations to our study, there are still aspects of this study that may shed light on how leaders improve their relationships with their employees. The results of this study imply that there are differences between leader's and follower's perception of leader's effectiveness. Moreover, the discrepancy of these perceptions can be decreased by the latter's participation in OTL training, which in turn, increases relational trust.

A common challenge within the educational sector is that principals are inadequate in handling dilemmas in their respective school. The results in this study imply that OTL training may help leaders improve their dilemma management, by validating their assumptions and take account of other perceptions than their own (Argyris, 1993; Robinson, 2009). Furthermore, factors such as power differences between leaders and employees may cause conflicts, however, this is not only evident within the educational sector. Thus, this type of OTL training may improve dilemma management across sectors and businesses (Cardno, 2007).

School leaders play a substantial role in teacher and student outcomes, and ultimately, school effectiveness (Hallinger & Murphy, 1985; Tschannen-Moran & Gareis, 2015). One known characteristic of effective leaders is self-awareness and trustworthiness (Sinnema et al., 2015). This study find support that OTL training improve trust through leader self-awareness. Thus, OTL training seems to be a way to improve learning and development in schools (Robinson, 2008).

Managers need to be aware of that training open skills, such as OTL, requires support and opportunity at work to apply these, in order to transfer the training to everyday work life. Further, selecting participants for training who are motivated and desire to gain a better understanding of themselves is an advantage for such training and the transfer of it.

Conclusion

This study shows the importance of leader self-awareness when investigating the potential impact of the Open-to-Learning workshop on relational trust. Despite limitations that may have influenced the possibilities of seeing the growth over such a short time span, our findings suggest that the relationship between the OTL workshop and relational trust is fully mediated by leader self-awareness. More specifically, OTL training seems to decrease the gap between leader and follower perception of the former's effectiveness, which in turn increases relational trust. However, we acknowledge that several factors, such as conditions concerning transfer of training and one-sided engagement in OTL, might influence how successful OTL training will be in increasing self-awareness and trust. Thus, in

order to optimize the effect of the OTL workshop, trainee's motivation and job support should be emphasized, and both leader and follower should take part in the OTL workshop. In this way, leaders may become more open to learning, and hence, become more effective and trustworthy leaders. Management may therefore draw on these results and arguments to tailor leader practices towards the development of self-aware leaders.

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Appendix 1 – Survey Questions and Scales

Contact information and teacher nominees

(This survey was sent to leaders in prior to the pre-test)

Please provide the email to the manager who is attending the Open-to-Learning workshop.

The leader's email

School

Please nominate five teachers, those with longest seniority and educational responsibility. Please enter their e-mail below.

Teacher no.1	
Teacher no.2	
Teacher no.3	
Teacher no.4	
Teacher no.5	

Survey Questions in English

(These questions were sent to leaders and followers before and after the workshop)

Open-to-Learning Conversations Scale

(In the follower's survey, this scale is formulated in the way that the follower is evaluating the leader's competence in managing problems)

Think of the different challenges you and your employees had in the previous semester. Then you think of the conversations you had with the employees who addressed these challenges. To what extent did the following happen during the conversation?

1. I explicitly invited the other person to help me better understand the situation
2. I openly and respectfully stated my real concern
3. I clearly explained the grounds for my point of view
4. I indicated the possibility of differing points of view

5. I inquired into the reasons for the other person's point of view

6. I checked that I had accurately understood the other person's point of view by using integrative summaries

7. I explored the other's doubts and disagreements

8. I ensured we sought to understand the cause of the concern before trying to solve it

9. I detected and checked assumptions about the cause of the concern

10. I suggested next steps that met the interests of both parties

11. I was responsive to the other's feelings

12. I directly sought the other's reaction to my point of view

13. I explicitly checked whether or not the other person shared my concern

14. I detected and checked assumptions about how to resolve the concern

15. I treated suggested causes and proposed solutions as hypotheses to be tested.

16. I explicitly sought areas of agreement

17. The two parties were really working in partnership

18. The conversation built trust between the parties

19. The conversation increased mutual understanding

20. The conversation damaged rather than enhanced the relationship - reverse scored

21. The problem was thoroughly explored

22. The legitimate interests of each party were given equal weight

23. A high level of agreement was reached about what to do next

24. Considerable progress was made in solving the problem

25. The outcome of the conversation is satisfactory to both parties

Principal Effectiveness Scale

Principal: How effective are you in...

Or

Teacher: How effective is the principal of your school in...

1. using research on teaching and learning to inform important school decisions?

2. learning alongside teachers about how to improve teaching and learning?

3. serving the interests of the whole school rather than of particular interest groups?

4. leading useful discussions about the improvement of teaching and learning?

5. identifying and resolving conflict quickly and fairly?

6. promoting and modeling the values of this school?

7. maintaining integrity in difficult situations?

8. showing both personal and professional respect for staff?

9. earning the respect of all of the staff?

10. earning the respect of the wider community?

11. earning the respect of the different ethnic communities served by the school?

12. seeking high quality information about the situation before making a final decision?

13. being open to learning and admitting mistakes?

14. saying what I think and explaining why?

15. actively seeking others' views?

16. making tough decisions when necessary?

Relational Trust Scale

(Only for followers)

To what extent do you agree or disagree with the following:

1. In this department, it is allowed to discuss feelings, disturbance and frustration with the leader.

2. In this department, the manager pays attention to the wellbeing of the employees.

3. I believe in what my leader says.

4. The leader is efficient and manage the department in a good way.

5. The leader puts the children before their own political interests

6. The leader believes in the skills of the employees

7. The manager is personally involved in the professional development of the employees

8. I really respect the manager as a professional

9. The manager respects me

Liking Scale

(Only for followers)

1. I like my supervisor very much as a person.

2. My supervisor is the kind of person one would like to have as a friend.

3. My supervisor is a lot of fun to work with.

4. My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question.

5. My supervisor would come to my defense if I were "attacked" by others.

6. My supervisor would defend me to others in the organization if I made if I made an honest mistake.

7. I do work for my supervisor that goes beyond what is specified in my job description.

8. I am willing to apply extra efforts, beyond those normally required, to further the interests of my work group.

9. I am impressed with my supervisor's knowledge of his/her job.

10. I respect my supervisor's knowledge of and competence on the job.

11. I admire my supervisor's professional skills.

Appendix 2 – Sample statistics

Sample				
	T1 + T2			
	OTL		Control	
	Leader	Follower	Leader	Follower
n	35	55	14	18
Mean age	49,8	49	53,8	47,6
% men	42,40 %	29 %	35,70 %	44,40 %
% women	57,60 %	71 %	64,30 %	55,60 %
Mean years of experience	2,79	4,2	2,14	4

Leaders and employees counted in this sample are all those who answered both at T1 and T2

Appendix 3 –T-tests Statistics

Experimental and control group comparisons

Variable:	Experimental group	Control group	Sig. value:
FPE (T1)	M = 5.56, SD = .61	M = 5.43, SD = .89	t(98) = .75, p = .454
FPE (T2)	M = 5.52, SD = .72	M = 5.32, SD = 1.10	t(67) = .87, p = .389
FOTL (T1)	M = 5.16, SD = .83	M = 5.33, SD = 1.25	t(95) = -.74, p = .463
FOTL (T2)	M = 5.29, SD = .83	M = 4.86, SD = 1.24	t(67) = 1.62, p = .109
TRUST (T1)	M = 6.00, SD = .82	M = 5.82, SD = 1.03	t(95) = .64, p = .523
TRUST (T2)	M = 5.94, SD = .84	M = 5.77, SD = 1.31	t(63) = .60, p = .553
LIKING (T1)	M = 5.79, SD = .78	M = 5.72, SD = .91	t(94) = .31, p = .756
LIKING (T2)	M = 5.64, SD = 1.04	M = 5.62, SD = 1.1	t(62) = .06, p = .957
LPE (T1)	M = 5.42, SD = .42	M = 5.43, SD = .38	t(101) = -.08, p = .936
LPE (T2)	M = 5.52, SD =.35	M = 5.52, SD = .54	t(72)= -.39, p = .698
LOTL (T1)	M = 5.01, SD = .47	M = 5.20, SD = .51	t(101) = -1.79, p = .076
LOTL (T2)	M = 5.02, SD = .54	M = 5.30, SD =.39	t(72) = -2.0, p = .05036

Difference in means between treatment and control group. FPE = Follower Principal Effectiveness, LPE = Leader Principal Effectiveness, FOTL = Follower Open-to-Learning, LOTL = Leader Open-to-Learning

Leader and follower comparisons

Variable:	Leader	Follower	Sig. value:
LPE/FPE (T1)	M = 5.43, SD = .41, n = 64	M = 5.51, SD = .70, n = 100	t(165) = .11, p = .916
LPE/FPE (T2)	M = 5.54, SD = .37, n = 49	M = 5.48, SD = .82, n = 69	t(121) = .22, p = .829
LOTL/FOTL (T1)	M = 5.04, SD = .60, n = 64	M = 5.2, SD = .94, n = 97	t(165) = -.247, p = .806
LOTL/FOTL (T2)	M = 5.09, SD = .56, n = 48	M = 5.18, SD= .96, n = 69	t(120) = .047, p = .963

Difference in means between leader and follower. For abbreviations, please look at the table above.

Before and after workshop comparisons

Variable:	Pre-test	Post-test	Sig. value:
FPE (T1/T2)	M = 5.54, SD = .61	M = 5.52, SD = .72	t(51) = -.41, p = .684
FOTL (T1/T2)	M = 5.20, SD = .74	M = 5.29, SD = .83	t(51) = -.93, p = .357
LPE (T1/T2)	M = 5.45, SD =.46	M = 5.52, SD = .35	t(55) = -1.260, p = .213
LOTL (T1/T2)	M = 5.0, SD = .5.17	M = 5.02, SD = .54	t(55) = -.56, p = .58
Trust (T1/T2)	M = 6.0, SD = .83	M = 6.0, SD = .84	t(49) = .81, p = .424
Discrepancy (T1/T2)	M = -.16, SD =.58	M = -.11, SD =.66	t(32) = -.55, p =.587

Difference in means between before and after the OTL workshop. For abbreviations, please look at the table above. Discrepancy refers to the difference between leader and follower's rating of the former's effectiveness.

Appendix 4 – Linear Regression

Descriptive Statistics

	Mean	Std. Deviation	N
Trust_mean_T1	5,9491	,82073	72
Discrepancy_T1	-,1276	,74110	72

Correlations

		Trust_mean_T1	Discrepancy_T1
Pearson Correlation	Trust_mean_T1	1,000	-,613
	Discrepancy_T1	-,613	1,000
Sig. (1-tailed)	Trust_mean_T1	.	,000
	Discrepancy_T1	,000	.
N	Trust_mean_T1	72	72
	Discrepancy_T1	72	72

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Discrepancy_T1[b]	.	Enter

a. Dependent Variable: Trust_mean_T1

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,613[a]	,376	,367	,65303

a. Predictors: (Constant), Discrepancy_T1

b. Dependent Variable: Trust_mean_T1

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17,974	1	17,974	42,149	,000[b]
	Residual	29,851	70	,426		
	Total	47,826	71			

a. Dependent Variable: Trust_mean_T1

b. Predictors: (Constant), Discrepancy_T1

Coefficients^a

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95,0% Confidence Interval for B Lower Bound	Upper Bound
1	(Constant)	5,862	,078		75,055	,000	5,707	6,018
	Discrepancy_T1	-,679	,105	-,613	-6,492	,000	-,887	-,470

a. Dependent Variable: Trust_mean_T1

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	4,1651	7,3900	5,9491	,50315	72
Residual	-1,85238	1,35585	,00000	,64841	72
Std. Predicted Value	-3,546	2,864	,000	1,000	72
Std. Residual	-2,837	2,076	,000	,993	72

a. Dependent Variable: Trust_mean_T1

Scatterplot with Regression Line

R² Linear = 0,443

y=5,85-0,75*x
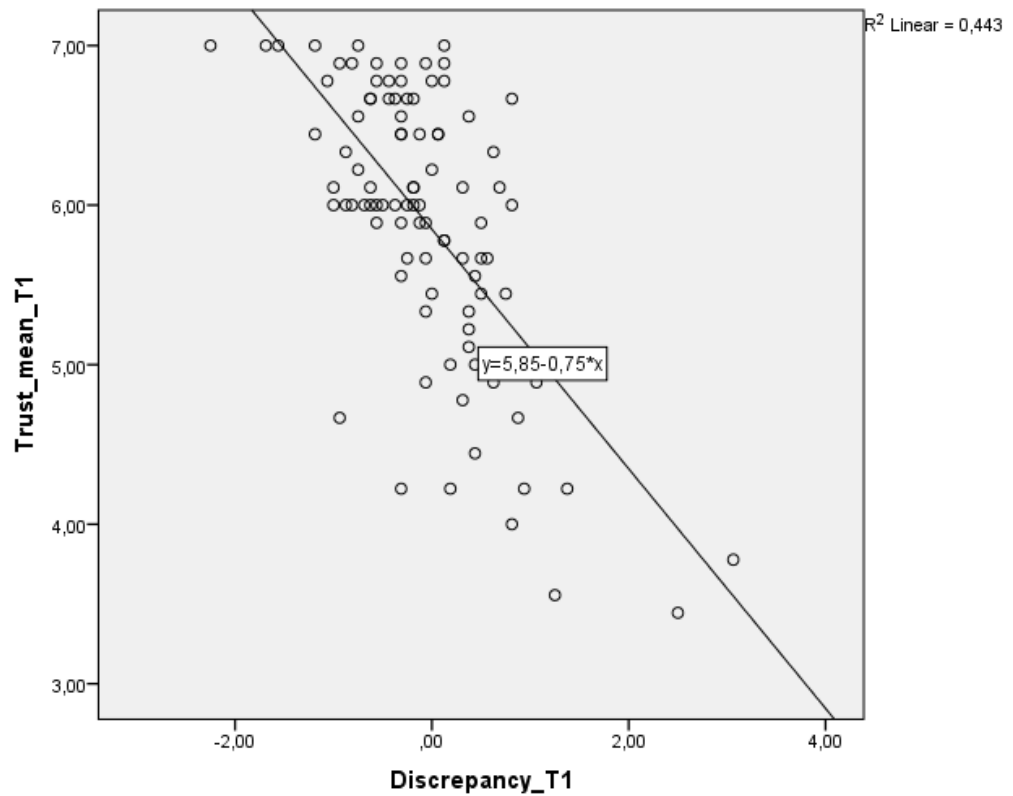
Histogram

Dependent Variable: Trust_mean_T1

Mean = -3,71E-15
Std. Dev. = 0,993
N = 72
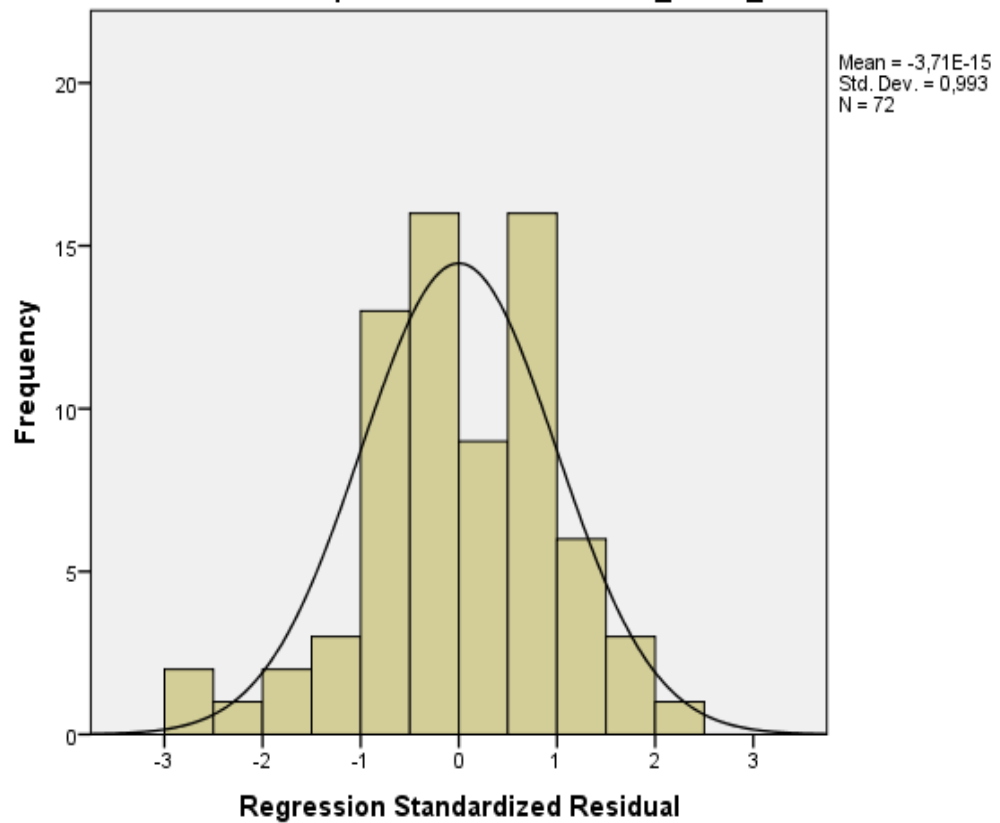
Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Trust_mean_T1

Scatterplot
Dependent Variable: Trust_mean_T1
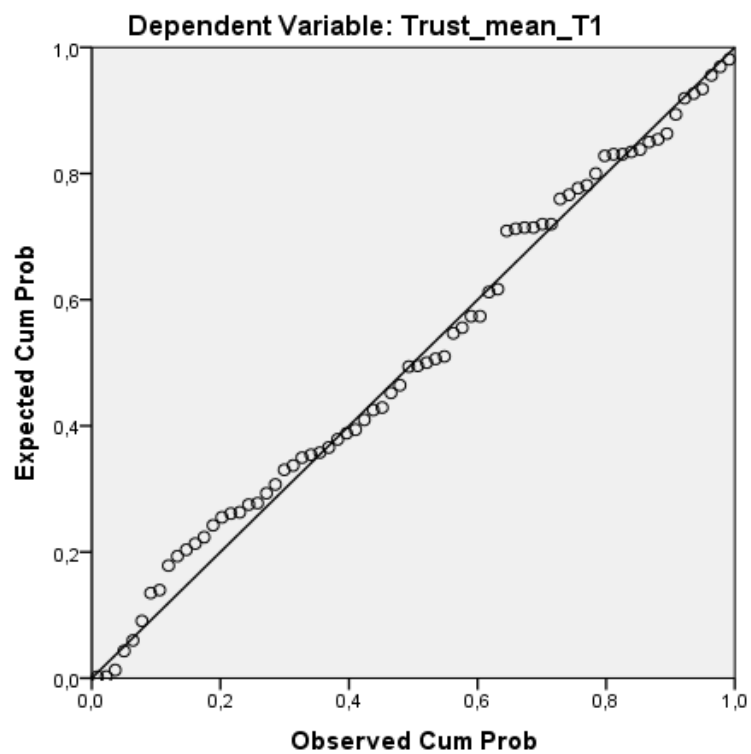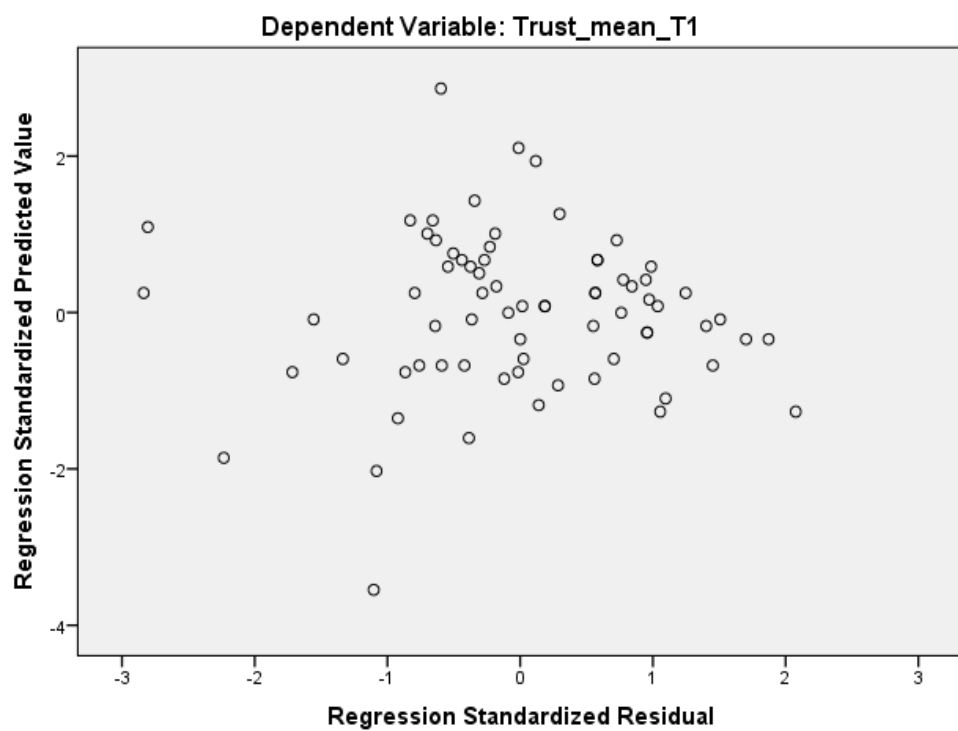
Appendix 5 – Controlling for liking

Model Summary[c]

Model	R	R²	Adjusted R²	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	,770[a]	,593	,587	,52618	,593	100,576	1	69	,000
2	,799[b]	,638	,627	,49995	,045	8,428	1	68	,005

a. Predictors: (Constant), Liking_T1

b. Predictors: (Constant), Liking_T1, Discrepancy_T1

c. Dependent Variable: Trust_mean_T1

Preliminary Master Thesis Report

Does Open-to-Learning Conversations Influence Relational Trust Between School Leaders and Teachers in Norway?

A Quantitative Study on Open-to-learning Conversations and Perceived Principal Effectiveness

Date of submission:
16.01.2017

Campus:
BI Oslo

Examination code and name:
GRA 19502 Preliminary Master Thesis Report

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Programme:
Master of Science in Leadership and Organizational Psychology

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Introduction

Just as in social life, human relations are critical in organizational life (Altinkurt & Yilmaz, 2012). In schools, various individuals and groups are dependent on each other to reach educational goals and run an effective school (Tschannen-Moran & Gareis, 2015). One of the main factors of effectiveness and development in knowledge-based organizations has been shown to be knowledge sharing between the organization's employees (Wang & Noe, 2010). Further, one of the main facilitators for knowledge sharing is interpersonal trust (Wang & Noe, 2010). In schools, school leaders who create trusting bonds to their employees are therefore said to foster effective communication and interaction, which in turn positively affect student academic outcomes (Tschannen-Moran & Gareis, 2015).

In addition, leaders who are in agreement with their employees when rating their own effectiveness, are often seen as more effective leaders (Fleenor, Smither, Atwater, Braddy, and Sturm, 2010). These leaders are said to be more self-aware than other leaders, as they have been open to their employee's feedback and reflected on it (Sinnema, Robinson, Ludlow, and Pope, 2015). Self-aware leaders set objectives and expectations perceived more realistic by employees than leaders with less self-awareness (Fleenor et al., 2010). This, in turn, may contribute to desirable outcomes, such as positive employee behavior and organizational effectiveness (Fleenor et al., 2010).

In this paper, we want to look into the concept of open-to-learning conversations and its effects on relational trust in the educational sector in Norway. In addition, we want to investigate if the discrepancy between leaders' and followers' perceived leader effectiveness (leaders' self-awareness) moderates this relationship. Our research idea is based on the fundamentals of instructional and collegial leadership, double-loop learning, and open-to-learning, and is done in cooperation with BI Norwegian Business School. We will briefly review the relevant theory and the main framework of OLC, before presenting our hypotheses, method, and plan for further progress. Our research question for this paper is as follows:

Research question:

Does training related to the concept Open-to-Learning Conversations influence relational trust between principals and teachers in Norway?

Instructional and Collegial Leadership

Instructional leadership occurred as a consequence of the "Effective School" movement in the 1980s, where the supporters argue that the principal plays a key role to obtain a productive school (Hallinger & Murphy, 1985). Moreover, collegial leadership also seems to be related to faculty trust and improved school performance (Tschannen-Moran & Gareis, 2015). Hence, this paper is based on the view that leadership can influence the effectiveness of school systems.

There have been developed several models since Hallinger and Murphy first introduced instructional leadership in 1985 (Alig-Mielcarek & Hoy, 2005). However, there are three essential elements that iterate in the models: 1. Defining and communicating goals; 2. Monitoring and providing feedback on the teaching and learning process; and 3. Promoting and emphasizing the importance of professional development (Alig-Mielcarek & Hoy, 2005). In other words, instructional leadership moves beyond the administrative tasks and focuses on the improvement of teaching and learning, that is, curriculum and instruction (Robinson, 2009; Hallinger, 2005, cited in Editors, 2014). This type of leadership is also known as "learning leadership", as it has shown to improve development in educational institutions (Editors, 2014). Furthermore, the main desired outcome of this type of management is to enhance learning for the students (Robinson, 2007; Le Fevre & Robinson, 2015). Studies in New Zealand have shown that promoting and participating in teacher learning and development is associated with valued student outcomes, both social and academic outcomes (Robinson, 2007; Le Fevre & Robinson, 2015). In order to have an effective leadership policy, however, one is dependent on support from all parts; principal, teachers and administration (Editors, 2014). This emphasizes the importance of the principal's engagement in teaching, which can take place in conversations with the teachers (Le Fevre & Robinson, 2015). Moreover, conversations about the quality of teacher learning are believed to increase relational trust, which in turn is likely to bring about

improvement (Le Fevre & Robinson, 2015, p.87). Based on these findings related to instructional leadership, it seems as though principals play a crucial role in order to implement effective school systems, and that teachers' involvement is important to obtain valued student outcomes.

Although focusing on improving curriculum and instructional activities are important to enhance students' performance, putting emphasis on interrelationships between principals and teachers also seems to be beneficial for facilitating trust in schools (Handford & Leithwood, 2013; Tschannen-Moran & Gareis, 2015). Leaders with a collegial leadership style are perceived by their teachers as being supportive and egalitarian, with a focus on the welfare of teachers. Such leaders are open to suggestions and questions from their subordinates, and emphasize a shared professional orientation (Tschannen-Moran & Gareis, 2015). This approach to decision making is seen as decentralized and friendly, which has shown to be related to relational trust (Handford & Leithwood, 2013; Tschannen-Moran & Gareis, 2015).

As both instructional and collegial leadership have been shown positively related to school performance and relational trust (Tschannen-Moran & Gareis, 2015), we may argue the importance of maintaining a balance between instructional activities and relation-enhanced actions. Leaders that are perceived as only competent are not good enough to facilitate a successful learning and trust-based culture, they also need to be relational-focused, open, and show their subordinates respect and integrity (Handford & Leithwood, 2013). That being said, we are not viewing the two sides of leadership as being mutually exclusive (Tschannen-Moran & Gareis, 2015). The purpose is to emphasize that principals' leadership is an important factor in order to achieve successful school performance, both the task related and the relational component of leadership.

The Origins of the OLC Framework

Robinson's communication model *Open-to-Learning Conversations* has its origin in Chris Argyris' work on double-loop and single-loop learning. According to Argyris (1993), both learning types are necessary in all organizations. Single-loop learning corrects error by changing routine behavior, so that the organization can

carry on its current policies or achieve its current objectives (Argyris, 1993). But in a dynamic environment, organizations cannot simply rely on this type of learning if it is to be effective and keep up to speed. Argyris points out that by opening up more of the inside of our minds to the people around us, we may improve our own effectiveness, enhance the quality of the relationships we enter into, and be able to renew the organizations and social systems we inhabit (Anderson, 1997). Organizations have to be ready to change to meet the demands of the environment, and consequently need to learn by correcting errors through examining their underlying values and policies (Argyris, 1993). Argyris (1993) stresses that this kind of learning, namely double-loop learning, is unusually found in organizations, because it requires leaders who constantly model it and honor it – leaders who are *leading learning*.

Emphasizing this, Robinson, Lloyd and Rowe (2008) found that the best way principals can positively influence the achievement and well-being of their students, is through their leadership of the improvement of teaching and learning in their respective schools. Thus, the closer school leaders get to the core business of teaching and learning, the greater the possibility they will make a difference to students (Robinson, Hohepa and Lloyd, 2007). What is found to be crucial for this type of leadership is relational trust between leader and teacher (Bryk & Schneider, 2008; Robinson, Hohepa and Lloyd, 2007). Robinson, Hohepa and Lloyd (2007) argues that one of the most important determinants for the development of relational trust, is the leader's competence to deal with difficult problems in a respectful manner. Further, it is argued that the essence in developing this competence lies in a leader's ability to be involved in open-to-learning conversations.

Knowledge Sharing

Instructional leaders are shown to facilitate a developmental and learning organization (Hallinger & Murphy, 1985; Alig-Mielcarek & Hoy, 2005; Le Fevre & Robinson, 2015). In the field of organizational learning, there are many studies that support the statement that knowledge sharing is one of the important components to create a learning organization (Filstad & Blåka, 2007; Wang & Noe, 2010). A learning organization is believed to facilitate learning at work,

create a learning climate, establish learning structure, and obtain organizational learning (Örtenblad, 2004). Moreover, knowledge sharing is emphasized in the educational sector, as newly acquired knowledge may not only improve teachers' curriculum, but also their learning practices (Reynolds, Murrill, & Whitt, 2006).

To facilitate knowledge sharing, it is important to understand the nature of knowledge. Polanyi classified two distinctions of knowledge - explicit knowledge and tacit knowledge (Polanyi, 2000). These two aspects of knowledge differ in their nature; the first easily codified and communicated, the latter highly personal and difficult to articulate (Nonaka, 1994). They are stressed as being mutually exclusive: existing as two sides of the same coin (Tsoukas, 2011). Tacit knowledge is deeply grounded in an individual's experience, and comprises mental schemes, beliefs, and perceptions contained so deep in one's worldview that it is taken for granted (Koskinen et al., 2002). Tacit knowledge regulates all skillful action, and is thus an important factor of organizational life (Tsoukas, 2011). Effective performance can therefore be said to depend on knowledge that is hard to explicitly formulate in full, and thus also difficult to formalize (Tsoukas, 2011; Foos et al., 2006).

As much as 90 percent of an organization's knowledge has been claimed to reside in the minds of its employees (Wah, 1999b; Bonner, 2000a; Lee, 2000, cited in Smith, 2001). As schools are dependent on knowledge workers (teachers), it is crucial for the school's effectiveness that they gain access to the tacit knowledge among its teachers. Tsoukas (2011) points out that to share tacit knowledge, we need to find new ways of talking, original ways of interacting, and novel forms of distinguishing and connecting. We learn, not when tacit knowledge is converted to explicit, but when tacit knowledge is articulated or imitated through interaction (Tsoukas, 2011). Given the personal nature of tacit knowledge exchange, Roberts (2000) pointed out that trust is an important factor in this process (Foos et al., 2006). She argues that risk and uncertainty bound to the transfer of tacit knowledge decreases when trusting relationships are present (Roberts, 2000, cited in Foos et al., 2006). A literature review by Wang and Noe (2010) also reveals that relational trust is an important facilitator for knowledge sharing within the organization. Hence, in order to obtain learning within an organization,

establishing relational trust is crucial in order to make people share knowledge, which may in turn get transferred into organizational knowledge (Wang & Noe, 2010).

Relational Trust

As schools consist of individuals and groups dependent on each other, both within each school as well as in the larger school system, trust is highlighted as an important facilitator for effective interactions and communication (Tschannen-Moran and Gareis, 2015; Altinkurt & Yilmaz, 2012). Rousseau and colleagues (1998, p.395) defined trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another (Dirks & Ferrin, 2001)". Being vulnerable implies that something meaningful is at stake, and thus involves taking risk (Mayer, Davis & Schoorman, 1995). Trust is not understood as equal to taking risk, but rather as the *willingness* to do so (Mayer et al., 1995). Filstad and Blåka (2007) points out the importance of establishing a learning relationship that promotes trust in knowledge-creating dialogues. In that way, both parties have the courage to be vulnerable, given that respectful behavior is shown to take care of that vulnerability (Filstad & Blåka, 2007).

Educational outcomes in schools have been stressed to be influenced by the collective trust between various actors in the respective school (Tschannen-Moran, 2014b; Zeinabadi, 2014, cited in Tschannen-Moran & Gareis, 2015). A situation where principals, teachers, students, and parents trust each other is seen to foster a climate for success (Tschannen-Moran & Gareis, 2015). Further, principals who foster trust are said to motivate teachers to increase their performance and achievement (Tschannen-Moran & Gareis, 2015). In addition, school leaders who create trusting bonds better work together with teachers when facing challenging problems of schooling (Chughtai & Buckley, 2009; Forsyth & Adams, 2014; Handford & Leithwood, 2013; Notman & Henry, 2011; Salfi, 2011; Tschannen-Moran, 2013, 2009; Zeinabadi, 2014, cited in Tschannen & Gareis, 2015). Contrary, a lack of trust between leader and employee can lead to both parties seeking to minimize their risk and vulnerability by engaging in self-

protecting actions. This may consequently end in disengagement from the educational process, and will thus negatively affect student learning (Bryk & Schneider, 2002; Tschannen-Moran, 2014b, cited in Tschannen-Moran & Gareis, 2015).

Factors Important for Trust between Principal and Teacher

A principal works with, for, and through teachers to lead the school and to reach shared educational goals (Tschannen-Moran & Gareis, 2015). In all their activities, a principal is always under scrutiny. Teacher's interactions with, and observations of, the principal creates the ground for judgment of the degree of trust they have for their leader (Tschannen & Gareis, 2015). With support from various studies, Tschannen-Moran and Gareis (2015) state that judgments on whether the principal is trustworthy or not, is based on the perceived benevolence, honesty, openness, competence and consistency by teachers (Handford & Leithwood, 2013).

Benevolence is explained as a generalized spirit of goodwill and a readiness to extend oneself in the support of the well-being of others. In addition, benevolence can also comprise a person's willingness to eschew personal gain if it could harm the other part (Tschannen-Moran & Gareis, 2015).

How *honest* the teacher perceive the principal to be refers to both the traditional view of honesty, namely if the principal is telling the truth, and in addition entails the perceived integrity of the principal. Factors like consistency in the principal's previous actions, credible references about the principal from outsiders, belief of the principal's sense of justice, and the notion of the coherence between principal's words and action all influence to what degree he or she is seen as having integrity (Mayer et al., 1995). A belief in the principal's sense of fairness and authenticity is underlined as important factors for trust. Thus, a principal who is viewed as being him or herself by truthfully representing a set of beliefs and values, and owning up to shortcomings is seen as more trustworthy. Contrary, a principal who is perceived as hiding something may cause teachers to be less willing to show vulnerability, and thus put less trust in the principal (Tschannen-Moran & Gareis, 2015).

Another way in which school leaders gain the trust of teachers is by being *open* with them through sharing information and delegating responsibilities important for school management (Tschannen-Moran & Gareis, 2015). By including teachers in decision-making, principals can facilitate for teachers feeling valued (Tschannen-Moran and Gareis, 2015). When teachers, in addition to being involved in decisions, also have influence on organizational decisions that affect them, conditions that facilitate mutual trust between teachers and principals become unambiguous (Handford & Leithwood, 2013; Mitchell et al., 2011; Tschannen-Moran, 2011, cited in Tschannen-Moran & Gareis, 2015). This is especially prominent when issues call for teacher's expertise, such as decisions related to instruction or student learning and well-being (Bryk & Schneider, 2002; Tschannen-Moran, 2014a, b, cited in Tschannen-Moran & Gareis, 2015). Zand (1997) pointed out how teachers who trust the principal are more inclined to communicate clearly and completely about problems, and are more prone to engage in problem-solving (Tschannen-Moran & Gareis, 2015).

To what degree do teachers trust their principal, also depends on the *competence* of the principal in their position as school leaders (Tschannen-Moran & Gareis, 2015). The role as a school leader is a complex one, comprising responsibilities such as communicating a convincing vision for the school, coaching employees to align their competence with this vision, modeling wanted behaviors of teachers, managing the school's resources effective and fair, as well as intervene in conflicts that arises (Tschannen-Moran, 2014a, cited in Tschannen-Moran & Gareis, 2015). An important aspect of the principal role is to balance the task dimension and the collegial relationship dimension of leadership (Tschannen-Moran, 2014a, cited in Tschannen-Moran & Gareis, 2015). Too much weight on any of the two can affect the amount of trust teachers feel towards the principal. However, when principals show the ability to successfully manage their job, teachers are more prone to trust him or her (Tschannen-Moran & Gareis, 2015).

Lastly, the *consistency* of which the principal shows benevolence, honesty, openness, and competence, affects to what degree teachers see them as trustworthy (Tschannen-Moran & Gareis, 2015). When teachers observe the

principal's actions eliciting trust as consistent over time and across settings, they are more likely to see them as trustworthy (Tschannen-Moran & Gareis, 2015). This means that teachers see their principal as dependable, which decreases the risk for them being vulnerable (Tschannen-Moran & Gareis, 2015).

Generally, trust in schools is highlighted as a key factor for productive group relations and the development of interpersonal relationships (Hoy et al., 1992, cited in Altinkurt & Yilmaz, 2012). Trust between leader and subordinate is seen connected to increased confidence in the accuracy of information given by the leader, a greater eagerness to interact with the leader, and a greater satisfaction in communication with the leader (Roberts & O'Reilly, 1975, cited in Tschannen-Moran & Gareis, 2015). Consequently, a high level of trust increases student achievement and facilitates for organizational commitment and citizenship behavior among employees (Ozag, 2006; Tschannen-Moran, 2001; Yilmaz, 2009, cited in Altinkurt & Yilmaz, 2012).

The Importance of Power Relations

When addressing the relationship between principal (leader) and teacher (subordinate), the influence of power relations is important to mention. According to Foucault (1979, 1980), power forms and legitimates knowledge, in the same way as knowledge promotes the exercise of power (Heizmann, 2011). The two are mutually established and dynamically influence social relations (Heizmann, 2011). Power is defined as "an individual's ability to guide other's behaviors in an arbitrary way (Pfeffer, 1992; Greenberg & Baron, 1993, cited in Altinkurt & Yilmaz, 2012)". As such, power is a relational term that does not make sense without interactions between people (Altinkurt & Yilmaz, 2012).

To understand the power relations that may exist in a school, and may therefore influence communication and decision-making, it is important to see the school as part of a larger system. The principal of the school is more like a middle manager than a top manager. Constrained by municipality and governmental budgets, rules and regulations, the school leader is likely often torn between directions given from above and local needs and wishes in the respective school (Myhre, 2010). Møller (2004) describes the various expectations directed towards the principal,

on a macro level (municipality and government) and on a micro level (the specific school and its culture), as consisting of cross-pressures and loyalty conflicts. School owners on one of the sides, see the principal as part of a hierarchy, expecting him or her to implement decisions passed on a superior level. Conflicting to this, teachers in the respective school expect respect according to their professional autonomy (Myhre, 2010). As a consequence, conflicts between expectations from school owners and teachers can create difficulties for the principal and lead to unwanted outcomes for the school. Tarter and Hoy (1988) found that to facilitate trust principals needed to protect teachers from unreasonable community demands, and also influence superiors without selling out teachers. It seems evident, and rather obvious, that to gain teacher's trust the principal needs to be perceived as being "on their side".

In Heizmann's study (2011) of a network of HR practice, she found that regional HR practitioners positioned their head office peers as sitting in an 'ivory tower', disconnected from everyday local practice. Because regional HR communities shared this experience of being 'neglected' by head office, it fostered the development of personal ties, which, in turn, further strengthened participation in a regional HR community (Heizmann, 2011). Relating this to the school system, teachers may gather around the common feeling of being left out of important decisions. Feeling that the school owner "forces" rules and regulations on the school, teachers and students, without acknowledging local differences and issues. In this way, teachers could create a regional teacher community that opposes management. Relating to this, the school leader could be seen as disloyal because of being the one to enforce what is decided by superiors (Møller, 2004). Consequently, this may create a barrier between the school leader and teachers, influencing relational trust and thus the willingness for knowledge sharing.

These issues related to power differences, enforces the importance of the points made earlier of trust and knowledge sharing being vital to create a healthy organization. If a principal is to be successful in facilitating such a healthy environment in their respective school, creating trusting bonds and communicating openly and honestly seems crucial.

Open-to-Learning Conversations

Professor Viviane Robinson has conducted many studies on school leadership (e.g. Robinson, 2001; Robinson, 2002; Robinson, 2006, cited in Robinson 2007) and based on her work and the work of Argyris and Schön (1974), she developed a concept called *Open-to-Learning Conversations* (OLC) (Robinson, 2009). OLC is a practical framework that focuses on how people can learn about the quality of their thinking and the information that they use to guide their perception of *what* is happening in the world around them, *why* it is happening, and *how* to respond to it (Robinson, 2009). Open-to-learning communication is prominent when instead of assuming validity of one's own views and imposing these on others, one seek ways to confirm and make better the quality of one's decision making (Robinson, 2009). By educating leaders on how to communicate in such a way, trust, knowledge sharing, and collegial leadership could be strengthened. In addition, the three elements of instructional leadership mentioned above could thus better be managed. Consequently, OLC conversations could influence the overall effectiveness of the school system.

Why OLCs are Important

The purpose of OLCs is to manage dilemmas within the organization (Robinson, 2009). A *dilemma* can be defined as something that "arises when one is confronted with decision alternatives in which any choice sacrifices some valued objective in the interest of other objectives" (Robinson, 2009, p. 35). When dilemma confrontations are being avoided by leaders, it makes it difficult for the leader to develop a culture of trust and respect in their school (Cardno, 2007; Robinson, 2009). Often leaders experience a dilemma between the wish to change agenda and to protect their relationships with employees (Argyris & Schön, 1974, cited in Robinson, 2009). As this conflict avoidance is both dangerous and may risk a culture of mutual trust and respect, the OLC framework is developed for the purpose to reduce this risk and facilitate trusting relationships. Furthermore, as trusting relationships are the core of a leadership that promotes the improvement of teaching and learning, it is crucial to establish a culture that is open to communication (Cardno, 2007; Robinson, 2009). OLCs can facilitate relational trust in the way that they uncover dilemmas, detect and challenge people's

assumptions in order to deal with conflicts in a constructively manner (Robinson, 2009).

The Key Components of the OLC Framework

It is common that people struggle with the dilemma between task issues and retaining relationships, which often leads to either a pursue of a *soft sell approach* - when the leaders fail to disclose their evaluation; or a *hard sell approach* - when leaders assume that her views are the only truth (Robinson, 2009). Both these approaches discourage debate, and neither of them produce a conversation that will obtain an agreement that is co-constructed (Robinson, 2009). The heart of OLC is to move the principal from checking the validity of his/her perspective towards reflecting upon his/her assumptions regarding the issue at hand.

There are seven key components of OLC, which will be explained in this section.

1. *Describe your concern as your point of view*. This component implies that you state your opinions without assuming that it is also what the other person think. The main idea is to not assume that your concern is the reflection of "the reality", but disclose your thoughts to invite a open-to-learning conversation.

2. *Describe what your concern is based on*. This component entails an explanation of your concern. You make your reasoning clear with evidence. In this way, not only is it easier for the other person to understand your way of reasoning, but also help you both to check your validity and reflect upon your quality of thinking.

3. *Invite the other's point of view*. Another way to check the validity is keep the conversation balanced, meaning that both sides learn from each other. The point here is to make it clear that you also look for the other's opinions about the issue. This openness to other's views embrace an atmosphere of mutual respect, where differences are treated as contingencies to learn and not as subjects for persuasion.

4. *Paraphrase their point of view and check*. This component provides structure to the dialogue. By summarizing the other's point of view, you let them know of whether or not you have understood what they have been telling you.

5. *Detect and check important assumptions*. The main purpose of OLCs is gaining valid information. Hence, assumptions that are made during the dialogue need to be evaluated critically. In other words, check how accurate your assumptions are by inviting the other person's opinion and let them criticize constructively.

6. *Establish common ground*. The goal of the conversation is to reduce the gap (if any) between the people involved and obtain a common ground. You both want to end the conversation with a motivation to keep working together, that this might happen through shared dissatisfaction with the current situation, shared satisfaction with the dialogue or relationship, or a shared purpose.

7. *Make a plan to get what you both want*. Establish a plan to solve the issue, where both have had the chance to contribute and are going for it.

These seven key components are believed to help the dialogue between the principal and teacher to be more open to learning, which in turn establish relational trust. These components might be applied as step-by-step guides to open-to-learning conversations related to the quality of teaching.

Hypotheses

Based on the literature review and discussion above, our intention is to explore if leader training related to engaging in open-to-learning conversations will have a positive effect on the relational trust between headmasters and teachers in Norwegian schools. Our main hypothesis addresses the directional relationship between the independent variable, OLC, and the dependent variable relational trust between leader and teachers in schools in Norway:

Hypothesis 1:

Educating principals within the concept of Open-to-Learning Conversations increases relational trust between principal and teachers in respective school.

Moderating Effect of Perceived Principal Effectiveness

In addition to hypothesis 1, we found one possible moderator to this relationship we want to look into. Sinnema and colleagues (2015) studied the discrepancy between teachers' and principals' perceptions of principal effectiveness.

According to the study, when principals underestimate themselves, leaders are considered by the teachers as effective leaders (i.e. positive discrepancy). However, when principals overestimate themselves, they are rated as less effective by the teachers (i.e. negative discrepancy). In addition, Fleenor, Smither, Atwater, Braddy, and Sturm (2010) have shown that in-agreement raters are more effective leaders than individuals who underestimate or overestimate their ratings. Thus, Fleenor et al. (2010) concluded that in-agreement raters have a higher degree of self-awareness than the other raters. Leaders with high self-awareness are familiar with how they are perceived by others, because they have been open to their feedback, and absorbed it to be a part of their self-perception (Sinnema et al., 2015). In addition, self-awareness has shown to help leaders set more realistic expectations and goals, which will increase the chance for positive employee and organizational outcomes (Atwater & Yammarino, 1997; Halverson et al., 2005; as cited in Fleenor et al., 2010). Furthermore, Sinnema and Robinson (2015) also suggested future research to look into the different types of discrepancy by studying links among discrepancy, relational trust and school improvement.

We hypothesize that when teachers rate school leaders as more effective than the school leader does, it means they trust their leader. But at the same time, people are known to often attribute a person favorable characteristics if they like that person (Nisbrett & Wilson, 1977). Thorndike (1920) explained this as overrating of special features with a halo belonging to the individual as a whole. This is therefore often called "the halo effect", which is important to mention as teachers may rate their leaders according to their personal liking of them, unrelated to the leader's actual effectiveness. To avoid this, we will control for teacher's liking of the principal in this study.

In an in-agreement situation, where leaders and teachers have a similar view on principal's effectiveness, we assume that this will be beneficial for the OLC training due to the leader's reflective mindset and openness to feedback. As this self-aware leader is said to set more realistic expectations and goals for their staff and organization, we also believe that in-agreement raters will be seen as more trustworthy by employees. Conversely, if a negative discrepancy between principal' and teachers' perceived principal effectiveness exists, it could lead to

non-realistic goals and expectations, which might be detrimental for relational trust. Hence, as we believe that the leader effectiveness discrepancy may have some implications on the link between OLC and relational trust, we want to include it as a moderator in our model, leading to the following hypothesis:

Hypothesis 2:

When the discrepancy between principal and teacher perceptions of principal effectiveness is positive (i.e. teachers rate higher than the principal) the positive association between OLC workshop and relational trust is strengthened.

Hypothesis 3:

When the discrepancy between principal and teacher perceptions of principal effectiveness is negative (i.e. teachers rate lower than the principal) the positive association between OLC workshop and relational trust is weakened.

As mentioned, one important characteristic of effective leaders has been shown to be high self-awareness, which is typically measured by the match between self and other perception (Sinnema et al., 2015). This view on leadership relates directly to the concept of OLC, and is therefore highly relevant to this paper. Further, leaders with high self-awareness have often been shown to be in-agreement when measuring self-other-agreement, which leads us to hypothesis 4 (Fleenor et al., 2010):
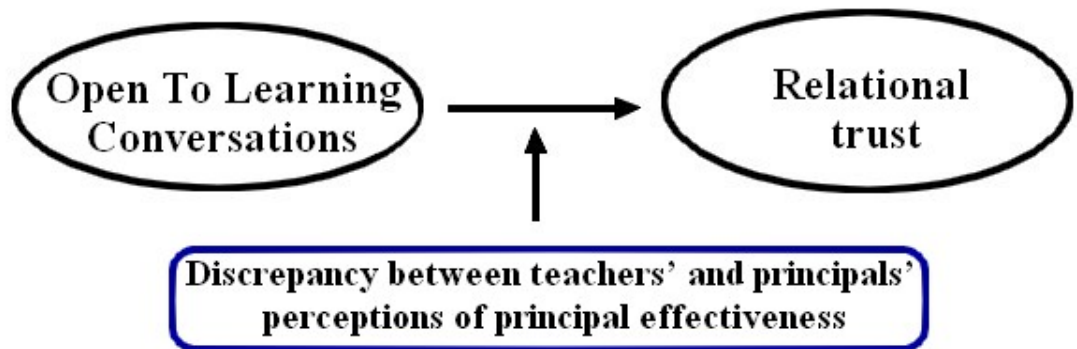
Hypothesis 4:

When principal and teacher perceptions of principal effectiveness are equal (i.e. teachers agree with the principal) it will strengthen relational trust beyond that of a positive discrepancy.

Research Model

Based on the literature review, and the following hypothesis above, our research model can be depicted as shown below:

Model 1: Research model

We wish to study OLC as the independent variable, relational trust as the dependent variable, and discrepancy between teachers' and principals' perceptions of principal effectiveness as a moderator.

Our Contribution

We believe that our study have its own unique contributions for the research field of organizational psychology. As the concept of OLC has already been tested in New Zealand with good results, we wish to apply the framework in a Norwegian setting, checking the generalizability across culture and continent. The study is also filling a gap in research directed at the principal/teacher relationship in a Norwegian context. If this study of OLC generates positive results, it may imply that the OLC framework can also be applied outside the educational sector, since dilemma management and discrepancy issues appears regardless type of business or sector (Cardno, 2007). In addition to this, research directed at students and schools can generally be seen as beneficial for the community at large. Children are our future, and what we do to make their learning experiences more effective and more pleasant, will in the long run affect the competence of those who are to lead our country in the years to come.

Although there have been studies that have looked into the discrepancy between leaders' and subordinates' perception of principal effectiveness (e.g. Sinnema & Robinson, 2015), there have not been any study that have investigated the discrepancy as a potential moderation for the relationship between OLC training and relational trust. If we find support for our hypothesis that the discrepancy has a moderating effect on our main hypothesis, we believe that this will have a unique contribution to the research field on factors that influence school performance.

In addition, there are few studies that have investigated teacher's trust in their leader. In this paper, each school leader's perceived trustworthiness is rated by three teachers, strengthening the validity of the results through decreasing the effect of individual noise.

Method and Sample

The OLC framework will be applied in a leader-training project by BI Norwegian Business School. The purpose of the project is to build and obtain trust in a way that will improve student outcomes. Assistant Professor Birkeland, who is also our master thesis supervisor, leads BI's leader-training project. Our master thesis will be a part of this project, where our contribution will be studying the effect of OLC on the relationship between principal and teacher (i.e. relational trust). As mentioned earlier, we will also contribute by looking at the moderating effect of the discrepancy between teachers and principals' perception of principal effectiveness.

Our sample will be principals and teachers that work in Norwegian schools. As it is desirable to catch an overall picture of the educational sector, the sample will be consisting of employees from elementary schools, middle schools and high schools.

As a fundament in research methodology, the choice of research method is dependent on the research question (Bryman & Bell, 2015). Since our purpose is to understand and compare our data to a larger population, it is suitable to apply a

quantitative research method. In addition, previous studies related to our topic suggest that quantitative studies might provide useful insights on the links among discrepancy, relational trust, and school improvement (e.g. Sinnema et al., 2015).

In order to investigate possible change in principal-teacher relational trust due to training, and also the possible change in the discrepancy, we are planning to conduct a two-time leader and follower survey study. We will mainly apply two scales to study our research questions, that is a scale of principal effectiveness which will be evaluated by both principals and teachers, and a scale of relational trust which will be evaluated by the teachers. The time one follower/leader survey will be sent out before the OLC workshop, and time 2 surveys will be sent out after the workshop.

Tentative Plan for Completion of Thesis

Since our project is part of BI's leader training workshop, we will be dependent on the project's schedule. During the previous fall, Professor Robinson have travelled to Norway to accredit eighteen leaders in the OLC framework (week 42 and 49). These leaders will in turn hold workshops on OLC method for principals that will apply this method at their institutions. In the further process, we will assist and contribute with the design of the surveys for pre-test and post-test. The pre-tests will be sent out in January, followed by the workshops on OLC method in February. Finally, the data collection (i.e., the post-tests) will be conducted around March/April. We expect then to analyze and discuss the data from late April or beginning of May.

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