Developing positive learning climate within a learning community

Qualitative research on exploring factors and understanding the formation of positive learning climates in learning communities: Insights into factors influencing the development of a positive learning climate.

Master thesis Strategic Human Resource Leadership

Radboud University

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Preface

I proudly present to you my master thesis, written at the completion of my Master Degree in Business Administration with a specialization in Strategic Human Resources Leadership. Writing this thesis has been both rewarding and challenging, with the result being something I am proud of. It enabled me to conduct in-depth research in developing a positive learning climate within a learning community.

The past few months have been intense and taught me a lot about learning communities and conducting qualitative research. The indispensable guidance of my supervisors Dr. Jeroen de Jong and Wouter van Zwol, MSC has supplemented my efforts in writing this these and I am thankful for all their support and confidence in my abilities. Jeroen provided feedback in an extremely pleasant way and his insights about explorative thinking and his openness and accessibility provided me with an invaluable confidence in the process. The informal communication and the ever-present willingness to answer questions made for pleasant collaboration on this project. I would also like to thank my fellow students Christel Grotentraast and Teun Boonen for their mutual support and encouragement.

In addition, I would like to thank my family, friends, and roommates for their continued support and love throughout the struggles of this thesis. Their advice and constant source of encouragement and motivation made it possible for me to successfully complete this project.

I hope you will enjoy reading my master thesis and that this work provides you with greater insight into the importance of creating a positive learning climate within learning communities.

Myrthe Oude Ophuis

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Abstract

Purpose - The aim of this research is to investigate the development of a positive learning climate within a learning community and identify the factors that either facilitate or limit its formation.

Design – Two qualitative research studies were conducted to investigate the establishment of a positive learning climate in learning communities. Study 1 employed a multiple case study approach, involving interviews with project leaders, facilitators, and participants from three learning communities. In study 2, a single case study focused on a leadership learning community at Radboud University, involving 18 students. Data was collected through pre- and post-meeting interviews and observations of community meetings to capture expectations, perceptions, and changes in experiences.

Findings – In study 1, differences were found between case A and cases B and C in terms of communication, group formation, and attendance. Case A exhibited inadequate communication and inconsistent attendance, while cases B and C demonstrated transparent communication, successful group formation, and consistent attendance. Transparent communication, specific learning questions, and competent staff were identified as success factors in cases B and C. In study 2, a single case study identified facilitating factors in the learning community, including shared interests, high-quality meetings, physical presence, trust, smaller groups, motivation, and diverse group dynamics. Limiting factors included unmet expectations, online participation, and a lack of theoretical frameworks and guidelines. Physical meetings provided immediate communication and question asking, while online meetings offered convenience. The presence of trust among participants and organizers played a crucial role in creating a positive learning environment. Attendance patterns and shared interests also influenced group dynamics.

Conclusion – The study concludes that positive learning climates in learning communities result from a combination of factors, including participant recruitment, physical meetings, effective online communication, shared interests, engaging content, trust, group cohesion, diverse dynamics, and motivation. However, limitations like limited interaction and unmet expectations need to be addressed for further enhancement. The study offers practical implications for practitioners and educators to design effective learning programs, emphasizing motivation, behavior, perceptions, physical meetings, open communication, trust-building, and clear guidelines. Future research should replicate the study on a larger scale, increase the sample size, and adopt a longitudinal approach for a comprehensive understanding of factors influencing positive learning climates in learning communities.

Keywords: learning community - positive learning climate – qualitative research

Table of contents

1. Introduction

In today's rapidly changing work landscape, characterized by the COVID-19 crisis and advancements in digital and technological innovations, the concept of hybrid working has emerged as a prominent trend. To effectively adapt to these changes, employees must continuously develop their knowledge and skills. In response, governments and organizations are placing increasing emphasis on 'lifelong development,' the ongoing process through which employees enhance their knowledge, skills, and abilities (Noe, Clarke, & Klein, 2014; Hartgers & Pleyers, 2016; Gijpstra, Bolle, & Driessen, 2019).

Unlike traditional training programs that rely on passive information consumption, learning communities offer an effective approach that fosters active learning (Knol & Velzing, 2019). While organizations primarily rely on formal learning programs, such as education and in-house training, to foster lifelong development (Emanuel, Sijbom, Koen, & Baas, 2022), these programs often fall short compared to learning communities. Formal learning programs tend to be generic, unable to fully align with employees' specific needs and work practices. Moreover, they often lack interactivity, which is essential for effective learning (Emanuel et al., 2022). Additionally, these programs typically take place within organizational boundaries, limiting opportunities for knowledge exchange and collaboration between different entities.

In contrast, learning communities present a compelling alternative to formal learning programs (Emanuel et al., 2022). By promoting active participation, exchange, discussion, and experiential learning, learning communities create an environment that fosters shared responsibility, accountability, and continuous improvement. Drawing on the diverse expertise and perspectives within the community, collaboration becomes a priority for collective growth. Additionally, Knol & Velzing (2019) emphasize the importance of sustainable learning and provide ongoing platforms for interaction and knowledge exchange, resulting in improved long-term retention and impact of learning. Learning communities have emerged as a conceptual framework that responds to the evolving landscape of society, technology, labor market and other factors. This approach offers a fresh perspective on lifelong learning and development (Knol & Velzing, 2019).

1.1 Definitions of learning community

Multiple definitions exist for learning communities. Mitchell and Sackney (2000) & Toole and Louis (2002) assert that a learning community is a group of people sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way. Wenger & Trayner (2018) developed the following definition: “Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (p. 3). Learning communities encompass communities where employees and experts from diverse organizations come together to learn and innovate collectively (Emanuel, Sijbom, Koen, & Baas, 2022). While differences of opinion persist among researchers and in literature, there is a general agreement that learning communities emphasize the exchange of different perspectives to enhance organizational knowledge, skills and innovativeness. Given the variation in definitions, it is essential to clarify the intended meaning of the term in this study. This study adopts the definition proposed by Emanuel et al. (2022), which views learning communities as a community in which employees and experts from different organizations come together to learn and innovate from and with each other. The selection of Emanuel et al. (2022) definition is based on its recent research context, relevance to the research objectives, and alignment with the study's scope.

1.2 Exploring the importance, benefits and conditions of learning communities

Having defined what is meant by a learning community, the discussion will now shift to exploring its importance, benefits, and conditions. Learning communities offer both short-term and long-term advantages for individual participants and organizations. Participation in learning communities has been associated with increased employability, reducing job insecurity, and improving career opportunities (Fugate, Kinicki, & Ashforth, 2004; Van Vuuren, 2012; Koen, Klehe, & Van Vianen, 2013). Moreover, learning communities enhance organizations' innovative capacity, competitiveness, and learning culture, addressing complex organizational issues and skill gaps (Crook, Todd, Combs, Woehr, & Ketchen, 2011; Kirkman, Mathieu, Cordery, Rosen, Kukenberger, 2011; Schipper et al., 2022). Compared to formal learning programs, learning communities are believed to provide better alignment with individual learning needs, increased interaction, and opportunities for knowledge exchange and co-creation (Noe et al., 2014). Interaction and active participation are recognized as key success factors for effective learning (Emanuel et al., 2022).

The sustainability of a learning community is determined by factors such as the pace and mode of meetings, treatment of newcomers and old-timers, and activities that foster meaningful conversations (Wenger & Trayer, 2018). Regularity and consistency of meetings are vital for maintaining continuity within the community, while excessive time spent on logistics can hinder participants' motivation (Wenger & Trayer, 2018). Community organizers should also foster interaction beyond meetings and welcome newcomers thoughtfully to contribute to community development and member participation. A successful learning community depends on participants' initiative, diverse learning approaches, and a well-structured community rather than its absolute size (Wenger & Trayer, 2018). It should promote collaboration, communication, engagement, and provide a positive learning climate with adequate resources for education (Emanuel et al., 2022). Furthermore, continuous assessment of the community's effectiveness and making necessary adjustments are crucial for long-term success.

1.3 Positive learning climate

One of the essential characteristics of learning communities is the positive learning climate, which is essential for effective knowledge sharing and learning (Emanuel et al., 2022). A positive learning climate in a learning community is defined as "an environment that is characterized by mutual support, respect, and collaboration, where learners feel valued and are encouraged to take risks and make mistakes as part of the learning process" (Brophy, Alleman, & Knighton, 2010). Previous research shows that a positive learning climate, where constructive communication is present, and participants trust each other and feel safe, psychological safety is positively related to knowledge sharing (Lau, Lam, & Wen, 2014; Noe et al., 2014; Nerstad et al., 2018). A positive learning climate has also been found to be an important predictor of innovative behavior (Sung & Choi, 2014), optimal performance (Van Dam, 2015), and creativity and knowledge creation (Yoon, Song, & Lim, 2010). Therefore, a positive learning climate is critical for effective learning and knowledge creation in learning communities.

It is challenging to form a positive learning climate within a learning community since the learning community is inter-organizational. Participants of the learning community work at different and sometimes competing organizations. These inter-relationships can make people reluctant to share information with others (Park & Russo, 1996). As a result of the inter-organizational environment there is an absence of a shared conceptual framework in learning communities. This can impede effective knowledge exchange. Establishing a common understanding is essential to avoid misunderstandings and promote a conducive learning environment (Lane & Lubatkin, 1998). Emanuel et al. (2022) highlights the need for future research to delve into individual characteristics, such as motivation, that facilitates a positive learning climate, the impact of shared perceptions on learning outcomes and the dynamic aspect of the learning climate. This necessitates further investigation to enhance understanding in these areas and advance the field of study.

The investigation into the development and characteristics of a positive learning climate in learning communities holds great importance (Emanuel et al., 2022). This study aims to shed light on the advantages and importance of learning communities, which encompass enhanced employability for participants and improved innovative capacity and competitive position for organizations (Knol & Velzing, 2019). Learning communities have been proven to be more effective in achieving learning outcomes and better tailored to employees' learning needs when compared to formal learning programs (Emanuel et al., 2022). However, their success relies heavily on participants' initiative, their ability to learn through diverse approaches, and the community's sustainability. Establishing a positive learning climate within these communities is paramount to facilitate effective knowledge sharing and learning experiences.

Research focused on fostering a positive learning climate in learning communities is crucial due to its contribution to enhancing learning outcomes, promoting knowledge sharing, reaping organizational benefits, and adapting to the modern work landscape (Grijpstra et al., 2019). This research offers valuable insights and practical applications for both individuals and organizations. By cultivating trust, encouraging constructive communication, and providing a safe environment, it stimulates innovation and enhances organizations' competitive position through increased creativity and knowledge creation

(Sung & Choi, 2014). Given the ever-changing nature of the field, where lifelong learning and development are paramount, research on a positive learning climate remains relevant (Grijpstra et al., 2019). Promoting a positive learning climate not only improves learning outcomes, facilitates knowledge sharing, and reaps organizational benefits but also enables smooth adaptation to the modern work landscape. Ultimately, this research presents valuable insights and practical applications for individuals and organizations, paving the way for effective learning, knowledge sharing, and development in a rapidly evolving work environment (Grijpstra et al., 2019).

1.4 Research question

Academic research on learning communities is currently limited, and there is insufficient understanding of the underlying mechanisms of learning and knowledge utilization (Emanuel et al., 2022). This knowledge gap presents a challenge in optimizing learning within learning communities, which is crucial for their effective functioning (Emanuel et al., 2022). While different organizations within these learning communities bring together learning, work, and innovation, the approaches employed vary, highlighting the absence of a definitive blueprint for a learning community (Knol & Velzing, 2019). Additionally, existing literature emphasizes the importance of establishing a positive learning climate (Emanuel et al., 2022). This research aims to investigate how a positive learning climate can be developed within a learning community and which factors influence its formation. Therefore, the following research question has been developed:

How are positive learning climates developed within a learning community and what factors facilitate and limit the development of positive learning climates in learning communities?

This research question addresses a significant gap in the existing literature and aims to expand the understanding of emergent states that promote a positive learning climate in learning communities (Emanuel et al., 2022). By conducting a comprehensive review of the current literature on learning communities and analyzing empirical data from a case study, this study will provide valuable insights into the creation of a positive learning climate within a learning community. The findings will be of interest to educators, learning community leaders, and policymakers seeking to optimize the effectiveness of learning communities, promote knowledge sharing, and foster innovation.

This study contributes to two main areas within the existing literature: learning communities and learning climate. Specifically, it focuses on the process of nurturing a positive learning climate, which is an integral component of learning communities. While previous studies have explored the effectiveness and characteristics of learning communities, they have not specifically focused on the learning climate (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Additionally, Emanuel et al. (2022) emphasizes the need for future research to explore aspects related to a positive learning climate. Therefore, this research study fills the gap by examining the specific factors, both inhibiting and facilitating, that influence the formation of a positive learning climate. By shedding light on these aspects, this study enhances the current understanding of learning communities and contributes to the broader knowledge on fostering effective learning environments.

1.5 Thesis outline

The thesis comprises five sections, with the introduction serving as the first chapter. The second chapter presents the theoretical framework of the research, providing an in-depth exploration of various theoretical concepts. Chapter three outlines the overall methodology employed in both studies. Subsequently, the findings of study 1 and study 2 are discussed. Finally, chapter five presents the conclusion and associated discussion.

2. Theoretical framework

The theoretical framework is essential in providing a complete understanding of the research problem and in guiding the analysis of data. This chapter describes the theoretical framework that will be used to examine how a positive learning climate is developed within a learning community. The theoretical framework includes a synthesis of several theoretical perspectives and concepts, including challenges, individual characteristics and dynamics. These perspectives and concepts provide a basis for examining the mechanisms and processes involved in creating a positive learning climate within a learning community.

2.1 Learning community

Learning communities are communities where employees and experts from different organizations come together to learn and innovate collaboratively (Emanuel et al., 2022). Learning communities share similarities with other learning-working communities, such as Communities of Practice (Wenger & Trayer, 1998), Professional Learning Communities (Fullan, 2005; Verbiest, 2016) Virtual Communities (Allen, Ure, & Evans, 2003), Innovation Networks (Möller & Halinen, 2017) and Field and Living Labs (Stolwijk & Seiffert, 2016). All these learning-working communities have in common that learning is self-initiated, informal, and proactive (Emanuel et al., 2022). Learning communities differ from further learning-work communities in that learning communities bring together both learning, working, and innovation, whereas other learning-work communities often focus on one of two of these three outcomes (Mennens et al., 2021). In addition, learning communities always consist of employees coming from different organizations (they are *inter-organizational*), whereas the majority of e.g., organizational CoPs and PLCs can be located within one organization (they are *intra-organizational*) (Emanuel et al., 2022).

In learning communities, participants have a shared goal of enhancing their practical skills and competencies, and they adopt a bottom-up approach by selecting topics of personal interest for further learning (Top Sectors & PBT, 2017). Through collaboration and knowledge exchange, participants acquire new knowledge and skills that are relevant to their respective practices. This self-directed and autonomous learning approach promotes motivation and enables the practical application of acquired knowledge and skills. (Ryan & Deci, 2000; Parker, Bindl, & Strauss, 2010; Jansen in de Wal, Den Brok, Hooijer, & Martens, 2014). Learning communities cover a wide range of topics, from understanding emerging technologies like artificial intelligence to addressing societal challenges such as energy transition or accessible healthcare collectively (Top Sectors & PBT, 2017).

Effective and sustainable learning communities involve both internal and external learning processes (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005; Hargreaves, 2007). Networks of schools have the potential to leverage a broader range of resources and expertise than individual schools, facilitate self-reflection and collective reflection on practice, and promote engagement in more interactive forms of professional learning (Hargreaves, 2007; Katz et al., 2008). In networked learning communities, professional learning occurs in a manner similar to that within schools, where schools can share their ideas and practices with the community and vice versa, depending on the strength of the connection between the school and the learning community (Katz & Earl, 2010). Individual participants play a vital role in connecting schools and organizations, fostering active participation and knowledge sharing (Bolam et al., 2005; Katz & Earl, 2010). Networked learning communities have the potential to enhance teachers' professional learning and, consequently, improve student achievement.

Examples of Dutch learning communities, such as the Duurzaamheidsfabriek, Talent Innovation Pool (TIP), EnTranCe, and Sharehouse, exemplify the integration of learning, working, and innovation through collaboration and interaction (Emanuel et al., 2022). Despite the shared objective of integrating learning, working, and innovation, these communities are composed of different organizations, resulting in variations in the approach and stakeholder involvement (Emanuel et al., 2022). The Duurzaamheidsfabriek, for instance, serves as an innovation environment where public and private organizations, along with knowledge institutions, collaborate to exchange knowledge and work experiences in the pursuit of sustainable innovations. TIP, on the other hand, is a learning environment facilitated by a university of applied sciences, bringing together internship students and employees from various companies within the same sector to discuss current themes and share work experiences that contribute to innovation within their respective organizations (Hofstra et al., 2021).

According to the study by Doğan & Adams (2018) the effect of learning communities is that teachers integrate new strategies or methods. For example, in Murphy (2015) study, one teacher reported: "Knowing and understanding my students more has really helped me because I can see things I didn't see before. Now if a student is inattentive and can't finish their writing, I can step back and think about it in relation to my teaching choices and support them with the strategies I've learned, like giving breaks and splitting the work more - really thinking about their needs" (p. 94). In short, by participating in learning communities, teachers made changes in their practice as they applied strategies specific to their profession.

In conclusion, learning communities offer individuals valuable opportunities for individuals to learn, grow, and connection (Emanuel et al., 2022). The effectiveness of learning communities depends on factors, such as shared interests and goals, clear expectations, a supportive environment, and diversity among participants. Engaging in learning communities can lead to improved learning outcomes, increased engagement, enhanced critical thinking skills, social connections, and career development.

2.2 Learning climate

A learning climate refers to how participants perceive the norms, procedures, and practices that support their learning behavior (Nikolova, Van Ruysseveldt, De Witte, & Van Dam, 2014). An atmosphere that instills fear of making mistakes can have a negative impact on employees' willingness to engage in experimental learning (Edmondson, 1999). A lack of acceptance of errors can cause members to feel concerned about the safety of their work and the impression it creates on their professional reputation when errors occur (Lee, Edmondson, Thomke, & Worline, 2004). Since employees may experience interpersonal risks associated with making mistakes, such as being perceived as incompetent or failure-prone, they may avoid experimentation and conceal unsuccessful work experiences (Edmondson, 1999). Therefore, perceptions of an error-avoidant climate may impede employees' proactive learning behavior through experimentation (Edmondson, 1999; Lee et al., 2004). As such, the intention is to establish a positive learning climate within the learning community.

2.3 Positive learning climate

A positive learning climate in a learning community is defined as "an environment that is characterized by mutual support, respect, and collaboration, where learners feel valued and are encouraged to take risks and make mistakes as part of the learning process" (Brophy et al., 2010). This type of climate fosters positive relationships among learners and with teachers, motivating learners to pursue their goals, boosting their confidence in their abilities, and empowering them to play an active role in their learning. The perception of learning is influenced by various factors including learners' sociodemographic, psychological, life situation, and learning and education-related characteristics. Additionally, the characteristics of the learning and formation process, along with the structural and cultural context in which it takes place, shape the perception of learning (Van Valckenborgh & Organisaties, 2004). The social context, including the characteristics of the learning community itself, also plays a role in influencing learner's perception of learning.

Learning within a community has a positive impact on work practices within organizations, as it enhances individual performance through the acquisition of knowledge and skills (Emanuel et al., 2022). Furthermore, learning in a learning community fosters innovation as individuals learn from each other's practices, generating novel ideas both within the learning community and their respective organizations (Emanuel et al., 2022). A positive learning climate is a significant predictor of innovative behavior, optimal performance, creativity, and knowledge creation (Yoon et al., 2010; Sung & Choi, 2014; Van Dam, 2015). In an effective learning community, a positive learning climate, characterized by the sincere sharing of knowledge, is essential (Emanuel et al., 2022).

In summary, a positive learning climate within a learning community creates an environment of support, respect, and collaboration, empowering learners to take ownership of their learning. The perception of learning is influenced by various individual and contextual factors, shaping the learner's experience within the community. This positive learning climate not only enhances individual work practices but also fosters innovation, optimal performance, and creativity within the learning community and its member organizations.

2.4 Factors influencing the development of learning climate

In the development of interactions and climate within newly formed teams, three fundamental factors significantly influence the process: individual team members' motivation, behaviors, and perceptions (DeChurch & Mesmer-Magnus, 2010; Ilgen, Hollenbeck, Johnson, & Jundt, 2005). Similarly, in learning where the pursuit of learning is paramount, individual motivation, behaviors, and perceptions related to learning play crucial roles in shaping the learning climate during the initial phase. Understanding these factors is essential for fostering a positive learning climate.

Behaviors that foster a positive learning climate within learning communities include actively seeking help and feedback from other participants. Proactive engagement in learning, both in terms of seeking and providing assistance, creates opportunities for knowledge exchange and mutual growth (Hargadon & Bechky, 2006; Coetzer, Knock, & Wallo, 2017). Reciprocation of expertise, professional knowledge, and constructive feedback further enhances the learning climate. Therefore, participants who engage in both helping and seeking help play a crucial role in fostering a favorable learning climate (Emanuel et al., 2022).

In addition to behaviors, individual perceptions of psychological safety significantly contribute to the formation of the learning climate within learning communities. Psychological safety enables individuals to express ideas, ask questions, and engage in open discussions without fear of negative consequences (Edmondson, 1999; Noe et al., 2014). Establishing an inclusive and positive learning climate, where trust, collaboration, and risk-taking are encouraged, relies on individual perceptions of psychological safety. Understanding the interplay between individual characteristics and shared learning climate perceptions can provide valuable insights for fostering shared perceptions and enhancing learning outcomes (Emanuel et al., 2022). Section 2.5.4 delves deeper into the concept of psychological safety, exploring its dynamics and its significant role in shaping the learning climate within learning communities. Shared perceptions of the learning climate are vital for understanding their impact on learning outcomes within learning communities (Emanuel et al., 2022). The collective perception of the learning climate influences the overall learning experience and outcomes. Thus, it is crucial to comprehend the dynamics and shared perceptions of the learning climate to foster a positive and productive learning climate.

2.5 Determinants of a positive learning climate

At the onset of a new learning community, establishing a positive learning climate is crucial. Learning communities rely on individual motivation, behaviors, and perceptions related to learning, which shape the formation of the learning climate (Emanuel et al., 2022). Through sharing experiences and practical knowledge, participants learn from each other, improve existing work practices, and foster innovation (Emanuel et al., 2022). A positive learning climate encompasses several key elements, including motivation, behaviors, cognitive perceptions of individuals, psychological safety and challenge to foster positive learning climate. These factors contribute to the formation of an environment that fosters learning and knowledge sharing among community members (Lau et al., 2014; Noe et al., 2014; Nerstad et al., 2018).

2.5.1 Motivation

Motivation plays a fundamental role in learning. According to Ryan & Deci (2000) ‘t*o be motivated means to be moved to do something’* (p. 1). Thus, someone who feels no incentive or inspiration to do something is characterized as unmotivated, while someone who is energized or activated to achieve a goal is considered motivated. So almost everyone who works or plays with others has to deal with motivation, with the question of how much motivation those others, or themselves, have for a task, and practitioners of all kinds are faced with the eternal task of encouraging more or less motivation in their environment.

The most fundamental distinction is between intrinsic motivation, which refers to doing something because it is inherently interesting or enjoyable, and extrinsic motivation, which refers to doing something because it leads to a distinct outcome (Ryan & Deci, 2000). Intrinsic motivation is particularly important for high-quality learning and creativity, and understanding the factors that fuel or undermine it is crucial for educators (Ryan & Stiller, 1991). In a positive learning environment, students are motivated to pursue their learning goals, confident in their ability to learn and succeed, and actively engaged in their own learning.

2.5.2 Behaviors

Behavior in a learning community refers to the actions, attitudes, and habits that individuals demonstrate when participating in the community's activities and interactions. Behaviors within a learning community significantly impact the learning climate and shape the community's culture (Emanuel et al., 2022). Positive behaviors, such as active engagement in discussions, willingness to share knowledge, and openness to diverse perspectives, foster a positive and productive learning environment (Emanuel et al., 2022). Conversely, negative or disruptive behavior hinders learning progress and impedes the development of a supportive learning culture.

2.5.3 Cognitive perceptions of individuals

Individuals' cognitive perceptions play a significant role in shaping the learning climate. Various factors, such as sociodemographic, psychological, and educational characteristics, influence individuals' perception of learning (Emanuel et al., 2022).

The dynamic nature of learning climate perceptions indicates that they can change over time and impact learning outcomes (Crossan, Lane, & With, 1999; Morgeson & Hofmann, 1999; Edmondson, 2002; Kostopoulos, Spanos, & Prastacos, 2013). The diversity in learning goal orientation within a learning community can potentially influence the time it takes for agreement or consensus to emerge in learning climate perceptions, subsequently affecting the realization of learning outcomes. Examining how the composition of individual characteristics within a learning community influences the formation of shared learning climate perceptions from a dynamic perspective can provide valuable insights for interventions aimed at fostering and promoting shared perceptions (Emanuel et al., 2022).

The strength and consensus of shared learning climate perceptions significantly affect learning outcomes (González-Romá, Fortes-Ferreira, & Peiró, 2009). Strong consensus promotes knowledge exchange and individuals' willingness to learn from each other. Weak consensus indicates differing perceptions due to varying expectations or a lack of mutual understanding (González-Romá, Peiró, & Tordera, 2002). Understanding the interplay between consensus and perception strength provides insights into the dynamics of learning communities and contributes to enhancing learning outcomes (Emanuel et al., 2022).

2.5.4 Psychological safety

This paragraph explores the concept of psychological safety within teams, its relationship with team learning, and the factors that contribute to its establishment. Psychological team safety, as defined by Edmonson (1999) as "a shared belief that the team is safe to take interpersonal risks," plays a vital role in team learning and effective collaboration. Psychological safety refers to the feeling of being able to express oneself freely without fear of negative consequences within the team (Kahn, 1990). The creation of psychological safety is a temporary, subjective contextual situation that can be influenced by individuals with power and influence (Denison, 1996; Shao, Feng, & Wang, 2016) and is based on assumptions about how team members will respond to behaviors such as asking questions, asking for feedback, reporting mistakes or suggesting ideas (Edmondson, 2004).

Several studies have demonstrated a positive relationship between psychological safety and team learning (Edmondson, 1999; Van den Bossche, 2006; Ortega et al., 2014). In order for team learning to thrive, employees need to feel safe to express their ideas and opinions, make mistakes, and ask for help (Edmondson, 1999). Managers and leaders play a critical role in creating a psychologically safe climate for team learning (Edmondson, 1999). Transformational leaders, who support and encourage employees to express their ideas and opinions, contribute to the establishment of psychological safety (Bass, 1997; Yukl, 2013). Managers and leaders play a critical role in creating a psychologically safe climate for team learning (Edmondson, 1999). Transformational leaders, who support and encourage employees to express their ideas and opinions, contribute to the establishment of psychological safety (Bass, 1997; Yukl, 2013).

Trust is a crucial factor for successful collaboration and a positive learning climate (Edmondson, 1999). Trust refers to participants' belief and confidence in each other's abilities, intentions, and actions within a given context (Emanuel et al., 2022). Establishing trust requires constructive communication that builds and enhances relationships, understanding, and respect (Emanuel et al., 2022). Trust and constructive communication contribute to promoting a psychologically safe climate (Edmondson, 1999).

Psychological safety reduces concerns about negative reactions, enabling team members to feel more comfortable reporting mistakes and sharing their ideas (Edmondson, 1999). This concept is essential for collective learning, as a psychologically safe climate is necessary for effective knowledge sharing and learning within learning communities (Edmondson, 1999). Furthermore, psychological safety is not equivalent to group cohesion, as group cohesion tends to reduce the willingness to question and disagree with others' opinions (Janis, 1982).

In conclusion, psychological safety, constructive communication, and trust are key factors that contribute to a positive learning climate within teams. The role of managers and leaders in creating an environment that fosters psychological safety, encourages idea expression, learning from mistakes, and mutual learning is crucial. However, further research may uncover additional factors or nuances that impact a positive learning climate. Continual exploration and investigation will enhance the understanding of these factors and their implications.

2.6 Challenges to forming a positive learning climate

Developing a positive learning climate within a learning community is a complex task influenced by various limiting factors. These challenges can significantly hinder the creation of an environment that fosters collaboration, engagement, and effective learning. This section examines common challenges that impede the development of a positive learning climate within learning communities.

One prominent limiting factor is the absence of certain determinants that contribute to a positive learning climate. The lack of psychological safety (Edmondson, 1999), trust, respect (Emanuel et al., 2022), and effective leadership (Edmondson, 1999; Yukl, 2013) poses immediate challenges in creating a positive learning climate. These factors play a crucial role in shaping the learning climate and require attention and nurturing.

Another limitation is the absence of diversity and inclusion within a learning community limits the richness of discussions and hampers the growth and learning potential of the community (Edmondson, 1999). Actively engaging and valuing individuals from different backgrounds and perspectives fosters a more inclusive and vibrant learning environment. Negative social dynamics, such as competition, aggression, or bullying, further hinder the development of a positive learning climate (Klein, Cornell, & Konold, 2012). These dynamics create an atmosphere of fear, anxiety, and exclusion, impeding collaboration, trust-building, and open communication.

Moreover, effective communication and collaboration are essential for creating a positive learning climate (Sharan & Sharan, 1992). Inadequate opportunities for meaningful interactions, idea sharing, and collaborative projects hinder the development of a vibrant and supportive learning environment.

Active participation in various knowledge exchange activities, such as online community boards, live chats, synchronous online discussions, and asynchronous feedback in discussion threads, is vital for fostering a thriving community (Hayes & Walsham, 2000; Ardichvili, Page, & Wentling, 2003). The absence of such activities hinder the process toward a positive learning climate. Additionally, individuals who solely seek to extract knowledge without willingness to share it pose a limiting factor. Previous studies have revealed that knowledge sharing can be a challenge, with employees often being reluctant to share their knowledge (Ciborra & Patriota, 1998). Various reasons contribute to this reluctance, including a lack of understanding of the importance of knowledge sharing, unfamiliarity with effective methods, doubt about their effectiveness, and concerns about potential negative consequences (Garfield, 2006).

Transferring knowledge across cultural boundaries poses challenges to collaborative learning in multinational and global organizations. Cultural differences influence behaviors related to questioning, disagreeing, discussing problems, and following others in conversations (Wenger, McDermott, & Snyder, 2002). National cultural characteristics, such as hierarchy orientation and power distance, impact knowledge-sharing patterns within multinational organizations (Ardichvili et al., 2003).

Lastly, the interorganizational nature of learning communities complicates the creation of a learning climate. Participants often represent competing organizations, which may discourage information sharing between individuals (Park & Russo, 1996). Establishing a shared frame of reference is crucial for mutual understanding and effective knowledge exchange (Lane & Lubatkin, 1998).

In summary, overcoming the challenges to forming a positive learning climate is essential for fostering effective knowledge exchange and collaboration within learning communities. Challenges such as potential competition, unfamiliarity, and differences in understanding pose important obstacles to the development of a learning environment where knowledge and experiences can be exchanged confidently and without misinterpretation.

3. Methods

The methods chapter of this thesis presents a comprehensive description of the research design, which consists of a case study approach. The research design aims to examine learning communities, and two complementary studies are conducted to gain a comprehensive understanding. Study 1 employed a retrospective approach, where participants were interviewed after all the meetings had taken place. They are asked to recall and reflect upon the past six months to provide their insights and responses. In contrast, in study 2 a different approach is utilized. Participants were interviewed before the first meeting and observations were made starting from the first meeting.

3.1 Study 1: Case study

This chapter outlines the methodology of the case study, including the research design, participants, data collection and analysis, and the quality of the research.

3.1.1 Research design

The chosen research methodology for this master thesis is the case study methodology, aligning with the qualitative research principles of description, comprehension, and explanation (Tellis, 1997). This methodology was well-suited for investigating specific phenomena or entities within their contextualized settings, considering factors such as time, events, and location (Merriam, 1998; Stake, 2006). According to Yin (2014), a case was defined as a contemporary phenomenon within its real-life context, particularly when the boundaries between the phenomenon and its context are unclear and the researcher has limited control over them (p. 13).

The case study approach enabled the exploration of "how and why" questions, which directly addresses the research question of this study: *"How are positive learning climates developed within a learning community, and what factors facilitate and limit their development?"* (Yin, 1989). By examining individual cases, the study aimed to gain a comprehensive perspective on the bottlenecks experienced by the participants (Swanborn, 2013, p. 43). Moreover, a case study investigated the phenomenon of interest within its real-life context, providing a rich source of information and utilizing primary sources such as interviews (Boeije & Bleijenberg, 2019, p. 21). In this study, the case study approach was employed to conduct an in-depth investigation into the implementation of learning communities and specifically, the creation of a positive learning environment, within an authentic setting. This approach was particularly valuable in exploratory research. Each learning community was analyzed as a single case, making the research holistic in nature (Yin, 1989).

Furthermore, this research constituted a multiple case study as it examines three distinct learning communities. The inclusion of multiple cases allowed for the replication of the investigation of the same phenomenon, enabling the identification of generalizable characteristics while minimizing idiosyncratic variances (Swanborn, 2013). By comparing the different cases, the study aimed to enhance the robustness and validity of the findings (Yin, 1989, p. 52).

In line with the exploratory nature of the study, interviews were conducted to gather insights into the research topic. This approach offered flexibility and openness, facilitating a comprehensive exploration of the phenomenon (Swanborn, 2013). It is important to note that this case study was part of a broader research program, and the findings will inform further investigations in study 2, which aimed to delve deeper into the research question.

To summarize, this study utilized a multiple case study design, selecting and comparing three distinct learning communities. Interviews were conducted to gather relevant data from key individuals within each learning community. The inclusion of multiple cases enhanced the reliability of the results and enabled the identification of common and relevant features across the cases (Swanborn, 2013).

3.1.2 Participants

The aim of this research was to investigate how the process of creating a positive learning climate operates within a learning community and to identify the factors that facilitate or hinder this process. To accomplish this objective, a comparative analysis of three learning community cases was conducted. Wouter van Zwol was responsible for conducting the interviews for this study, which took place until the point of saturation was reached (Boeije & Bleijenberg, 2019). All interviews were carried out in 2022, recorded, and transcribed. Transcripts of the interviews are available upon request. Therefore, the raw transcripts are not included in this document, but relevant quotes have been included in the results section. Each case involved interviews with the project leader, the facilitator, and a minimum of two participants. Millenaar & van Schaiktransport BV provided the respondents for the survey.

The total number of participants in this study was 7, all of whom were Dutch speakers employed in the logistics and transport sector. This case study offers an analysis of individuals representing diverse stakeholder groups. Table 1 is provided, a comprehensive overview of the 7 interviewed participants and their respective background information is presented. It should be noted, however, that no additional demographic data beyond what is included in the table was accessible.

Table 1 - Overview of interviewees study 1

Name	Case	Role in learning community	Student or professional
Interviewee 1	Case A	Project leader	Professional
Interviewee 2	Case A	Facilitator	Professional
Interviewee 3	Case A	Participant	Professional
Interviewee 4	Case B	Project leader	Professional
Interviewee 5	Case B	Facilitator	Professional
Interviewee 6	Case C	Project leader	Professional
Interviewee 7	Case C	Facilitator	Professional

3.1.3 Data collection

Yin (2009) outlined six sources of supplementary evidence that could be utilized for data collection in case study research, including documentation, archival documents, interviews, direct observation, participant observation, and artifacts (p. 99). In this case study, data was collected through the use of interviews. Interviews were employed as a means of obtaining information, specifically through conversations with "keypersons" or field experts. Interviews were recognized as an effective method for collecting data due to their efficiency (Swanborn, 2013). All interviews in this study were conducted on an individual basis, with two speakers present. The interviews, which ranged in duration from 30 to 90 minutes, were conducted by a PostDoc researcher affiliated with Radboud University, with the interviewees' consent and recorded for reference. Subsequently, transcripts of the interviews were created. Data collection for this study was performed by analyzing and categorizing the interview transcripts through coding techniques.

3.1.4 Data analysis

In order to address the research question and resolve the problem statement, it was imperative to conduct data analysis. Boeije and Bleijenberg (2019) explained that the purpose of analysis was to impose structure on the unorganized qualitative data. The process of analysis involved transcribing and summarizing the recorded interviews, followed by labeling and coding. Labeling involved studying relevant characteristic names or descriptions to each text fragment, which was important in observing and distinguishing different activities from each other. Units of analysis could be words, sentences, fragments, or themes (Baarda, De Goede & Teunissen, 2005), which were processed in a word processing file. Irrelevant parts of the text were eliminated, and the remaining units were labeled. Mortelmans (2013) referred to this process as "open coding". To obtain the transcripts utilized in this study, interested parties can directly request them from the researcher.

Once all the interviews were transcribed and labeled, the analysis could begin, and conclusions could be drawn regarding the research topic. The process of data analysis was crucial in ensuring that the research question was effectively addressed, and the results were reliable and valid (Mortelmans, 2013).

The comparative analysis of the three cases was accomplished through a standardized analytical process described earlier. Consistency in labeling and coding across all three cases was crucial to ensure comparability. A table was generated for each case, and the researcher then compared the tables, including quotes, to identify similarities and differences. Contextual factors, including the location, time period, and demographics of the participants in each case, were also taken into account to provide a comprehensive understanding of the findings. Ultimately, the objective of comparing the three cases was to fully comprehend the research question and draw reliable conclusions based on the data analyzed.

3.1.5 Research ethics

Prior to commencing the interview, participants were requested to provide their consent for audio recording. The interviews were recorded to ensure accuracy and thoroughness. Precautions had been taken to ensure anonymity and confidentiality throughout the interview process. Additionally, the researcher had provided a comprehensive explanation regarding the purpose of the interview, fostering an environment where participants had felt at ease to openly share their thoughts without concern of their information being disclosed. It is important to note that the data used in this study had been obtained through a pre-existing source, and as such, a confidentiality agreement had been duly signed to ensure the responsible and ethical use of the data.

3.2 Study 2: LeaderCommunity Radboud University

This chapter provides a detailed description of the research design, population sample, measuring instrument, data collection, data analysis, and research quality of the to investigate the leadership learning community for students at Radboud University.

3.2.1 Research design

The research design employed in this study was a single case study, chosen to facilitate a detailed and intensive investigation into the process of creating a positive learning climate (Swanborn, 2013). Swanborn (2013) provided a comprehensive definition of a case study as "a strategy in which one or only a few examples of a social phenomenon were intensively studied in depth." According to Swanborn, a case study involved examining a social phenomenon in its natural environment over a period of time, utilizing diverse sources of information. The aim was to provide a precise description, interpretation, and explanation of the phenomenon, with a focus on the perspectives of those involved in the social process. Additionally, the case study approach involved confronting different viewpoints and sometimes attempting to align them towards a common direction in order to garner broad support for desired changes (Swanborn, 2013).

The case study design was well-suited for addressing "how" and "why" questions, which aligned with the main question of this study. By utilizing a case study approach, the study sought to understand the process by which a positive learning climate was developed.

The learning community consisted of six meetings, with the first meeting taking place physically and the remaining meetings being hybrid (physical and online). The first meeting was on Thursday, May 11, from 1 p.m. to 3 p.m., and the second meeting was on Thursday, June 1, from 1 p.m. to 3 p.m. In addition, case histories from daily practice were worked on, and there was room for discussion and exchange of experiences. During the program, participants were asked to keep critical incident records and give and receive feedback from fellow students. Interviews were also conducted to track the process over time and gain insight into the effectiveness of the program. Interviews were also conducted to track the process over time and understand the effectiveness of the program. The interviews were conducted before the first meeting and after meeting two. Pre-meeting interviews provided insights into participants' initial expectations, motivations, and perceptions, while post-meeting interviews captured changes in perspectives and experiences. Comparing pre- and post-meeting interviews revealed the evolving process and program effectiveness. Additionally, post-meeting interviews assessed the immediate impact and gathered feedback for timely adjustments, enhancing the program's effectiveness.

3.2.2 Population Sample

Participants for the learning community were recruited through a call on the Radboud University website and through the distribution of the application link in various management science student WhatsApp groups. Prospective participants were required to complete a registration form, with the intention of achieving a diverse range of participants in terms of study background, age, and gender.

A maximum of 30 students were eligible to participate in the learning community. This single case study included a total of 18 participants. The student population exhibited demographic variation in terms of gender, age, racial/ethnic background, anticipated level of leadership, and frequency of interaction with individuals from cultures or races distinct from their own. The population group consisted of students enrolled at Radboud University Nijmegen for the leadership course in spring 2023.

Below in the table, you can find some information about the 4 respondents for the interviewees.

Table 2 - Overview of interviewees study 2

	Respondent 1	Respondent 2	Respondent 3	Respondent 4
Age	23	23	22	21
Gender	Male	Male	Female	Female
Study	Master: Strategic Management	Master: Strategic Management	Master: Strategic Human Resources Leadership	Bachelor: International Business Administration
Attendance meeting	1x Physical, 1x Online	1x Physical, 1x Online	1x Online	2x Physical

3.2.3 Data collection

The data collection in this study involved the use of two main measurement tools: observations and interviews. The interview questions were developed based on the reviewed literature in the theoretical chapter and the findings from the first case study, study 1. The specific interview questions can be found in the appendix.

A total of four participants were selected for the interview. An overview of all participants in the learning community was received, and four participants were randomly selected to be approached by email for the research/interviews. Prior to the first meeting, the first interview took place, capturing the initial expectations and perceptions of the participants. The second interview took place after the second meeting, during which any changes or developments in the participants' experiences and perspectives could be explored. In addition, all learning community meetings were observed to gather further data and insights.

By combining observations and interviews, this approach to data collection provided a comprehensive and in-depth understanding of the process of creating a positive learning climate within the learning community. The interviews provided valuable individual perspectives, while the observations captured the collective dynamics and interactions within the group.

3.2.4 Data Analysis

The data collected from the interviews was analyzed using the qualitative analysis method. The qualitative data was analyzed by examining the interview transcripts through open coding to identify relevant themes for the research (Boeije and Bleijenberg, 2019). A comprehensive list of codes used during the coding process of the interviews is provided in the appendix. To obtain the transcripts utilized in this study, interested parties can directly request them from the researcher. Furthermore, observations were conducted in conjunction with the interview results, and these observations can be found in the appendix.

3.2.5 Research ethics

The ethical aspect of data analysis played a crucial role at various stages of the process. Possible pitfalls had been carefully considered in advance to minimize unethical behavior. The study design was based on scientific literature, reducing the risk of unethical conduct. Adhering to APA standards for referencing scientific literature also prevented plagiarism. The choices made and references to scientific literature were traceable to their sources, promoting verifiability.

Participant recruitment was carried out through a transparent process, with calls posted on the university website and application links distributed in various WhatsApp groups for management science students. The sample aimed for diversity in terms of study background, age, and gender. The study included a total of 18 participants who were enrolled in the leadership course at Radboud University, representing various demographic variations.

Objectivity was highly valued both prior to and during data collection. Participants voluntarily took part and had the freedom to withdraw at any time. Anonymity and confidentiality were ensured to protect the participants' privacy, and detailed explanations of the study's objectives were provided to create a comfortable environment for sharing experiences. Interview questions were reviewed by a supervisor to prevent any potential bias towards a desired outcome.

During data analysis, there was room for interpretation, requiring constant attention to ethical conduct. Therefore, coding was performed with an open mind, based on the topics and characteristics derived from the literature and preliminary research. The use of Atlas.ti software aided in accurate coding by generating citation lists according to the assigned codes and facilitating comparisons among citations.

4. Results

The results chapter of this thesis plays a crucial role in presenting the findings of the study. The purpose of the chapter is to provide a comprehensive and detailed description of the data collected and analyzed that relates to the research questions. The results will be presented in two sections. The first section will focus on the results of the comparative case study, will the second section will present the results of the single-case study.

4.1 Results case study: Multiple case study

Table 3 provides an overview of the cases, including information about the organizer, target group, sector, and interviews. A comparison and contrast of the learning climates within the cases follows at the end of the chapter.

Table 3 – overview of the multiple cases study

	Organizer	*Target group*	*Sector*	*Interviews*
Case A	KnowledgeDC logistics/University of applied sciences Zeeland	Logistic mangers (i.c.w. students)	Transport & logistics	Project leader Facilitator 1 participant
Case B	KnowledgeDC logistics/HAN	Professionals in SMEs (i.c.w. students)	Transport & logistics	Project leader Facilitator 0 participant
Case C	KnowledgeDC logistics/University of applied sciences Rotterdam	Construction professionals (i.c.w. students)	Construction logistics	Project leader Facilitator 0 participant

4.1.1 Case A

Case A represents companies in the transport & logistics industry, focusing on research into Electronic Master Consignment Note (E-CMR). In this case, one participant and two learning community representatives are interviewed.

Key facts about case A:

- Types participants: professionals – logistic managers & students
- Number of participants: four companies
- Number of meetings: 6 meetings over a 20-week period
- Environment meetings: Online
- Duration of the meeting: first meeting 3 hours, the subsequent 1,5 hours

Participants

This section presents the findings related to the development of positive learning climates within the learning community in case A. An interesting aspect that emerges in this context is the attendance pattern, with only one participant consistently attending all the meetings. In an interview, this participant highlights the challenge, stating, *"All of them, as one of the few, that's one of the problems."* However, they also express a desire for increased interaction with other supply chain partners, which proves difficult due to the limited input from other companies. Despite this limitation, the participant managed to establish contact with an e-CMR supplier and stayed updated through a newsletter, indicating their proactive engagement.

The *absence of physical meetings* was perceived as a barrier to developing positive learning climates due to the *lack of interaction and networking opportunities*. The participant emphasized the value of jointly visiting a company that was implementing e-CMR, as physical meetings facilitate direct interaction and engagement. In contrast, digital meetings, especially through platforms like Microsoft Teams, created a sense of distance among participants.

The participant suggested that the assignments and the learning community as a whole could have been more detailed, with a focus on specific aspects of e-CMR or actors in the logistics chain. By encouraging companies to exchange perspectives, the learning community could generate more value and enhance the development of positive learning climates.

The digital environment imposed by the COVID-19 pandemic posed challenges in fostering interaction between students and companies, as well as among the students themselves. As a result, sessions became shorter, and participants often found themselves distracted by operational obligations, which compromised their level of engagement and impeded the desired learning climate within the community. Reflecting on this situation, one participant expressed their disappointment regarding the input from other companies, stating, *"Yes well, I expected more from the other companies say, expected more input from the other companies and that ended up being disappointing. That's where the difference is for me, because otherwise it did meet my expectations."*

The analysis also revealed *fluctuation in participation*, with varying levels of involvement among participants. Some individuals did not prioritize attending the meetings, requiring significant efforts to re-engage them. Despite these efforts, overall attendance remained low, highlighting the difficulty of maintaining consistent participation. Remarkably, only one participant demonstrated unwavering commitment by attending every meeting. Figure 1 illustrates the participation by session in a graphical format.

Another significant observation was the *absence of group formation* within the online sessions. The virtual setting had an impact on community formation, as participants primarily engaged as individuals rather than forming lasting bonds or connections. The anticipated mutual assistance and questioning among participants were limited. The participant, along with other companies, struggled to establish lasting contacts or build a strong network beyond the confines of the track. The significance of physical meetings in providing opportunities for social interaction and community building became evident. Unfortunately, the participant reported no further contact with other companies from the track after the conclusion of all meetings.

In conclusion, the development of positive learning climates within the learning community faced challenges due to the absence of physical meetings and limited input from other companies. The participant's experiences shed light on the importance of direct interaction, engagement, and networking for fostering positive learning climates. Recommendations include incorporating more detailed assignments that focus on specific aspects of the topic and facilitating meaningful exchange of perspectives among companies to enhance the value derived from the learning community. Additionally, efforts should be made to overcome the challenges posed by the digital environment and participants' operational obligations to foster a more engaging and interactive learning climate within the community.

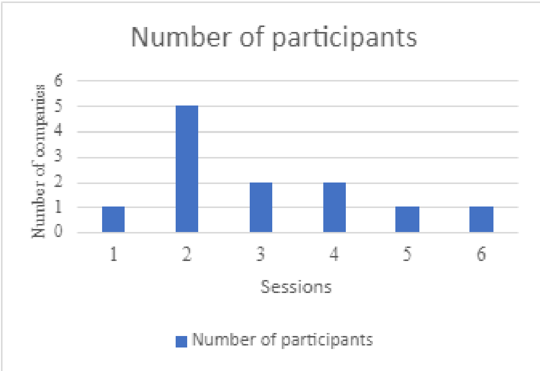

Figure 1 - *Number of participants in case A*

Learning Community representatives

The analysis of the structure and dynamics within the learning community reveals both facilitating and limiting factors that influenced the development of a positive learning climate. Key findings include the impact of *recruiting and learning requirements*, the *challenges of online meetings*, the significance of a good *start*, the importance of effective *communication*, participant attendance and prioritization, the input from companies, the level of student involvement in discussions, and the facilitating factors of excellent guest speakers and the Teams environment.

Recruiting and the awareness session played a crucial role in shaping the learning community. The session on the e-CMR generated interest and identified companies' need for more information and clarification on its potential positive business impact. This highlighted the importance of addressing specific *learning requirements* and tailoring the program accordingly.

However, there were no assignments for participants between meetings. Although this could have enhanced engagement and interaction, it was not prioritized due to time constraints outside the sessions. The facilitator indicated in the interview: *"No, then again that cost time outside the session, so we didn't actually push for that."*

The transition to online meetings presented challenges in terms of *community building* within the learning climate. The absence of physical presence hindered the formation of strong connections among participants, ultimately impacting the overall learning climate in a negative way. The facilitator shared their observations on this matter during the interview, stating, "Yeah well, we just notice that, that just has a lot of impact on community building."

The significance of a good start was evident in the observations that a poor initial atmosphere had a lasting impact on the community's dynamics. It was crucial to establish a positive tone from the beginning to ensure a successful and engaging learning experience.

Effective communication emerged as a critical factor in creating a positive learning climate. The organizers acknowledged that better communication about the program structure and the guest speakers' topics could have improved participants' understanding and engagement. Clear communication would have provided a concrete framework for participants, enabling them to manage their expectations and participate more effectively.

Participant attendance and prioritization were inconsistent throughout the sessions, with fluctuations observed in the number of attendees. The efforts to bring everyone back together after cancellations showed the organizers' commitment, but the overall attendance remained low. This highlighted the challenge of motivating participants to prioritize their involvement in the learning community.

The input from companies was a source of disappointment for some participants, as they expected more active engagement and contribution from their peers. This indicates the importance of fostering a climate where participants feel comfortable and encouraged to share their knowledge and insights.

The level of student involvement in *discussions* was impacted by the online setting, particularly through Teams. Participants noted that students were less likely to engage in discussions and share their perspectives, possibly due to the limitations of virtual communication. This underlines the importance of creating opportunities and platforms for students to actively participate and contribute to the learning community.

On the positive side, the inclusion of *excellent guest speakers* in the sessions was seen as a facilitating factor. Guest speakers with expertise in e-CMR provided valuable insights and practical examples, enhancing the learning experience and making the sessions more engaging and relevant.

While the *Teams environment* was available for communication, little use was made of it. Participants noted that they were not yet familiar enough with each other to establish a WhatsApp group. This suggests that further efforts could be made to foster connections and collaboration within the learning community.

Overall, the analysis highlights the interplay between various factors in the development of a positive learning climate within the community. It emphasizes the need for effective communication, a strong start, active participant engagement, and the facilitation of meaningful interactions through guest speakers and suitable digital platforms. These insights can inform future efforts to improve learning communities and enhance the overall learning experience for participants.

4.1.2 Case B

Case B represents companies in the transport & logistics industry, where research is done into the use of data in logistics processes more efficiently. Within the case, two learning community representatives are interviewed.

Key facts about case B:

- Type participants: professionals in small and medium-sized enterprises (SMEs) & students & Vrije Universiteit Amsterdam
- Number of meetings: 10 meetings (every two weeks)
- Environment meetings: Hybrid meetings

Learning Community representatives

This chapter focuses on the perspective of the facilitator and project leader from case B, examining their roles in organizing and facilitating discussions, as well as the impact of the community on the participants' collaborative learning experiences. We highlighted the importance of *recruiting participants, facilitating open conversations, utilizing physical meetings, establishing clear expectations, and fostering interpersonal communication*. Additionally, the role of humor in creating a positive learning climate.

Recruiting companies proved to be one of the challenges encountered in the learning community. The project leader acknowledged that clarifying the benefits and revenue for companies beforehand could enhance their motivation to participate. Participants also emphasized the significance of driving the learning demand themselves by focusing on specific learning questions early on. This approach ensures the applicability of the acquired knowledge and maximizes learning outcomes. The project leader highlighted this perspective during the interview, stating, *"If it is a learning question that is relevant to him or her, then he is more likely to work with that to learn."*

Although the idea of assigning *homework* between meetings was discussed, it was ultimately not implemented in the learning community. However, the lack of a dedicated communication platform outside the scheduled meetings was identified as a limiting factor. The project leader mentioned in the interview that participants relied on email for communication, stating, *"No they don't, but they all have each other's email addresses."*

Participants quickly engaged in critical reflection on limitations and causes, often highlighting what cannot be done. The facilitator shared their training as a solution-focused facilitator, emphasizing the importance of reframing discussions to focus on possibilities, challenges, past successes, and alignment with company objectives. By incorporating these elements, participants were encouraged to develop action plans based on proactive thinking.

Participants showed a preference for physical meetings and *hybrid formats* over online sessions due to the *positive social interaction* they fostered. They expressed those online meetings lacked the same pleasant atmosphere. The facilitator highlighted this sentiment in the interview, saying, *"Then I think we had to go back online suddenly, and that always creates an atmosphere that is not nice. It's always less so. We had at the first round Dac, we were really present live and then you can organize really nice things with tables and going by and yes, everybody was there and also from the province, and you name it. Yes, we weren't able to organize that second round in that way, which was really unfortunate".* The *networking* aspect within the learning community played a significant role, as participants easily connected with each other, engaged in social conversations, and shared experiences. *Company visits* were organized to provide insights and collaborative opportunities, allowing participants to work together on assignments and explore real-world scenarios.

Participants engaged in frequent *interpersonal communication*, fostering a sense of connection and *collaboration*. The learning community structure facilitated this through subgroup activities and ample time for mutual communication and consultation. The organizers enforced punctuality, ensuring a structured environment while accommodating individual circumstances. Consistency in participant attendance further enhanced the sense of community and the support participants provided to each other.

Organizers communicated clear expectations to participants, emphasizing an open attitude and active participation. Participants were encouraged to share information and think collaboratively. The requirement for specific learning questions originating from the participants themselves was identified as vital for meaningful learning experiences. This personalized approach increased motivation and engagement.

The learning community fostered *open conversations and discussions*, providing a platform for participants to exchange ideas, ask questions, and offer suggestions. The facilitators invited participants to respond to each other's ideas, encouraging a collaborative learning environment. Participants also engaged in *humor*, creating a positive and enjoyable atmosphere during meetings, as mentioned by the project leader: "*There are also a lot of jokes being made, I notice. Nice too."* .

The analysis highlighted crucial factors for the success of a learning community. The importance of *recruiting participants*, encouraging specific *learning questions*, facilitating *open conversations*, organizing *physical meetings*, and fostering interpersonal communication were identified as key elements in developing a *positive learning climate*. Additionally, the role of clear expectations, idea response, and humor were found to enhance participant engagement and collaboration. Understanding and implementing these factors can contribute to the effective development of a positive learning climate in the learning communities.

4.1.3 Case C

Case C represents companies in construction logistics, where research is done into circular construction. Within the case, two learning community representatives are interviewed.

Key facts about case C:

- Type participants: Construction professionals & students
- Number of meetings: 10 meetings (every two weeks)
- Environment meetings: Online

Learning Community representatives

The description of the learning community emphasizes the significance of *recruiting participants* who possess the necessary skills or expertise in the topic. The facilitator explicitly stated in the interview, *"They are in demand, and they are substantively involved. They are skilled or experts in the topic."* Additionally, the *learning requirements* entail regular inquiries to ascertain the participants' needs and desired learning outcomes, encompassing both technical and soft skills.

Online collaboration presented challenges for the learning community, as the lack of physical presence and practical experience was deemed crucial for a comprehensive understanding and creative stimulation. The *absence of face-to-face interaction* impeded students' comprehension and their ability to apply knowledge in real-world scenarios. This sentiment was expressed by the facilitator in the interview: *"The creative process is kind of flattened by online collaboration. I personally notice this strongly: when I'm sitting around the table with people, I derive much more value from that compared to an online session. Moreover, these students had a strong creative inclination, and that aspect just couldn't be elicited from them in an online setting."*

Clear expectations were communicated in advance to encourage active participation and meaningful exchange among participants. The project leader emphasized this aspect in the preparation phase before the first meeting, stating: *"The main focus is on exchange, which means that everyone is expected to come prepared and actively contribute."*

Interaction among participants occurred fairly quickly, with discussions focusing on interpreting information and its implications for assignments. Specific questions were formulated and adapted, and knowledge gaps were filled through speakers.

A strong *team* was formed within the learning community, with each participant showcasing their unique strengths and contributing to the group's success. The *flow of collaboration* extended from students to young professionals, although online limitations hindered their ability to fully connect and understand each other's work.

Challenging speakers were instrumental in providing unique perspectives and valuable insights that couldn't be easily accessed online, greatly benefiting the students. The facilitator emphasized the significance of such speakers in a learning community, stating: *"I believe it's crucial to occasionally* *have speakers who challenge the conventional wisdom, offering perspectives that can't be taken for granted. In our recent session, I managed to invite speakers whose information couldn't be easily found on the Internet. This aspect received the highest rating from the students."* To cultivate a safe and collaborative climate, *group activities* were incorporated into the learning community. The utilization of *a Teams environment* facilitated seamless information exchange and file storage. However, certain limitations were observed in terms of chat and file sharing functionality.

4.1.4 Comparison between cases, A, B and C

Table 4 – overview and comparison of case A, B and C

	Case A		Case B		Case C	
	Facilitating factors	**Limiting factors**	**Facilitating factors**	**Limiting factors**	**Facilitating factors**	**Limiting factors**
Motivation	Excellent guest speakers	Participant attendance and prioritization of the learning community	Specific learning question in an action plan		Specific question / Challenging speakers offering unique perspectives and sharing information	
Behaviors		Input companies / Students less involved in discussions	Consistent participants / Participants respond to each other's ideas / Participants agree outside meetings	Participants quickly engage in critical reflection on limitations and causes.		
Constructive communication	Teams' environment	Not well communicated	Interpersonal communication / Organizers communicated clear expectations to participants prior to the learning community.	Outside of the learning communities, there is no dedicated communication platform	Clear expectations communicated in advance / Teams environment	
Participants trust each other			Networking / Company visits		A team was formed / Interaction among the participants fairly quickly	
Psychological safety		Online meetings	Physical meetings/hybrid meetings / Working in subgroup / Open conversations and discussions / Humor / Two types of introduction		Interaction among the participants fairly quickly / Flow between students crossing over to young professionals / Group activities	Online meetings / Physical absence hindered students' comprehension, experience, and creative stimulation with application knowledge

The comparison of the cases reveals differences between case A and cases B and C. In case A, there were more limiting factors than facilitating factors, whereas both case B and case C had more facilitating factors than limiting factors.

One of the key distinctions in case A was the inadequate *communication of expectations* before the start of the learning community. This resulted in a *lack of engagement, fluctuating attendance, and low participation*. In contrast, case B and case C had *transparent communication and expectations*, with case B even highlighting the benefits and returns for participating companies in advance. Moreover, participants in both cases asked *specific learning questions*, enhancing the applicability of the acquired knowledge and maximizing learning outcomes. The transparent communication and expectations fostered active participant engagement in case B and case C.

Another aspect that differed among the cases was participation and attendance. case A experienced *fluctuating attendance* and often low attendance rates, whereas case B and case C demonstrated consistent participant attendance, resulting in a supportive and engaged learning environment.

Group formation emerged as a crucial factor influencing the dynamics within the learning communities. In case A, group formation was lacking as all meetings were conducted online, resulting in participants primarily engaging individually with limited interaction and exchange of questions. This hindered the establishment of lasting contacts and the development of a strong network outside the learning community. The importance of physical meetings became evident, although there was no further interaction among participating companies after the meetings. Despite these limitations, the learning community fostered open conversations, discussions, and the exchange of ideas, questions, and suggestions.

In contrast, both case B and case C successfully formed groups. In case B, group formation occurred, with participants regularly engaging in interpersonal communication, fostering a sense of belonging and cooperation. The structure of the learning community facilitated this through subgroup activities and allocated time for mutual communication and discussion. Specific learning questions were established by the participants. The consistent attendance of participants reinforced the sense of community, and the use of humor ensured a positive and enjoyable atmosphere during the meetings. Similarly, case C demonstrated successful group formation, where participants interacted rapidly, focusing on interpreting information and its implications for assignments. Specific learning questions were formulated, and speakers filled any knowledge gaps. A strong team emerged within the learning community, allowing each participant to showcase their unique strengths and contribute to the group's success. Effective collaboration between students and young professionals was observed in case C.

The comparison of the cases emphasizes the importance of *transparent communication and expectations* in establishing a positive learning environment within learning communities. Understanding the benefits and rewards for participants, formulating specific learning questions, and recruiting competent staff are among the success factors that contributed to a positive learning experience in case B and case C. In contrast, case A experienced fluctuating participation and low attendance due to a lack of transparent communication and expectations.

Regarding group formation, case A had shortcomings due to online meetings, while case B and case C demonstrated successful group formation through interpersonal communication, consistent participant attendance, and the creation of a positive atmosphere. However, the limitations of the transition from physical to online communication were a barrier to full interaction in case C.

Furthermore, the comparison highlights the significance of *challenging speakers* who provide unique perspectives and share valuable information, thus promoting knowledge sharing within learning communities. Additionally, *company visits* were identified as a facilitating factor in case B, aiding in making connections and enhancing learning experiences.

However, it is important to note that case A, B and case C also had their own limiting factors. In case A, a major limitation was *the lack of interaction outside formal meetings, hindering deeper connections and knowledge sharing*. In case B, the *absence of a specific communication tool* for participants to engage with each other between meetings was a limiting factor. Although participants had access to each other's email addresses, there was no structured way to facilitate communication. In case C, the shift to online meetings and the absence of *physical presence* were identified as limiting factors. These barriers negatively affected participants' understanding, experience, and creative stimulation in applying knowledge. The absence of physical interaction and hands-on experiences was perceived as limiting.

4.1.5 Conclusion study 1

In conclusion, the multiple case study conducted in study 1 sheds light on the development of positive learning climates within learning communities. The findings from the three cases highlight various challenges and opportunities in creating a positive learning climate. Case A faced limitations with online meetings, resulting in a lack of group formation. case B and case C demonstrated successful group formation through interpersonal communication, consistent attendance, and a positive learning climate.

The study underscores the importance of both physical meetings and effective online communication in building strong communities. Challenging speakers and company visits were found to be valuable for promoting knowledge sharing and enriching discussions. However, limitations such as limited interaction outside formal meetings, the absence of a specific communication tool, and the constraints of online meetings and the lack of physical presence were also identified.

These findings provide valuable insights for the design and implementation of future learning communities. By understanding these factors, organizations can enhance the participant experience, foster effective knowledge sharing, and promote collaboration within learning communities.

4.2 Results study 2: Single case study

After conducting a study one, a learning community called the ‘LeaderCommunity’ on leadership was established, consisting of students from Radboud University in Nijmegen. Four participants were interviewed for this study, and the meetings were observed, with a focus on all participants. The results of the single case study were analyzed by transcribing and coding the interviews, and they were examined alongside the observations. These findings provide valuable insights for fostering a positive learning environment within a learning community.

Please find below a table presenting an overview of the participants, including personal background information and their objectives in participating in the LeaderCommunity. The participants, referred to as Respondent 1, Respondent 2, Respondent 3, and Respondent 4, share their perspectives on various aspects of the learning community.

Table 5 – Overview interviewee study 2

	Respondent 1	**Respondent 2**	**Respondent 3**	**Respondent 4**
Age	23	23	22	21
Gender	Male	Male	Female	Female
Study	Master: Strategic Management	Master: Strategic Management	Master: Strategic Human Resources Leadership	Bachelor: International Business Administration
Side job	No	Store employee Aldi	3 side jobs: restaurant employee in a nursing home, bar employee in a café, employee at a startup in the events and promotion sector	Front desk employee in a gym
Previous learning experience in a stimulating learning environment	Positive atmosphere, affinity among peers, comfort, personal connections, casual conversations, group dynamics, extensive expertise, interactive teaching methods, active interaction, individual needs, student interests	Peer group of 30 students, interaction, conversations, personal growth, discussions, role plays, incisive instructor, pushing boundaries, dynamic group interaction, combination of theoretical learning and practical learning, real world application.	Self-reflection, observing others, openness, honesty, reflecting on outcomes, secure environment, feedback, discussions, interactive teaching style, approachable, facilitator, learning from teacher and group, inclusivity.	Active participation, personal application, effective learning experiences, collaboration, communication, feedback, positive learning environment, diverse cultures, open atmosphere, freely express opinions, group size, smaller groups five or six people
Previous experience learning community	No	Previously participated in a weekend of The Rotary Club	No	In High School

During the interview conducted prior to the first meeting, the expectations of the four respondents regarding the Learning Community were discussed. In terms of expectations, two interviewees mentioned that they did not have specific *expectations* for the LeaderCommunity. However, the other two had certain expectations in mind. One respondent had noticed information in the invitation about trainings and workshops and expected activities during the meetings that would challenge them to develop specific leadership skills. The other interviewee had an expectation of engaging in group exercises that simulate the role of a manager. These varying expectations indicate the diverse perspectives and interests of the participants.

When it came to their *motivation to participate*, all four interviewees expressed a *shared sentiment*. They mentioned that they lacked practical experience in leadership following their university studies. Two respondents expressed their desire to pursue a management traineeship after completing their studies, as they aspired to hold management positions in the future. The other two respondents also anticipated taking on leadership roles in their future careers. Additionally, one respondent expressed an interest in starting her own business and recognized the importance of leadership skills in that context. This shared motivation reflects a common desire to enhance their leadership abilities and prepare for future professional challenges.

During the interview, several key elements were frequently mentioned by the respondents, based on their previous encounters with conducive learning climate. These elements included *active participation, practical application of acquired knowledge, collaboration, communication and feedback, fostering a positive and inclusive atmosphere, facilitative teaching approaches that push students beyond their limits, a preference for smaller group settings, and an environment that embraces the acceptance of mistakes*. These elements highlight the participants' desire for an engaging and supportive learning climate.

Two of the interviewees had *previous experience participating in a learning community*, while the other two did not. One interviewee who had prior experience noted that although it was not as well-defined as this community, there were groups in high school where students could support each other, and similar initiatives existed in elementary school. The other respondent had taken part in a learning community weekend organized by The Rotary Club, where they had the opportunity to interact with 20-30 individuals from diverse fields. This weekend provided a platform for personal leadership development and self-improvement.

Meeting preferences were a significant aspect explored during the interviews, shedding light on the participants' inclination towards physical or online meetings. Among the interviewees, three expressed a preference for *physical meetings*, emphasizing the advantages associated with them. They cited better perception and *absorption of emotions, greater group input, and the opportunity to learn from body language.* These interpersonal dynamics were valued by participants as they provided a richer and more immersive learning experience. However, one participant had to join the *meetings online* due to a study project abroad, while another respondent preferred online meetings due to the convenience of avoiding travel distance and the sense of freedom experienced behind a screen. These preferences showcased the diverse perspectives among the participants, with some individuals valuing the flexibility and ease of online meetings. Ultimately, the preferences for *physical or online meetings* provided valuable insights into the participants' considerations and highlighted the importance of catering to various needs and circumstances when designing and organizing learning activities within the Learning Community.

The interviewees unanimously expressed their intention to attend all meetings unless they coincided with other commitments or if they anticipated a lack of new learning opportunities, deeming them uninteresting. This commitment to active participation underscored the participants' dedication to their own growth and learning within the Learning Community.

Overall, the interviews before the start of the learning community provided valuable insights into the participants' expectations, motivations, preferences, and past experiences related to the Learning Community. These findings contribute to a deeper understanding of the participants' perspectives and can inform the design and implementation of the Learning Community to ensure a meaningful and engaging learning experience for all involved.

4.2.1 Facilitating and limiting factors single case study

This paragraph delves into the facilitating and limiting factors identified in the single case study. To provide a clear overview, the table presents the factors categorized by the respondents. Subsequently, these factors are further elaborated upon in the text. Additionally, a timeline of study 2 is included towards the end of the paragraph, providing a chronological perspective.

Table 6 - summarizes the facilitating and limiting factors in this single case study

	Respondent 1		**Respondent 2**		**Respondent 3**		**Respondent 4**	
	Facilitating factors	**Limiting factors**	**Facilitating factors**	**Limiting factors**	**Facilitating factors**	**Limiting factors**	**Facilitating factors**	**Limiting factors**
Motivation	Participants with shared interests / Continued meeting participation due no weekly schedule			Meeting format did not meet expectations / No new leadership skills learned yet / No significant learning experiences identified within learning community		1st meeting online & 2nd meeting absent / No new leadership skills learned yet / No significant learning experiences identified within learning community / Meeting format did not meet expectations	Informative 1st meeting / Significant learning experiences identified within learning community: diversity in leadership perspectives	Uninformative 2nd meeting / Absence of theoretical framework and guideline

Behaviors	1st Meeting - In-Person Attendance	2nd meeting online	1st Meeting - In-Person Attendance	2nd meeting online		Waiting to share critical incidents		Difficulty in self-reflection on critical events
Constructive communication	Accessible participants	Online meeting - Connection with the rest of the LC was missed	Superficial interaction	Online meeting - Interaction with the rest of the LC was missed	Contact with participant outside meeting		Building group cohesion through communication in small groups	
Participants trust each other	Role of organizers in building trust		Role of organizers in building trust		Building trust in group		Importance of others' opinion / Benefit of small groups in building trust / Building trust through critical incidents	
Psychological safety	Benefit of small groups in group formation	Not yet integrated into the group	Positive and open group formation / Comfortable environment / Benefit of small groups in group formation		Benefit of small groups in group formation / Effective setup with plenary sessions and small group discussions	Challenges of absence in physical	Group dynamics / Diversity in group dynamics / Building group cohesion through communication in small groups	Sense of group acceptance

During the second interview, factors that promote and limit the creation of a positive learning climate in this learning community were identified. Facilitating factors included *shared interests, the quality and content of meetings, physical presence, trust within the community, smaller groups for cohesion and interaction, motivation, and diverse group dynamics*. Conversely, limiting factors mentioned were *unmet expectations, online participation, and lack of theoretical frameworks and guidelines*.

The importance of *physical meetings* emerged as a facilitating factor. Although, one respondent preferred online meetings for the first meeting, they later acknowledged that physical meetings allowed for a more personal and *efficient exchange of ideas*. The convenience of online participation was appreciated by some due to travel time savings. In terms of quality, physical meetings were considered superior in terms of immediate communication and the ability to ask questions. However, online interactions were perceived as slightly slower. Notably, an observation during the meetings revealed rapid communication, except for a critical incident discussed during the second meeting that lasted for more than 10 minutes without interruption or input from the organizers.

The *quality and content of the meetings* were found to be essential factor in creating a positive learning climate. One respondent found the first meeting valuable due to challenging questions that stimulated *self-reflection* and personal connections to the topic. Mutual learning was observed during the meeting, as participants engaged in an exciting introductory assignment that sparked informal conversations and created a lively atmosphere. However, another respondent had *different expectations* and felt that the meetings were not distinctive enough. The second meeting was perceived more as a therapeutic conversation than a leadership lecture. This highlights the importance of the content and structure of the meetings for a positive learning environment. Another respondent enjoyed the meetings but expressed a need for a better understanding of personal leadership and theoretical aspects of effective leadership. From the observation, it became apparent that the individual who introduced the incident preferred the participation of the entire group, which contrasted with the approach of the first meeting where work was carried out in small groups. They emphasized the importance of clear frameworks or tangible outcomes to enrich the learning experience. Nevertheless, they valued the friendly atmosphere and the opportunity to learn from others within the community.

Trust emerged as a fundamental element for fostering a positive learning climate. Respondents emphasized the importance of trusting other participants as it facilitates open communication, idea sharing, and the creation of a supportive learning environment. The *role of the organizers* in building trust was also highlighted, as they play a crucial role in facilitating a positive learning environment. Building group cohesion through *small group communication* was identified as an essential aspect of trust, as it improves interaction and engagement between participants. The existence of social *agreement* and fixed norms contributed to a sense of trust and belonging. An observation during the second meeting, revealed that participants attached great importance to establishing trust, dedicating a significant amount of time to drafting a social contract. A significant amount of time during the meeting was devoted to drafting the social contract, with discussions arising about various aspects, such as whether certain points should also be included in the contract. *Participant behavior* is also a crucial factor in shaping a positive learning climate. The observed attendance patterns among the respondents demonstrate their flexibility in participating.

Attendance patterns among the respondents demonstrated their flexibility and varied participation. This flexibility potentially influenced group dynamics, particularly with regards to one respondent who was entirely absent from the second meeting. *Shared interests* among participants, as highlighted by Respondent 1 and Respondent 4, are crucial in fostering a sense of belonging and community within the learning climate. However, reluctance to share *critical incidents* with the group between meetings on online platforms was mentioned as a limiting factor. Passive attitudes towards participation and the lack of active sharing of experiences were perceived as limiting elements.

Overall, the *impressions of the meetings* were positive, although there were also some points of criticism. Some respondents expressed a desire to learn more about personal leadership and its theoretical aspects. They expected tangible outcomes and clearer examples of good leadership. Another respondent regretted missing the dynamics of the group due to attending only the first meeting online. They emphasized the educational value of physical presence in a group. Another respondent expressed disappointment with the second meeting, expecting a guest lecture on leadership rather than a therapeutic conversation. However, despite these expectations not being fully met, all respondents would still recommend the learning community to others, highlighting the value of connecting with like-minded people and the opportunity for personal skill recognition and application.

The findings provided valuable tips for future participants to maximize their learning experience within the community. *Active participation, sharing personal stories, being open to conversations* and *feedback,* and *attending physically* when possible were strongly encouraged. Additionally, participants were advised to be fully motivated, think about the subject and their own point of view before the meetings, and come prepared.

The results also provided valuable recommendations for the organizers of the learning community. *Bridging the gap between theory and practice, considering a balanced mix of physical and online gatherings, and transparent communication about expectations and meeting content* were highlighted as important factors. Promoting the use of additional learning materials and incorporating more concrete elements such as assignments or practical work were suggested to enhance the learning experience.

Despite areas of improvement that were identified, the participants in single-case-study 2 expressed an overall positive consensus regarding the value of the learning community. They recognized the opportunity it provided for personal growth and the chance to connect with others who shared similar interests and goals.

This table presents a chronological overview of events and significant milestones that occurred throughout single-case-study 2, which focused on a learning community. The timeline provides a comprehensive understanding of the study's progression.

Table 7 - Timeline single-case study 2

Timeline single-case study 2			
Interviews (Prior to the start of the learning community)	**Meeting 1**	**Meeting 2**	**Post interviews**
Participants' expectations and motivations discussed	Introduction to the learning community	Observation of rapid communication during a critical incident discussion	Facilitating and limiting factors identified
Previous experiences and preferences explored	Challenging questions and self-reflection	Drawing up a social contract	Importance of physical meetings for personal and efficient exchange of ideas recognized
	Informal conversations and personal connections	The meeting was perceived differently by participants, with some finding it valuable while others had different expectations. Rather than a leadership lecture, it was seen more as a therapeutic conversation.	Quality and content of meetings discussed
	Positive atmosphere observed		Trust and group cohesion highlighted as essential elements
			Attendance patterns
			Reluctance to share critical incidents on online platforms mentioned as a limiting factor
			Valuable insights and tips for future participants shared
			Recommendations for organizers to bridge the gap between theory and practice
			Positive consensus among participants regarding the value of the learning community

4.2.2 Conclusion study 2

In this single case study, a learning community called the 'LeaderCommunity' was established. The study revealed several key elements that contribute to a positive learning climate within the learning community. Facilitating factors included shared interests among participants, the quality and content of meetings, physical presence, trust within the community, smaller group settings for cohesion and interaction, motivation, and diverse group dynamics. On the other hand, limiting factors identified were unmet expectations, online participation, and a lack of theoretical frameworks and guidelines.

The importance of physical meetings emerged as a significant facilitating factor, allowing for more personal and efficient exchanges of ideas. However, one respondent preferred online meetings due to convenience and the sense of freedom they provided. The quality and content of the meetings played a crucial role in creating a positive learning environment. Engaging questions and opportunities for self-reflection, learning from others, and stimulating discussions were appreciated by participants. Trust among participants and the role of organizers in building trust were also essential for fostering a positive learning climate. Building group cohesion through small group communication and the establishment of social agreements and norms contributed to a sense of trust and belonging.

Participant behavior, such as attendance patterns, demonstrated flexibility and potential influences on group dynamics. Shared interests among participants fostered a sense of belonging and community. However, the reluctance to share critical incidents between meetings on online platforms was identified as a limiting factor, as it hindered active participation and sharing of experiences.

While participants generally had a positive impression of the meetings, some expressed unfulfilled expectations. They desired a deeper understanding of personal leadership, clearer examples of effective leadership, and more tangible outcomes. Managing expectations is crucial to ensure participant satisfaction with the learning experience. Recommendations were provided to address this issue. For organizers, bridging the gap between theory and practice and meeting participants' expectations was important. Using additional learning materials, such as case studies or articles, provided a comprehensive understanding of personal leadership. Including assignments or practical work offered tangible outcomes and practical application. Attending physical meetings whenever possible facilitated a more personal and efficient exchange of ideas. Flexibility was acknowledged to accommodate different attendance patterns. By implementing these recommendations, both participants and organizers can effectively manage expectations, enhance the learning experience, and create a more fulfilling and impactful learning community.

Despite areas for improvement, participants recognized the value of the learning community, highlighting the opportunities for personal growth, connection with like-minded individuals, and the application of acquired skills. Overall, the study provides valuable insights for fostering a positive learning environment within learning communities.

5. Conclusions, implication, and recommendations

The final chapter comprises five sections: general conclusion (5.1) addressing the research question, discussion (5.2) summarizing literature and research findings, practical contributions (5.3), limitations and recommendations for future research (5.4), and a concluding section (5.5) providing a brief review of the study's inception and purpose.

5.1 Conclusion

In today's evolving work landscape, characterized by the COVID-19 crisis and technological advancements, hybrid working has become a prominent trend. Continuous development of knowledge and skills is crucial for employees in order to effectively adapt. Consequently, governments and organizations are increasingly prioritizing 'lifelong development' - the ongoing process of enhancing employees' knowledge, skills, and abilities (Noe, Clarke, & Klein, 2014; Hartgers & Pleyers, 2016; Grijpstra, Bolle, & Driessen, 2019). Learning communities have emerged as a popular approach in this context, facilitating the promotion of knowledge and skills development within the workplace.

This study aims to draw upon the current literature on learning communities to explore the establishment of a positive learning climate within learning communities. To achieve the formulated aim, the following research question has been formulated:

'How are positive learning climates developed within a learning community and what factors facilitate or limit the development of positive learning climates in learning communities?'

To answer this research question, a qualitative research approach was employed, consisting of two distinct studies. These studies provide valuable insights into the development of positive learning climates within learning communities and the factors that facilitate or limit their development.

In study 1, a multiple case study approach was used to examine three different learning communities. The findings emphasized the significance of both physical meetings and effective online communication in the development of a positive learning climate. While limitations such as the lack of group formation in case A due to online meetings were observed, successful group formation was achieved in case B and case C through interpersonal communication, consistent attendance, and a positive atmosphere. Additionally, challenging speakers and company visits were found to be valuable for promoting knowledge sharing and enriching discussions. However, limitations such as limited interaction outside formal meetings, the absence of a specific communication tool, and the constraints of online meetings and the lack of physical presence were identified.

Study 2 focused on a single case study of the 'LeaderCommunity' and revealed key elements contributing to a positive learning climate. Facilitating factors included shared interests among participants, quality and content of meetings, physical presence, trust within the community, smaller group settings for cohesion and interaction, motivation, and diverse group dynamics. On the other hand, limiting factors included unmet expectations, online participation, and a lack of theoretical frameworks and guidelines. Physical meetings emerged as a significant facilitating factor, enabling personal and efficient exchanges of ideas, although some participants preferred online meetings for convenience and freedom. The quality and content of meetings, trust among participants, and group cohesion through small group communication were crucial for fostering a positive learning environment.

By comparing the findings from study 1 and study 2, it becomes evident that positive learning climates were developed through a combination of different factors. Physical meetings and effective online communication play vital roles in developing positive learning climates. Both studies emphasize the importance of shared interests, trust, and group dynamics in creating a sense of belonging and community. Physical meetings facilitated face-to-face interactions, building relationships and trust through non-verbal cues. Simultaneously, effective online communication tools like discussion forums and collaborative platforms fostered active participation, knowledge exchange, and a sense of community. Shared interests played a vital role in fostering belonging and collaboration. Trust and positive group dynamics, including supportive behaviors, contributed to a positive learning climate. However, limitations were identified, including limited interaction outside formal meetings and challenges with online participation. Addressing these limitations requires ongoing efforts to further enhance positive learning climates.

In conclusion, based on the comparison of study 1 and study 2, the general answer to the research question is that positive learning climates in learning communities are developed through a combination of factors. These include participant recruitment, physical meetings and effective online communication, shared interests among participants, quality and engaging content in meetings, trust and group cohesion, diverse group dynamics, and motivation. However, limitations such as limited interaction outside formal meetings and unmet expectations should be addressed to further enhance the development of positive learning climates. These insights can inform the design and implementation of future learning communities, helping organizations enhance the participant experience, foster effective knowledge sharing, and promote collaboration.

5.2 Discussion: theoretical contributions

This discussion chapter explores the broader theoretical framework within which the interpretation of the results of the two studies takes place. The findings of this study are consistent with the existing literature on creating a positive learning climate within learning communities, but also introduce new insights not previously documented.

First, this research offers valuable insights that can be applied to the design of learning communities. Based on the findings, learning communities can improve participants' experiences, promote effective knowledge sharing and foster collaboration. Contributing to the literature on positive learning climates, this research offers concrete insights into the factors that promote a positive learning climate within learning communities (Stoll et al., 2006; Emanuel et al., 2022). The research identifies both promoting and limiting factors and highlights the importance of physical meetings as well as effective communication and psychological safety. In addition, the research highlights the importance of shared interests, trust, group cohesion and diverse group dynamics in creating a positive learning climate. These findings contribute to the understanding of positive learning climates and can serve as a basis for further research and practical applications in the field of learning communities. Importantly, the literature does not explicitly address the importance of physical meetings for a positive learning climate, which this research does reveal.

Psychological safety emerges as a crucial factor in creating a positive learning climate, as supported by both research findings and the literature (Edmondson, 1999; Noe et al., 2014). Psychological team safety, defined as the belief that a team is safe to take interpersonal risks, contributes to team learning and collaboration. It involves the freedom to express oneself without fear of negative consequences within the team (Kahn, 1990). This safety is a subjective and temporary context influenced by those in positions of power, shaped by expectations about how team members will respond to behaviour such as asking questions, asking for feedback, reporting mistakes or suggesting ideas (Denison, 1996; Edmondson, 2004; Shao et al., 2016). This study shows that organizers play a crucial role in creating an environment where participants feel safe to actively engage and share ideas, contributing to a positive learning experience. The study highlights the importance of individual participants' perceptions of psychological safety in cultivating a conducive learning environment. This research adds something to the literature by specifically examining how psychological safety and other factors influence a positive learning climate within learning communities. Moreover, both the research findings and the literature demonstrate the importance of psychological safety in creating a positive learning climate. The studies show that individual perceptions of psychological safety contribute to the formation of a learning climate within learning communities. Study 2 further shows that organizing smaller groups with more interaction and collaboration contributes to the creation of trust and a sense of community. As a result, sharing critical incidents becomes easier in these smaller groups, creating a positive learning climate faster than in larger plenary settings.

The findings of this study align with the theoretical perspective on shared interests and their influence on learning communities. Creating a base of shared interests among participants fosters a sense of belonging and community, which is consistent with the idea that shared perceptions of the learning climate influence overall learning experiences and outcomes within learning communities (Emanuel et al., 2022). Additionally, the study highlights the role of cognitive perceptions in shaping the learning climate, including factors such as learner characteristics and contextual influences on their perceptions of learning (Emanuel et al., 2022). Study 2 underscores the importance of shared interests among participants in fostering a sense of unity and community within the learning community. However, reluctance to share critical incidents on online platforms between meetings and a passive attitude towards participation were identified as limiting factors for active knowledge sharing. In addition, initial research shows that participants' asking specific learning questions or research questions increases learning efficiency, which is in line with the literature that emphasizes the role of individual perceptions of learning in creating a positive learning climate (Ilgen et al., 2005; DeChurch & Mesmer-Magnus, 2010). The presence of learning needs within the learning community, a shared purpose and strong group dynamics with high levels of social interaction and collaboration are also identified as important factors. The study also highlights the importance of participants asking specific learning questions or research questions, which contributes to greater learning efficiency. This finding is consistent with previous studies that highlight the role of individual perceptions of learning in creating a positive learning climate (Ilgen et al., 2005; DeChurch & Mesmer-Magnus, 2010). The current research uniquely explores how individual perceptions of learning in practice can be translated into specific learning needs and enhance learning experiences within learning communities. By allowing participants to formulate their own learning questions, their engagement and learning efficiency can be enhanced.

Furthermore, the research highlights that perceptions of learning climate are dynamic and can evolve over time. This was evident in both study 1 and study 2. In study 1, one case featured a hybrid format of meetings, combining both physical and online sessions. The case noted a discernible difference in the positive learning climate, with the physical meetings being more conducive to learning. Furthermore, in another case from study 1, participant attendance fluctuated significantly, resulting in a highly dynamic learning climate. Study 2 provided clear evidence that the learning climate was influenced by the meeting content and whether participants found it valuable and interesting or not, further emphasizing its dynamic nature. This is consistent with the theoretical understanding that individual and shared perceptions of the learning climate can change and influence learning outcomes (Crossan et al., 1999; Morgeson & Hofmann, 1999; Edmondson, 2002; Kostopoulos et al., 2013). The composition of individual characteristics within a learning community was found to influence the formation of shared perceptions of the learning climate, highlighting the importance of taking into account different orientations towards learning goals within the community (Emanuel et al., 2022). Group formation emerged in the studies as a crucial factor influencing dynamics within learning communities. The lack of physical meetings in one case hindered the creation of lasting connections and the development of a strong network outside the learning community. Despite these limitations, the learning community promoted open discussions, conversations and the exchange of ideas, which contributed to a positive learning climate. The study highlights the importance of an online communication platform for information sharing and interaction between meetings. By implementing a team environment or similar online communication platform, participants can easily interact with each other, creating a stronger bond and increasing willingness to share knowledge and experiences. The study's findings confirm the value of such online platforms for information sharing and interaction, which is not extensively discussed in the literature. Integrating a team environment or similar online communication platform can promote engagement and knowledge sharing among participants, thus contributing to a positive learning environment. Moreover, the exchange of contact information between participants through these platforms increases the likelihood of informal meetings outside the learning community, which facilitates further acquaintance and reinforces a positive learning climate.

Overall, the findings of this study are consistent with the theoretical framework regarding shared interests, perceptions of the learning climate, consensus and group dynamics. Understanding how these factors interact can provide valuable insights for interventions aimed at promoting shared perceptions and improving learning outcomes within learning communities. This comparison with the literature highlights the consistency between the findings of this study and previous research. The research contributes unique insights by looking specifically at the development of positive learning climates within learning communities and the factors that facilitate or limit this development. These findings enable practitioners and teachers to derive practical implications for designing and implementing effective learning communities, taking into account the role of physical meetings, transparent communication, psychological safety, asking specific learning questions and using online communication platforms.

5.3 Practical contributions

In addition to its theoretical contributions, this research also encompasses practical implications. The practical implications of this research are significant for practitioners and educators involved in designing and implementing learning programs within communities. The recommendations provided in this study can serve as a valuable guide for practitioners and educators to enhance the effectiveness of learning programs and initiatives in learning communities. By incorporating these insights into practice, practitioners and educators have the opportunity to create learning environments that foster collaboration, meaningful interactions, and personal growth among participants.

Understanding the importance of motivation, behavior, and perceptions can inform the selection process of participants who actively contribute to and align with the goals of the community. This strategic selection can contribute to the overall success of the learning program. Participants can be selected based on specific criteria, such as desired characteristics, skills, background, or experience. This selection process involves identifying individuals who meet the criteria and notifying them of their selection. Selected candidates should be provided with additional information about the learning community, including important details like dates, times, and expectations. Additionally, prioritizing physical meetings can have a positive impact on engagement, collaboration, and the overall learning outcomes within the community. The personal interaction and face-to-face communication in these meetings can enhance the learning experience and build stronger connections among participants.

Furthermore, promoting open communication, building trust, and providing clear guidelines and expectations are crucial in creating a positive learning climate within learning communities. To foster active participation, knowledge sharing, and mutual support, it is essential to establish effective communication channels and platforms. These could include a WhatsApp group, a closed LinkedIn group, or a Microsoft Teams group. Building a sense of trust among participants fosters a safe environment where individuals feel comfortable expressing their ideas and seeking help from others. Clear guidelines and expectations set the foundation for a structured and purposeful learning experience.

In conclusion, this research offers practical insights and recommendations that can empower practitioners and educators to design and implement effective learning programs within learning communities. By considering the significance of motivation, behavior, and perceptions, and by prioritizing physical meetings, fostering open communication, building trust, and providing clear guidelines, practitioners and educators can create enriching learning environments that promote collaboration, meaningful interactions, and personal growth among participants.

5.4 Limitations and directions for future research

This section discusses the limitations of the study and provides valuable insights for future research. One limitation pertains to the research design in study 1, where the sample size was restricted due to resource constraints, potentially limiting the generalizability of the findings. Similarly, study 2 only captured data from two out of the six scheduled meetings of the learning community, offering an incomplete understanding of the development of positive learning climate.

Another limitation arises from the retrospective approach employed in study 1, where participants were interviewed after all meetings had taken place. This method may have introduced recall bias and restricted the depth of insights that could have been obtained through real-time data collection. Additionally, in study 1 the interviews were conducted using previously gathered data, without the direct involvement of the researcher in formulating and conducting the interview questions. Additionally, there was no personal interaction between the researcher and the interviewees, potentially impacting the depth and alignment of the collected data. However, in the future, it is possible to utilize interviews conducted by others, while still exerting influence on the interview questions beforehand to ensure the acquisition of relevant information for one's own research. It is also advisable to request audio recordings of the interviews, allowing for a better utilization of the interviewee's tone and experience, rather than relying solely on transcripts. This approach facilitates a deeper understanding and enables the researcher to interpret the collected data more effectively.

However, despite these limitations, this research holds significant theoretical and practical relevance. To overcome these limitations and further enhance the understanding of positive learning climates within learning communities, several directions for future research are recommended. Firstly, replicating the study on a larger scale and following a learning community from its inception to conclusion would provide a more comprehensive understanding of the factors influencing positive learning climates. Additionally, future research should aim to include a substantial number of participants, preferably at least half of the learning community members, to capture diverse perspectives and experiences, resulting in more robust insights.

In addition, it is important to acknowledge a limitation in the methodology employed in this study, particularly in study 2. The interviews were conducted prior to the first meeting and after the second meeting, despite the learning community consisting of a total of six scheduled meetings. This approach may have limited the depth and comprehensiveness of the insights obtained, as respondents were not able to provide a complete picture of the development of positive learning climates within the community. To obtain more valuable and comprehensive information in future studies, it is recommended to conduct interviews at multiple points throughout the entire duration of the learning community. This would allow for a more thorough understanding of the evolving dynamics and experiences within the community over time. However, it is important to note that the decision to conduct interviews after only two meetings was made due to time constraints faced during this research. While this limitation may have impacted the richness of the data collected, it should be recognized as the best feasible solution under the circumstances. Despite this constraint, the findings still provide valuable insights into the factors influencing positive learning climates within learning communities. Future research endeavors should aim to address this limitation by allocating sufficient time and resources to conduct interviews at multiple intervals, thus ensuring a more comprehensive understanding of the development of positive learning climates within learning communities.

Moreover, adopting a longitudinal approach that involves the active participation of the researcher throughout the entire duration of the learning community would provide invaluable insights into the development of positive learning climates. Immersing oneself in the community, attending all meetings, and building rapport with participants would foster a deeper understanding of the dynamics, interactions, and contextual factors influencing positive learning climates can be obtained. Such a longitudinal perspective offers unique insights into the development, sustainability, and adaptability of positive learning climates that may not be fully captured in shorter-term or cross-sectional studies.

In addition to the limitations already mentioned, it is important to acknowledge the potential bias introduced by the researcher's observations during the study. The act of observation at the meetings may have influenced the participants' behavior and interactions through the Hawthorne effect, leading to a biased representation of the learning community dynamics (Oswald, Sherratt, & Smith, 2014). Furthermore, the researcher's own interpretations and subjective judgments may have influenced the observations and subsequent analysis.

To mitigate these limitations in future research, it is recommended to incorporate additional methods such as self-report measures or triangulation of data from multiple sources. This could involve collecting participant feedback or conducting independent observations to complement the researcher's observations. By integrating multiple perspectives and employing diverse methods, a more comprehensive and objective understanding of the dynamics within the learning community can be achieved.

In conclusion, while this research has shed light on the factors influencing positive learning climates within learning communities, it is essential to recognize the limitations that have been encountered. By addressing these limitations in future research, such as expanding sample sizes, adopting a longitudinal approach, and ensuring direct involvement in data collection, the understanding and practical applications of positive learning climates can be further advanced.

5.5 Final conclusion

This study explores the development of positive learning climates in learning communities and the factors that facilitate or limit them. Two studies were conducted, highlighting the importance of physical meetings, effective online communication, shared interests, trust, group dynamics, and motivation. Limitations such as limited interaction outside formal meetings and unmet expectations were identified. Psychological safety, shared interests, and cognitive perceptions were found to influence a positive learning climate. The findings align with the existing literature and offer new insights. Organizers play a crucial role in creating a safe environment, and smaller group settings foster trust and a sense of community. The dynamic nature of learning climates and the influence of meeting content were observed. The composition of individual characteristics and group formation within learning communities were also influential factors. Online communication platforms were valuable for information sharing and interaction. Overall, the study provides practical implications for designing and implementing positive learning climates in learning communities.

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Appendix

Appendix 1: Study 1 – Codes

- (Gezamenlijk) doel learning community
- Behoefte leren in LC
- Bijeenkomsten zijn kort van tevoren gepland
- Bijeenkomsten zijn vooruit gepland
- Communicatie: Contact buiten de bijeenkomsten
- Communicatie: Oppervlakkig contact
- Community building
- Community-ontwikkeling: Groepsdynamiek
- Community-ontwikkeling: Interactie bevorderen
- Community-ontwikkeling: Sociale interactie
- Community-ontwikkeling: Uitdagingen bij interactie
- Contextuele waarde: Belang van fysieke aanwezigheid
- Continue deelname: Deelnemen aan de LC
- Digitale communicatie
- Gebruik van werkvormen
- Gedrag/interactie
- Gemeenschappelijke verwante afwegingen
- Gezelligheid
- Hybride meetings
- Informatie delen
- Kennis delen
- Kennis opbouwen
- Kritisch denken: Alternatieve oplossingen overwegen
- Kritisch denken: Analyseren
- Kritisch denken: Analytisch denken
- Kritisch denken: Discussie
- Kritisch denken: Evalueren
- Kritisch denken: Feedback vragen
- Kritisch denken: Open staan voor feedback
- Kritisch denken: Praktisch denken
- LC-onderwerpen voor de lange termijn
- LC-onderwerpen korte termijn
- Motivatie: Active rol
- Motivatie: Normatieve afwegingen
- Motivatie: Persoonlijke voordelen
- Netwerken
- Offline omgeving
- Online omgeving
- Ontwerpkeuzes
- Ontwerpkeuzes
- Percepties met betrekking tot leren
- Persoonlijke kennis
- Persoonlijke vaardigheden: Persoonlijke attitudes
- Persoonlijke vaardigheden: Persoonlijke capaciteiten

- Persoonlijke vaardigheden: Persoonlijke eigenschappen
- Praktische toepasbaarheid van geleerde kennis
- Psychologische veiligheid: Deelnemers durven mening te uiten
- Psychologische veiligheid: Deelnemers geven elkaar feedback
- Psychologische veiligheid: Deelnemers leren elkaar kennen
- Psychologische veiligheid: Deelnemers vertrouwen elkaar
- Psychologische veiligheid: Wederzijdse ondersteuning
- Reflecteren leerproces
- Rol facilitator
- Samenstelling learning community
- Samenwerking
- Studenten-bedrijven samenwerking

Appendix 2: Study 1 – Results tables with quotes for each case

Case A

Table 8 - Results tables with quotes case A

	Description	Quote
Structure	Recruiting: Awareness session	*P/O.: "But we have noticed that in logistics, so to speak, there are developments around the digital waybill. From there, one of the partners organized an awareness session around the digital waybill and based on that, companies expressed the need to know more about it and especially on the question they have, so the goal of, is the digital waybill, does that bring me a positive business case as a company? Yes or no. And that question that was asked actually to carriers, but also to shippers".*
	Learning requirement: Asking participants what they want to learn	*P/O.: "We asked say the question to the companies of what do you need? What question do you want to get solved? Then we made an outline ourselves, and then we HZ and our partner, Of this is I think the program how we think it is interesting for you. And, then we facilitated this by hooking up those knowledge parties or entrepreneurs".*
	No assignments for between meetings	*F/O.: "No, then again that cost time outside the session, so we didn't actually push for that."*
Limiting factors	Online meetings	*F/O.: "But yeah, when it's online and yeah, that's... Yeah well, we just notice, that just has a lot of impact on community building".*
	Poor start	*F/O.: "Because we started with, yes, that atmosphere was very bad at first. And yes, because we were so bad... The start was bad, huh.... Anyway, you focus on this session, but you see that coming back: if you don't start well then you don't recover from that.".*
	Not well communicated	*F/O.: "We did not communicate well what we brought. That's the, yes, maybe, yes... But I do agree with that, yes. So, we didn't communicate well how well that we brought our guest speakers... No, but if we had known beforehand, if we had said this, 'hey okay, nice, you're looking for an ECMR knowledge. Well, session one, we're going to do some mapping and introductions. Session two supplier, session three expert, session four practitioner, session five consultant, session six, yeah, together, student results. Then I think for them it's also much more concrete... Because I don't think we've ever brought it that concrete beforehand. So no, if that communication is better, yes, it might be a failure factor, so then you don't have people asking at the beginning: what is TIP? Then they know where they stand. Are they maybe at session one already that they know what to expect or at least more what to expect. Yes, so there is an opposite to that success factor of setting up well that we bring something. That when they come, that the companies can always get something, that they are convinced of that".*
	Participant attendance and prioritization of the learning community	*F/O.: "So we started with one company, which is how I can best outline it. So, one was present. Then we had a few cancellations. The second session we were also one, the third session we were two. Oh, wait sorry, I'm doing it the wrong way round. The first session... No, that's right. The second session everyone was there, so then we had put a lot of effort into getting everyone back in as an organisation as well. Then everyone was there. That was the only session that everyone was there, the second one. Session three there were only two present, session four there were two presents and the last two there was only one present. So yes, you actually saw very clearly: we are starting. Oh, that was disappointing or people didn't know... Yeah, didn't prioritize it. Well, hop, call everyone back, then everyone was there. Well, and then there were two, two and then it*

		dropped off again and we ended up with one again".
	Input companies	*P.: "Yes well, I expected more from the other companies say, expected more input from the other companies and that ended up being disappointing. That's where the difference is for me, because otherwise it did meet my expectations".*
	Students less involved in discussions	*P.: "You also notice that those students, especially through Teams, don't get involved in such a discussion and I would have liked them to. I mean, I always find it interesting how a young guy or gal who looks at it purely from a school or student point of view. And now via Teams you're less likely to do that, you don't just pick up on things. I think that is a human characteristic".*
Facilitating factors	Excellent guest speakers	*P.: "Well for me it went better after that, because in those sessions after that a guest speaker was invited every time. And they would talk about something specific about e-CMR. So for example, one time there was one that went beyond a company that actually offers e-CMR, a platform for that. Another time we spoke to a company that had already introduced it. Also, very interesting of course. So that for me was look, then you get somewhere and then you get to what is interesting for me. And what kind of theory is behind that for a student?".*
	Teams environment	*P/O.: "This yes, that just anyway. Little use is made of it. I have to say that honestly. They know who say participate in the community. But no, we don't have a WhatsApp group, we're still a bit too unfamiliar with each other for that".*

Note: P/O.: means Project leader / Organization, F/O.: means Facilitator / Organization and P.: means Participant.

Case B

Table 9 - Results tables with quotes case B

	Description	**Quote**
Structure	Recruiting participants: companies are invited	*P/O.: "Well, one of the things was that we had very difficult recruiting companies, actually we still do, but that's um, we didn't know that then. But then we thought well, if we make sure that the revenue for companies, if it's a little clearer beforehand. Then people also have. More of a reason to participate".*
	Learning requirement: Learning demand must come from the participants themselves, action plan	*P/O.:"I would like to see people making that learning request at an earlier stage. But very specific. Ideally, I would just have a session with each person with the group. And then say from you, are we going to look at what now? How do we make your learning question specific because. The longer you leave that learning question in general the harder it becomes, for such a participant to apply any knowledge provided".*
	No assignments for between meetings	*P/O.: "We did consider giving people homework. But we didn't come out of it yet."*
Limiting factors	Outside of the learning communities, there is no dedicated communication platform	*P/O.: "No they don't, but they all have each other's email addresses".*
	Participants quickly engage in critical reflection on limitations and causes.	*F/O.: "Yes, critical reflection in... What participants are very quick to come up with, you may have heard that from 'name project leader' as well, to just tell of what can't be done. Can't, and then the causes and of course that doesn't add that much to an action plan. We, 'name of project leader' and I, have followed a training course for solution focus facilitator and what we have learned there is, of course, to turn that kind of context into a context that thinks in terms of possibilities and challenges and what else is possible and what has been successful in the past and what fits well with the company, so to include those kinds of questions. With which, of course, you give direction in a conversation, but also towards an action plan".*
Facilitating factors	Physical meetings/hybrid meetings	*F/O.: "Then I think we had to go back online suddenly, and that always creates an atmosphere that is not nice. It's always less so. We had at the first round Dac, we were really present live and then you can organize really nice things with tables and going by and yes, everybody was there and also from the province, and you name it. Yes, we weren't able to organize that second round in that way, which was really unfortunate. And so with students presenting their assignments and opinions and so that was also about data. Yes, that was very nice. It was about the triangle huh, so you have students, education, business and yes, the VU was then involved for the research."*
	Networking	*F/O.: "You can also say the network has worked out so well, there are so few... that's how you can describe it, worked out so well, networking and getting into each other's kitchens, that people talk to each other very easily and that they also come to social talk, so that goes quite far, yes. They do know how to find each other."*

	Company visits	*F/O.: "Yes, yes, because we have also organized company visits, so that one of those mornings, once every fortnight, we do a company visit on four mornings anyway. And from that company visit we then get a tour and there is also a presentation from that company with an assignment, and yes, we then work on that together."*
	Two types of introductions	*F/O.: "We had two kinds, say introductions, for each morning. One was from the company, we did that alternately, and the other was from a guest speaker."*
	Interpersonal communication and working in subgroups	*F/O.: "Yes, those are things that happen quite quickly of course, because the group was not very big, so they had, there was a lot of mutual communication and consultation and we also worked in sub-groups, so people got to know each other quickly. So that started already when we arrived in the morning of course and before then we had everybody working and... Not that that took hours, that's nonsense, but yes, sometimes... I'm fine with being tight in itself, but 9 o'clock is 9 o'clock. And of course, people are allowed... I'm not so tight that I refuse people or anything like that, in class I don't say 'now you're not allowed in, of course not, because you're paying for education, but yes well, if you choose to do the first part... That's up to you, 9 o'clock is 9 o'clock, and if they come in later I also say 'Good morning, welcome' and then I just carry on. So, when it comes to Network Dac, yes, at one point we had to... Where do you notice that then, is that we had to start paying close attention to the structure ourselves."*
	Consistent participants	*F/O.: "The thing is that the group we started with, we ended with. So also, the one who was a bit further along was present. He also cancelled once or twice, so to speak, because I think someone like that gets a bit less out of it, and he says, "Yes, I'm mainly there to mean something to others. But what he said was right, because that is also what happened."*
	Organizers communicated clear expectations to participants prior to the learning community.	*P/O.: "That's also a requirement that we set beforehand, right? If we um, before companies' students join, we say well you don't have to be an expert on the use of data. No, You do have to have an open attitude and You have to we expect that you just think with others and that and that you share information yourself."*
	Specific learning question	*P/O.: "We had a number of conditions, conditions that we said we want to meet in order to make sure that the participants in that Learning community that they're actually going to learn and one of the conditions that we used then was that the learning question has to come from the participants themselves. If it is a learning question that is relevant to him or her, then he is more likely to work with that to learn".*
	Open conversations and discussions	*P/O.: "To my mind, those conversations are very open".*
	Participants respond to each other's ideas	*P/O.: "We have the meeting. We invite people to respond to each other's ideas, questions, suggestions, we have the company visits".*
	Participants agree outside meetings	*P/O.: "Sometimes a subject is discussed of which we feel that someone knows a lot more about the other person and then it just doesn't fit into the program or doesn't fit with what we are doing. Or doesn't fit what the other group is doing, or the rest of the group is doing" and then we say, "go visit each other sometime, have coffee sometime".*
	Humor	*P/O: "There are also a lot of jokes being made, I notice. Nice too."*

Note: P/O.: means Project leader / Organization, F/O.: means Facilitator / Organization and P.: means Participant.

Case C

Table 10 - Results tables with quotes case C

	Description	**Quote**
Structure	Recruiting participants	*F/O.: "They are in demand and they are substantively involved. They are skilled or expert in the topic."*
	Learning requirement	*"P/O.: ""So that goes too, during the process there are also regular questions. What need is there? What do you need to be able to do your job? What do you still want to learn? The piece of soft skills also comes up in it, so It's not just technical and substantive topics, But it's also really a piece of soft skills"".*
Limiting factors	Online	*"F/O.: ""I think we sort of went into lockdown at that point, and that did an essential detract from the content. It certainly wasn't down to the speakers and their willpower to make something of it, but a case like this simply requires presence on sites, feeling, seeing, tasting what is possible and allowed. It's very important to visit construction sites, to see when it comes to biodiversity in outdoor spaces, for example, what that can do for a living environment. And we missed that, and that was one of the principles of tip, to develop application-oriented knowledge. Yes, and you also want to sample that where it can be applied.""*

	Physical absence hindered students' comprehension, experience, and creative stimulation with application knowledge.	*F/O.: "The creative process is kind of flattened by the online collaboration. I notice that very strongly myself: when I'm sitting around the table with people, I get a lot more out of that than when it's an online session. and those students were creatives at heart, and then you just can't elicit that from them."*
Facilitating factors	Clear expectations communicated in advance	*P/O.: "We try to steer very much towards guys know what you say yes to, there are some things that are asked of you. It's not just fetch, It's mainly exchange and that means you have to come and bring as well."*
	Interaction among the participants fairly quickly	*P/O.: "and, because you follow those sessions together, so the students together with the young professionals, of course the discussion of, hey, what have we heard now and what does that mean for the assignment. Especially in this TIP, because they really had a joint assignment. What does this information mean for that assignment?"*
	Specific question	*F/O.: "I started to look more at what knowledge need is there, and how can I fill that, and the students themselves taught how they would build that up based on establishing the research question, adapting the research question, then delving into the sub-questions... And in that way, where there was a need, we also filled that knowledge need through speakers."*
	A team was formed	*F/O.: "No that mainly has to do with... one student is a real techie, who prefers to do the most complicated calculations. There is a creative lady who can especially visualise what she is doing, and so each student has emphatically shown his added value after only three or four meetings. And another thing I would like to say about it is that they were able to show how that strengthens each other. So there really was a team standing."*
	Flow between students crossing over to young professionals	*F/O.: "You saw that there was a flow between the students that spilled over to the young professionals. I do have to be honest that even in this, working online was a huge hindrance, because the students were allowed to get together, but we were not allowed to be together. So the students gave feedback and presentations, really ad nauseam. And that hindered us all tremendously. Knowing from each other exactly what you are doing, seeing, feeling, tasting where there might be additions or opportunities, and also putting group feeling above personal success. Or group success above personal success."*
	Challenging speakers offering unique perspectives and sharing information	*F/O.: "I think the most important thing is that every now and then you have challenging speakers who contribute to the big picture, from an angle that can't be taken for granted. I think during this tip round, I managed to get speakers who... Where the information they offered was not necessarily found through the Internet. And that's what students rated tip highest on".*
	Group activities	*P/O.: "Yes those first one two meetings just doing activities, I call it to get to know each other to. Yeah just create that safe environment where you feel comfortable sharing information."*
	Teams environment	*P/O.: "We have a team environment in which all the different rounds are, shall we say, where the students are imported and the participants the young professionals are imported and they can exchange information and knowledge there and files can be stored there".*

Note: P/O.: means Project leader / Organization, F/O.: means Facilitator / Organization and P.: means Participant.

Appendix 2: Study 2 – Interview questions

Before meeting 1

Thank you once again for your participation in the LeaderCommunity and for taking the time to engage in this interview. Our graduate research focuses on exploring knowledge and skills, motivation, and fostering a positive learning climate within a Learning Community. We assure you that your responses will be processed anonymously. Would it be acceptable for us to record this interview to ensure accurate results?

Please provide us with the following basic information:

- What is your age?
- What are you currently studying?
- Do you have a side job? If yes, please specify where you work and your position.

Now, let's move on to the interview questions:

1. How would you define leadership based on your understanding?
2. How do you personally describe a leader, and what is the reason behind your description?

3. What specific characteristics do you believe make someone a leader?
4. Could you share any challenges you have encountered while practicing leadership?
5. Have you previously participated in a learning community? If so, what are your expectations from this current Learning Community experience?
6. What knowledge and skills do you hope to acquire during your involvement in this learning community?
7. How do you anticipate gaining knowledge and skills within the learning community?
8. Could you describe any prior experiences you have had with leadership?
    a. If you have no previous leadership experience, please share any related experiences you have had.
9. If you were in a leadership position, how would you describe your current leadership style?
    a. If you have no previous leadership experience, please describe the leadership style you would adopt if you were in a managerial role.
10. In terms of leadership, where do you feel you have space for growth or improvement?
11. What motivates you to participate in the learning community?
12. How can organizers of the learning community ensure that participants remain motivated throughout their involvement?
13. What factors could potentially limitate your motivation to engage in the learning community?
14. To what extent do you intend to attend all learning community meetings?
15. In what situations do you feel safe within a study or work-related group?
16. How comfortable do you feel providing feedback or expressing your opinion in a study or work-related group?
17. Can you describe a learning environment where you felt you learned a lot?
18. What were the social aspects of this environment? For example, motivation levels, psychological safety, social interactions, and group dynamics.
19. Could you share an example of a learning climate in which you had positive experiences and were able to learn a great deal as a result?
20. What are your expectations regarding the design of the Learning Community?
21. What are your expectations regarding how the Learning Community will be managed?
22. Do you prefer physical or online meetings in terms of motivation and fostering a positive learning climate?
23. Please explain why you have a preference for this particular format of meetings.

Thank you for your cooperation in providing us with valuable insights for our research.

Post-Meeting 2 Interview Questions:

1. Overall, how would you describe your experience with the meetings thus far?
2. In what ways do you envision applying the skills you have acquired during the learning community in your future professional and personal life?
3. What has motivated you to consistently participate in the learning community? Which factors have played a significant role in this motivation, and which factors have not?
4. Have you encountered any obstacles while participating in the learning community, and if so, how have you managed to overcome them?
5. How did you perceive the physical and online meetings? Which format do you prefer, and why, particularly in terms of motivation and fostering a positive learning climate?
6. How did you find the process of group formation within the learning community?
7. What specific activities were undertaken to establish trust within the group?
8. In what ways do different work formats, such as plenary sessions or small group discussions, contribute to stimulating group formation?

9. Can you provide examples of situations where you have experienced significant learning within the learning community?
    9.1. How do you believe you could have maximized your learning and gained more from the learning community experience?
10. What advice or tips would you offer to future participants to make the most out of their learning community experience?
11. What recommendations would you give to the learning community organizers to enhance the value of future meetings?
12. Lastly, based on your experience, would you recommend the learning community to others seeking to improve their personal and professional skills and knowledge? Why or why not?

Thank you for your ongoing participation and valuable insights.

Appendix 3: Study 2 – Codes

- Belang van fysieke aanwezigheid
- Belemmering
- Communicatie: Constructieve |(opbouwende) communicatie
- Communicatie: Contact buiten de bijeenkomsten
- Community-ontwikkeling: Groepsdynamiek
- Community-ontwikkeling: Groepsdynamiek
- Community-ontwikkeling: Interactie bevorderen
- Community-ontwikkeling: Sociale interactie
- Community-ontwikkeling: Uitdagingen bij interactie
- Contextuele waarde: Belang van fysieke aanwezigheid
- Continue deelname: Deelnemen aan de LC
- Deelname learning community
- Deelnemer voelt zich veilig
- Definitie leiderschap
- Eigenschappen leider
- Ervaring leiderschap
- Gebruik van werkvormen
- Gebruik van werkvormen
- Huidige leiderschapsstijl
- Kennis opbouwen
- Kritisch denken: Discussie
- Kritisch denken: Discussie
- Kritisch denken: Feedback vragen
- Kritisch denken: Open staan voor feedback
- Kritisch denken: Open staan voor feedback,
- Kritisch denken: Praktisch denken
- Leeromgeving
- Motivatie: Active rol
- Motivatie: Persoonlijke voordelen
- Offline omgeving
- Omschrijven leider
- Online omgeving
- Percepties met betrekking tot leren
- Praktische toepasbaarheid van geleerde kennis

- Psychologische veiligheid: Deelnemers durven mening te uiten
- Psychologische veiligheid: Deelnemers geven elkaar feedback
- Psychologische veiligheid: Deelnemers leren elkaar kennen
- Psychologische veiligheid: Deelnemers vertrouwen elkaar
- Psychologische veiligheid: Wederzijdse ondersteuning
- Reflecteren leerproces
- Rol facilitator
- Samenstelling learning community
- Samenwerking
- Uitdaging leiderschap
- Verwachting LC

Appendix 4: Study 2 – Results tables with quotes for each respondent

Respondent 1

Table 11 - Results tables with quotes respondent 1

	Respondent 1	
	Description	**Quote**
Limiting factors	2nd meeting online	*Yes, the first time I was present and the second time I followed it via online, so that is always less.*
	Online meeting - Connection with the rest of the LC was missed	*Yes, you do miss the connection a bit. What I say, it was an advantage to have one other person online. Otherwise, it's totally remote.*
	Not yet integrated into the group	*Yeah, I think it's still a little too soon for that, to be honest. Especially because I think I was there that second time online. Yes, that's something different.*
Facilitating factors	1st Meeting - In-Person Attendance	*Yes, physical is a bit more personal of course. That you can spar with each other a little faster. In terms of practicality, I just like online because I have to travel 3-3.5 hours for those two hours, so that's more just practical. But for the quality, I think it is physically better that you just have shorter lines to talk to each other and ask something, or I don't know what. That's something online, yes, you do it a little less quickly, I think.*
	Participants with shared interests	*I think that the added value for me in particular is that you are surrounded by people who have a bit of the same interest or ambition and that you talk about the theme of leadership. Yes, sparring with each other about that. Because in everyday life you sometimes read something, but I think it is of added value if you can talk about it with fellow students, right? So, skills I don't necessarily know. But more just knowledge on the subject. And yes, sharing experiences, I think*
	Continued meeting participation due no weekly schedule	*Yes, I think it's relaxing anyway that it's not every week, for example that it's just that you also have time for other things, say that it doesn't get in the way and for the rest. Yes, I like it. I just naturally find it an interesting subject so that just appeals to me, I think.*
	Accessible participants	*You sign up for it, so to speak, when you don't have to, so you just have people who say yes. Nice word but yes kind of gee motivated to get there and also want to contribute a bit. I really want to learn something, so you notice that when you talk to someone that it is a bit more accessible than, for example, in a normal classroom or lecture setting or something like that, so I think that.*
	Role of organizers in building trust	*Yes, I think those teachers did well and I think that is also what they do well, so that you just, emphasize that yes, nothing crazy is what you say and things like that just keep saying that you just have to be able to say yes what you want and is not limited in it. I think that's just. Yes, and if you see other students doing that, I think you'll be more inclined to say something like that yourself. So, I think teachers play a big role in that.*
	Benefit of small groups in group formation	*Yes, I think those smaller groups work well too. Especially because then you come into somewhat better contact with two people, and you also have some informal things about each other. Just training about what your ambitions are, etcetera, then you get to know each other a little better than that. can really contribute, so to speak. If you feel you belong somewhere, just say that question that you asked 3 questions ago.*

Respondent 2

Table 12 - Results tables with quotes respondent 2

	Respondent 2	
	Description	**Quote**
Limiting factors	2nd meeting online	*I have to say that the audio wasn't really that great, so I didn't really get a lot of what was said in the second lesson.*
	Online meeting - Interaction with the rest of the LC was missed	*Online Let's start online first. I think less. Yes you heard little, the audio was. Yes, if you really listened carefully, it worked, but it was not the optimal situation. Of course you missed the interaction.*
	Meeting format did not meet expectations	*So we kind of got no vacancy, just a description of what it entailed. And it also stated that it was a course worth almost € 2,500 for 8 or 5 meetings. What is it? Something in that direction, so we thought to ourselves Oh well, then someone from a Rabobank or something like that will have a director invited to tell us something about us or do I know a lot about a what kind of company or something in that direction? Who would tell more. Yes, and that's what we were both hoping for anyway. Yes that you experience it something In it, or yes. An employer who actually has a lot of work experience and who can then pass this on to people who are just or about to start working.*
	No new leadership skills learned yet	*I don't think I've really learned any skills yet with my draw to the course, due to the fact that you've only had two lessons. Yes, this is always just skills, listening carefully to what others have to say. That is something you experienced in the first lesson. You sat down in groups of 3-4 people and then you started talking about your own questions that you answered. And yes, a little probing, a little social contract, things like that.*
	No significant learning experiences identified within learning community	*He might sound a bit rotten to say, but I actually haven't yet.*
Facilitating factors	1st Meeting - In-Person Attendance	*Well, physically, the interaction was. But I thought it was very, very general or something. I hear yes. Yes I don't know.*
	Superficial interaction	*Yes interactions are due to the fact that at the end they were going to answer 5 of those questions of what, what do you think? What is leadership? Which qualities do you find important? And do I know much what else was there? Well, it's nice to have a discussion. Yes, yes, I don't know. Maybe yes, no I don't know. I couldn't explain it any further what else should be. Or something. It's more of a feeling.*
	Positive and open group formation	*The group formation. I have to say that a lot of people were very open. I could appreciate. Everyone also let others talk too. Did you also get the idea that everyone showed understanding with what others said? Yes, that was nice to see.*
	Role of organizers in building trust	*Perhaps to act a bit crazier yourself as a supervisor, to show of. It's all normal that you feel at home here and in that direction maybe just to build confidence yes, other than that I haven't really seen anything that built confidence.*
	Comfortable environment	*Yes, I do myself, but that's not so much because I care what others think of me, so.*
	Benefit of small groups in group formation	*I think that mainly happens with what we have done, so in the beginning with those group assignments of 3, 4 and if we had done something serious with changing people, because we then had 20 minutes, if I got it right. And well, those whole 20 minutes, everyone was in groups of 4 and that was it. It wasn't like one group goes then another group and the other one comes here and you get different people again. That had really become a kind of fixed group then, so to speak. So that could be changed somewhat to make it more dynamic.*

Respondent 3

Table 13 - Results tables with quotes respondent 3

	Respondent 3

	Description	Quote
Limiting factors	1st meeting online & 2nd meeting absent	*I only attended the first meeting online and unfortunately I could not attend the second meeting. So I'll do it based on my first experience. I think the approach of the entire Community is good and very interesting and can also be valuable. The only drawback I found was that I was there online and that you actually didn't get it right, what the group did and I was only with 'other participant's name' in the zoom meeting and we are talking one on one about had things. But at a certain point you have finished talking about that and you don't really get a sense of what the dynamics are in the group. And that is the physical in such a group is also very instructive and that is a pity that that is not possible.*
	No new leadership skills learned yet	*Quite honestly, I'm not sure I can say if I've already gained skills based on the first learning community meeting. Because I said, I think it was mainly very introductory saying and reflection on: Okay, what do you think of leadership, what are your skills at the moment and what do you want to learn? So, I think it was really mostly a matter of reflection on yourself. But I can't say what I now think of yes, I have already really gained a skill or a skill that I thought of yes this, I have already learned this.*
	Waiting with parts of critical incidents	*Well, I was especially curious because we had agreed in the first community that you had to or could share your critical incidents in the group. I'm a bit hesitant myself, so I thought, I'll just wait and see what others say, but that didn't happen, so I thought yes, maybe this is something I didn't understand correctly and that we can indeed handle the sessions. I've often thought about gosh. There isn't really much sharing, so to speak, so I thought, did I miss something? But so, the active participation and I actually missed that a bit.*
	Challenges of Absence in Physical	*Yes, I cannot be physically present. I think that's an obstacle in itself, because what I said, I think the physical dynamics that you notice then, you can also learn a lot from it, that it's easier to communicate with each other in smaller groups of questions and I missed that. Yes, and look I couldn't attend the last meeting myself, so I think it was better indeed. That it was also fine if you were online, but it is of course nice to do things physically, I think.*
	No significant learning experiences identified within learning community	*No not yet, I think I have too little. I missed the second session. I think that was a more important session.*
	Meeting format did not meet expectations	*Maybe also clarify a little more in advance what it is exactly I feel like it was sold a little better than it actually is and not that I'm stamping it into the ground. But I think somewhere on a website or something it said yes masterclass this blah blah blah, so I expected that there was really something more being done with leadership or with master class than it is now in the end.*
Facilitating factors	Contact with participant outside meeting	*But I called Jonas this morning and he briefly updated me on what has been agreed in the second learning community.*
	Benefit of small groups in group formation	*And I think it is very interesting to push through that in smaller groups, so to speak, because then the threshold for sharing things is lower. Yes, and that you can get a little more out of it, I think.*
	Building trust in group	*Well, I think it's really good that the social, social contract is in place to make sure okay these are the agreements that are made within the group and everyone is actually going to agree more there as well so you just know for sure that that is the basis and that you can rely on each other. I think it also helps me, for example, that you have smaller smaller groups instead of 1 large group, because then the threshold is also somewhat lower, I think, and that also means that you do not have 20,000 having people who respond to one thing, but you just have a bit smaller number to discuss things.*
	Effective setup with plenary sessions and small group discussions.	*Oh yes, I think it is indeed interesting to have a plenary session first, in which, for example, some things are explained or theory is given by Jeroen or Wouter or whoever. And I always like it when you can indeed sit there in smaller groups to discuss that theory, for example, or indeed to discuss the critical incidents. So, I think it's a good setup.*
	Benefit of small groups in group formation	*Yes, yes, I think so, so that you do indeed see those smaller groups. Maybe you have to vary that a bit every time, that you also speak to several other people. But I think it's good.*

Respondent 4

Table 14 - Results tables with quotes respondent 4

	Respondent 4	
	Description	**Quote**
Limiting factors	Difficulty in self-reflection on critical events	*Yes, it is quite difficult sometimes. Well, what are the critical incidents to open up really vulnerable, say to be able to say really clearly, well, this happened, did I do this wrong in my eyes or could I have done this better? Yeah, that's still a bit tricky, I think.*
	Uninformative 2nd meeting	*I found the first, I found it a bit more instructive than the second. In my opinion, the second was mainly just talking to each other about critical incidents, but. Yes, I found that, I think, least instructive. It was good to talk to each other, about it and. Well, supposed to talk there, but it was. You don't really learn anything or anything, and I thought that was a shame.*
	Sense of group acceptance	*Not quite yet, I think. I think I am yes, I am part of the group, But I don't really have the feeling that I really belong in the group or something, But I think that just has to come.*
	Absence of theoretical framework and guideline	*Yeah, I'm used to university anyway, so you just miss something of a guideline. Something of a theory to hold on to, so yeah, I do miss that.*
Facilitating factors	Importance of others' opinion	*Well, during the conversations that we are going to have about the incidents, the critical incidents, you will learn that it is really important to also take the opinion of others into account, don't just think of well, I want this, I want to do this. This is the best way for me, but also to look at does everyone understands and does everyone agree, or can everyone agree? So, I've learned that it's important to also involve followers in making your choice, so to speak.*
	Group dynamics	*But it's just a nice atmosphere and the people are nice and it's educational, so it's not like I'm there for nothing, so to speak.*
	Benefit of small groups in building trust	*Yes, those small groups that help to create a more familiar atmosphere, so to speak, are handled a little better, in my opinion. Because instead of 12 people knowing what my moment has been, I now only know 4 people, so that's a little easier to say. For myself, saying okay, it's not too bad, it's not that bad at all.*
	Informative 1st meeting	*Yes, at meeting 1 you got to know each other a bit more, so then you really have to write down what you thought was your leadership style and how you dealt with leadership and what your qualities were and such and that is why you have. Do you also think a little more deeply about how you experience leadership? And then you can also hear from others how they experience it. And yes, that was a bit more instructive for me, because now it was normal. Yes, you also have to think critically about what you have done and what you are doing. But yeah, I don't know, it was different anyway.*
	Diversity in group dynamics	*I think we have a nice group so far. I think it's fun and people are really open to helping each other and giving feedback. You do notice that some people look a little different, have a different view than the rest. Of course, everyone differs with good. Look, but it's funny to talk to each other in groups and see what Everyone thinks about it.*
	Building trust through critical incidents	*Yes, I think critical incidents also help to have more trust in each other anyway if everyone opens up and exposes themselves, so to speak and explains what they did and didn't do and what they want to improve and are open to the feedback. Yes, and the group app and the rules we set up by social rules.*
	Building group cohesion through communication in small groups	*Yes, I think it's a small group communication. That helps anyway to get to know a few people better, so you. Already a little better, getting to know each other and already feeling a little better. Like okay this is my group this is where I belong and then in the big conversations then you can kind of here what Everyone thinks and how they feel and then by talking to each other you still have the feeling of okay we're really totally doing it together so really doing together we're looking to improve and learn and leadership. So yes.*
	Significant learning experiences identified within learning community: diversity in leadership perspectives	*I think during lesson 1 that there are also other ways, so to speak, my feeling was that how I experience leadership is what leadership is like. Very succinctly, but if you then hear from other people like oh, I do it very much that way, or I am very bad, that is how you learn again. Oh, there are also really many other types of people who look at leadership very differently and who experience it very differently. And they also see followership very differently. And yes, because of that you are more, I have started to think more like okay, maybe my way is not the best way, but there are also other ways that can be useful in certain situations.*