



Universitetet
i Stavanger

**DET SAMFUNNSVITENSKAPELIGE FAKULTET,
HANDELSHØGSKOLEN VED UIS
MASTEROPPGAVE**

STUDIEPROGRAM:

EXECUTIVE MBA

OPPGAVEN ER SKREVET INNEN FØLGENDE
SPESIALISERINGSRETNING:

LEDELSE

TITTEL: DIALOG OG EFFEKTIVITET I TEAM

ENGELSK TITTEL: DIALOGUE AND TEAM EFFECTIVENESS

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Preface

This master thesis is written as part of the Executive MBA program at the University of Stavanger. For the past year, this has been a rewarding and educational journey. Evolving from being told what to read in courses, to conduct critical literature reviews, and doing research on my own, has given me a new perspective and great appreciation of the field of research. I would like to give a special thanks to my supervisor Aslaug Mikkelsen for her guidance and critical evaluation along the way, as well as to MindUp for participating with contacts. Thank you to Freddie Ullestad and Sisilie Lunde. Last but not least, a big thank you to my family for their support and patience throughout this time.

Stavanger, 24.05.2018

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Abstract

Due to the development and demands of globalisation and the need to quickly adapt to changes, companies have been forced to change their organisational structures. Organisation in teams is seen as a powerful tool for high performance. However, simply putting individuals together in teams, without nurturing the team, does not make them more effective. Despite this, many employees and leaders do not take the time to develop a well-functioning team. There are different models to test effectiveness, but fewer on how to improve effectiveness. Dialogue, as a special way of communicating in teams, have been suggested by experts in the field to be an important predictor of effectiveness as early as the 1970s. Yet very few researchers have looked into this. Bang and Midelfart (2010) offer the first study to test specifically if dialogue is positively correlated with effectiveness in leader groups. They found that dialogue is an independent factor in predicting effectiveness. Inspired by this, the purpose of this thesis was to see if dialogue correlates positively with effectiveness in different teams. The number of participants is 104. They come from 16 teams, representing 10 different organisations. All were given the same survey as the original study. The results are strikingly similar. Dialogue has a strong positive correlation with effectiveness. Furthermore, the results on all three measures of effectiveness has a strong correlation with dialogue, which is in line with the findings of the original study.

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1 Background

Due to the development and demands of globalisation and the need to adapt, most organisations are organised in teams (Yukl, 2013). This is considered best practice HRM, and viewed as a powerful tool for high performance (Mikkelsen, 2014). One cannot get passed rapid change in organisations (By, 2005), and it seems many teams are striving for better results regardless of hierarchy (Hackman, 2002). Despite this, many employees and leaders do not take the time to develop a well-functioning team, because they are too busy chasing results (Bang & Midelfart, 2010).

From being highly hierarchical throughout history, organisations have changed their structure to more decentralised systems made up of teams. This is due to the tougher markets that require high flexibility and responsiveness towards clients, while continuously facing cost reduction programs. In order for teams to be effective, good communication within- and between teams is necessary (Jehn, Northcraft, & Neale, 1999; Bang et al., 2010; Bang & Midelfart, 2010).

Organisations are in constant change and the demand for better and more efficient results has never been greater. Yet 70% of all change initiatives fail (Bamford & Forrester, 2003; Higgs & Rowland, 2005; By, 2005). It is therefore of outmost importance to find ways to be more efficient, and that actually last over time. If members of a team feel respected, heard, appreciated, and feel they can learn something from each other, the literature claims that this will be reflected in positive results (Losada, 2014).

There is a consensus that teams work, but not on how to improve their performance (Dechurch et al., 2013). According to Bang's (2008) review on the effectiveness literature, common problems why teams fail to be effective are different interests among its' members, personal differences, inability- and unwillingness to long-term thinking and openness, and lack of loyalty to the decisions that are made. Some leaders are frustrated over members that only seem to care about their own tasks and not those of the other team members. Further frustration occurs when the team seems disconnected and does not seem to focus on the overall purpose. This also affects the organisation at large (Bang et al., 2010; Bang & Midelfart, 2012).

Through their review on the effectiveness and dialogue literature, Bang and Midelfart (2010) found that many who participate regularly in meetings, experience this as a waste of time. Some reasons are that they feel the meetings are ineffective, they do not get enough out of it, or because the focus is on details and single cases for so long that the bigger picture is lost. Often it is the same people who talk at length during the meetings, while others remain passive. It is not uncommon that discussions drag out without conclusions or decisions actually being made, and when they do land on a decision, it is not always followed up. Overall, the communication is unclear (Bang & Midelfart, 2010). There are not enough discussions that are exploratory and boost energy. Also, the substantive fact based debates are often favoured over the debates regarding relations in the group. This often allows conflicts establishing in relations without anyone intervening. These problems and similar issues are why many leaders and organisations actively work to develop and improve team development (Bang & Midelfart, 2010).

For teams to maximize their potential, communication is key. Without it, people cannot exchange views or develop shared goals. Communication is therefore at the heart of organisational learning (Kaufmann & Kaufmann, 2015). Yet dialogue, as a form of communicating, has received very little consideration in the literature (Easterby-Smith, 2003, Mazutis & Slawinski, 2008; Bang & Midelfart, 2010). This is why team effectiveness and degree of dialogue is interesting to study.

Bang and Midelfart (2010) have shown in their study that dialogue is positively correlated with team effectiveness. They looked at the correlation between dialogue and effectiveness in leader groups and found that the greater amount of dialogue, the more effective the leader group judged themselves to be.

The purpose of this thesis is to use Bang and Midelfart's (2010) survey on different teams to see if level of dialogue correlates positively with team effectiveness.

2 Theory

2.1 Theoretical Main Perspectives

In order to understand dialogue and effectiveness in teams, the larger literature concerning these concepts should be discussed. This section is therefore structured in the subchapters: Communication, dialogue, individual learning, organisational learning, groups and teams, effectiveness in teams, and finally, dialogue and team effectiveness as one. Theoretical perspectives that are used are Kolb's (1984) experiential learning theory, and Argyris and Schön's (1978; 2000) single and double loop learning.

2.2 Communication

Communication comes from the Latin word *communicare*, which means to notify, do together, or be in touch with. Communication is commonly known as a transfer exchange of information through a joint communication system and has four main functions: control, motivation, emotional expression, and information (Robbins & Judge, 2007, pp. 368-369; Kaufmann & Kaufmann, 2015). It is the process where a person, group, or organisation (sender) transfer information (message) to another person, group or organisation (receiver), where there is some understanding by the receiver(s). This includes the transference of both information and meaning. Simply transferring information does not guarantee effective communication, because the content can have different meaning for the sender and the receiver. Feedback is an important part of the communication process to ensure common understanding. The transfer of information can happen face to face, via telephone, video conferences, and via emails amongst others (Kaufmann & Kaufmann, 2015).

Communication is one of the most important processes in an organisation. Leaders actually use 80 percent of their work time in written and oral communication, and good communication is most of the time a trait of successful organisations (Kaufmann & Kaufmann, 2015). According to Robbins and Judge (2007, pp.374-376), communication increases motivation by clarifying to members what needs to be done and what needs to improve. Further, the formation of goals and feedback on progress and reinforcement of desired performance, all stimulate motivation and require communication. For teams to perform effectively, they need to stimulate members to perform, provide a means of

emotional expression, and make decisions (Robbins and Judge, 2007, pp. 368-369). Dialogue is a form of communicating that increases effectiveness in teams. In dialogue, members are active listeners, they are accepting, they dare to speak their mind, and they explore each other's differences and build on these (Bang, 2010).

2.3 Dialogue

Dialogue differs from regular communication. It is not simply a better conversation, but it is a conversation that takes the energy from people's differences and channels it towards a new understanding of the issue at hand. It lifts the conversation out of polarization to a greater common understanding. In this respect, dialogue can be used as a tool to access the intelligence and coordinated power that groups possess, but rarely tap into (Isaacs, 2008). The word dialogue itself comes from Greek. It is made of two meanings: *dia* (through) and *logos* (meaning, reason). According to Bang and Midelfart (2010), this is a contrast to the way people normally think of the word, a conversation, or at worst, as a robotic and uncreative debate between persons, who are trying to enforce their views on one another, or defend their own. Dialogue is a special form of communication, because instead of just transferring information, dialogue allows people to feel safe to let their guard down and to explore the meaning of the conversation (Bang & Midelfart, 2010). Dialogue fulfils deeper needs than simply getting to an agreement, unlike negotiation. Rather, in dialogue, people acknowledge different skills and opinions and build on these. It is a conversation where people think together in a relationship. Thinking together suggests that people no longer take their own positions as final. People who practice dialogue let their protective guard down and open up to listen to possibilities. This allows building on different views and creating something superior, rather than choosing one view over the other (Bushe & Marshak, 2015).

To produce results and to open up dialogue for teams and individuals, four necessary behaviours need to be practiced: respect, listening, suspending, and raising one's voice (Kaufmann & Kaufmann, 2015). Respecting entails searching for the best qualities in people, seeing them as legitimate, and respecting their boundaries. Listening means acceptance of what others have to say, not just hearing words, and at the same time, getting rid of inner assumptions. Suspending is suspending our own point of view and the confidence we have behind it. It means to allow for a change in direction, reflect, look at oneself from the outside, and to try to have a new view on things. Raising one's voice is to have enough practice and

courage to say what one truly thinks, despite the social and hierarchical setting. This practice allows hidden potential to come to the surface (Dixon, 1999; Isaacs, 2008).

The active listening part of dialogue has six components: Listening (being attentive to what is being said), understanding (finding meaning), remembering (working to remember what is said), reacting (be attentive and answer the sender), evaluating (not judging the message immediately), and interpreting (not reading something into the message that is not there). Components in active listening are shown in Figure 2.1.

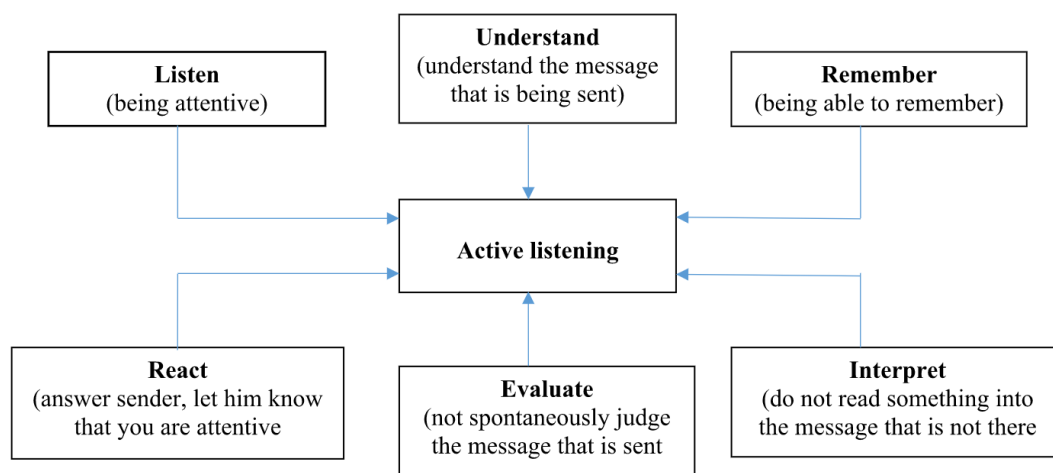


Figure 2.1: Components in active listening (Kaufmann and Kaufmann, 2015, p.311)

William Isaacs, founder of the Dialogue Project at MIT’s Organisational Learning Centre, concludes after fifteen years of research, that difficult issues between employees and leaders, and within or between organisations, come from incapacity to have a proper and successful dialogue. He shows that dialogue is much more than pure words. It is the ability to welcome different opinions, what he calls the art of thinking together (Isaacs, 2000; Isaacs, 2008).

According to Isaacs’ (2000) research, most conversations in organisations, especially those involving difficult or multifaceted issues, quickly turn into debates, which ironically has the root-meaning “to beat down”. In debates, there is a struggle and a competition to force your view onto others and there is no room for exploration of the other person’s opinion. This does not trigger the possibility for collective intelligence (Dixon, 1999). Dialogue on the other hand, encourages collective thinking and analysis. This allows for exploration of the possibilities that lie beyond what people are now accustomed to as the normal way of talking.

If there is an exploration of meaning and inquires that take place, the stage is set for new opportunities to come forth (Bushe & Marshak, 2014).

People in teams normally identify with a certain role, which is not easily challenged. The four-player model, first developed by David Kantor (2012), is more fluid once dialogue is achieved. This means members are more comfortable and more likely to change roles if dialogue is a natural part of team meetings. Movers (I suggest we do it this way...), followers (ok, what can I do?..), opposers (I disagree because of..) and bystanders (this is how I am understanding this:), are more likely and comfortable to change the roles if there is openness in the meeting room. Most identify more with one role over another, but will shift into a different role in a different meeting or situation (Isaacs, 2008). What dialogue challenges people to do, is to visit several of the roles during the same conversation or meeting. This means one has to build on what has been said, rather than just wait your turn and then throw opinions on the table, regardless of what has been said earlier. This allows for a shift in the conversation. Often, the movers come in with pointy elbows, the bystanders do nothing, and the followers are afraid to share anything but a quiet agreement. Using dialogue in these situations, will allow for more room, more openness, and in turn more effectivity. This is where the full potential can be unlocked. Dialogue is not just exchanging words, but a living involvement of investigation both within and between people. Therefore, the most significant part of all conversations are those one could not predict before having the conversation (Bushe & Marshak, 2014).

According to Losada (2014), the concept of dialogue can be linked to positivity. Believing that the members of the group are competent, that it is worth listening to them, and that they can learn from one another, have to be rooted in a positive mind-set. Losada (2014) argues that in order to develop dialogue, there needs to be teams present in the organisation that practice positivity and the creative and liberating power that comes along with this. The polarity of you and I needs to change to we. Advocacy and curiosity can develop a continuous dialogue, because where there is enough positivity, one is less afraid of constructive feedback. This in turn can lead to a realistic enthusiasm that can drive teams and organisations to their full potential (Losada, 2014).

For organisations, dialogue encourages a transparent infrastructure that inspires balanced communication between the person and the team by allowing procedures of perception and

personal understanding to enter the conversation. This in turn can get incorporated into the mind-set of the organisation. It further encourages new information up the ladder, so in time, it becomes a natural norm and value to voice one's opinion regarding discovering and fixing errors. When challenging topics are allowed to be brought into daylight, there is a bigger chance for more effective ways of working (Argyris, 2000).

Conversation is the beating heart of organisations, because without it, people and teams cannot share ideas, nor learn to reach a common understanding. The question is whether this conversation is characterised as dialogue. Organisational customs and rules can put a lid on and discourage honest and open conversations. This in turn disables collective learning and intelligence, particularly the uncovering and correction of mistakes. Learning, at both the individual and organisational level, is important when developing dialogue and to increase effectiveness (Argyris, 2003; Mazutis & Slawinski, 2008).

2.4 Individual Learning

Kaufmann and Kaufmann (2015) define individual learning as “the acquisition of knowledge and skills that are relatively permanent and which have their starting point in experience” (p.186). To separate learning from biological natural development, the emphasis is on experience in learning. However, learning is not a mechanical result from experience. Learning from experience depends on cognitive organisation in form of encoding, interpretation and organisation of what is being learned.

Kolb (1984) claims “learning is the process whereby knowledge is created through the transformation of experience” (p. 38). In the 1980s, Kolb (1984, 2014) created the Experiential Learning Theory (ELT) which works on two levels. There is a four-stage cycle of learning and four different learning styles. A great deal of Kolb's theory is regarding the learner's cognitive processes and that learning includes the attainment of abstract concepts. The push for the development of these concepts is through experience. Research supporting the cross-cultural validation of ELT comes from all over the world, including Norway (Kolb, 2014). Figure 2.2 shows Kolb's experiential learning cycle.

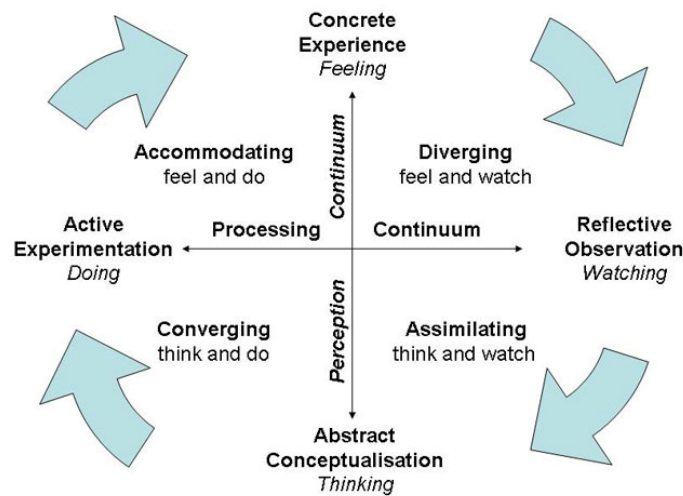


Figure 2.2: Kolb's Experiential Learning Cycle (Saul McLeod, 2017, retrieved from <https://www.simplypsychology.org/learning-kolb.html>)

According to Figure 2.2, learning is viewed as effective when an individual progress through the four stages: 1) having a concrete experience; 2) observing and reflecting on what that experience leads to; 3) the formation of abstract concepts (analysing) and generalizing (conclusions); 4) active experimentation of hypothesis for future situations. This results in new experiences (Kolb, 2014). Learning is a unified process where every stage is supportive of and going into the next stage. One can enter the cycle in every stage and follow through the logical sequence. It is important to note however, that effective learning only takes place when the individual can execute all four stages. One stage alone is not an effective way of learning (Kolb, 2014).

Systemic application of learning in organisations have shown great effects on job performance, productivity, lower absence, and decreasing numbers of serious work related injuries. In addition, the principles based on the psychology of learning have had great effect on strategic leadership (Kaufman & Kaufman, 2015).

2.5 Organisational Learning

Learning is a process that happens in organisations as well, and it is important to make sure it happens in a way that benefits the organisation. It is crucial to understand when and how this takes place, or what is a barrier for why it is not taking place, in order to improve the productivity and innovation in any given organisation (Kaufmann & Kaufmann, 2015).

Organisational learning has been defined as “the intentional use of learning processes at the individual, group, and system level to continuously transform the organisation in a direction that is increasingly satisfying to its stakeholders” (Dixon, 1999, p.6).

Dixon (1999) argues that learning is the construction and reconstruction of meaning, and therefore it is a dynamic process. Organisational learning requires responsibility of its members beyond obedience and completion of an assigned task. It is expected that they contribute ideas, share their knowledge, and that they engage in a proactive search for a more efficient way to complete the work. If they act on the interest of the whole organisation, it will greatly improve the collective ability of the workforce to learn (Dixon, 1999).

As can be seen in Figure 2.3, Dixon (1999) hangs the organisational learning cycle on Kolb’s (1984) experiential learning cycle. For organisational learning to happen, every member of the organisation must engage in all the stages of the experiential learning cycle. Similarly, to ELT, where the person takes part in a concrete experience, at the organisational level, it is necessary that all members take part in the practices that gather information from the external environment (suppliers, customers, conferences) and that similarly, all take part in work-related exercises that produce new information (Dixon, 1999).

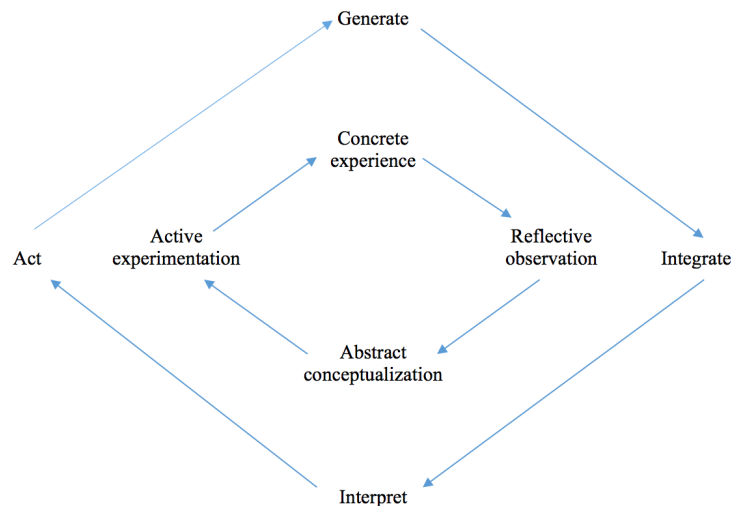


Figure 2.3: The organisational learning cycle and the experiential learning cycle (Dixon, 1999, s.65)

Organisational dialogue skills are important for the collective interpretation of knowledge in the organisational learning cycle. Organisational dialogue according to Dixon (1999), is the “interaction in a collective setting that results in mutual learning upon which the organisation can act” (p.110). Collective setting means that organisational dialogue in this context is reserved for a group of people, not talk between two individuals. This has to not only be characterised as good communication skills and openness, but it has to be targeted at the organisation’s business. Dixon (1999) claims the following have to be in place in order to achieve dialogue:

- Provide members with complete and correct information
- Confirm other individuals’ personal competence when disagreeing with their ideas
- Make the reasoning that supports their position obvious. For example, how they got from initial data to conclusions
- Voice others’ point of view
- Change position when others come forth with convincing proof or rationale
- View assertions, including one’s own, as hypotheses to be tested
- Challenge errors

Organisations also learn in the hallways through dialogue. People interact, exchange ideas, data, conclusions, reasoning and questions instead of only listening to formal presentations. Although listening is important, individuals cognitively organise their minds at a deeper level

when trying to formulate what to say. Research has shown that the behaviour of orally summarizing information strengthens the understanding of that information (Dixon, 1999). This relates back to the reaction part of active listening discussed earlier. Learning through dialogue in the hallway has the benefit of perspective taking which means: "...the act of paraphrasing the ideas and arguments of others" (Dixon, 1999, p.52). This is more than playing back what one heard to check if one heard correctly. It is the ability to understand and voice how the situation is interpreted from another person's perspective. This action inclines the other to give more detailed information than if the perspective was not given. The extra information and the fuller understanding of another perspective both help to increase new knowledge. However, to create this new knowledge, it is important to keep one's own and the others' perspectives at the same time. Collective learning then occurs through dialogue, because this metaphorical time and space welcomes an opportunity to facilitate in-depth conversations about things that matter to the employees (Dixon, 1999).

Organisational learning can be described as a multi-level process that is dynamic, where thoughts and actions of both individuals and teams change and become a part of the organisation over time (Mazutis & Slawinski, 2008). Argyris and Schön (1978) argued that learning was both personal and systemic in need of a "personal willingness to detect and correct errors in own behaviours, as well as a continual improvement in the processes, practices, metrics, and governance structures of larger organisations. It is both, not one or the other" (Senge, 2003, p.48). Despite this, many organisations are trapped by what Argyris and Schön (1978) calls Model I behaviours: defensiveness, conflict avoidance and self-protection. This prevents errors from surfacing or being dealt with properly. To avoid negative feedback and to protect themselves and others, individuals are likely to withhold information, afraid of conflict or of evoking negative feelings (Argyris, 2000; Mazutis & Slawinski, 2008). In Model I organisations this behaviour becomes reinforcing, creating a culture of competition and win/lose dynamics where persons avoid confrontation. Although there are differences between individuals' espoused theory and theory-in-use (i.e., what individuals say they do contra what they actually do), organisational norms inhibit public investigation into these differences. This type of organisational learning system does not allow incongruities to surface and it prevents employees from engaging in dialogue (Argyris and Schön, 1978; Argyris, 2000).

By contrast, Model II organisations are open, advocate informed choice, allow for public reflection, and encourage double-loop learning (Argyris, 2000).

Argyris and Schön (1978) describes organisational learning in the context of single loop and double loop learning the following way: “When the error detected and corrected permits the organisation to carry its present policies or achieve its present objectives, then that error-and-correction process is *single-loop* learning. Single-loop learning is like a thermostat that learns when it is too hot or too cold and turns that heat on or off. The thermostat can perform this task because it can receive information (the temperature of the room) and take corrective action. *Double-loop* learning occurs when error is detected and corrected in ways that involve the modification of an organisation’s underlying norms, policies, and objectives” (pp. 2-3).

Figure 2.4 demonstrates this learning theory.

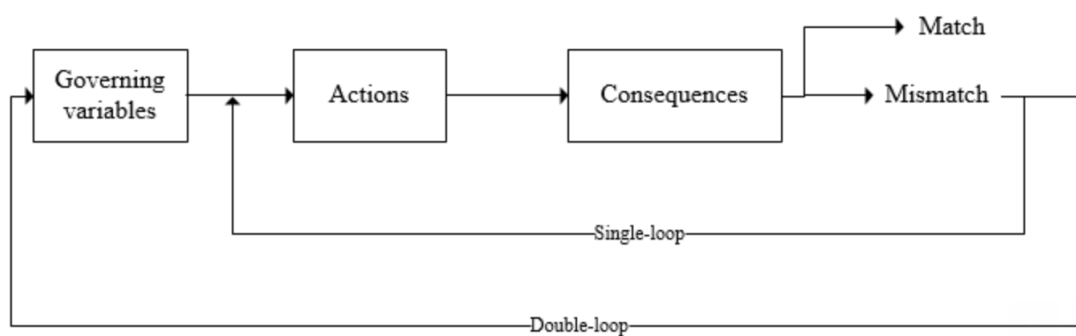


Figure 2.4: Single-loop and double-loop learning (Argyris, 2000, p.68)

The difference between espoused theory and theory-in-use is easier to reveal when conflict is confronted through inquiry and dialogue, rather than power struggles (Argyris, 2000).

2.6 Groups and Teams

In a world where there is an increasing demand for effectiveness, arranging employees in teams are viewed as a flexible way to organise businesses (Katzenbach & Smith, 2005). Many organisations allocate people to teams without much consideration. Katzenbach and Smith (2005) argue that using the term *teams* so freely, inhibits the learning and application that is crucial for good results. Just calling a group a team does not make it a real team (Katzenbach & Smith, 2005). Therefore, it is important to differentiate between groups and teams.

“A *work group* is a group that interacts primarily to share information and to make decisions to help each member perform within his or her area of responsibility”

(Robbins & Judge, 2007, p.339). Work groups have neither the need, nor the opportunity to participate in collective work that requires joint effort. Their performance, therefore, is simply the summation of each member’s individual work. No positive synergy takes place that can otherwise create an overall level of performance that is greater than the sum of its parts. A *work team* on the other hand, produces positive synergy through coordinated effort. Individual work results in a level of performance that is greater than the sum of its parts (Robbins & Judge, 2007, p.339). Please see Figure 2.5 for differences between groups and teams.

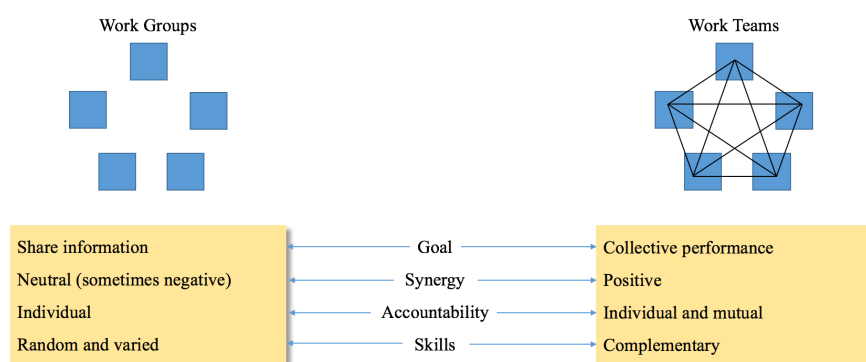


Figure 2.5: Comparing work groups and work teams (Robbins & Judge, 2007, p.339)

These differences help clarify why most organisations are organised into teams. Management wants positive synergy that allows for increase in performance. The wide use of teams creates the potential for organisations to produce more output with no increase in input. The emphasis on potential is important. Just calling a group a team does not increase performance (Robbins & Judge, 2007, p.340).

Katzenbach & Smith (2005) defines a team as “a small number of people with complimentary skills who are committed to a common purpose, set of performance goals, and approach for which they hold themselves mutually accountable” (p.112). The essence of a team then is common commitment. If this is absent, groups act individually, but if it is present, the group develops into a powerful unit of *collective performance* – which is what individuals have to do together in order to succeed (Katzenbach & Smith, 2005). There is a synergic effect that is expected when operating in a team. As mentioned above, a team that is effective is expected to perform better than the sum of what each participant could accomplish had they been on their own (Senior & Swailes, 2004; Mikkelsen, 2014). Mutual dependence implies that one cannot achieve the team goal(s) individually, which also means one member can stand in the way of the other members’ collective efforts to reach the goal. Teamwork is therefore dependent on strong cooperation and peoples’ ability to adapt and be flexible in order to reach the potential reward (Bang, 2008), and according to Svare (2006) cooperation is easier if there is high degree of dialogue.

Successful teams experience less stress, have a greater input, they work more effectively and they are more likely to generate new ideas that can improve the work in the team (Katzenbach & Smith, 2003; Mikkelsen, 2014). A key to good performance is the balance between the necessary knowledge needed for the task and the relational needs of the participants (Mikkelsen, 2014). Good dialogue promotes good relations, which in turn statistically makes that team more effective (Bang & Midelfart, 2010). Teams often practice *distributed leadership* (Harris, 2008), where one in addition to manage oneself, also manages the other members of the team. They are expected to share information, ask for information, illuminate when something is not clear, initiate discussions, come up with suggestions and ideas, and at last but not least, contribute to support in this social community (Mikkelsen, 2014). This is essential to team effectiveness and is much in line with the literature on dialogue (Ellinor & Gerard, 1998; Svare, 2006; Isaacs, 2008).

Knowing when to use a team will be important for the effectiveness. According to Oldham and Hackman (2010) there is a wrongly held belief on behalf of managers, that putting individuals into teams, without careful consideration, will automatically increase quality and performance (Oldham & Hackman, 2010). There is a great responsibility on creators of teams. Research shows that once in a team, individuals become surprisingly accepting to tasks that

are unfitting for the team, if the design of the project is faulty, and even when the contextual support is absent or insufficient (Hackman & Katz, 2010).

There are several different types of teams. Oldham and Hackman identifies six types:

Surgical teams. One person has the main responsibility. Accomplishing the work means that there must be coordinated interaction among participants at all times. They must provide the team leader, who is responsible for the product, all the information and help they can give. Surgical teams are suitable for work that requires a great deal of individual insight, skill, and/or creativity, but it is too big or complicated to be handled by one person on his or her own (Oldham & Hackman, 2010).

Coacting groups. Each member is primarily responsible for the results in this team. Every individual's work is not reliant on what other's do and the output of the team is simply the aggregation of participant's individual contributions. Since they work independently they do not have to coordinate their activities in real time. Much organisational work is completed by people who are called "teams" but in reality are coacting groups – formed, possibly, by managers who hope that the benefits of team work can be achieved even as they continue to directly manage the work of individual members. These types of groups are suitable only when there is little need for interdependent work by members (Oldham & Hackman, 2010).

Face-to-face teams. Individual members are co-located and work together interdependently in real time to produce a product for which they are collectively accountable. Most research on teams and effectiveness surrounds this type of team. These teams fit a wide variety of tasks for which creating a high quality product requires coordinated work efforts in real time from a diversity of participants who have complimentary expertise, experience, and perspectives (Oldham & Hackman, 2010).

Distributed teams. These are also called virtual teams. Members are collectively responsible and accountable for results, but they do not have to interact in real time, and they are not co-located. Information and communication technologies are used to communicate ideas, information and reactions at times of their own choosing. These teams can often be larger, more diverse, and collectively more knowledgeable than face-to-face teams, and they are particularly useful when members cannot meet frequently, and when the work does not require high levels of interdependence. When they are successful, these teams can quickly and

efficiently bring widely dispersed information and expertise to bear on the work (Oldham & Hackman, 2010).

Sand dune. This special team is receiving increasing amount of attention in research and is not in a traditional sense a bounded work team. Rather, this kind is a dynamic social system that has a fluid, rather than fixed, composition and boundaries. A comparison to how real sand dunes change in size and shape depending on the wind, teams varying in numbers and kinds form and re-form within larger organisational units as external requirements and opportunities change. These teams seem particularly well suited for managerial and professional work that does not lend itself to the formation of fixed teams with stable memberships. Sand dune teams are very useful in organisations that operate in fast-changing environments (Oldham & Hackman, 2010).

Leadership teams. This is a special type of team where all participants are leaders and who share responsibility for leading an entire organisation or large organisational unit. Since both the speed and scope of organisational leadership continue to grow, it is becoming increasingly evident that the “heroic” model of leadership, where one individual is responsible and accountable for the overall performance, is decreasingly viable. Therefore, more organisations are creating teams to do leadership work. The issue, as documented in a cross-national empirical study of senior leadership teams, is that these kinds of teams are not normally designed very well, nor are they very effective (Oldham & Hackman, 2010). Bang (2008) has researched the dynamics and effectiveness of leadership teams and concludes that the following must be in place for a leadership team to function effectively: Agreement on the results they wish to achieve, performing enhancing conditions, and purposeful group processes (Bang, 2008). The next section will look more into the effectiveness in teams.

2.7 Effectiveness in Teams

Now that it is established that teams are a central part of organisations and what they are, the question is how we can make teams perform better and more effectively. Seven factors have been reported to characterize team performance: team organisation, team climate, team purpose, team composition, team leadership, interpersonal relations and team communications (Senior & Swailes, 2004). Since it is so popular and common to work in teams and too many have failed at developing methods to make teams more effective, Susan Wheelan has dedicated her research and 30 years of experience in the field to make a guide of what she considers the recipe for an effective team to be (Wheelan & Hochberger, 1996; Wheelan, 2005a;). For a team to be effective, the team must also receive effective organisational support. Wheelan (2005a) argues these are the most important:

- Put groups in a favorable organisational climate
- Give groups what they need to accomplish their tasks
- Educate individuals for group participation competence
- Avoid unsubstantiated team development consultation strategies
- Avoid helping too much
- Make sure each group has enough autonomy to do its work while remaining connected to the rest of the organisation
- Conduct organisational support reviews regularly (Wheelan, 2005a)

In addition to organisational support, Wheelan (2005b) argues that in order for a group to develop into a high functioning team, it must go through developmental stages. What seems to be necessary in order to move from one stage to the next is trust and open dialogue (Wheelan, 2005b). The stages will be briefly discussed before further literature on team effectiveness is reviewed.

Stage 1: Dependency and Inclusion

This stage is characterized by members trying to find “their place” in the group. Is this a safe place to be? Will they accept me? What are the rules in this group and how do they and I behave? Since no relationships have formed yet, there is a lack of structure and support and consequently members rely heavily on the leader. Politeness, tentativeness and defensiveness are characteristics of this stage and although some work happens here, it is very little

(Wheelan, 2005b). A clue that the group is in this stage, is when the leader asks something and no one answers (Wheelan, 2005a).

Stage 2: Counterdependency and Fight

The group tries to be more independent from the leader and conflicts arise, as members fight about goals, structure, values and operational procedures.

Conflict is necessary here to find a common path where all parts can be productive, and for members to learn that it is alright to disagree. Many groups are stuck on this stage because the conflicts take over, or because the stress is so significant that they turn back to leader dependence to avoid uncomfortable situations. This has negative effects on the work quality. The groups that master this stage develop feelings of safety and give suggestions and ideas to further develop the group. A clue that the group is in this stage is when the thought of meetings make you feel sick because there is some sort of conflict (Wheelan, 2005a, 2005b).

Stage 3: Trust and Structure

Here, the conflicts have been resolved, there is a developing trust, members are committed to the group and cooperation increases. The dialogue hangs looser, people are solidifying constructive and positive relations and finally, it is possible to focus on task first and not so much on influence, status and power. The discussions are now on organisation and operational procedures, which makes work at this stage much more productive. A clue that the group is in this stage is when members are happy and efficiently cooperating and the leader becomes more consultative rather than directive (Wheelan, 2005a, 2005b).

Stage 4: Work and Productivity

As one can see from the name this is a stage of high effectiveness and the group is now a high performance team. Since many issues are cleared and the structure and procedures are set, the team can focus fully on the goals. Both the quality and quantity of work increase here. For this to happen all available resources must be utilized, including the resource members have in each other. Too often an otherwise valuable idea or suggestion gets discarded because the person who gave it is in some way devalued. According to Wheelan (2005a) this means that there are earlier unresolved issues and that this group would not be in the last stage. The importance of dialogue, to draw and build upon each other's ideas, are crucial to reach and remain in this last most effective stage. A clue that a team is in this stage is when members

find the team work exhilarating, they are performing, and they dare to speak openly with colleagues (Wheelan, 2005a, 2005b).

Research shows (Wheelan, 2005a; Nielsen, Sundstrom, & Halfhill, 2005) that work teams that are at the last two stages complete tasks faster, generate better quality, and produce more revenue than members in the first two stages. Students benefitted from their professors being in highly productive teams. On standardized tests they achieved higher scores than their counterparts, whose professors were part of a group at a lower stage (Wheelan, 2005a). According to Wheelan's research even intensive care personnel save more lives if they are a part of a higher stage in group development (Wheelan, 2005a).

As mentioned earlier, although work in teams can be more effective than working individually (Katzenbach & Smith, 2003), many studies show that working in teams does not automatically bring on effectiveness (Bang, 2008). There can be a loss of efficiency where there are dysfunctional relations and group processes between members (Steiner, 1972; Bang, 2008). Therefore, a new field of research has risen, looking at *what* team effectiveness really means, *which* elements affect team effectiveness and *under what conditions* these elements mean something.

In his review article, Bang (2008) looks at effectiveness being defined in three parts: task performance, team cohesiveness, and individual satisfaction. He then looks at how well leader groups meet all three. He presents a model that is based on 30 years of research on effectiveness in teams.

Most review articles on team effectiveness use an **input-process-output (IPO)** model (Bang, 2008).

- **Input factors:** internal and external prerequisites that predetermine how the team will work together, such as team size and characteristics of the task at hand.
- **Process factors:** how the cooperation actually works, such as if the goals are clear, effective ways to work, and the degree of dialogue.
- **Output factors:** which results the team achieves.

Figure 2.6 shows this model of team effectiveness.



Figure 2.6: A model for team effectiveness (Bang, 2008)

The IPO model is a framework used to understand how teams work, interact, and produce. Through actively using this model, teams have a greater chance of getting an overview of where they stand as a team, and how to maximize their performance and hence their results. Over time there is a mutual influence between the three (Bang, 2008). The focus of this thesis is highlighted in green.

Hackman (1990, 2002) claims that teams are very often ineffective and to be effective certain criteria must be in place. He argues that there are three areas of importance in the output section when looking to measure team effectiveness.

1. Team performance

Does the team accomplish their goals?

2. Team cohesiveness

Will the team survive and thrive? Will the cooperation between its' members increase their relations, and in turn, the team performance in the future? Bad relations could affect the performance in the long run, so team performance alone is not sufficient when measuring effectiveness (Bang, 2008). Beal et al. (2003) conclude a positive correlation between team cohesiveness and team performance in their meta-analysis of 64 articles (Beal et al., 2003). Feeling some belonging to a team is necessary for a group or team to even exist. Therefore, it is essential to discuss sense of community, cohesiveness, and commitment in the "output" section of team effectiveness (Forsyth, 2006).

3. *Individual Satisfaction*

A team creates results in terms of goal completion and group cohesiveness, which adds value to the organisation, but also if the members are happy and individually satisfied in the team.

Does being a member of the team contribute to and spark learning and gratification?

(Hackman, 1990). Bang (2008) argues that in order for the team to work effectively, members cannot feel that being a part of the team takes energy, but rather gives energy, and that each member has to feel that it is fruitful and engaging to be a part of it.

Hackman (2002) uses an example from sports when discussing the effectiveness of teams.

The star often takes the glory, although he is dependent on the other players to score a goal, particularly the last player, who sent the ball at a perfect angle, but the audience does not

know this player's name. Most can draw on personal examples of similar situations in their own organisations. People are quick to give one person the glory or the blame. Once the need

for good communication is recognized, teams can work towards better effectiveness

(Hackman, 2002). When discussing team effectiveness, conflict states and conflict processes

are very often discussed. This is beyond the scope of this thesis, however, it is important to

mention in the discussion on team effectiveness. Dechurch et al. (2013) did a meta-analysis of

3218 teams that showed that conflict processes and conflict states are independent and

valuable predictors of the performance and affective results. In addition, they concluded that

how teams relate (conflict processes) in terms of their differences, are as significant as the

conflict states (the source and intensity), of their understanding of their differences (Dechurch et al., 2013).

Literature from the last 30-40 years (Bettenhausen, 1991; Guzzo & Dickson, 1996; Cohen &

Bailey, 1997; Hackman, 2002; Bang, 2008a; Thompson, 2015) on team effectiveness shows

that it is difficult to agree on some common models to find the most central factors in team

development other than the IPO model, which is widely used. As many as 150 different

variables from separate studies have been identified as being positively correlated with

effectiveness in teams. All researchers seem to have their own favourite factors that they

argue are the most central for a team to work effectively. According to Bang's (2008) review

research these are:

1. *Consensus regarding results.* The teams' participants must have a clear and joint understanding of why they are there and regarding the results they are going to deliver (output).

2. *Performance-enhancing prerequisites and framework conditions.* A set of prerequisites and framework conditions that build support around the team will increase its' effectiveness (input).
3. *Purposeful group processes.* The team must achieve the kind of cooperation that leads to effective achievement of goals (process).

Fortunately, in the more recent years, there has been a shift towards starting to make use of other researcher's results and building on these (Bang, 2008).

2.8 Dialogue and Team Effectiveness

Most employees and leaders in today's teams are pressed for time, so making room for improvement in soft qualities in a team is not always met with positivity (Bang & Midelfart, 2010). However, the most successful teams invest a magnificent amount of time to create a commitment they feel ownership to (Katzenbach & Smith, 2003). This commitment is greater if people feel they are a part of the discussion as in dialogue (Bang & Midelfart, 2012). As a matter of fact, only 80 percent of time is spent on concrete work in effective teams. The other 20 percent are used on nurturing the team (Wheelan, Davidson, & Tilin, 2003; Wheelan & Williams, 2003). According to Wheelan (2005b) workaholic groups are unable to reach their full potential, because they do not make time to take care of the team (Wheelan, 2005b). Bang and Midelfart (2010) argue that it will be a good investment for the effectiveness in a team to take time to practice dialogue.

De Dreu and Weingart (2003) found strong positive correlation between dialogue and team effectiveness in their meta-study on team performance and team member satisfaction. Using dialogue as a tool for exploring different viewpoints, proved to be a successful predictor for team effectiveness (De Dreu & Weingart, 2003). Contrary to what Wheelan (2005a) argues in her stages of group development, Bang (2008) shows in his review on team effectiveness that open conflict is avoidable and unnecessary to make use of diversity in the team. Rather, according to Bang (2008), an exploration of relevant information should be brought to the table and be discussed with an open mind.

When the communication is done consciously and focused, research shows a strong connection to team effectiveness. Bang et al. (2010) found that focused communication

predicted individual satisfaction, the quality of relations, and case effectiveness (Bang et al., 2010). Further, Pentland (2012) found patterns of communication to be the most important in predicting the effectiveness of a team. As a matter of fact, patterns of communication were as significant as all the other factors (personality, skill, individual intelligence, the substance of discussions) combined (Pentland, 2012).

A main question in the vast literature on teams concerns how team effectiveness can be measured (Senior & Swales, 2004). Bang and Midelfart (2010) created a survey to measure level of dialogue and level of team effectiveness to see how the two were related. They found a positive correlation between dialogue and team effectiveness. Their results show a positive correlation between dialogue and all three measures of effectiveness: team performance, team cohesiveness and individual satisfaction. Figure 2.7 illustrates the three measures of team effectiveness.

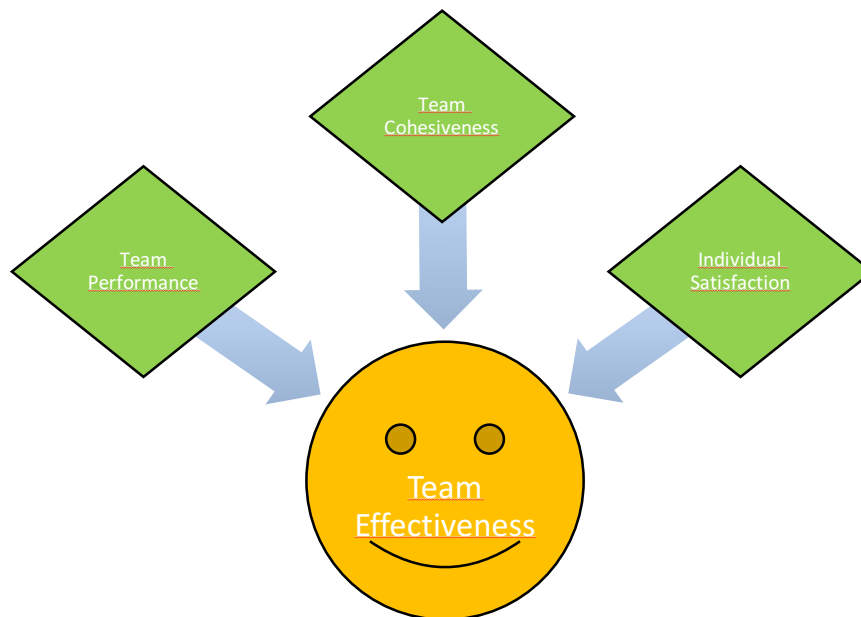


Figure 2.7: Measure of team effectiveness

According to Bang and Midelfart's (2010) research, and Bang's (2008) review article on team effectiveness, team effectiveness is often defined as the quality of the teams' performance (quality of services or products), team cohesiveness, and individual satisfaction in the team. Team performance includes how effective the team is on completion, the quality of discussions and decisions the team makes, and how successful the team is in implementing

these. The second dimension is regarding group cohesiveness that has developed in the team. This dimension shows how much members feel a part of the team as opposed to a group of individuals. The third dimension, individual satisfaction, concerns whether the members feel engaged, and personally and professionally satisfied from being a member of the team (Bang & Midelfart, 2010).

Dialogue is operationalised as a belief to think one can learn something from one another (attitude towards learning), respecting others, even when one disagrees (respect), exploring different views (exploration), and building on each other's views. The essence is exploration of deeper meaning and hidden potential, not agreement like other studies on positive communication (Bang and Midelfart, 2010).

Bang and Midelfart's (2010) study consisted of leader groups but the authors point out that they hope their results can be transferable to all types of teams. This thesis is therefore using the same survey, but is comprised of different kinds of teams, not just leader groups. This thesis also has four background variables: gender, public or private sector, age, and education. Of special interest is to see if there is a difference between men and women concerning team performance and concerning dialogue. Robbins and Judge (2007, p.50) has reviewed the research on differences between males and females, and concludes that there is no evidence to suggest that there are any differences in regards to job performance, but a few differences in conversational styles (p.386), which might create barriers in communication. The thesis will look further into the following hypotheses:

Hypothesis 1: Dialogue is positively correlated with all individual measures of team effectiveness.

- a) Dialogue is positively correlated with team performance.
- b) Dialogue is positively correlated with team cohesiveness.
- c) Dialogue is positively correlated with individual satisfaction.

Hypothesis 2: Dialogue is positively correlated with team effectiveness.

Hypothesis 3: The factors of team effectiveness will correlate positively with one another.

- a) Individuals who score high on team performance will also score high on team cohesiveness.

- b) Individuals who score high on team cohesiveness will also score high on individual satisfaction.
- c) Individuals who score high on individual satisfaction will also score high on team performance.

Hypothesis 4: Background variables have no impact on dialogue.

- a) There is no difference in perceived dialogue between men and women.
- b) There is no difference in perceived dialogue between public and private sector.
- c) There is no difference in perceived dialogue between age groups.
- d) There is no difference in perceived dialogue depending on education.

Hypothesis 5: Background variables have no impact on effectiveness.

- a) There is no difference in team effectiveness between men and women.
- b) There is no difference in team effectiveness between public and private sector.
- c) There is no difference in team effectiveness between age groups.
- d) There is no difference in team effectiveness depending on education.

3 Design and Method

3.1 Research Design

The administered research design is the same as Bang and Midelfart (2010) used in their study on dialogue and team effectiveness. This is a four part survey that uses a 5-point Likert scale ranging from completely agree to completely disagree. Teams were compensated for their participation by receiving the results in PowerPoint format.

3.2 Sample

The participants were recruited through the author's LinkedIn profile and through the organisational development firm, MindUp. Practical information about the survey was explained to the leaders of each team that was interested in participating. This included the nature of the questions, the duration of the survey, compensation of participation, and anonymity.

The number of participants is 104. They come from 16 teams representing 10 different organisations. This makes the team average 6.5 members. 57% are women and 43% are men. 63% are from the private sector and 37% are from the public sector. 80% have university or college education while 14% have high school, and 6% go under the categorisation of other. 5% are under 30 years old, the majority are between 31 and 49 years old (63%), and 32% are above 50 years old. See Table 3.1 for an overview of background variables.

Table 3.1: Background Variables

Variables	Gender		Education			Sector		Age		
	Women	Men	University/College	High School	Other	Public	Private	<31	31-49	50+
Number of people	59	43	83	15	6	38	66	5	66	33

3.3 Measurement

The survey consisted of four parts. First *dialogue* and then *team effectiveness*, which was measured by the three dimensions: *team performance*, *team cohesiveness*, and *individual satisfaction*. The questions were administered in Norwegian. To take the survey, participants

received a URL, they were informed that the survey was anonymous, and that it would take around 5-10 minutes to complete.

The survey opened with the following description:

“You will now get 23 questions that will give insight into how your team experiences dialogue and effectiveness measured through perception of team performance, team cohesiveness and individual satisfaction. Research shows that these dimensions are connected – and that it is possible to strengthen certain skills which increase achievements and results when it is revealed where the pressure is”.

Dialogue was measured by 8 items on a 5-point Likert scale. The items are translated from the original study. The difference is that this study is using the word team instead of leader group (Bang & Midelfart, 2010).

- a) The way we discuss matters in the team show that we can really learn something from one another.
- b) I feel that others in the team respect my competence, even when they disagree with me.
- c) It happens that I feel undervalued by some in the team when we discuss cases.
- d) It happens that I feel overvalued by some in the team when we discuss cases.
- e) The members of the team typically try to explore each other’s ideas and point of views.
- f) When someone suggests controversial or incomprehensible viewpoints in the team, we spend time to explore what lies behind these statements.
- g) We seldom try to build on one another’s ideas in the team.
- h) We often try to build on one another’s ideas in the team.

Team effectiveness was measured through perception of *team performance*, *team cohesiveness*, and *individual satisfaction* (Bang & Midelfart, 2010).

The items are translated from the original study.

Perception of *team performance* was measured by 4 items on a 5-point Likert scale (Bang & Midelfart, 2010).

- a) I am very content with the results we accomplish in the team.
- b) The team is very effective in getting things done.
- c) It is very rare that we make bad decisions in the team.
- d) The team is very resourceful in implementing their decisions.

Team cohesiveness was measured by 7 items on a 5-point Likert scale (Bang & Midelfart, 2010).

- a) I am proud of the team I am a member of.
- b) Sometimes I speak badly of my team when I talk to others.
- c) Sometimes I speak highly of my team when I talk to others.
- d) I feel very attached to the team I am a member of.
- e) Our team is a tightly knit group.
- f) If it is up to me, I am still a part of this team in three years.
- g) Sometimes I wish I was not a member of this team.

Individual satisfaction was measured by 4 items on a 5-point Likert scale (Bang & Midelfart, 2010).

- a) I experience it as very satisfactory to work in the team.
- b) I experience it as professionally rewarding to participate in this team.
- c) Participation in this team contributes to my development.
- d) It gives me energy to participate in our meetings.

3.4 Analysis of Data

The results were analysed in SPSS using bivariate correlation and independent sample t-tests. Some questions have a positive tone, some have a negative tone, and some questions are turned. This has been accounted for when coding the data into SPSS. All 104 participants answered all the questions in the survey.

The main hypotheses of correlation between dialogue and different measures of effectiveness will be done with bivariate correlation. The hypotheses including background variables, will be done with independent t-tests, so that the mean score can be compared for two different groups of participants.

Each participant is only counted once in every test that is run. Observations can be assumed independent because data from one subject cannot influence other participants. Results from all the hypotheses will be presented. Where it is applicable, descriptive statistics will be presented with mean values and standard deviation.

Since the numbers in “under 30” in the age variable was low, this group was merged with “31-49” and the age categories were changed to “age under 50” and “age over 50”. For the same reason, the low numbers in “other” in the education variable was merged with “high

school” to become “no university education”. This left the education variable with two dimensions “university education” and “no university education”, respectively.

During testing, the significance level on the Levene’s test was below $p=.05$ on hypotheses 5a, b and d. This means that the variance for the two groups measured in each respective hypothesis are not the same. Therefore, the data violates the assumption of equal variance, and the second line of the output, which refers to equal variances not assumed, was used.

3.5 Reliability and Validity

Rather than only providing yes/no answers, the level of probability that the Likert-scale offers, makes it more user-friendly and understandable when feelings and attitudes are measured. Especially if the topics are of sensitive or challenging nature (Likert, 1932; Cox III, 1980;). It is therefore a great measure to use when questioning people about subjects such as their co-workers, sense of belonging, and individual satisfaction (Remmers & Ewart, 1941; Lissitz & Green, 1975; Jenkins & Taber, 1977; McKelvie, 1978;). In addition, since there are real teams involved, hoping to improve their effectiveness, these kinds of answers open up for discussion. This makes it easier to identify where the team has room for improvement.

The reason Bang and Midelfart’s (2010) survey was chosen is primarily because of the reliability and validity the Likert-scale, and secondly, many of the questions have international anchoring. Jehn et al.’s (1999) article alone, where the questions on perception of team performance and team cohesiveness have been taken from, has been cited 3372 times. Bang and Midelfart (2010) were not able to find a scale that measured individual satisfaction, but developed a four part scale that reflects Hackman’s (2002) definition of individual satisfaction. According to Hackman (2002), individual satisfaction is that the experience of being in a team will contribute positively to the participants’ individual gratification and learning (Hackman, 2002). His book has been cited 1332 times. To develop the dialogue scale, Bang and Midelfart (2010) used the different ways dialogue has been defined by leaders in the field such as Schein, Isaacs and Ellinor and Gerard (Ellinor & Gerard, 1998; Isaacs, 2008; Isaacs, 2000; Schein, 1993).

3.6 Ethics

After reviewing the requirements from Norsk samfunnsvitenskapelige datatjeneste AS (NSD), it was clear that this thesis did not need approval due to the nature of the research.

It was communicated to the team leaders that the information would be confidential and unidentifiable, and who would get access to the information. It was pointed out that the information would be treated in a manner which made it anonymous to the researcher.

4 Results

In this chapter the results from the different analyses in SPSS are presented. Analyses used are bivariate correlations and independent samples t-tests. First, a bivariate correlation analysis between the two main variables dialogue and effectiveness (measured by team performance, team cohesiveness, and individual satisfaction) was run. Figure 4.1 shows the relationship between dialogue and effectiveness.

Figure 4.1 Relationship between dialogue and effectiveness (N=104).

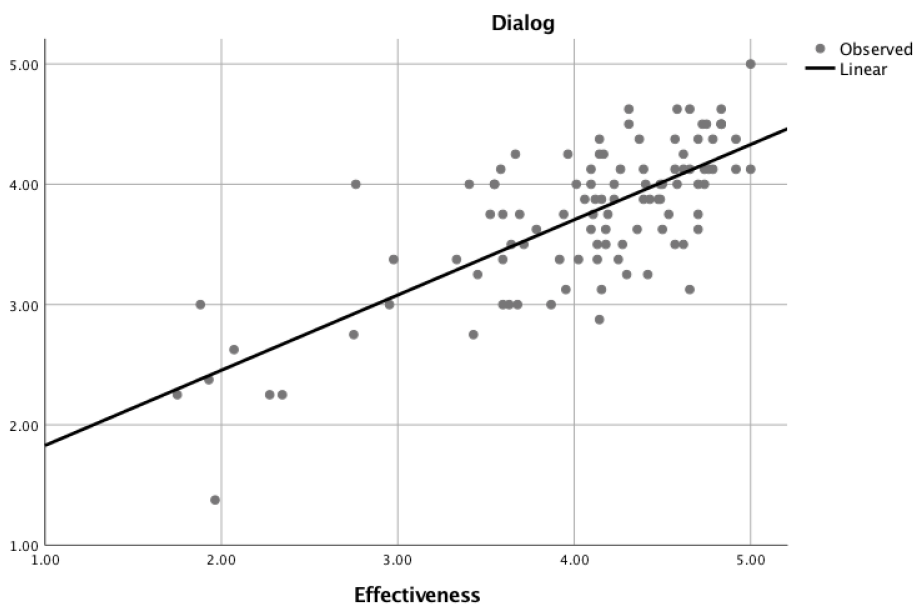


Figure 4.1 show a positive correlation which is confirmed by the statistics in Table 4.1.

Table 4.1: Bivariate correlation of dialogue and effectiveness.

		Dialog	Effectiveness
Dialog	Pearson Correlation	1	.745 ^{**}
	Sig. (2-tailed)		.000
	N	104	104
Effectiveness	Pearson Correlation	.745 ^{**}	1
	Sig. (2-tailed)	.000	
	N	104	104

^{**}. Correlation is significant at the 0.01 level (2-tailed).

Table 4.1 shows that there is a positive correlation between dialogue and effectiveness where $r=.745, p < .01$.

To understand this main correlation better, a bivariate correlation analysis between dialogue and the three measures of effectiveness: team performance, team cohesiveness, and individual satisfaction was run. Table 4.2 show these correlations.

Table 4.2: Correlations between dialogue, team performance, team cohesiveness, and individual satisfaction (N=104).

		Dialog	Team Performance	Team Cohesiveness	Satisfaction
Dialog	Pearson Correlation	1	.699**	.748**	.610**
	Sig. (2-tailed)		.000	.000	.000
	N	104	104	104	104
Team Performance	Pearson Correlation	.699**	1	.756**	.716**
	Sig. (2-tailed)	.000		.000	.000
	N	104	104	104	104
Team Cohesiveness	Pearson Correlation	.748**	.756**	1	.813**
	Sig. (2-tailed)	.000	.000		.000
	N	104	104	104	104
Satisfaction	Pearson Correlation	.610**	.716**	.813**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	104	104	104	104

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

Table 4.2 shows that dialogue is positively correlated with team performance where $r = .699, p < .01$, to team cohesiveness where $r = .748, p < .01$, and to individual satisfaction where $r = .610, p < .01$.

Figure 4.2 shows the relationship between dialogue and team performance. There is a positive correlation where $r = .699, p < .01$.

Figure 4.2: Relationship between dialogue and team performance (N=104).

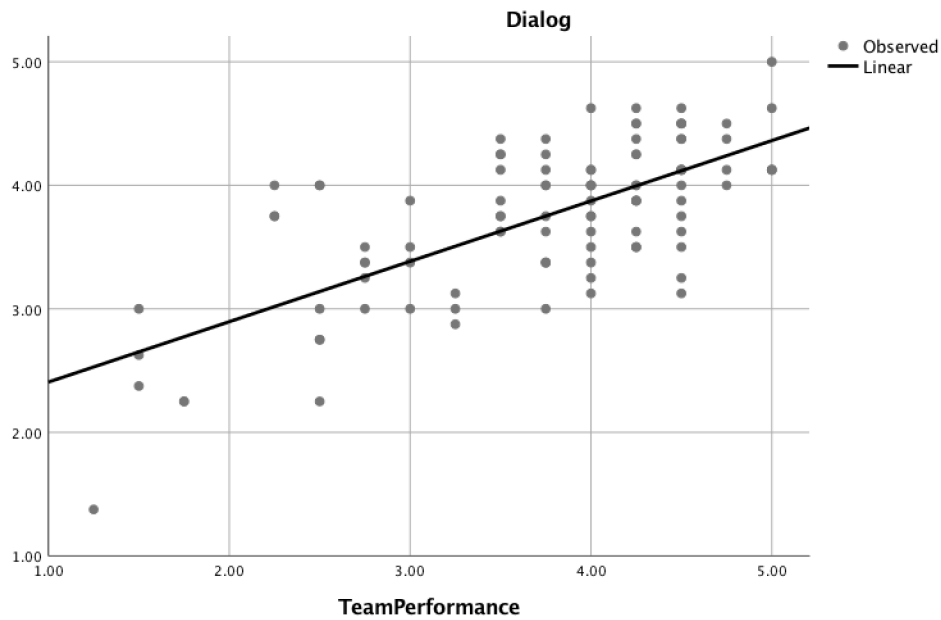


Figure 4.3 shows the relationship between dialogue and team cohesiveness. There is a positive correlation where $r = .748, p < .01$.

Figure 4.3: Relationship between dialogue and team cohesiveness (N=104).

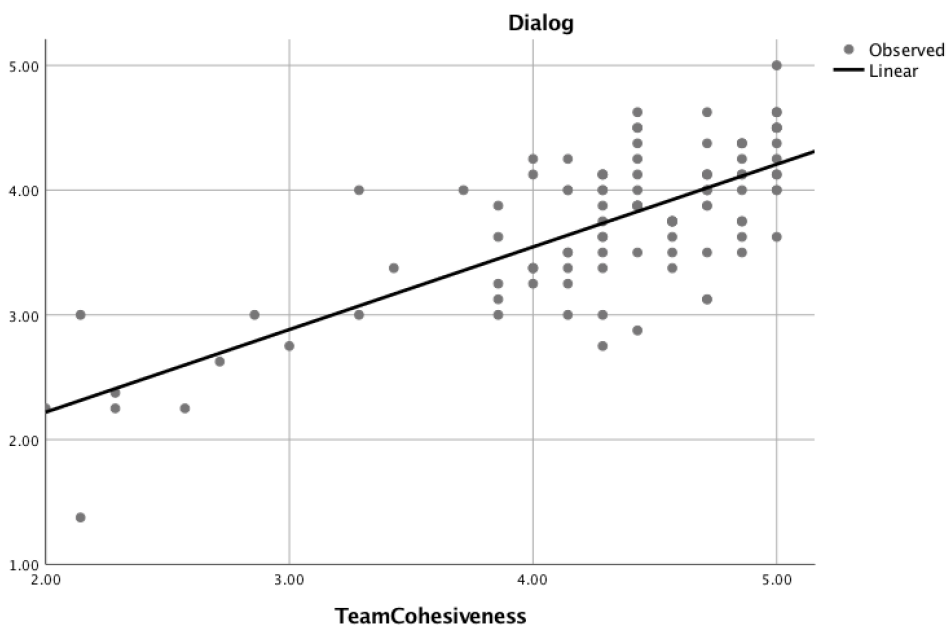
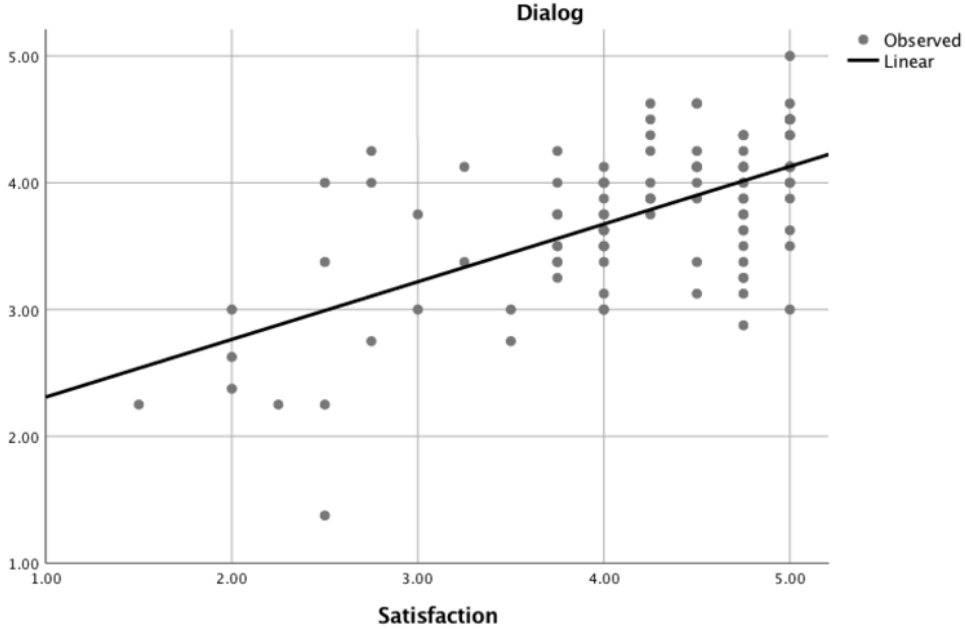


Figure 4.4 shows the relationship between dialogue and individual satisfaction. There is a positive correlation where $r = .610, p < .01$.

Figure 4.4: Relationship between dialogue and individual satisfaction (N=104).



As can be seen from Table 4.2, there is a positive correlation between team performance and team cohesiveness ($r=.756, p < .01$), positive correlation between team cohesiveness and individual satisfaction ($r=.813, p < .01$), and finally, a positive correlation between individual satisfaction and team performance ($r=.716, p < .01$).

Table 4.3 shows descriptive statistics for dialogue between females and males.

Table 4.3: Descriptive statistics for dialogue between females (N=59) and males (N=45).

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Dialog	Female	59	3.7373	.60203	.07838
	Male	45	3.7444	.64511	.09617

Table 4.4 shows equality of variance and equality of means for dialogue between females and males.

Table 4.4: Independent samples t-test: Equality of variance and equality of means for dialogue between females (N=59) and males (N=45).

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Dialog	Equal variances assumed	.036	.850	-.058	102	.954	-.00716	.12290	-.25093	.23662
	Equal variances not assumed			-.058	91.306	.954	-.00716	.12406	-.25358	.23926

As, Table 4.4 shows, an independent samples t-test was conducted to compare the dialogue scores for females and males. There was no significant difference in scores for females ($M = 3.74$, $SD = 0,6$) and males ($M = 3.74$, $SD is 0,64$); $t(102) = -.058$, $p = .954$, two-tailed.

Table 4.5 shows descriptive statistics for dialogue between public and private sector.

Table 4.5: Descriptive statistics for dialogue between public (N=38) and private (N=66) sector.

	Sector	N	Mean	Std. Deviation	Std. Error Mean
Dialog	Public	38	3.8059	.58680	.09519
	Private	66	3.7027	.63653	.07835

Table 4.6 shows equality of variance and equality of means for dialogue between public and private sector.

Table 4.6: Independent samples t-test: Equality of variance and equality of means for dialogue and public (N=38) and private (N=66) sector.

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Dialog	Equal variances assumed	.005	.945	.819	102	.415	.10327	.12604	-.14673	.35327
	Equal variances not assumed			.838	82.549	.405	.10327	.12329	-.14197	.34851

As, Table 4.6 shows, an independent samples t-test was conducted to compare the dialogue scores for public and private sector. There was no significant difference in scores for public sector ($M = 3.81, SD = 0,6$) and private sector ($M = 3.7, SD is 0,64$); $t(102) = .819, p = .415$, two-tailed.

Table 4.7 shows descriptive statistics for dialogue between age under 50 and age over 50.

Table 4.7: Descriptive statistics for dialogue between age under 50 (N=71) and age over 50 (N=33).

	Age	N	Mean	Std. Deviation	Std. Error Mean
Dialog	Under 50	71	3.6919	.64532	.07659
	Over 50	33	3.8447	.54935	.09563

Table 4.8 shows equality of variance and equality of means for dialogue between age under 50 and age over 50.

Table 4.8: Independent samples t-test: Equality of variance and equality of means for dialogue between age under 50 (N=71) and age over 50 (N=33).

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Dialog	Equal variances assumed	.398	.530	-1.176	102	.242	-.15280	.12995	-.41056	.10497
	Equal variances not assumed			-1.247	72.565	.216	-.15280	.12252	-.39700	.09141

As, Table 4.8 shows, an independent samples t-test was conducted to compare the dialogue scores between persons under and over 50 years old. There was no significant difference in scores for persons under 50 ($M = 3.69, SD = 0,65$) and persons over 50 ($M = 3.84, SD is 0,55$); $t(102) = -1.176, p = .242$, two-tailed.

Table 4.9 shows descriptive statistics for dialogue between university education and not university education.

Table 4.9: Descriptive statistics for dialogue between university education (N=83) and no university education (N=21).

	Education	N	Mean	Std. Deviation	Std. Error Mean
Dialog	University education	83	3.7154	.65283	.07166
	No university education	21	3.8393	.45439	.09916

Table 4.10 shows equality of variance and equality of means for dialogue between university education and no university education.

Table 4.10: Independent samples t-test: Equality of variance and equality of means for dialogue between university education (N=83) and no university education (N=21).

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Dialog	Equal variances assumed	2.681	.105	-.820	102	.414	-.12392	.15119	-.42381	.17596
	Equal variances not assumed			-1.013	43.454	.317	-.12392	.12234	-.37057	.12272

As, Table 4.10 shows, an independent samples t-test was conducted to compare the dialogue scores for persons with or without university education. There was no significant difference in scores for persons with university education ($M = 3.71$, $SD = 0.65$) and persons without university education ($M = 3.84$, $SD is 0.45$); $t(102) = -.820$, $p = .414$, two-tailed.

Table 4.11 shows descriptive statistics for effectiveness between females and males.

Table 4.11: Descriptive statistics for effectiveness between females (N=59) and males (N=45).

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Effectiveness	Female	59	4.1935	.57817	.07527
	Male	45	3.8775	.87744	.13080

Table 4.12 shows equality of variance and equality of means for effectiveness between females and males.

Table 4.12: Independent samples t-test: Equality of variance and equality of means for effectiveness between females (N=59) and males (N=45).

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Effectiveness	Equal variances assumed	6.861	.010	2.209	102	.029	.31599	.14302	.03231	.59967
	Equal variances not assumed			2.094	71.979	.040	.31599	.15091	.01515	.61683

As, Table 4.12 shows, an independent samples t-test was conducted to compare the effectiveness scores between females and males. There was a significant difference in scores for females ($M = 4.19$, $SD = 0.58$) and males ($M = 3.88$, $SD is 0.88$); $t(71.98) = 2.1$, $p = .04$, two-tailed.

Table 4.13 shows descriptive statistics for effectiveness between the public and the private sector.

Table 4.13: Descriptive statistics for effectiveness between the public (N=38) and the private (N=66) sector.

	Sector	N	Mean	Std. Deviation	Std. Error Mean
Effectiveness	Public	38	4.2043	.55408	.08988
	Private	66	3.9719	.81478	.10029

Table 4.14 shows equality of variance and equality of means for effectiveness between the public and the private sector.

Table 4.14: Independent samples t-test: Equality of variance and equality of means for effectiveness between the public (N=38) and the private (N=66) sector.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Effectiveness	Equal variances assumed	5.393	.022	1.561	102	.122	.23240	.14887	-.06287	.52767
	Equal variances not assumed			1.726	99.070	.088	.23240	.13468	-.03482	.49962

As, Table 4.14 shows, an independent samples t-test was conducted to compare the effectiveness scores between public and private sector. There was no significant difference in scores for public sector ($M = 4.2, SD = 0,55$) and private sector ($M = 3.97, SD is 0,81$); $t(99.07) = 1,73, p = .09$, two-tailed.

Table 4.15 shows descriptive statistics for effectiveness between persons under 50 and persons over 50.

Table 4.15: Descriptive statistics for effectiveness between persons under 50 (N=71) and persons over 50 (N=33).

	Age	N	Mean	Std. Deviation	Std. Error Mean
Effectiveness	Under 50	71	4.0010	.79937	.09487
	Over 50	33	4.1768	.56976	.09918

Table 4.16 shows equality of variance and equality of means for effectiveness between persons under 50 and persons over 50.

Table 4.16: Independent samples t-test: Equality of variance and equality of means for effectiveness between persons under 50 (N=71) and persons over 50 (N=33).

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Effectiveness	Equal variances assumed	1.325	.252	-1.135	102	.259	-.17576	.15487	-.48295	.13143
	Equal variances not assumed			-1.281	84.864	.204	-.17576	.13725	-.44865	.09713

As, Table 4.16 shows, an independent samples t-test was conducted to compare the effectiveness scores between age under and over 50. There was no significant difference in scores for persons aged under 50 ($M = 4.00$, $SD = 0,8$) and persons aged over 50 ($M = 4.18$, SD is $0,57$); $t(102) = -1,345$, $p = .259$, two-tailed.

Table 4.17 shows descriptive statistics for effectiveness between university education and no university education.

Table 4.17: Descriptive statistics for effectiveness between university education (N=83) and no university education (N=21).

	Education	N	Mean	Std. Deviation	Std. Error Mean
Effectiveness	University education	83	4.0197	.79766	.08755
	No university education	21	4.2035	.39199	.08554

Table 4.18 shows equality of variance and equality of means for effectiveness between university education and not university education.

Table 4.18: Independent samples t-test: Equality of variance and equality of means for effectiveness between university education (N=83) and no university education (N=21).

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Effectiveness	Equal variances assumed	6.593	.012	-1.023	102	.309	-.18386	.17977	-.54044	.17271
	Equal variances not assumed			-1.502	66.150	.138	-.18386	.12240	-.42824	.06051

As, Table 4.18 shows, an independent samples t-test was conducted to compare the effectiveness scores between university education and not university education. There was no significant difference in scores for university education ($M = 4.02, SD = 0,78$) and no university education ($M = 4.2, SD is 0,39$); $t(66.15) = -1,502, p = .138$, two-tailed.

5 Discussion

In this thesis there was a strong positive correlation between perception of dialogue and team effectiveness. Research suggests that investing time in developing dialogue will pay off in how effective the team becomes (Bang & Midelfart, 2010). All three measures of team effectiveness (team performance, team cohesiveness, and individual satisfaction) had a strong correlation with dialogue. The same three measures correlated positively with each other. The results are in line with Bang & Midelfart's (2010) findings.

There was no impact from background variables on dialogue as seen through independent samples t-tests. However, there was a significant difference in perceived effectiveness between men and women, but none of the other background variables had an impact on effectiveness. The hypotheses will now be discussed in light of the literature on dialogue, team effectiveness, Dixon's organisational learning theory, Argyris' theoretical perspectives on espoused theory, theory-in-use, and double-loop learning, and biological factors.

Hypothesis 1 states that dialogue is positively correlated with all individual measures of team effectiveness. This is confirmed, they all are. Each of these hypotheses will be discussed in turn.

Hypothesis 1a states that dialogue is positively correlated with team performance. This hypothesis was confirmed ($r = .70$, $p < .01$), and replicate the original study ($r = .69$, $p < .001$) (Bang & Midelfart, 2010) in that there is a strong correlation between the two variables. van Knippenberg et al. (2004) argues that performance will increase where a climate of dialogue has been created. A dialogic climate, which also includes questioning, and sometimes negative feedback, can sometimes develop conflict and dissent, which is the opposite of what promoters of dialogue are trying to achieve. Still, according to van Knippenberg et al. (2004), the benefits of the positive effects on performance, outweighs issues that can arise along the way. In contrast, De Dreu and Weingart's (2003) metastudy from 30 empirical studies on the connection between team effectiveness and conflict, concluded that both task conflict and relational conflict was negatively correlated with team effectiveness (average correlations on $-.23$ and $-.22$). Nevertheless, the research is contradictory. What the researchers seem to agree upon, is that if there is a moderate level of task conflict, but a low level of relational conflict, these teams will outperform both teams with high conflict in both, and teams with low conflict in both (Bang & Midelfart, 2010). One can wonder if this is because these teams are more exploratory and respectful of each other,

both of which are important components of dialogue. Katzenbach & Smith (2005) argue in their ground breaking article on teams, that the most successful teams invest a magnificent amount of time and energy in exploring, shaping, and agreeing on a purpose that is theirs, individually and collectively. This is then translated into precise performance goals. At last, when Bang and Midelfart (2010) controlled for both task conflict and relational conflict, dialogue was still a strong predictor of team effectiveness.

Hypothesis 1b states that dialogue is positively correlated with team cohesiveness. This hypothesis was confirmed ($r = .75, p < .01$), and replicate the original study ($r = .69, p = < .001$) (Bang & Midelfart, 2010) in that there is a strong correlation between the two variables. Members of a team have to feel they want to be, and are, part of the team, rather than just individuals placed together. The results show that the feeling of cohesiveness increases when dialogue increases. If the members have a positive and enriching way of working together, this will increase the cooperation in the future (Hackman, 2002). Trust in the team is further positively related to the teams learning behaviour (Argyris, 2003; Bang, 2008). Dialogue may help increase cohesiveness through learning collectively. Pentland (2012), found that the best team workers had good communication and were spreading ideas around. They were appropriately exploratory and searched for ideas beyond the team, but not at the expense of team engagement. The team success was higher if there was more of these charismatic connectors.

Hypothesis 1c states that dialogue is positively correlated with individual satisfaction. This hypothesis was confirmed ($r = .61, p < .01$), and replicate the original study ($r = .71, p = < .001$) (Bang & Midelfart, 2010) in that there is a strong correlation between the two variables. High degree of individual satisfaction is reflected through learning and how happy one is to be a part of the team (Hackman, 2002). It is therefore important to create conditions that facilitates learning, and dialogue can support this.

There is a small difference in the correlation between dialogue and individual satisfaction in this thesis compared to the original study. One could argue that a possible reason for this is gender. In Bang and Midelfart's study 82% of the participants were men, whereas in this thesis there was only 43%, in other words, half the representation of the original study. Review of the gender research shows that men have higher expectations of success (Robbins and Judge, 2007, p.50) which could account for their satisfaction. Further, when a problem

arises, according to Robert and Judges' (2007, p.386) research, men frequently assert their desire for independence and control by offering solutions. On the other hand, women are often less boastful than men. Women are likely to downplay their authority and accomplishments, not to appear bragging. However, it is important to note that this is not necessarily generalisable to all men and women, and this research is from North America who has quite a different work culture than we have in Norway.

The main hypothesis (2) states that dialogue is positively correlated with team effectiveness. The results confirm the hypothesis, there was a strong positive correlation between dialogue and effectiveness. It can be argued then, that a dialogic communication form between members of a team is positively associated with the effectiveness in the team. Although Bang & Midelfart's (2010) look at dialog as a special form of communication and its impact on effectiveness, many other empirical studies have looked at positive effects of positive communication, also known as "constructive controversies" (Bang, 2008). This is not the same however, and it is important to understand how dialogue differs. As we have seen in the original study and this thesis, dialogue is defined as a belief to think one can learn something from one another, respecting others, even when one disagrees, exploring different views, and building on each other's views. The essence of dialogue then is exploration of deeper meaning and hidden potential, not agreement which is the goal in constructive controversies (Bang and Midelfart, 2010).

The research suggests that teams typically outperform individuals when the problem being solved requires multiple skills and experience. Teams are more flexible and responsive to the changing environment, and have the ability to rapidly collect, engage, and refocus (Katzenbach and Smith, 2005). However, to achieve this effectively, motivation is an important factor, and this increases with the use of appropriate communication (Kaufmann and Kaufmann, 2015), in this case dialogue. Perhaps if a team reaches its' goals, the members will develop pride in belonging, and in turn individual satisfaction, all of which can be predictors of motivation. Cognitive theories of motivation claim that reaching one's goals creates motivation and increases motivation further by developing expectations of future success. Social theories of motivation explain that when an individual feel belonging and feel treated in a fair manner, this also increases motivation (Kaufmann and Kaufmann, 2015, p.93). This can be applied to the team cohesiveness and individual satisfaction factors.

Furthermore, a team culture that focuses on trust and innovation is more likely to practice knowledge sharing. When human resources practices incorporate fairness and open communication, they are also more likely to promote an organisational culture that encourages knowledge sharing (Wang & Noe, 2010; Wang, et al., 2014). Hackman (2002) argues that in order to understand what makes a team effective, one has to learn to think and act at the group level of analysis. Since this is not something that is done regularly in our lives, learning and practice is needed.

Due to the growing speed of change, teams encounter a rising need for fast learning in order to meet the expectations of effectiveness. The speed and technological density that is everywhere, forces organisations to change both their structures and designs regularly, and there is an increasing demand for knowledge-based distributed information. The learning and implementation will be faster if there is openness to tap into the larger collective knowledge that is created through dialogue. Teams will be more effective if they start off in a dialogue format to create mutual trust, and a safe, and inspirational common ground (Schein, 1993; Schein, 2015).

In order to accommodate the need for fast learning and increase effectiveness, one can apply Dixon's (1999) organisational learning cycle, which has incorporated Kolb's experiential learning cycle. Both theories suggest that learning works by trial and error, to make a mistake and then reflect upon it. Argyris and Schön's (1978) conceptualisation, suggests that one can learn by simply reflecting on espoused theory and theory-in-use. This means, instead of going through the entire learning cycle, as Kolb (1984, 2014) and Dixon (1999) suggest, merely thinking about what you say, in contrast to what you do, is enough to learn. However great, this might work better for individual learning, due to both personal and practical reasons. In a team development scenario, using the experiential and organisational learning cycle might be easier to apply, and easier to use when recording team learning.

Dialogue plays a central role in Argyris and Schön's (1978) organisational learning theory, but little research has given dialogue as a form of communication a central role since (Argyris, 2000; Easterby-Smith, 2003, Mazutis & Slawinski, 2008). As mentioned above, other researchers have looked into constructive controversy, but this construct lacks exploration of meaning (Bang & Midelfart, 2010). Argyris (2000) argues that double-loop learning is a necessity if organisations are to make informed decisions in a fast changing environment. However, the reasoning processes that are used by members in teams and their

managers, inhibit the necessary exchange of information that makes double-loop learning possible. Argyris (2000) argues this is because an environment of dialogue is absent at the psychological and practical level of most teams (pp.267-270). As this thesis shows, dialogue is positively correlated with all three measures of effectiveness as it is defined by Bang and Midelfart (2010).

Hypothesis 3 states that the all three factors of team effectiveness (team performance, team cohesiveness, and individual satisfaction) will correlate positively with one another. These dimensions are naturally not independent of one another, and research shows a high level of covariance between each (Bang & Midelfart, 2010). However, since the same survey as Bang & Midelfart conducted was used, it was decided to run statistics on this to see if the results would be comparable. The results are the same as Bang and Midelfart's (2010) findings. This thesis found support for hypotheses 3a, 3b, and 3c.

Hypothesis 3 a states that individuals who score high on team performance will also score high on team cohesiveness. This was confirmed ($r = .76, p = <.01$) and replicates the original study ($r = .76, p = <.001$). Beal et al. (2003), found in their meta-analysis of 64 articles on cohesion and performance in groups that feeling a part of the team was positively connected to team performance. Inner commitment was the strongest predictor, followed by being proud of the group. Hypothesis 3 b states that individuals who score high on team cohesiveness will also score high on individual satisfaction. This was confirmed ($r = .81, p = <.01$) and replicates the original study ($r = .82, p = <.001$). Beal et al. (2003) also found that cohesiveness correlated with individual satisfaction as measured by confidence to the team and feeling a part of the team. Finally, hypothesis 3 c states that individuals who score high on individual satisfaction will also score high on team performance. This was also confirmed ($r = .72, p = <.01$) and replicates the original study ($r = .74, p = <.001$). In their meta-analysis of 254 studies, Judge et al. (2001) concludes that there is a moderate and significant correlation between individual satisfaction and team performance (.30). One should be critical to very strong correlations as they can suggest common method variance. The three factors of team performance, team cohesiveness, and individual satisfaction overlap as mentioned above. If performance goals are met, people are likely to feel happy (part of individual satisfaction), and in turn, they might feel a stronger allegiance to the group. This is likely to motivate individual members of the team to work collectively towards further achievements.

Whichever factor comes first, it will most likely influence the others, perhaps it is the same phenomena that is being tested?

In addition to using the survey that Bang and Midelfart's (2010) used to study dialogue and effectiveness, four different background variables were added to the statistics. These were, gender, sector, age, and education. In all teams the members will be different and the author wanted to check if these differences had an impact on either dialogue or effectiveness.

Hypothesis 4 states that background variables have no impact on dialogue. This was confirmed, there was no significant difference for any of the four hypotheses.

Hypothesis 5 states that background variables have no impact on effectiveness, which was confirmed for 5b, 5c, and 5d, but not for 5a.

Hypothesis 5a states that there is no difference in effectiveness between men and women.

This was not confirmed. There is a significant difference in scores: $t(71.98) = 2,1, p = .04$, two-tailed. What this suggests is that women and men perceive effectiveness differently.

Since this is a self-evaluation survey, this does not mean that men are more effective. The results show that there is a *perception* difference on effectiveness between men and women.

A review of the literature shows that other than biological factors such as child birth, and child rearing, no differences between men and women affect job performance (Robbins and Judge, 2007, p.51). Furthermore, there are no reliable differences in problem-solving, analytical skills, competitive drive, motivation, sociability, or learning abilities (Weiss et al. 2003).

5.1 Limitations and Further Research

Although this thesis confirmed the results of Bang and Midelfart (2010), further research on this field is suggested to discover how robust this correlation actually is. In addition, it is important to identify which factors contribute to, or discourage, dialogue in teams.

Only data from real teams are used in this thesis. This means that all members of the team had to complete the survey for the data to be used. However, the 16 teams only amounts to 104 individuals. This is a small sample. Furthermore, it was not a random selection. Team leaders who wanted their teams to participate in the survey were given more information after they

showed an interest via LinkedIn or through the email that was sent regarding the survey. This could have an effect on the results.

According to Bang (2008) the optimal size of a team should be five-six, and no more than ten. Some of the teams that participated were ten members, and one team had 23 members. This may have effected how well they considered dialogue in the team, as it is difficult to have a good, open, deep, and exploratory report with so many people. On the other hand, Katzenbach and Smith (2005) argue that teams should be between 2 -25 people. According to this statement, the team were reasonable in size.

The fact that this is not an objective measure and not an experiment, is a further limitation. Although it is anonymous, some teams are small and perhaps participants answer according to what they think they are expected to answer, or what they feel is right at the moment. Another limitation is that the survey was sent to participants' email, and therefore taken at different times, during different circumstances. The mood that day at work or how one interprets the questions could affect the answers. Also, participants might answer differently if they really understand what dialogue is. In the future, it would be interesting to see if the teams would answer differently than on the initial survey, had they been receiving training in dialogue before the survey was re-administered. Even without training in dialogue, it will be interesting to see if the answers differ from one time to the next, after putting focus on it, and learning initiatives have been initiated.

5.2 Managerial Implications and Conclusion

As an intervention design, the survey used in this thesis can be used as a diagnostic tool at the beginning of team development work. It can be used to establish where there is agreement, and where there are disagreements in the team. It is possible to apply theories of learning such as the organisational learning cycle by Dixon (1999), or single and double loop learning by Argyris and Schön (1978; 2000), to move the team towards better dialogue. After some time, the survey can be administered again. If there is a greater degree of dialogue and team effectiveness, or even if only one of the components of team effectiveness has increased, then one can confirm that learning has taken place. This cycle can be continued until the team has reached a level they are happy to be working at. Depending on where the team fits in the group development stages outlined by Wheelan (2005a), one can choose to focus on trust

within the group separately or simultaneously as dialogue. The IPO model of effectiveness will also most likely be of great use in the field.

In conclusion, it seems like dialogue has an individual effect on team effectiveness. Thinking that one can learn something from one another, show respect, explore different views, and to try to build on what other people are saying, seems to improve the chances of effectiveness, regardless of team.

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