

JYU DISSERTATIONS 847

Teppo Toikka

Building a School as a Learning Community

Exploring the Development of a Unified Comprehensive School in Finland



UNIVERSITY OF JYVÄSKYLÄ
FACULTY OF EDUCATION AND
PSYCHOLOGY

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ABSTRACT

Toikka, Teppo

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This doctoral study consists of three substudies that examine the development of a new comprehensive school as a learning community. The research investigates how the learning community development model presented in this dissertation supports the growth of primary and lower-secondary school teachers, principals, and teams toward a new unified comprehensive school. This study was conducted as a qualitative case study alongside the Creative Expertise project. Participants included teachers and principals from both primary and lower-secondary levels. In the first substudy, all classroom teachers, subject teachers, and special education teachers (N=41) were interviewed at the beginning of the school development process, while the second and third substudies involved interviews with the principals and teacher team leaders (N=7) of the school community at the conclusion of long-term developmental collaboration. The construction of the new school community is challenged by numerous factors stemming from both local and systemic traditions and practices that still persist in comprehensive schools. The findings emphasize the dialogue and discussion regarding collaborative working methods and their importance in anchoring the shared vision to the school's daily practices and in supporting team learning in the school. Teachers' expectations and readiness to work in development teams, along with the differing practices and operational methods of the two merging schools, were found to impact the development work of the unified school as a learning community. In addition, this research explores the background and continuity of comprehensive school development and the implications for the current challenges and opportunities in basic education development. The findings enhance our understanding of how the mental models of teachers in the school community, the shared vision of the merging schools, and team learning act as facilitators for school development.

Keywords: Learning community, unified comprehensive school, mental models, shared vision, team learning.

TIIVISTELMÄ (ABSTRACT IN FINNISH)

Toikka, Teppo

Koulun rakentaminen oppivana yhteisönä: Yhtenäiskoulun kehittämisen tarkastelu Suomessa

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Tämä väitöstutkimus koostuu kolmesta osatutkimuksesta, joissa tarkasteltiin uuden yhteiskoulun kehittämistä oppivana yhteisönä. Tutkimus selvitti, miten oppivan yhteisön kehittämismalli tukee ala- ja yläkoulun opettajien, rehtorien sekä tiimien kehittämistä kohti uutta yhtenäiskoulua. Tutkimus toteutettiin laadullisena tapaustutkimuksena Uutta luova asiantuntijuus -hankkeen rinnalla. Osallistujina olivat koulun ala- ja yläkoulun opettajat sekä rehtorit. Ensimmäisessä osatutkimuksessa haastateltiin kaikki koulun luokanopettajat, aineenopettajat ja erityisopettajat (N=41) kehittämissuunnitelman alussa. Osatutkimuksissa II ja III haastateltiin kouluyhteisön silloisia rehtoreita ja tiiminvetäjinä toimineita opettajia (N=7) pitkäkestoisen kehittämissuunnitelman päätteeksi. Tulokset osoittavat, että uuden kouluyhteisön rakentamista haastavat monet tekijät, jotka kumpuavat paikallisista ja koulujärjestelmän traditioista sekä toimintatavoista, jotka ovat edelleen läsnä nykykouluissa. Tulokset korostavat keskustelun, dialogin ja yhteisöllisten työtapojen merkitystä koulun yhteisen vision kiinnittymisessä arkeen sekä tiimioppimisen tärkeyttä kehittämisen tukena. Lisäksi kehittämistyöhön vaikuttavat opettajien odotukset työskennellä kehittämistiimeissä sekä kahden yhdistyvän koulun erilaiset käytänteet. Tutkimus avaa yhtenäiskoulukehityksen taustoja ja pohtii näiden merkitystä peruskoulun kehittämisen haasteille ja mahdollisuuksille. Tulokset lisäävät ymmärrystä siitä, miten kouluyhteisön opettajien mielenmallit, jaettu visio toteutuminen ja tiimioppiminen tukevat uuden kouluyhteisön kehittämistä.

Avainsanat: Oppiva yhteisö, yhtenäiskoulu, mielenmallit, jaettu visio, tiimioppiminen.

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LIST OF ORIGINAL PAPERS

This doctoral thesis is based on the three substudies listed below. These publications are referred to as substudies or as Substudy 1, Substudy 2, and Substudy 3 in the text. Copies of the published articles can be found as appendices to this report, and they have been reprinted with the permission of the publishers.

- Article I Toikka, T., & Tarnanen, M. (2022). Understanding teachers' mental models of collaboration to enhance the learning community. *Educational Studies*, 50(6), 1114–1131. <https://doi.org/10.1080/03055698.2022.2052809>
- Article II Toikka, T., & Tarnanen, M. (2024a). A shared vision for a school: developing a learning community. *Educational Research*, 66(3), 295–311. <https://doi.org/10.1080/00131881.2024.2361412>
- Article III Toikka, T., & Tarnanen, M. (2024b). School development through team learning: exploring the potential of teams in a learning community. [manuscript under review for publication].

This thesis is part of the Creative Expertise (*Uutta Luova Asiantuntijuus* [ULA]) project (2017–2021) funded by the Ministry of Education and Culture, with the data for the three publications collected within the project's framework. The thesis author is the first author of each article and participated in all research phases: planning, preparing, and executing the development project with a partner school. While considering the co-author's instructions and comments, the thesis author collected the data, conducted the analyses, and drafted each article's report. Co-author Tarnanen held a leadership role in the ULA project.

FOREWORD

Many of us have wondered what we want to do when we grow up – something worth looking back on from a rocking chair, or hopefully, much earlier! Well, through a few lucky twists of fate, I decided that when I grew up, I wanted to write a dissertation – or at least become a researcher. There are many ways to start a researcher career, and mine began with a bang: on my second day at work, I was already interviewing teachers, gathering data for what would become this very dissertation. Although, at the time, I wasn't quite aware of that – probably for the sake of my own peace of mind! But once I received approval to start my doctoral studies, it became clear that the coming years of my "grown-up" life would "orbit" around the topic and theme I had chosen.

I would like to express my sincere thanks to everyone who has supported me during my PhD journey. First, I want to thank my primary supervisor, Professor Mirja Tarnanen, for your constant support and trust throughout this process. In addition to supporting my dissertation work, you provided me with many opportunities to work on interesting projects, and your guidance has helped me grow as a researcher. I am grateful for the belief you have shown in my work.

Special thanks to my second supervisor, Professor Emeritus Jouni Välijärvi. I genuinely appreciate the time you dedicated to providing me with valuable advice and insights throughout my research journey. Our discussions, particularly those focusing on the history and future of the education system, have been enlightening and have influenced my thinking.

I would also like to thank the ULA team: Emma, Anne, Vili, and Matti. Collaborating with you has been one of the best parts of this journey. I will always remember our travels in the "ULA taxi" around Finland – your hard work and energy made our projects both fun and successful. I am grateful for the friendships we formed along the way and the lasting impact you have all had on my research experience.

I am very grateful to my dissertation pre-examiners, Wilfried Admiraal and Janne Pietarinen, for your helpful feedback. Special thanks to Janne for agreeing to be my opponent. A big thank you to all my colleagues. I would especially like to mention the POMM1110-team, the MyPeda group, and the sustainability course team. I would also like to extend my heartfelt thanks to the members of the 2D "dice" office and my fellow young researchers on the Retee ry board.

Finally, I want to thank my family and friends who have supported me throughout this journey. Your love and encouragement have made this experience not only possible but truly enjoyable.

In Helsinki, October 23th, 2024

Teppo Toikka

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ACRONYMS AND ABBREVIATIONS

ULA	Creative Expertise project (Uutta luova asiantuntijuus)
FNBE	Finnish National Board of Education
OECD	Organisation for Economic Co-operation and Development

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ORIGINAL PAPERS

1 INTRODUCTION

The development of a school as a learning community is a complex issue. Often, in terms of research and practice, it combines theory and action, branching off in various directions due to the ever-changing reality of a school. Moreover, the development of unified comprehensive schools is a multifaceted and captivating process. These schools embody the entirety of the comprehensive education content, its aims, and, above all, the people involved—including students of various ages, teachers with diverse educational backgrounds, and other essential school professionals, as well as principals who guide the community's improvement, learning, and development. There are many expectations regarding what schools should offer their students, how children and adults in schools learn and grow as individuals, and which teaching and learning practices and philosophies best support the vast aims of comprehensive education. At times, novice and even more experienced educators may wonder how to promote the learning and development of the school community's members. What does professional development and learning even mean in a school context? How might professional development and learning drive desired and envisioned change and improvement within schools.

Development and learning in a school community is a topic not often covered in the media. Yet, teachers' continuing professional development and learning are an essential part of in-service teachers' work to expand their knowledge and teaching practices and adapt to their students' evolving needs and a more collaborative school culture (Boeskens et al., 2020). The media is frequently occupied, sometimes for a reason, by crises in education, such as declining PISA (Programme for International Student Assessment) results, students' malaise, and their lack of well-being. Most likely, on any given day, articles about schools and education policies are printed in major and local newspapers. Undoubtedly, these themes resonate strongly with the minds and emotions of citizens. The school system is regularly seen as responsible for fulfilling many of society's hopes, aspirations, and expectations. In public discourse, our education system has undoubtedly been our national pride, but it is also a stage for key political confrontations and negotiations (Huusko et al.,

2007). To prove this, one only needs to look back at previous parliamentary or municipal elections and government programs.

Moreover, building and establishing a new school is always a major event, at least locally, because most of us are familiar with our local schools – if not up to date through children’s school stories, then perhaps through weekly hobby-level floorball practices. Naturally, we all have our own experiences of school. In a sense, more integrated basic education and the growing number of unified comprehensive schools shape and transform our view of school as an institution from separated schools to unified school communities.

I suggest here at the beginning of this dissertation that the development of a school as a learning community is a somewhat abstract task, as school communities are by nature multilayered and shaped by their histories, ongoing shifts in education policies, leadership, teachers, students, and local culture (e.g., Braun et al., 2011). I have observed that even well-tested practices and praised theories must genuinely meet and connect with the learning needs, practices, and expectations of a real school community and its teachers’ personal terms. In this sense, theory may provide us with a framework, but it needs to align with the challenges and opportunities of real-world school environments and practices (Biesta & Burbules, 2003). With this in mind, the aim to understand existing school practices offers valuable insight for both initial and in-service teacher education. This understanding helps us realize what does or does not work in our schools, how to better prepare teachers at various stages of their careers to make an impact within their schools, and how we can harness their developmental skills in the constantly changing realm of education.

This thesis follows the journey of developing a school as a learning community through a case study that merges theory with the ever-changing practices of a school community and the development of individuals, teams, and the entire school community. This study presents an approach to school development by applying Senge’s learning organization theory, which he first presented in his highly impactful book, *The Fifth Discipline* (Senge, 1990). This thesis’s substudies more closely examined Senge’s learning disciplines of mental models, shared visions, and team learning. More precisely, the three substudies investigated 1) teachers’ mental models for teacher collaboration, 2) the school community’s co-created shared vision, and 3) team learning within a school’s new development teams.

In this study, learning communities are defined as schools in which members continuously strive to develop and learn together, aiming for openness to innovative ideas and dialogue and readiness for change. In this dissertation, I present the concepts of a learning community and, a professional learning community (e.g., Bolam et al., 2005; DuFour et al., 2016; Stoll et al., 2006), and a learning organization (Senge, 1990; Senge et al., 2012) and their subtle differences in content and usage contexts. Additionally, I bridge these concepts to the context of unified school development to provide insights on how to initiate change in a school community through a learning community approach and by integrating theory and practice.

This dissertation is the result of work carried out within the framework of the Creative Expertise (in Finnish, *Uutta Luova Asiantuntijuus* [ULA]) project (see Martin et al., 2020). This project provided the framework, objectives, and practices for this study. The ULA project's development model, as explored in this study, was based on a redesign of teachers' continuous learning throughout their careers and integrated their continuous learning and development within the school community to support both teachers' and the school's learning and development. The objectives of the ULA project were diverse, but this study focuses specifically on the part of the project centered on the planning, implementation, and development of long-term school collaboration, which involved teachers, student teachers, and teacher educators as active participants in the school's development (Martin et al., 2020). In line with the project's philosophy, the methods of development and learning were designed based on initial surveys conducted (Tarnanen et al., 2021; Toikka & Tarnanen, 2022) in partner schools.

In all substudies of this dissertation, the examination of teacher collaboration was central, and it was viewed in the context of promoting school development and the success of a new unified comprehensive school community. However, the concept of teacher collaboration is somewhat hard to grasp, as it is an umbrella term for multiple forms and practices (Vangrieken et al., 2015). Teacher collaboration encompasses various forms and definitions, including co-teaching, team teaching, communities of practice, and professional learning communities (Vangrieken et al., 2015). Thus, teacher collaboration may include everyday activities, such as sharing exam and assignment materials, teaching different subjects, or providing guidance to another teacher. However, it can also involve broader joint projects, either with students fully engaged or only in terms of execution, through which teachers plan lessons together. In this case, teacher collaboration can be understood in a third way, which is strongly linked to the perspective of developing the entire school community (Senge et al., 2012). Learning communities foster a culture of continuous learning and collective responsibility for student success (DuFour et al., 2016) by strengthening collaboration within a school community to facilitate both individual and collective development and learning.

As indicated by its title, this study examines the building and development of a new school. The term "building" is appropriate, as this research involved the physical and communal aspects of building a new school. However, the title also implies that the building process was not random but was facilitated through intentional development actions driven by people. This "new" school was extensively renovated; thus, the focus was on development and change rather than creation. To facilitate and build a sustainable basis for multilevel development, learning, and change in the school community, it was important to identify the school's current state at the beginning of the project, including both its challenges and successes, and provide a direction for change efforts that recognize employees' mental models, perceptions, and prior experiences.

1.1 Unified comprehensive education in Finland

Large-scale school reforms have always been connected to societal changes (Halinen & Pietilä, 2005; Sarjala, 2005). Traditionally, the Finnish education system, with its two-track basic education, aimed to offer diverse educational pathways to different segments of society (Naumanen & Silvennoinen, 2010). During the 1960s and 1970s, Finland initiated a substantial basic education reform that aimed to provide equal and uniform educational opportunities for all students through one national core curriculum and detailed legislation about the new comprehensive schooling (Kalalahti & Varjo, 2023). However, the comprehensive education system faces ongoing challenges and demands, for example, related to student well-being (Salmela-Aro, 2022), curriculum development (Haapaniemi et al., 2021), assessment practices (Nieminen et al., 2024), and technological advancements (Christopoulos et al., 2020; Kaarakainen & Saikkonen, 2021). Amid numerous changes in the education system and schools, teachers must continually renew their professional knowledge and skills related to the ever-changing educational landscapes shaped by global forces of digitalization (Korhonen et al., 2021; Mertala, 2020), immigration (Pulkkinen et al., 2024), and sustainability and global environmental problems (Lehtonen et al., 2019; Vesterinen & Ratinen, 2024).

In Finland, a legislative amendment regarding unified comprehensive education came into effect in 1999 (Basic Education Act 628/1998). This amendment unified the pedagogical structure of single-track basic education into a nine-year integrated comprehensive program (Johnson, 2006). Unified comprehensive schools typically teach all primary and lower-secondary school grades, specifically Grades 1 to 9 or 10. These schools may operate in separate buildings or in a single building. Often, the transformation of comprehensive schools is an administrative decision in which old school buildings merge primarily on paper. Alternatively, schools may physically merge under one roof.

A key aim of this amendment (Basic Education Act 628/1998) was to integrate comprehensive education by removing the administrative barriers between primary and lower-secondary schools (Halinen & Pietilä, 2005). Thus, the key objective of the current comprehensive primary school, as suggested by its name, is to promote equality, coherence, and cohesive basic education for all children by safeguarding children's best interests and rights. The First National Core Curriculum for Basic Education (Finnish National Board of Education [FNBE], 2004) under the new unified comprehensive education deemed the cohesive continuum from early childhood education to the completion of basic education as the central developmental goal of basic education. This same goal has also been at the heart of comprehensive education in the subsequent and present National Core Curriculum for Basic Education (Finnish National Agency for Education [FNBE], 2014). However, numerous societal changes have challenged this concept, as today's comprehensive school system can no longer mitigate disparities caused by children's diverse backgrounds and other societal

factors, such as increasing regional inequality (Kosunen et al., 2024) and diverse socioeconomic status (Järvinen et al., 2023). I will expand on this idea in Chapter 3, which focuses on the evolution of a unified basic school from the latter half of the 20th century to the present day.

To enhance the effectiveness of education and teacher training, both in Finland and globally, there is a focus on improving teachers' continuing education and training, which should more comprehensively target the development of work communities (Taajamo & Puhakka, 2019). Furthermore, principals should be capable of acting as development-facilitating pedagogical leaders in addition to managing human resources, leadership, finances, and work community improvement and changes (Mäkelä, 2007). Teachers are also expected to engage in professional development and learning, along with school community development, throughout their careers (Taajamo & Puhakka, 2019). However, in many Finnish schools, teachers often work alone in isolation or do not collaborate with colleagues to develop their teaching skills (Organisation for Economic Co-operation and Development [OECD], 2019). Education organizations cannot undergo reform and transformation merely through mandates (Fullan & Hargreaves, 2016; Guskey, 2002). Professional development is not a straightforward and uncomplicated process, as it requires challenging one's own beliefs, being aware of the school's operational culture, and understanding how to improve it based on collegiality and shared thinking (Avalos, 2011; Luostarinen et al., 2020; Senge et al., 2012).

In Finland, municipalities are responsible for providing comprehensive education. When the responsibility for organizing social and health care services, as well as rescue services, was transferred from municipalities and joint municipalities to well-being areas on January 1, 2023, the education sector became the largest sector in most Finnish municipalities. Although the number of unified comprehensive schools is still relatively small compared to all comprehensive schools (Statistics in Finland, 2020), the current trend in municipalities is thought to be a change to larger school units (Kalalahti & Varjo, 2023), which also creates the need for change in school management and practices (see Johnson et al., 2024). Additionally, the education sector has experienced a reduction in the number of schools, with the number of primary schools decreasing by 7% (Statistics in Finland, 2020). Whichever way a school's development progresses, it has implications on the nature of teacher collaboration, school management, and pedagogy, as well as, for example, on boundary-crossing activities between upper and lower grades.

Since the legislative amendment, particularly after the year 2000, comprehensive education and unified comprehensive schools have been studied from various perspectives. These include the development of learning communities (Rauste-von Wright et al., 2003), the process of integrating comprehensive education in a municipality (Johnson, 2006), collaborative efforts to develop a school community (Huusko et al., 2007), school organizations' culture and leadership (Lahtero, 2011), the implementation of unified comprehensive education (Rajakaltio, 2011), teacher communities (Ronkainen,

2012), attitudes related to the change from separated schools to unified (Sahlstedt, 2015), and the impact of a unified comprehensive school on teaching (Lammi, 2017).

Rauste-von Wright et al. (2003) explored the conditions for a unified comprehensive school from the perspective of a learning organization and examined how to build effective learning environments. Their study shares part of its research design with the current study. In Rauste-von Wright et al.'s study, teacher educators facilitated learning processes in the participating school, and the study aimed to discover how the school community could reflect on its learning. The study highlighted the unstructured nature of the school's culture, which resulted in a fragmented school community and divided teaching staff (Rauste-von Wright et al., 2003).

In Johnson's (2006) doctoral dissertation, the process of integrating comprehensive education was examined in one municipality from 2000 to 2005. The development of comprehensive education in line with the objectives of basic education was found to be an inherently slow process. Additionally, perceptions regarding the school and its changes were tense, and based on reflections on teachers' roles and collaboration, the changes themselves were seen as burdensome, although they were also viewed as opportunities for development and learning (Johnson, 2006).

According to Huusko et al. (2007), building unity within a school is a process in which the school community strives to learn new ways of thinking and acting at all system levels. The starting point for school development is the emergence of relevant questions related to unified comprehensive education. The researchers claimed that establishing comprehensive education is a collaborative change process that emphasizes interaction and reflective examination of the community's and individuals' perceptions and practices of vertical and horizontal coherence within the school community (Huusko et al., 2007).

Rajakaltio's (2011) doctoral thesis demonstrated the prevailing school culture in a unified comprehensive school complex and contradictory. Rajakaltio's study focused on the systemic and cultural transformation of separate primary and lower-secondary schools into a new unified comprehensive school. The research findings illustrated how teachers with different educational backgrounds (class and subject teachers) operating within distinct school cultures and with differing work orientations formed a new school that conserved the division of teachers within it and maintained a hierarchy between teacher groups despite the transition to a unified comprehensive school (Rajakaltio, 2011).

Lahtero's (2011) doctoral dissertation examined a unified comprehensive school's organizational culture from a symbolic-interpretive perspective. The case study explored the prevailing leadership culture and subcultures within the school community (Lahtero, 2011). Lahtero's interpretation was that symbolic and cultural influences are strongly present within a school community, leading to active interpretations of the leader's initiatives.

Ronkainen's (2012) doctoral thesis focused on how primary and lower-secondary schools were combined into an administratively unified comprehensive school between 2003 and 2009. Similar to Rajakaltio's (2011) thesis, Ronkainen's (2012) study highlighted how the teacher community forms a complex organization with a strong commitment to tradition in its organizational culture. Thus, the formation of a unified comprehensive school requires teachers to experience themselves as the learners to create a new school. However, in Ronkainen's research, teachers yearned for opportunities to go beyond old boundaries and questioned the routines, encouraged experimentation, discussed, and worked together as a community, and critically examined their own and the community's actions to learn from each other.

Sahlstedt's (2015) doctoral thesis examined teachers', pupils', and their guardians' experiences related to a unified comprehensive school and investigated the diversity among their perceptions. Sahlstedt's study also explored what things should be considered in the future when new unified comprehensive schools are built. According to the survey results, the guardians had the most positive and teachers the most negative attitudes toward unified comprehensive schools (Sahlstedt, 2015).

Lammi's (2017) doctoral thesis examined the impact of a unified comprehensive school on teaching when different "academic tribes" (pp. 53–55) and pupils of different ages met in a new way compared to the separate primary and secondary schools. Lammi examined how the new unified comprehensive school altered teacher interactions during the school day, what kind of collaboration teachers engaged in at the new school, and what skills teachers needed in the new school. The findings highlighted the role of interpersonal skills, self-awareness, and understanding of diversity within the school community (Lammi, 2017).

The studies and books presented above provide a comprehensive and current picture of the challenges and opportunities in developing a unity of thorough education and unified comprehensive schools over the past 20 years. Although previous studies share some similarities with this thesis and its substudies, research on developing a learning community based on a boundary-crossing approach between university and school is still scarce. School reforms are both administrative and practical. Perhaps, at times, the change in schools is still viewed as overly administrative.

This idea may stem from the fact that the unity and development of basic schools depend on the will and possibilities of individual municipalities to implement development and change projects, and almost always, the change regarding a unified school starts with an administrative decision (Johnson et al., 2024). However, many examples highlight the importance of the community in implementing the change and development of a new type of school (e.g., Huusko et al., 2007; Rajakaltio, 2011; Ronkainen, 2012). Thus, it is important to move from an administrative point of view toward a more multilayered understanding of change and development because achieving lasting change in an individual school requires concerted effort that spans from national-level governance to the

local level and within schools (Kovalainen, 2020). This study primarily focuses on internal change within a school, with collaborative development as the central perspective. However, this does not imply that a school's operations are detached from its community or broader context. Instead, school practices heavily rely on legislation, norms, and traditions.

1.2 Research context of this study: Creative Expertise project

This study was carried out as part of the Creative Expertise (ULA) project, which aimed to bridge the gap between initial and in-service teacher training. The ULA project was funded by the Ministry of Education and Culture from 2017 to 2021. This project was part of the Finnish Teacher Education Forum's Teacher Education Development Programme, which aimed to enhance the education of teachers. The program defined the need for change in the environment of teaching and education from early childhood education to higher education. The forum identified three key goals for future teacher education and the teaching profession, which included expertise in teachers' core competencies, creative expertise, and continuous development of teachers' skills and school communities (Ministry of Education and Culture, 2016).

Furthermore, the Finnish Teacher Education Forum aimed to strengthen teacher education programs, learning environments, and working methods to enhance the growth of innovative expertise. The forum emphasized learner-centeredness, research-based approaches, and community in teaching practices based on collaboration, networking, and building a culture of cooperation and peer support in teacher education (Ministry of Education and Culture, 2016). To achieve this objective, the forum established six guidelines to improve teacher education through 45 pilot projects, including ULA, which aimed to renew the curricular goals and practices of teacher education and teachers' professional learning (Lavonen et al., 2020). The objectives reflected a strong need for enhanced collaboration, driven by concerns about schools' and teachers' abilities to tackle the challenges brought about by changes in the operating environment (Ministry of Education and Culture, 2016). Thus, this dissertation and its substudies are part of a broader continuum of initial teacher education and ongoing professional development, as societal changes and new demands on teachers' expertise necessitate a reevaluation of the content and structures of teacher education.

The Finnish Teacher Education Forum aimed to enhance teachers' continuing education by providing teachers and other school staff with up-to-date knowledge about current teaching methods, practices, and strategies related to school development and by fostering a culture of teamwork and collaboration. One of the goals of the ULA project was to develop communal working methods in schools to support change, as it is important to recognize and acknowledge the traditions and practices of schools when aiming for changes in work practices (Martin et al., 2020). Developing teacher collaboration presents challenges not

only in Finland but also more widely among OECD countries (Taajamo & Puhakka, 2019). According to Lavonen et al. (2020), Finnish teachers are autonomous professionals in a decentralized education system, and “Finland has never had teacher standards. Instead, it has national aims or strategies for teacher education to communicate the shared ideas and characteristics valued in the teaching profession” (p. 245). In addition, in a school community, a teacher’s work is independent, allowing autonomy and pedagogical freedom in their teaching. Moreover, it has been observed that “teachers’ expertise in schools is not shared or integrated with the expertise of their colleagues” (Ministry of Education and Culture, 2016, p. 10).

The growing importance of teacher collaboration and teamwork is not just a national observation; similar observations and voices have been heard more broadly on a global scale (Vangrieken et al., 2015). A particular challenge is the very fixed structures in education supporting work in isolation, with teachers being confined to their own classrooms and simultaneously relying on traditional teaching methods and pedagogical practices (Kools & Stoll, 2016). Additionally, concerns have been raised regarding fragmented teacher professional development, which needs to be addressed so that “activities supporting teacher’s development are guided, effective, systematic, and long-term, as well as encouraging teachers to collaborate and network” (Ministry of Education and Culture, 2016, p. 7). Thus, teachers’ professional development is expected to focus more on community-based development and learning, which aligns with the transformation of workplaces into teachers’ learning and development environments (Helin, 2014).

Continuing education should not solely be based on isolated training days away from the school community but rather should include long-term and tailored collaboration with work communities (Martin et al., 2020). Teachers’ professional development should be enhanced by implementing strategies that effectively integrate the updating and development of teachers’ competencies with the school’s overall development based on dialogic collaboration and peer learning (Jokinen et al., 2014). According to Soini et al. (2022), change management, knowledge sharing, and general opportunities for participation make it easier to integrate reforms into school practices. Like most education systems, the Finnish education system is prone to various challenges; these include a decrease in learning outcomes, an increase in the variation of learning outcomes, increases in the various needs of individual learners, collaborative learning processes in heterogeneous and multicultural classrooms, a lack of teacher collaboration, a lack of quality work at the local level and pedagogical leadership to support teachers’ professional learning, teachers’ pedagogical competences and innovative orientation, a lack of willingness and competence for personal professional learning, the number of young people who drop out from education or the labor market, increases in inequality, and the influence of digitalization (see Lavonen et al., 2020).

The goal of the ULA project was to renew teachers’ initial and continuing education in terms of content and structure, in alignment with the Finnish

Teacher Education Forum's strategic aims and guidelines for teacher education development. This was achieved by promoting shared expertise in school communities and fostering a culture of professional development based on systems thinking, research-based knowledge, and teacher collaboration (Martin et al., 2020). In Finland, primary school teachers are educated at universities through five-year master's programs, and in-service teachers participate in local curriculum work. This is supported by a strong emphasis on research skills throughout initial teacher education. Although my dissertation examines change nationally within the Finnish context, it shares similarities with the international education discussion. For example, the connection between teachers' initial and continuing education is being resolved around the world (Helin, 2014).

The ULA project was divided into three work packages, and this thesis and its substudies focus on the development project in the first work package (Martin et al., 2020). In this work package of the ULA project, a research team from the University of Jyväskylä developed a new concept for school development and teacher in-service training that emphasizes community development based on a learning community approach to school development, discussion and dialogue, shared vision, and team learning. The larger aim was to support the partnering school's unique process by utilizing a research-based approach and building long-term school collaboration, which aimed to respond to the school's needs (see Martin et al., 2020; Tarnanen et al., 2021).

To bridge in- and pre-service teacher education, the ULA team collaborated with a comprehensive school for two academic years, beginning in the spring of 2018. The school community participated in a long-term school-university workplace coaching and development program, encouraged by the ongoing change in the school toward a unified comprehensive school, to promote and support teachers' and principals' continuous learning. In the project, the professional development and continuing education of teachers, principals, and other staff members were integrated into the development of the learning school community. This approach was founded on the idea of collaborative and contextually relevant continuing education embedded within the school's daily operations to support their professional growth.

As the schools requested, the efforts prioritized the building of unity within the school community and harmonizing separate school communities into a single community. Thus, the current study addresses both the theoretical and practical implications for school development and offers insights on how to improve schools through an approach that aims to enhance schools as a learning community (see Figure 1). The development aimed to strengthen community, advance pedagogical development, support learning, empower teachers' agency, and develop the school's operational culture toward a unified comprehensive school. The key phases included identifying the need for change, which involved understanding the school community's initial situation (Tarnanen et al., 2020; Toikka & Tarnanen, 2021); building a shared vision (Toikka & Tarnanen, 2024a); and establishing common goals. The work progressed through project-based

approaches and the efforts of the school's new development teams, with an emphasis on team learning (Toikka & Tarnanen, 2024b).



Figure 1 Visualization of the ULA project's school development concept (see Martin et al., 2020)

2 THE AIM OF THIS THESIS

The aim of this dissertation is to examine how the ULA project's learning community approach supports the transformation of a school into a unified comprehensive school as a learning community within the Finnish comprehensive school context. In this dissertation, school transformation is examined through three learning disciplines of a learning organization, as named by Senge (1990; 2006; Senge et al. 2012): teachers' mental models, a shared vision of the school community, and the promotion of team learning. Change in school communities is a current and long-lasting phenomenon. Thus, it has been studied extensively, but as society and the world around the school change, changes in schools must also be understood through new research. Moreover, despite substantial research on school development from several perspectives, there is a notable lack of focus on the development of schools prior to their actual merger into a unified comprehensive school setting. Thus, this study examines change in schools at the level of one school community; however, to better understand this change, this examination also focuses on the broader framework of school change. In addition, it introduces both current changes and long-term developments related to the questions and decisions that are critical to understanding current schools, for example, the changing needs of education and curriculum changes.

This study emphasizes the changes occurring in schools before the merger into one unified comprehensive school. Thus, this dissertation focuses on how teachers and principals experienced and perceived the development of a school community and changes in organizational structure, workspaces, and teams, along with a shift in work culture toward a more collaborative and team-based learning community. In this thesis, the "learning community" refers to the school as both a learning institution and an environment in which members can learn and develop individually and collaboratively.

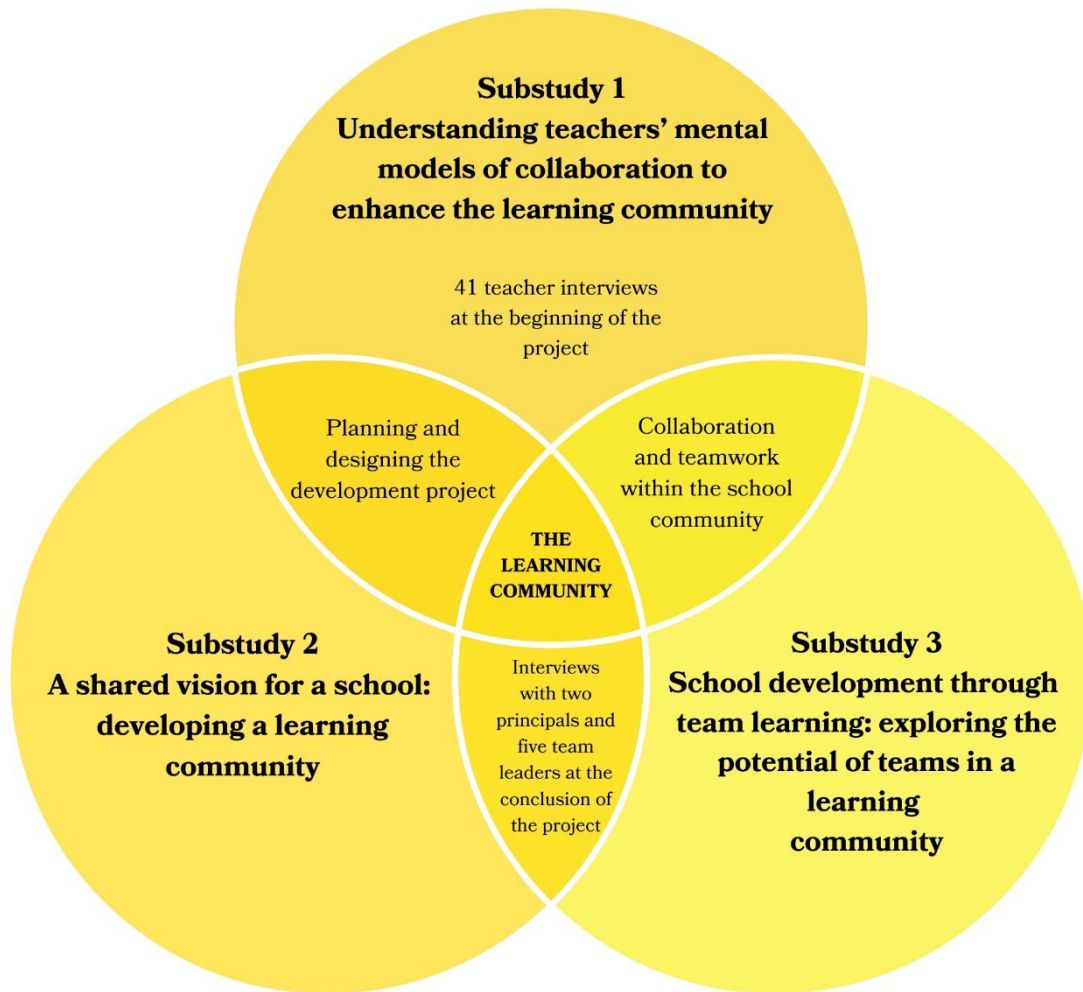


Figure 2 Structure of the thesis and substudies

Figure 2 highlights the structure of the thesis, which includes three substudies conducted within the same school community of their school development into a unified comprehensive school. Three learning disciplines were used to examine the change from different perspectives. A difference among these disciplines is their relation to different organizational levels: the individual, the team, and the organization (Bui & Baruch, 2010). In this dissertation, the examination of mental models focused on the individual level, while the examination of team learning focused on the team level. The third examination, that of a shared vision, focused on the development of the entire school community according to that vision. This approach provided a comprehensive picture of the school's transition toward a unified school on multiple levels. Additionally, two temporal layers were examined: the study of mental models, which focused on the school's initial situation at the start of development, and the study of shared vision and team learning, which examined the relationship of teachers and principals with change during and at the end of the development project.

In Figure 2, the areas of overlap between the substudies' circles represent their shared elements. This is based on Bui and Baruch's (2010) argument that team learning is a team-level discipline and shared vision is an organizational-level discipline, while mental models represent an overarching discipline that spans several levels. Thus, Substudy I examined teachers' mental models of collaboration, a critical driver for change at multiple levels of a learning community. Additionally, Substudy I's exploration of teacher collaboration mental models was related to Substudy III's focus on team learning within the new development teams, which were formed to support and increase cross-boundary teacher collaboration within the school community. Furthermore, Substudies II and III were based on the same interview data collected at the project's end, although they investigated different learning disciplines.

Through a summary of the substudies and their findings, this dissertation seeks to contribute knowledge on the development of the school community toward a unified comprehensive school by addressing two overarching questions that link the substudies together. The research questions of this thesis and Substudies I-III are presented in Table 1.

Table 1 Research questions of the study and substudies

Overarching research questions for the entire study	Specific research questions for each substudy
<ol style="list-style-type: none"> 1. What are the existing conditions involved in the merging of primary and lower-secondary schools into a unified comprehensive that influence the development of a learning community? 2. What new insights can be gained about the role of the learning community approach in shaping collaboration, shared vision, and team learning in unified comprehensive schools? 	Substudy I
	<ol style="list-style-type: none"> 1. What forms of collaboration do teachers attach to their work? 2. What do teachers think about different forms of collaboration, and what types of collaborative work do they consider relevant during a period of change?
	Substudy II
	<ol style="list-style-type: none"> 1. How do teacher team leaders and principals associate a collaboratively created shared vision with the process of developing a learning community?
	Substudy III
	<ol style="list-style-type: none"> 1. How do teacher team leaders perceive team learning in development teams? 2. How do teacher team leaders consider their professional development in relation to their new role? 3. What key aspects contribute to the success of development teams in terms of promoting school community development?

3 EVOLUTION OF COMPREHENSIVE EDUCATION: HISTORICAL OVERVIEW

In this chapter, I present the evolution of comprehensive education in more detail, including the key milestones that have shaped its current form and practices, particularly from the perspective of pedagogically cohesive comprehensive education. Thus, this chapter aims to show the roots of unified comprehensive schools, which go deeper than the administrative act of the late 1990s. I limit the overview to the post-World War II era, with a focus on the transition to comprehensive schools and the development at the beginning of this century. The overview begins with a brief look at the longer history of the Finnish school and education system and the transition period from a two-track to a single-track school system by addressing the reasons and solutions that led to this systemic transformation.

I argue that, despite the increasing importance of uniformity in comprehensive education, the system can still appear somewhat divided and less integrated and equal than desired (see Kalalahti & Varjo, 2023). This observation raises questions about the historical and structural influences on education system development and their ongoing impact on present comprehensive education. By pointing out these connections, I explain why efforts to unify comprehensive education do not always lead to practice and what steps are needed to achieve this goal.

The Finnish education system consists of early childhood education with one year of mandatory preschool at the age of 6. This is followed by basic education, which is synonymous with comprehensive education, for ages 7–15. Secondary education, which includes general and vocational education, ranges from 15 to 19 years of age, and higher education follows this. Currently, compulsory education continues until a young person reaches the age of 18, thereby only partly encompassing both general and vocational secondary education within the scope of compulsory education. Additionally, the adult education system is part of this continuum, thus emphasizing lifelong learning for adults.

Moreover, the national collective agreement for teachers plays a central role in Finnish education, as it governs a variety of critical aspects related to the operation of schools and the responsibilities and rights of teachers. The agreement provides a structured framework for matters such as working conditions, salaries, and professional development as well as for time allocated to collaborative planning and home-school collaboration. This 120-hour collaboration time for each teacher per academic year is intended to foster collaborative planning of teaching and home-school partnership using multiple approaches. It also provides space for teamwork and the sharing of expertise among teachers. This time can be used for participation in school development activities so that teachers' insights and experiences are considered within the school. This specific time was strategically used for the development of the new unified comprehensive school described in this thesis, thus allowing for efforts and resources to focus on the ULA project's progression and school improvement.

3.1 The first steps toward a more unified basic education

The emergence of the Finnish comprehensive education system can be traced back to a process that gained momentum around the 1960s and 1970s. Although the transition to the comprehensive school system was implemented in the 1960s and 1970s, some of the earliest discussions and ideas about the new school system were presented as early as the late 1940s by the School System Committee (in Finnish, *Kansakoulukomitea*; see Salmela, 1948). The committee emphasized the idea that social justice, meaning the social capital of parents (i.e., wealth, origin, social status, or place of residence), should not affect a child's opportunities to attend school (Salmela, 1948). Over the course of almost two decades, several committees were tasked with considering the new school system, with the process gaining momentum in the mid-1960s (Johnson et al., 2024).

The decades following World War II brought an increase in prosperity in Finland and a comprehensive transformation of the societal structure from rural to urban (Repo, 2010). This also changed the educational needs of citizens, as an increasing number of students began to move toward secondary education, resulting in a decline in elementary school's upper grades (Lammi, 2017; Sahlstedt, 2015; Tantt, 2005). Before the introduction of the comprehensive education system, the Finnish basic education system operated on a two-track model that was divided into elementary school, secondary school, and high school. Elementary school provided basic education, while secondary school offered either middle school or high school education, which prepared students for university studies. During the development of the earlier school system in the 19th century, two prominent perspectives emerged: a unified school system focused on child-centeredness and a parallel two-track system aimed at promoting education and cultural development, of which the latter perspective became more dominant (Ahonen, 2003; Sahlstedt, 2015). The direction of changes in the education system was contested by differing views, with a focus on

students' learning abilities and needs and an underlying belief in the variability of people's capacity to be educated. (Johnson et al., 2024).

The transition to a new system was primarily justified by the need to address social and regional inequality in education (Väljjarvi, 2022). During the 1950s, the pedagogy and teaching methods in elementary schools started to resemble those of secondary schools, and with the growth in the number of secondary schools, the need to dismantle the two-track system increased (Sahlstedt, 2015; Tanttu, 2005). Thus, the two-track model faced considerable challenges in the decades leading up to major reform. One of the problems with the system was that, among other things, in elementary school, students were provided either middle school-based education, which was the same content as that of elementary school and provided skills for nonacademic professions, or high school-based education, which provided access to higher education (Repo, 2010). The education system struggled to meet the growing educational demands of the population, resulting in a situation in which it could no longer function efficiently or effectively in a changing environment (Lehtisalo, 2005). This meant that more and more people were better educated. Thus, their educational needs increased rapidly, and almost everyone participated in a six-year basic school. However, the two-track system still provided different further education routes for students (Antikainen et al., 2006; Halinen & Pietilä, 2005).

As previously mentioned, the transformation of the school system was driven by the simultaneous and intertwined shortcomings of the previous system to meet the demands of the late 1960s. In addition, in the 1960s, there were also concerns related to the post-war Baby Boom generation overcrowding educational institutions and worries about the education and employment of young people after completing their education (Repo, 2010). Moreover, the administrative fragmentation and somewhat haphazard nature of the earlier school system were seen as "leakages"; thus, there was a great desire to revise the school system as a whole in line with the idea of centralized planning and the government approach of the 1960s (Halinen & Pietilä, 2005).

In the 1960s, the development was further propelled when, in 1963, the parliament instructed the government to investigate how a new comprehensive school system could be implemented (Halinen & Pietilä, 2005). Following this request, several committees engaged in extensive work to negotiate a blueprint for the new school system throughout the 1960s. These included the Basic Education Committee in 1964, the School Reform Committee in 1965, and the Basic Education Curriculum Committee in 1966 (see Johnson et al., 2024). Based on the number of committees, it appears that there was a strong intention to establish a new school system, and this development was strongly affected by the timely regime of detailed and centralized planning (Ropo & Väljjarvi, 2010).

However, due to contradictions and disagreements in the committees' work, the creation of the new system proved to be challenging. Eventually, in 1968, a law (Law on the foundations of the school system 467/1968) on the new school system, named *peruskoulu* (comprehensive school), was enacted. The law established the new school system and school culture, which were more unified

than the single-track system. However, it preserved some elemental structures from the previous system, such as the division into lower and upper grades (Johnson et al., 2024), and despite intense debates, the new system retained clear elements of a two-track division. This compromise and implementation of change was influenced by the already-educated body of teachers, whose expertise was essential in the new school system. Thus, former middle school and secondary school teachers handled lower-secondary education, while former elementary school teachers oversaw primary education (Johnson et al., 2024). Moreover, the central directive of comprehensive education claimed that the education of all students in the lower grades of the comprehensive school should be uniform in content, whereas the upper grades included ability-based groups for subjects like mathematics (Halinen & Pietilä, 2005). In retrospect, the 1960s' evolution of comprehensive education mainly focused on societal and educational equality. However, pedagogical coherence or consistency in curriculum and school organization culture were not primary considerations.

The traditional separation between primary and secondary education remained within the comprehensive school system, evident in aspects such as the curriculum, teaching staff structure, and division into lower and upper comprehensive education grades (Halinen & Pietilä, 2005). The existing school system provided the necessary infrastructure and teachers, which made it easier to transition to the new system with already familiar elements. However, in many respects, this approach resulted in insufficient changes (Johnson et al., 2024). For instance, as it was rooted in the earlier two-track system, the new school system was not viewed as holistically as hoped because, for example, the curricula for different school levels were developed separately and cross-boundary collaboration between the school levels was not deemed necessary (Sahlstedt, 2015).

The leadership of schools also remained largely unchanged, especially in the early stages of the new school system. The position of principals and school leaders in the new comprehensive school system was built upon the tradition of head teacher leadership that originated from the earlier elementary school system (Taipale, 2005). In the old system and in secondary schools, there were head teachers whose role was to supervise the compliance of regulations, rules, and the maintenance of order in the school, whereas the development of the school community was not typically assigned to these head teachers because it was believed that they lacked the necessary educational competences (Taipale, 2005). The coming decades eventually changed this assumption, as nowadays, principals have numerous responsibilities and are expected to have a wide range of knowledge in leading and developing their schools and staff in interactions with different stakeholders on multiple levels (Elomaa et al., 2024).

3.2 A common but not uniform school system

In the 1970s, Finnish basic education transitioned into a single-track system between 1972 and 1977. This reform has been considered “perhaps the most important educational policy decision in the history of Finland” (Lammi, 2017, p. 36). The new system was designed for all students to address the need to improve citizens’ educational level (Johnson et al., 2024). Although steps were taken toward a more equal school system, the new system was not perfect, as two central issues prevented unified learning paths for all students. First, the comprehensive school curriculum lacked a cohesive structure and was divided into distinct subject-based silos (Halinen & Pietilä, 2005). Second, the curriculum continued to produce students with varying eligibility for further studies; for example, those who chose the lowest-level curriculum in mathematics were not eligible to continue education in high school (Halinen & Pietilä, 2005).

In the 1970s, education development typically involved centralized governance and administration, as education directors and educational supervisors in municipalities were tasked with centralized planning of the administrative, financial, and pedagogical aspects of schools (Kalalahti & Varjo, 2023). The work of school principals did not emphasize pedagogical leadership in the school, as the tasks of the principals were very concrete actions based on running the everyday life of the school—that is, principals oversaw school activities and teacher performance, occasionally conducting classroom checks (Taipale, 2005).

However, by the 1980s, the approach shifted toward shared responsibility between schools and centralized planning. This shift meant that schools and teachers began to contribute more to curriculum development, indicating a cultural change within the comprehensive school system (Halinen & Pietilä, 2005). Centralized planning was criticized and deemed less effective than before (Atjonen, 2005; Taipale, 2005). This change was not unique to Finland, as across the Western world, the nature of educational development and the isolated nature of teachers’ work began to be reconsidered (Hargreaves & O’Connor, 2018).

In a sense, 1985 was an important year, as it marked a major step toward linking education policy and pedagogy between school levels. This was achieved with the establishment of a new curriculum framework for comprehensive schools and national core curriculum guidelines (see Kouluhallitus, 1985). The curriculum of the 1980s was still very detailed in nature and based on a static understanding of knowledge, the description of the contents of teaching, and the ways in which individual lessons should be implemented (Lindström, 2005). However, under the new curriculum, municipalities were given increased autonomy in making curriculum-related decisions, as they were explicitly required to develop and design the curriculum for comprehensive schools at the local level (Atjonen, 2005). In addition, discussions on ability-based groups in the

early 1980s led to the abolition of different curricula for mathematics and foreign languages and, thus, the grouping of students.

This change finally addressed the issue of unequal opportunities for students' further education, a topic that had been the subject of heated debate in previous decades (Niemi & Lavonen, 2020). The new regime and municipality-specific curriculum features were received with varied responses and reactions, as efforts were made to foster collaboration among different stakeholders (Atjonen, 2005). Concurrently, the challenges of teacher professional development were reevaluated using an innovative approach. The focus shifted from isolated training days to a continuous professional development model integrated into the school community's daily work (Mikkola, 2005). According to Mikkola (2005), this approach introduced two major shifts: 1) the school organization and its development and learning needs were considered with the entire community involved in the change, and 2) the school's transformation no longer relied solely on information from individual course days but instead depended more on long-term training and support for teachers.

3.3 The new regime and renewed school system

The development efforts of the late 1980s opened new ways to locally develop schools. According to Sahlstedt (2015), "The process of dismantling normative control occurred at a much faster pace compared to its initial implementation" (p. 35), and the gradual dismantling of normative control guided schools toward greater organizational independence. However, it was clear that the school's curriculum and culture required adapting to the changing operational environment (Lindström, 2005). Global trends, such as neoliberal ideology and concepts of lifelong learning, selectivity, individuality, efficiency, and accountability for results, played a part in shaping the Finnish education system in the 1990s (Ball, 1997; Seppänen, 2003).

The 1990s saw not only a new balance between local and central governance (Kalalahti & Varjo, 2023) but also the promotion of comprehensive education's structural integration. While the development in the 1960s had been centrally controlled, a new chapter had begun in the development and guidance of education. As a sign of this change, the revised curriculum guidelines, published in 1994 (Opetushallitus, 1994), were concise at approximately 100 pages. That same year, a project focused on developing nongraded instruction was initiated. This aimed to encourage schools to conduct internal reforms and offer educational flexibility, thus enabling students to advance at their own pace (Halinen & Pietilä, 2005). Halinen and Pietilä (2005) also highlighted how contemporary discussions valued Deweyan ideals of school development, such as learning by doing, and creative, self-driven school improvement.

The 1990s witnessed changes across society, including in the education system. The shift included loosened normative guidance, increased structural and administrative autonomy, and a focus on customer orientation and

stakeholder collaboration within schools (Halinen & Pietilä, 2005; Taipale, 2005). These changes also signified a transformation in educational paradigms and learning beliefs (Lindström, 2005). Teachers were expected to encourage students' lifelong learning skills, and their continuous professional development served as a model for lifelong learning (Mikkola, 2005). This era also focused on developing a unified structure for comprehensive schools and a standard curriculum that explored flexible school entry, nongraded learning opportunities, assessment methods promoting uniformity, and the flexible assignment of teachers across all comprehensive education levels (Halinen & Pietilä, 2005).

In the early 1990s, the focus on teacher professional development and learning and the teacher-as-researcher movement became prominent in international research literature; the objective was to emphasize the nature of the teaching profession and the importance of integrating new research knowledge into teaching (Niemi, 2005). This shift was also reflected in initial teacher education, and for example, the development of teachers' professionalism and the use of new information, communication technology, and global dimensions were recognized as essential teacher competencies (Mikkola, 2005; Niemi, 2005). However, practices regarding teachers' continuing education remained relatively underresearched and often relied on intuition and immediate feedback from training sessions rather than from extensive research on developing teacher training (Mikkola, 2005). Municipalities also had varying resources for guiding and supporting more extensive curriculum work in local schools (Halinen & Pietilä, 2005; Lindström, 2005). Moreover, based on contemporary studies, within a more autonomous governance, only those schools that received support succeeded in developing curricula in accordance with national curriculum guidelines (Pietilä & Toivanen, 2000).

The new approach to school development and concerns about schools' abilities to develop high-quality curriculum work had an impact on the role of principals. With the principal's role shifting to leading the school community's development, the focus in their education moved from purely administrative skills to developing key leadership competences (Taipale, 2005). Interestingly, while principals were encouraged to formulate their own school visions, they often did not share these with the teaching staff. This was mainly due to the fear of potential resistance from school personnel (Hämäläinen et al., 2002).

3.4 The reform of unified comprehensive education

The next reform of comprehensive school education aimed to clarify school legislation and abolished the administrative boundary between primary and secondary schools (Basic Education Act 628/1998; Basic Education Decree 852/1998). This reform was administrative and based on political and legislative decisions. Similar to the basic education reforms of the 1960s and 1970s, the transition to a unified comprehensive school system was justified by radical societal changes and evolving perceptions of learning and knowledge (Atjonen,

2005: Lindström, 2005). The evolution of the comprehensive school system has been consistently influenced by educational policy changes (Lammi, 2017; Sahlstedt, 2015).

The aim of these reforms was to establish a comprehensive and cohesive learning path for students throughout their education. While there was an emphasis on cohesiveness, central regulation was also lessened. This shift gave educational providers more freedom to adapt their institutions, but it also reduced nationwide uniformity within comprehensive education (Kalalahti & Varjo, 2023). Particular focus was placed on the transition stages in education, such as the transition from primary to lower-secondary school (Grades 6 and 7). In earlier systems, this stage was frequently cited by teachers and policymakers as a challenging phase in the education system (Huusko et al., 2007; Rajakaltio, 2011; Ronkainen, 2012). During this transition, students shift from classroom-based to subject-based teaching, which not only alters their social status but also introduces them to a new learning environment (Rajakaltio, 2011). In lower-secondary schools, learning is more clearly fragmented into different subjects, most notably with changing classrooms and teachers. Therefore, a key objective of the new comprehensive education legislation was to bridge these two school worlds, and to lower the stress related to students' transition from one school level to the next by enhancing continuity in the educational process (Pietarinen, 1999).

In 2001, the Finnish government implemented changes to the Finnish comprehensive school system through a decree (Government Decree on the national goals of education referred to in the Basic Education Act and the division of hours in basic education 1435/2001) outlining objectives, the allocation of hours in basic education, and the timeline for the upcoming curriculum reform. This decree introduced a nine-year unified comprehensive school for the first time. The decree settled the responsibility for implementing school reforms and fostering educational innovations at the local level and within individual schools (Pyhältö et al., 2011), and it emphasized the necessity of consultation and participation from teachers, school staff, principals, students, and their guardians to develop a truly coherent education system (Pietilä & Toivanen, 2000). It was also suggested that unified comprehensive schools could foster deeper collaboration between home and school, which was relevant in new schools where the teachers taught students beyond the traditional Grade 6-to-Grade 7 transition (Tanttu, 2005).

Along with the desire to explore these new schools, there were varying expectations regarding the new system. Rauste-von Wright et al. (2003) studied the conditions for expertise in comprehensive schools within the new unified system. They suggested that this was influenced by students' experiences as well as principals' and teachers' perceptions of what unity means in their work, and how it manifests in the curriculum, teaching across subjects, organizational culture, leadership, and teaching practices, as well as in students' experiences (Rauste-von Wright et al., 2003). Interestingly, Rauste-von Wright et al. found that the unity of the comprehensive school was reflected through the students,

as teachers emphasized the potential for better student understanding, improved communication, and enhanced student support in a unified school setting (Rauste-von Wright et al., 2003). In a subsequent research project, Huusko et al. (2007) aimed to explore the development of unified basic education as a pedagogical phenomenon. They examined the perspectives of the community, students, and teachers, focusing on the evolution into a learning community. Huusko et al.'s study indicated that the basic education system's practices often still exhibit mechanistic and behaviorist-oriented views of learning and change processes.

According to Huusko et al.'s (2007) findings, the successful unification of basic education can be realized if certain conditions are met:

- The unification process requires a systemic understanding.
- The unification process necessitates the establishment of coherence, both vertically and horizontally.
- The unification process requires meaningful active agency by the participants in relation to the development work.

The early 2000s can be viewed as a period of drastic changes in the development of Finnish basic education. Nevertheless, comprehensive schools have not become the dominant form of basic education school organization.

3.5 The situation in the 2020s

Since the administrative division between primary and lower-secondary education was abolished in 1999, there has been a shift from separate primary and lower-secondary schools to unified comprehensive schools in Finland. Currently, 22% of comprehensive schools provide primary and lower-secondary education (Grades 1-9) in a unified setting, and the proportion of these schools has increased by 10% over the past decade (Statistics in Finland, 2020). This indicates a restrained but steady change from the traditional school structure of separate primary and lower-secondary schools to unified comprehensive schools (Lahtero & Risku, 2014). As this trend continues to gain momentum, comprehensive schools are becoming more inclusive. Unified comprehensive schools bring together diverse stakeholders, each with their own perceptions about the school's development objectives, teaching and learning processes, and core mission (Ronkainen, 2012).

The changes in school organizations have been hindered by numerous challenges, including the strict division of teachers into class and subject teachers; the existing education infrastructure, such as physical and organizational structures and facilities, which affect the feasibility of collaboration and unification of schools (Piispanen, 2008); and the organization of daily school work, such as the regulation and structuring of teaching (Johnson et al., 2024). Perhaps a primary "relic" from the previous education system in modern schools

is the physical separation of primary and secondary schools, which continues to divide basic education (e.g., Rajakaltio, 2011). Meanwhile, as municipalities face tighter budgets, teachers are increasingly responsible for maintaining and developing their professional competences (Mikkola & Välijärvi, 2014). Moreover, municipalities' resources for educational development and support of teacher competency affect the progression of local schools (Kalalahti & Varjo, 2023). However, Lammi (2017) reported that many municipalities have begun building not only administratively but also structurally unified comprehensive schools following the introduction of the Basic Education Act (628/1998). Such a structural shift offers greater opportunities for change, as a comprehensive school located in a single building may unify a school's organizational culture (Halinen & Pietilä, 2005). Although many hopes are placed on the unification of schools, unification has been observed to remain quite superficial in some school communities, merely as mentions in ceremonial speeches (Ronkainen, 2012).

Lahtero and Risku (2014) suggested that distinct schools can have considerably different cultures, with no necessary connection between them. Thus, schools are often highly independent, with teachers forming their own unique subgroups and subcultures. Despite these findings, it has been proposed that Finland has a divided comprehensive school system, with many practices inherited from the era of the two-track school system (Johnson, 2006; Rajakaltio, 2011; Sahlstedt, 2015). Instead of a uniform basic education system, smaller regional and local systems have developed, which challenges the core goal of unity and equality in education (Kalalahti & Varjo, 2023). Recent research has also indicated that primary schools are not as successful as hoped in creating equality and mitigating the impact of family background or gender on learning outcomes (Kosunen et al., 2024).

The concept of "unified comprehensive education" has encountered resistance and is considered problematic, particularly in schools with traditional structural divisions into primary or secondary levels. According to Huusko et al. (2007), principals in such schools align development with the goals of unifying basic education but prefer to employ an alternative term rather than "unified basic education." Therefore, unified comprehensive education is often seen as representing schools that provide Grades 1–9 or that have administratively merged schools, which represent only a small fraction of all schools in Finland (Huusko et al., 2007). Moreover, Sahlstedt (2015) suggested that the terms "comprehensive school" and "unified comprehensive school" are most often used interchangeably and as synonyms for each other.

Another relic in the comprehensive school system can be observed in the curriculum. While the current curriculum aims to create pedagogical uniformity within the school system, the establishment of a unified comprehensive school is a local decision. The National Core Curriculum for Basic Education (FNBE, 2014) emphasizes the unity of comprehensive education. It states that basic education should be developed as a pedagogically unified whole that is educationally coherent and consistent (FNBE, 2014). However, the curriculum itself does not dictate how this unity should be achieved, leaving it to local discretion. As

Rajakaltio (2011) noted, this concept is not new in curriculum development. Curricula have long aimed to develop a unified comprehensive school. In fact, the aspiration toward integrated teaching across different subjects originated in the era of the two-track school system (Lammi, 2017).

A third factor impacting comprehensive schools stems from teacher education. All teachers in Finnish primary and lower-secondary schools have completed master's degrees and pedagogical studies for teaching by default, but they come to schools from different educational backgrounds of initial teacher education. Despite many attempts since the late 1970s to unify teacher education, structural unity has not progressed as much as expected (Lahtero & Risku, 2014; Niemi, 2005). While class teachers and subject teachers represent two distinct types, each with varying educational backgrounds, working conditions, and teaching methods (Lammi, 2017), a shift toward a more unified comprehensive education could potentially be supported by more unified teacher education methods aimed at enhancing collaboration between class and subject teachers during their initial teacher training. Naturally, during their education, teachers not only acquire professional competence but also start to develop a professional identity (Beauchamp & Thomas, 2009; Flores, 2020). An additional challenge is that most new comprehensive schools are formed from separate schools, causing staff to transition directly to the new school's service.

The separate operational cultures at the primary and secondary levels are physically distinct and often reinforce the division into class teacher-led primary schools and subject teacher-led lower-secondary schools. This division can be seen in both initial teacher education and schools (Rajakaltio, 2011). However, more teachers now qualify with dual eligibility, which allows them to teach across the entire comprehensive school in class and subject teacher roles. Understanding the link between the school, teacher education, and the teacher's work can provide a clearer vision of unified basic education's future and improve our understanding of current teaching practices in comprehensive schools (Lammi, 2017). Changes in primary education and teacher education are inherently linked, indicating that the needs of schools and universities are interconnected.

4 LEARNING COMMUNITY DEVELOPMENT TOWARD A UNIFIED COMPREHENSIVE SCHOOL

4.1 The learning organization

In today's uncertain and rapidly changing environment, both organizations and individuals increasingly depend more on their skills to adapt. In a changing environment, the status quo quickly becomes outdated. However, psychological and organizational barriers often hinder change and innovation in organizations, causing missed opportunities for growth and improvement (Edmondson & Moingeon, 1998). Therefore, organizational learning has emerged as a significant field of research, regardless of the industry or nature of the organizations. As organizational learning has been extensively studied and modeled, it has simultaneously evolved into a diverse and multi-interpretable concept that offers many directions and possibilities (Moilanen, 2001).

The concept of learning organizations rose in popularity during the late 1980s and early 1990s (Garratt, 1999), and educational researchers started paying attention to the term and idea of learning communities during the 1990s. To refer to this current discussion, I focus on this period, as these concepts have gained prominence in education and training from the 1990s onwards. The term "learning community," and more specifically "professional learning communities," gained popularity a little later in the educational development context due to the interest of educators and schools' nature as school communities (Bolam et al., 2005; DuFour, 2004; Hord, 1997).

The idea of a learning organization has since become widely recognized and firmly established. It is also one of the goals of programs by global entities like the OECD (Kools & Stoll, 2016). Senge's (1990) seminal book, *The Fifth Discipline*, has influenced learning in organizations and sparked interest in learning organizations (Hsu & Lamb, 2020). His ideas have been influential in shaping and providing a new perspective on how organizations in different fields can

effectively enhance learning within the organization (Garratt, 1999). Senge further developed this concept in his book *Schools that Learn* (Senge et al., 2000) and its 2012 (Senge et al., 2012) revised edition. Works by Senge (1990), Argyris and Schön (1978), and Watkins and Marsick (1993) are often seen as pivotal in the evolution of organizational learning, as they helped organizations understand how they can improve their learning capacity.

In *The Fifth Discipline*, Senge (1990; 2006) defined a learning organization as “organizations where people continually expand their capacity to create the results, they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspirations are set free, and where people are continually learning to see the whole together” (p. 3). Moreover, a learning organization can be described as an organization that supports both individual and group motivations for learning, highlights the learning process itself, and provides readiness to implement change, thereby enabling desired transformations to take place (Moilanen, 2001). Senge’s learning organization concept was influenced by Jay Forrester’s work on system dynamics methodology starting from the 1950s, Argyris and Schön’s (1978, 1996) works on organizational learning, and Robert Fritz’s (1989) work on the creative process and structural tension (as cited in Reese, 2020).

Argyris and Schön’s (1978) concept of organizational learning involves the detection and correction of errors, meaning collectively reflecting within an organization on what went wrong, asking questions, and making changes to the organization’s plans. According to Garratt (1999), a learning organization is an organization that is continuously learning and adapting, with the aim of long-term commitment for extended periods rather than an immediate solution to problems. Over the last 30 years, the concept of the learning organization has been further developed and, at the same time, has faced various criticism in terms of how it is understood and interpreted, that is, what the whole concept means. Additionally, a key question is to what extent an organization is able to manage its members’ learning (Garavan, 1997). However, it is impossible to describe a learning organization completely because its nature is characterized by constant change and uniqueness (Örtenblad, 2002; see also, Senge et al., 2012)

Although a learning organization requires a strategy for change that outlines how it builds the framework for goal-aligned learning based on its vision (values, principles, etc.), the main prerequisite for the organization’s success is that individuals genuinely learn (Moilanen, 2001). Senge (1990) suggested that the key to creating a learning organization and making changes in the organization is that the organization’s members must develop their skills and learn to think more systemically.

The literature on organizational learning presents diverse definitions regarding the quality and extent of learning in an organization. According to Edmondson and Moingeon (1998), some researchers have explored how organizations naturally learn, while others have focused on creating learning through interventions within organizations. In this study, the latter approach is emphasized through the nature of the facilitated change process. For an

organization to learn, members of the organization need to develop a mutual and shared understanding of the organization's current state and to produce and share new knowledge and insights openly through dialogue and discussion (Dutton, 2012; Senge et al., 2012). According to Tynjälä (2022), the organizational learning concept "is often associated with normative, prescriptive and practice-oriented approaches aiming at developing learning organizations" (p. 430). Investing in learning within an organization conveys an appreciation and trust of its members, as learning positively impacts factors such as job satisfaction and organizational atmosphere (Moilanen, 2001).

In the same way as other organizations, the concept of schools as learning organizations has become prevalent. As previously discussed, especially since the 1990s, there has been global and local focus on finding solutions in school development that simultaneously enhance the operating culture, leadership, and teaching within schools (Kattilakoski, 2018; Lantela et al., 2024; Lee & Li, 2015). In the context of comprehensive education, bridging these aspects of school development aims to support the unity of comprehensive education and the creation of a more cohesive learning path for all students. The unity of comprehensive education stems from the fact that a school comprising various groups of teachers functions as a learning community and evolves through collective discussion and planning (Pietarinen, 2005). Additionally, the role of local decision-making has grown, while centralized control has decreased (Kalalahti & Varjo, 2023). Moreover, improving teachers' professionalism requires more workplace learning (Tynjälä, 2013). Although learning communities are often said to aim at improving student learning (DuFour et al., 2016), sustaining the well-being and professional growth of teachers, including their motivation, commitment, and enjoyment of their work, is also presented as an essential part of learning community development (Webb et al., 2009).

In this study, two terms—*learning organizations* and *professional learning communities*—are used in parallel and subordination to the term learning community. Learning organization, professional learning community, and learning community are interrelated concepts focusing on continuous learning and development within an organization or community. Although these terms represent different facets of the same underlying theory, they share several key aspects. For example, all three concepts emphasize aspects of collaboration, promotion of interaction to enhance learning within an organization, continuous learning, shared vision, and the view of the organization as an interconnected whole. However, highlighting the nuanced distinctions between these terms is crucial.

Within schools, the concept of a professional learning community includes the aspects of teachers' learning, collaboration, and interaction (e.g., Eaker et al., 2002; Hargreaves, 2007). According to DuFour (2004), professional learning communities are based on three "bid ideas": ensuring that students learn, creating structures to promote a collaborative culture, and focusing on results. Thus, the community is seen as a serious collective, with the capacity to promote and sustain professionals' learning in a school. Bolam et al. (2005) claimed that

an effective community is built on a shared vision, collective responsibility for students' learning, collaborative learning, professional learning, reflective inquiry, openness, mutual trust, respect, support, and partnership. Similarly, Bolam et al. (2005) defined eight key characteristics of effective professional learning communities: "shared values and vision; collective responsibility for pupils' learning; collaboration focused on learning; individual and collective professional learning; reflective professional inquiry; openness, networks and partnerships; inclusive membership; mutual trust, respect and support" (p. 145). A learning community is characterized by a group of teachers sharing and critically examining and reflecting on their practice within a school in collaborative and learning-oriented practices to build capacity in personal, interpersonal, and organizational domains (Mitchell & Sackney, 2011).

In part, the usage of these different terms is influenced by cultural practices, as concluded by Antinluoma (2024). The varying cultural contexts in each country, such as the culture, values, and educational traditions, have led to differences that impact the characteristics and potential of learning communities (Webb et al., 2009). Moreover, the term learning community has become common in everyday language as well as in scientific usage (Soini et al., 2003), such as in curricula. However, Stoll et al. (2006) pondered how well a group made up of only teachers, principals, and school staff can genuinely respond to students' diverse needs, as "[p]rofessional learning communities have largely been interpreted as referring to groups of teachers supported by leaders" (p. 3). Kools and Stoll (2016) suggested, "It could be argued that adding the perspective of community brings the heart into the concept of a learning organization" (p. 20). Senge often talked about the learning organization (Senge, 1990) or the "school that learns" (Senge et al., 2012) but less about learning communities. However, we borrowed Senge's (1990; Senge et al. 2012) thinking and conceptualization regarding the disciplines of the learning organization for the ULA project to develop the school as a learning community. In summary, while the concept of a learning organization may be more applicable to business discourse, the idea of a professional learning community is well suited to educational contexts, even though its primary focus is on examining learning and action through teachers. This is based on the idea that a learning community, at least as articulated by Finnish national curriculum guidelines, aims to engage all members of the community in learning and development.

As the development goal of schools in Finland has been to reduce centralization and increase schools' autonomy, collaboration, learning, and interaction among teachers have become increasingly important in school improvement. Hargreaves (2007) implied that a key goal of the school community is to reduce the isolation traditionally associated with the teacher's work (in classrooms) and increase teacher collaboration and learning within the school community. According to Admiraal et al. (2021), "learning schools have structures that enable their staff to learn and grow as a professional, operating genuine communities that draw on a shared vision and the collective capacity of their staff in their pursuit of continuous improvement" (p. 685). Thus, individual

learning alone does not make the school a learning community but is a well-known facilitator of a school that learns (see Senge et al., 2012). Moreover, school communities should value transparency in their improvement strategies and endorsements by teachers (Soini et al., 2022). In other words, a learning community should strongly emphasize the learning of all its members, meaning that the curriculum text serves both as a guide for instructional planning and as a broader framework for developing the school's organizational culture. Thus, it is essential to note that the curriculum should also outline the foundation for school development that is firmly rooted in a collaborative, dialogue-based, and inclusive approach. Participation is thus linked to both learning and community, and students should be involved in planning the activities of both.

According to the Finnish national core curriculum guidelines, a learning community is at the core of developing Finnish schools' culture (FNBE, 2014). The aims of a curriculum include investing in the learning of all members, with an emphasis on dialogue, collaboration, and participation (FNBE, 2014). Thus, the choice to mainly use the concept of a learning community in this dissertation aligns with the terminology of the Finnish national core curriculum, which posits that the core idea of school improvement is to develop a school as a learning community (FNBE, 2014). According to the national curriculum's conception of learning, students are active participants and integral parts of the school, not just passive recipients of teaching. For example, the national core curriculum encourages discussions about school values, which form the basis for curriculum drafting and joint teaching. Schools must design and plan how to implement these discussions and ensure the participation of staff, students, guardians, and other partners (FNBE, 2014).

At the heart of this development is horizontal and vertical coherence, which refers to a unified pedagogical continuum and collaboration among teachers (Huusko et al., 2007; Rajakaltio, 2011). This suggests that the elements of a comprehensive education school across primary and lower-secondary grades, including subjects and practices, must be meaningfully coherent and consistent. According to Bolam et al. (2005), a learning community's creation and success can be fostered through multiple but simultaneous actions, such as optimizing resources and structures, fostering both individual and collective learning, actively promoting the idea of a learning community, and exercising effective leadership and management. The development of a school as a learning community is connected to an understanding of the nature of the school system and building dialogue and discussion that support the goals of such development (Senge et al., 2012). However, there can be considerable differences among teachers' abilities regarding how they share their expertise in the school community (Soini et al., 2022)

Implementing the curriculum, with various interpretations and practices that arise through interactions of education experts at the local level, is the vital basis for developing comprehensive education. For example, the curriculum guidelines of 2004 and 2014 both emphasized that, when developing comprehensive basic education, the curriculum work should be an essential part

of the process (FNBE, 2004, 2014). Local curriculum work aims to critically examine a school's existing practices and teaching and, if necessary, its community's renewal. This process asks the "school community's members to examine the alignment between the goals presented in the curriculum guidelines and what they encounter in their daily school life" (Pietarinen, 2005, p. 13).

Even if critical discussions within the school community about teaching and school development are lacking due to teachers' autonomy, they are essential for school development (Kyllönen, 2011). In other words, collective dialogue and discussion play a pivotal role in creating "encounters and openings for interaction within the school, which are necessary for building a learning community" (Kyllönen, 2011, p. 63). According to Hargreaves and O'Connor (2018), learning communities appear to be promising environments for collaborative inquiry and decision-making, but teachers often view them as top-down reforms, leading to resistance. This partly relates to the fact that teachers perceive non-teaching tasks as time-consuming, even though their connection to teaching is sometimes weak (Rajakaltio, 2011). Although the learning community approach is based on working together in a new way, the process of initiating and sustaining the learning community requires school staff members to shift their focus to learning rather than teaching, to working collaboratively, and to aiming for continual improvement through collective reflection (DuFour, 2004). This may be a slow and troublesome process in the beginning, as teachers in general prefer the work in the classroom, as they view it as motivating, while they perceive non-teaching tasks as compulsory and burdensome (Rajakaltio, 2011).

Hargreaves (2007) argued that building a long-lasting learning community may take time and repetition. Moreover, it is crucial to understand that teacher collaboration can have a wide range of meanings and practices within a school context. As Little (1990) described, teacher collaboration can encompass anything from the distribution of routine tasks and ready-made test templates to deep shared expertise, and it may take place, for example, within the same classroom or while jointly overseeing a specific course or subject. Moreover, teacher collaboration often aims for something other than innovative teamwork built on a shared pedagogical idea; instead, the focus tends to be on more traditional and lighter forms of collaboration (OECD, 2019). Thus, teachers should be actively involved in developing their work and operations and collectively strive to develop the school and their own teaching practices (Lammi, 2017).

To support the development of a learning community, it is essential to ensure that school staff and administrative representatives share a mutual understanding of school improvement and actively invest in it (Hargreaves & O'Connor, 2018). Thus, building a comprehensive school as a learning community involves enabling teachers' ownership and agency in interactive development work and "dismantling mechanisms that maintain defensive and individualistic cultures" (Kyllönen, 2011, p. 151). Otherwise, establishing a learning community could easily be hindered by unrecognized conflicts. In conclusion, teacher collaboration to enhance learning in a school setting requires

well-defined designs and processes that facilitate learning, dialogue, and discussion among teachers and are related to teachers' expertise in curriculum, teaching methods, and learning principles.

4.2 From organizational change to school development

The research related to organizational change is substantial and spans various academic disciplines, including management, psychology, education, and sociology. Often, change means a shift in the prevailing arrangements of an organization into new practices or procedures. In this study, organizational change is explored within the context of a comprehensive school community, yet the phenomena of change are common and shared across various fields and industries. Research has underscored, for example, the necessity of purposeful leadership, the importance of democratized structures within the organization (Nadim & Singh, 2019), training and support for new roles in teams, active participation of employees (Bess et al., 2011), identity work (Valleala et al., 2015), and clear communication (Khaw et al., 2023; Valleala et al., 2015).

According to Phillips and Klein (2023, p. 194), there are five common change management strategies to implement:

- communicate about the change,
- involve stakeholders at all levels of the organization,
- focus on organizational culture,
- consider the organization's mission and vision, and
- provide encouragement and incentives to change.

Organizations initiate changes for a multitude of purposes, including the need to adjust to evolving external circumstances, adopt innovative processes or technologies, and respond to shifts in financial resources (Oreg et al., 2011), as well as to respond to, for example, external or internal pressures (Beycioglu & Kondakci, 2021). Organizations are driven to change, or are sometimes forced to do so, by a range of factors, including social and demographic shifts, advancements in technology, and globalization (Ahlstrom et al., 2020; Burke & Ng, 2006). Thus, change is often regarded as essential for organizational survival, as adaptation is imperative for long-term success and viability in a rapidly changing operational landscape (see Phillips & Klein, 2023). In educational organizations, for example, schools must adapt and change how they work, teach, and help students keep up with changes in society. School communities are expected to develop teaching and learning methods so that they are doing their best to prepare students for life with a wide range of skills (Morrison et al., 2021) and to help them reach their potential (Lavy, 2020). School organizations are also expected to change to align with the shifting external landscape, technological

advancements, digitalization, changing societal norms, and new educational regulations and guidelines (Palumbo & Manna, 2019).

4.2.1 Organizational change

Organizational change is by nature nonlinear and messy (Fullan, 2020). Thus, organizational change may evoke a spectrum of individual emotions, from anxiety and identity loss to potential increases in job satisfaction (Khaw et al., 2023) or resistance (Akella & Khoury, 2022; Nadim & Singh, 2019; Walk & Handy, 2018). Scholars have suggested that successful school reform depends on teacher change, as individuals' perceptions, for example, of the effects of change on themselves and their work, may shape their reactions to organizational change, including negativity when change is anticipated to increase workload, uncertainty, and fatigue (Khaw et al., 2023). Although organizational change is nonlinear and often ambiguous, this path must often be taken because innovative ideas and insights require the movement of existing pieces and established traditions (Fullan, 2020). For example, resistance to change can stem from concerns about potential disruptions in either how tasks are carried out (efficiency) or whether the organization is focusing on the right objectives (effectiveness) (Nadim & Singh, 2019). Resistance to change has been defined as a force "which hinders management from achieving its goals and objectives" (Akella & Khoury, 2022, p. 301).

Resistance to change within an organization is often well founded, and the organization's members can have legitimate reasons for opposing the change initiatives. Although resistance to change is perhaps one of the most well-known forces preventing schools from evolving, there is also growing recognition that change might need to be "conceptualized" and understood in a new way. (Beycioglu & Kondakci, 2021). For example, the resistance to change prevailing in school communities has been observed to be strong in some instances, and teachers have found relinquishing autonomy and isolation difficult, which means that calming resistance takes time and requires interpersonal skills (Kovalainen, 2020). Therefore, in the process of school development, it is essential to assess the current state of the school and areas in need of development, while simultaneously fostering a discourse and dialogue that facilitates a shared understanding of the factors that challenge and enable development (Senge et al., 2012).

Employees enhance their acceptance of change by engaging in collective and collaborative activities and forums, thus fostering individual and organizational learning (Senge, 1990; Valleala et al., 2015). Moreover, Nadim and Singh (2019) argued that, by recognizing resistance to change as an inherent and natural aspect of human reactions, the focus should shift from managing resistance to proactively designing adaptable learning organizations that foster change. This leads to the construction of a learning community, as the building blocks of a learning community are a communal and dialogue-based culture. Thus, the success of a future school is based on the school's ability to evolve as a learning community together.

Constructive conflict refers to the phenomenon of learning, in which disagreements, contradictions, or differences of opinion within an organization are approached and managed in a way that leads to positive outcomes and progress (Decuyper et al., 2010). Thus, instead of trying to pass off or diminish the resistance as something bad during the change, understanding and making sense of it can make resistance and conflicts useful for the process of organizational learning (Akella & Khoury, 2022). Similarly, understanding employees' positive and negative perspectives and reactions toward change can be seen as a source for constructive criticism and the implementation of change (Khaw et al., 2023). The transformation of a school into a unified comprehensive school serves as an excellent case example, as this change typically originates from outside of the school and rarely aligns with the wishes of teachers or students. In such a change, it is important to understand the perspectives of teachers alongside those of policymakers, as school development is not merely top-down or bottom-up but rather an interaction among various stakeholders (Beycioglu & Kondakci, 2021). Thus, this thesis aims to address this challenge by involving teachers in the development of their own school through a new form of conceptualization based on models of building a learning community.

4.2.2 Change in the school community

Schools have always been dependent on and connected to the broader changes, internal and external pressures, and ideologies in the world around them, ranging from major megatrends, such as ecological sustainability and technological advancements, to social and demographic shifts (Beycioglu & Kondakci, 2021). Research on school community organizational change is a relevant topic because it sheds light on the unknown but essential aspects of how educational institutions, especially schools, may evolve. While the body of scientific literature on change management in school communities has grown, a gap still exists in our understanding of the key factors that drive or hinder schools' change. As expectations and external pressure for change are placed upon school communities, policies and efforts to develop schools often conflict with the tradition-oriented character of schools' operating cultures (Salminen, 2018).

School communities, which are inherently static, require actions from their members to initiate and enact changes, with the role of managers being particularly important in hierarchical settings where they coordinate these efforts (see Laloux, 2014). In any organizational change, multiple levels of organization interact, such as national guidance documents, local actions, and ultimately the practices and methods that schools employ to implement, for example, the curriculum's guidelines and objectives. However, teachers may face challenges in understanding and implementing the new core curriculum's goals without change management and knowledge sharing (Soini et al., 2022). Thus, the change is often supported through a participative approach, which involves members from various levels of the organization collaborating to devise and execute solutions to organizational challenges (Lines, 2005).

This can be achieved, for example, by introducing varying perspectives to encourage teachers to see the school as a broader and, above all, unified continuum that extends beyond their own “territory” and delimited teaching tasks (Pietarinen, 2005). At the same time, we must strive to avoid the notion that “all schools should be the same.” We can observe differences in the practices and traditions of schools both internationally and nationally (Salminen, 2018), but similarly, variations can exist even among neighboring schools. Not all schools may be entirely alike, even though they share certain characteristics (White & Levin, 2016). Moreover, a school’s culture and practices do not change solely by updating the documents that guide them, as altering values, ideologies, and customs may take time, and despite political and guidance-related changes, a school’s practices and traditions pass from one teacher generation to another (Ronkainen, 2012). Thus, understanding a school’s architecture of organization and culture, such as hierarchies, is key to outlining the possibilities for school operation and development (Mincu, 2022).

While teacher autonomy may exhibit valuable qualities for learning, the isolation of teachers within school communities creates barriers to collaboration among teaching staff and shared learning. This, in turn, directly impacts the school’s ability to maintain continuity despite efforts for change (Fullan, 2016). Thus, professional recognition from peers plays a crucial role in fostering a collaborative environment in which educators feel empowered to work together effectively (Sullanmaa et al., 2023). A learning community’s transformation into a unified comprehensive school also highly influences school structures and relationships between principals and teachers, and the principal of a comprehensive school may be perceived more as the principal of one teacher group over another (Kovalainen, 2020). Although there is often only one principal in a school, the organization’s culture, which is strongly resistant to change, may hinder the promotion of real changes (Fullan, 2005). Thus, it has been argued that changes in school cannot be solely spearheaded by the principal, as solutions are rarely straight top-down processes (Thomas & Hardy, 2011). Bolam et al. (2005) highlighted the strategic importance of school leadership in promoting the processes of “creating, developing and sustaining an effective professional learning community” (p. 143). Hence, a challenge in advancing learning school community development lies in the principal’s twofold role. Pyhältö et al. (2011) claimed that principals “need to balance financial-technical realities and pedagogical development in order to carry out their work as educational leaders successfully” (p. 57).

As previously mentioned, changes in society pose various challenges to the execution of educational practices within schools. Therefore, it is no longer sufficient to think that the development of school communities could rely solely on the training of principals and school leaders. Instead, it must be approached by considering the entire school community’s functioning and its staff’s learning in the workplace (Juuti, 2016; Kovalainen, 2020). To generate sustainable change in a school community, it is essential for school leaders and teachers to collaboratively create a climate of shared effort and ownership within the change

process (Carrington & Robinson, 2004). Moreover, it is essential for both the members of the school community and the administration to engage in shared discussions and collaboration to develop a coherent and collectively understood vision of the reform initiatives and to develop strategies for implementing sustainable change within their local contexts (Hargreaves, 2007; Pyhältö et al., 2011), as professional recognition of each member of the community fosters a supportive learning environment and strengthens relationships among educators (Sullanmaa et al., 2023). However, change is not meant to eliminate diverse ways of thinking but rather to enable the school to better adapt to the various demands of change (Hoy & Sweetland, 2001).

Creating a culture in which every teacher feels respected and valued is vital for encouraging learning and risk-taking within the professional community. Creating an environment in which teachers support each other in the community improves teacher well-being and allows them to, for example, handle burnout more effectively (Pietarinen et al., 2021). Thus, ensuring teachers' professional development is not only necessary for maintaining their professional skills and ensuring the quality of education but also impacts teachers' well-being and job satisfaction, their ability to innovate in their work, and their motivation to remain in the profession (Mikkola & Välijärvi, 2014). For example, in the context of teachers' continuous professional development, the value of new information is determined by how effectively it is integrated into teaching practices and shared within the school community. This integration becomes particularly impactful when it enhances collaborative learning, facilitates innovative problem-solving approaches, informs pedagogical decision-making, or strengthens professional relationships among educators (Fullan, 2020). Such an approach not only supports individual teacher growth but also contributes to the overall development of the school as a learning organization. Vescio et al. (2008) have noted that teachers' active engagement in learning communities influences their teaching methods, promoting a shift toward student-centered approaches, and enhances the teaching culture by promoting collaboration, empowering teachers, and fostering a culture of continuous learning. According to Antinluoma et al. (2021), to enhance school as a learning community, schools should better address organizational capacity issues (e.g., in terms of human resources), manage administrative workloads to maintain a focus on learning, explore co-teaching as a catalyst for change, and improve networking among educational stakeholders at all levels.

When shifting from a more traditional model of schooling with a higher hierarchy and more centralized planning to a learning community model, schools can face challenges related to adopting a learning community mode of thinking due to the school's institutional barriers and prevailing structures, for example, time allocated for team learning. Teacher collaboration goes beyond simply providing additional planning time. Moreover, some evidence has indicated that more shared planning time does not necessarily lead to greater collaboration among teachers (Wei et al., 2010). According to Kovalainen (2020), different teaching staff members have their own identifiable and maintained

traditional expectations related to school leadership and attitudes, which affects school operations, and considering and recognizing these expectations and attitudes is essential in the merger of schools (see also Ronkainen, 2012; Tarnanen et al., 2021).

In this study, the learning community approach to school development aimed to establish an enduring collaborative culture centered around continuous improvement and a new way of working and learning rather than being mere program innovation (Fullan, 2006) because, in unified comprehensive school development, it is important to keep in mind that multiprofessional teacher communities are more prone to facing challenges in establishing shared understandings of teaching and learning and in aligning development objectives (Soini et al., 2022). According to Pietarinen (2005), the development of unified comprehensive schools requires examining and analyzing teachers' attitudes and values regarding how unity is defined in the school and which efforts will be planned and carried out to reach settled goals. Moreover, this is beneficial for teachers' learning and school development, as previous research has shown that teachers' engagement in active learning is related to the collegial support and the feeling of being respected within the school community (Sullanmaa et al., 2023).

As previously mentioned, prevailing traditions and a lack of professional development resources, training, and support for teachers make it harder to challenge traditional practices of teaching. Organizational change should be seen as an iterative process of continuous improvement that includes learning and adjustments to the community's shared vision (Nadim & Singh, 2019). Thus, school change is often a slow process because, for example, teachers tend to retain teaching methods that have shown positive outcomes (Aldridge & McLure, 2023). Sometimes, time helps reinforce new activities and changes in the school community as activities become integrated into everyday life and turn into routines. Kovalainen (2020) noted that the time constraints in preparation for change may result in fears associated with the change if they are addressed only after the transition to comprehensive schooling has already taken place. Thus, when educational changes are vastly misaligned with a school community's existing practices, it is beneficial to consider an extended timeframe for the implementation (Aldridge & McLure, 2023). In the context of this study, for example, preparing the community for a move to a new unified school setting began well before the planned "moving date." In conclusion, school transformation processes are filled with tension, as the school is also responsible for society. This means that change is difficult due to the weight of responsibility, and the school system's task can easily be interpreted as transferring students forward in their education pathways.

4.3 The five disciplines for support organizational learning and school development

In his seminal work, Senge (1990) outlined five essential disciplines that an organization must cultivate to evolve as a learning organization, increase its capacity for learning, and foster transformation through individual and collective learning. These disciplines are 1) personal mastery, 2) mental models, 3) shared vision, 4) team learning, and 5) systems thinking. These five disciplines are the foundation for change in the process of transforming organizations into learning organizations (Senge, 1990; Senge et al., 2012). Additionally, it is important to note that the five traits of a learning community identified by Bolam et al. (2005) bear strong resemblances to Senge's five disciplines. Their review revealed that, despite the diversity of learning communities, five fundamental traits consistently emerge: shared values and vision, collective responsibility, reflective professional inquiry, collaboration, and learning at both the group and individual levels (Bolam et al., 2005).

In a learning organization, individuals improve their abilities to accomplish the desired results, foster broad thinking patterns for learning and problem-solving, and engage in continuous collective learning (Senge, 1990). In Senge's view, the learning of school staff at the individual, shared, and organizational levels is interconnected, as the five disciplines "offer a leverage for those seeking to cultivate and develop superior organizations and communities" (Senge et al., 2012, p. 5). Moreover, Bui and Baruch (2010) described personal mastery as an individual-level discipline and team learning as a team-level and shared vision organizational-level discipline, with the other two (mental models and systems thinking), representing disciplines that span several levels.

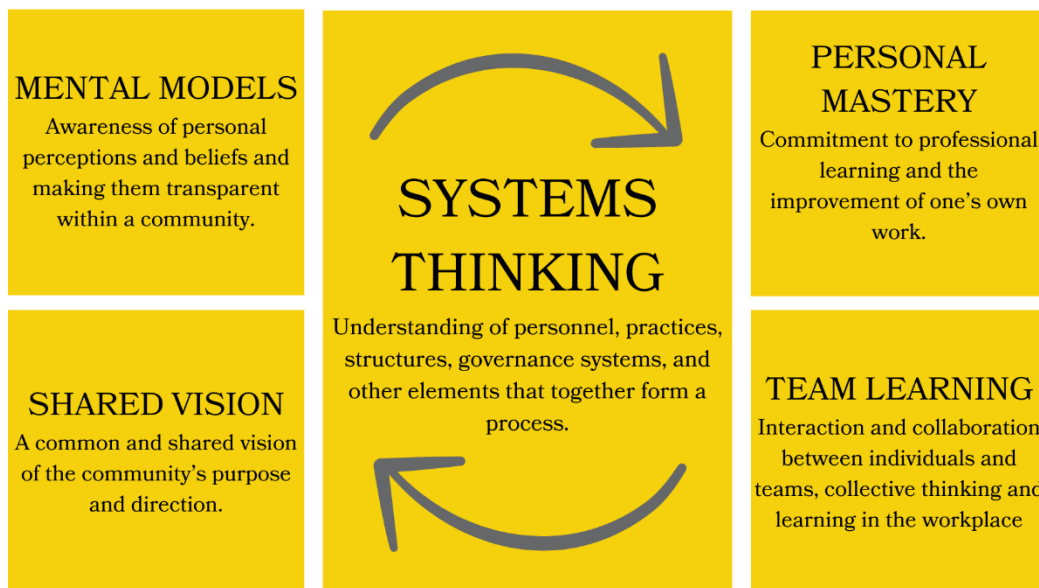


Figure 3 Senge's (1990) five disciplines, as defined in the ULA project (Martin et al., 2020)

4.3.1 Personal mastery

Perhaps one of the most conceptually essential ideas about organizational learning is that, for an organization to evolve, the individuals in the organization must learn and change, and only then is organizational change possible (Argyris & Schön, 1978; Senge, 1990). Personal mastery highlights self-awareness, as it focuses on how well we understand ourselves and our behavior in relation to, for example, a team or organization (Senge, 1990). Moreover, personal mastery is a key discipline in creating employees' creativity and individual drive to acquire new knowledge and skills (Fateh et al., 2023). However, although personal mastery initiates and drives change in individuals, in order to enable organizational change, it needs to be accompanied by other capacities. In organizations, individual skills, learning, and development can be supported in various ways, but not all methods are beneficial for personal mastery. Every individual enhances their sense of well-being by discovering their life's purpose, which serves as the foundation for personal growth (Rupčić, 2020). In the initial interviews for the first substudy, participants were asked about what kind of continuous professional development they had attended and, conversely, the types of training they would like to participate in. The responses were diverse—regardless of subject or grade level, teachers expressed a wide range of needs as varied as their experiences with continuous professional development. Personal mastery is achieved through recognizing one's unique qualities and talent (Rupčić, 2020). It is therefore clear that developing personal mastery does not mean implementing a "one-size-fits-all" and "must-attend" approach to learning within an organization (Senge, 1990). Since personal mastery involves personal growth, through this discipline, teachers may discover their own preferences, strengths, and skills that they may wish to use or improve in their teaching. This is why personal mastery is closely tied to teachers' continuous development and learning.

The central idea in organizational renewal is that, while traditionally, enabling learning processes is seen as an organizational issue, personal mastery means that individuals take responsibility and initiative for their learning so that the organization can achieve a shared vision (García-Morales et al., 2007). In other words, personal mastery is based on the values and motivation of the individual, which guide personal vision, goals, and objectives. Bui and Baruch (2010) identified personal mastery as an individual-level discipline based on the commitment of an individual to improve and expand their personal learning and development. According to Senge (1990), individual learning is enabled by aligning personal roles, vision, and the organization's purpose to lead individuals to develop new knowledge and skills. Another key foundation is the creative tension that arises when examining an organization's present and future vision (Senge et al., 2012). Creative tension helps both individuals and communities create creative tension, which is a vital aspect of growth and learning (Senge, 1990). Moreover, "[p]ersonal mastery is the discipline of continually clarifying and deepening our vision, focusing our energies, developing patience, and seeing reality objectively" (Senge, 1990, p. 7). Along

with personal vision, which encompasses an image of the future that individuals desire, goals are necessary, as they help achieve the vision.

4.3.2 Mental models

Mental models are deep-rooted assumptions, generalizations, and cognitive depictions of a system that shape how individuals comprehend and interact with it (Senge, 1990). In addition, mental models are developed through organizing prior knowledge, existing ideas, and past experiences (Mathieu et al., 2000; Rouse & Morris, 1986). Rouse and Morris (1986) outlined three functions of mental models: describing a system's purpose and structure, explaining its operation, and forecasting future states. The first function pertains to understanding why a system exists and its contents, while the second function explains how the system operates (Mevorach & Strauss, 2012; Rouse & Morris, 1986). The third function allows individuals to predict changes and events within the system (Jones et al., 2011; Rouse & Morris, 1986).

Mental models are often unconscious, tacit, and incomplete and can vary among individuals. This variation can lead to differences in perceptions of new information, as people within an organization focus on different details (Mevorach & Strauss, 2012; Norman, 1983; Senge, 1990). Another challenge with implicit and unexamined mental models is that participants often believe that their understanding of events and their causes is entirely accurate (Woodside, 2017). Thus, to understand our unconscious mental models, we must confront new and challenging information that tests our existing knowledge and assumptions (Hess, 2014). However, we tend to seek information that fits our existing knowledge (Jones et al., 2011) and remember only the information that reinforces our existing mental models, as it requires less mental effort (Norman, 1983; Senge et al., 2012). Some scholars have linked this reflective practice of becoming aware of and altering our mental models to the concept of transformative learning, which involves becoming aware of and changing our tacit assumptions about a system (Hess, 2014; Tynjälä, 2022). Therefore, learning to work with our unconscious mental models through reflection is seen as a central discipline for schools aiming to become learning communities (Senge et al., 2012).

4.3.3 Shared vision

Change and progress within a school require more than just the implementation of new strategies or policies. They require a shift in both behavior and beliefs, as well as new ways of thinking and acting, but they also require a direction created by a shared vision (Wilson Heenan et al., 2023). The literature on organizational learning highlights that a shared vision promotes organizational learning through a shared picture of the desired future, provides direction (Loon Hoe, 2007; Senge, 1990), and guides organizations with limited resources toward the common goal (Wang & Rafiq, 2009). Moreover, a shared vision builds a sense of purpose for a learning organization (Sinkula et al., 1997). While personal mastery

guides individual development, a shared vision fosters interaction and commitment to a team or organizational goals, and helps create new layers of meaning for their own growth (Hautamäki et al., 2020). A shared vision is co-created by members of an organization, and according to Senge (1990), a shared vision is a “picture of the future we seek to create” (p. 9). A co-created vision involves the hearts and minds of those who must execute and deliver the organization’s goals (Harvey-Jones, 1998); in the case of schools, the teachers are responsible for teaching and learning. Establishing a shared vision is a crucial step in the development of a school, as it provides answers to questions such as “What do we aim to achieve?” and “What are our aspirations?” (DuFour & Eaker, 1998, p. 62).

Previous research has emphasized the role of a vision, and the concept of a shared vision has been widely accepted as a characteristic of a successful school community (Kose, 2011). A shared vision stands for an organization’s common ambitions, and “a school or community that hopes to live learning needs a common shared vision process” (Senge et al., 2012, p. 7). Creating a shared vision is based on collaboration and a sense of security for both school administrators and educators and the exchange of ideas and discussion, as the shared vision identifies the desires of individuals and the community (Benoliel & Schechter, 2017). In learning school communities, principals are vital in promoting the school vision (e.g., Mitchell & Sackney, 2006; Murphy et al., 2007), as effective leadership supports the school’s organizational learning (Kurland et al., 2010).

However, conflicting visions may arise during co-creation. For instance, the principal’s powerful desire for change may clash with the perspectives of the work community (Kose, 2011). In practice, creating a shared vision involves a structured approach in which individuals who are invested in the school’s future frequently discuss and collaborate on the community’s future. Moreover, the progression of a shared vision within schools is often gradual and slow (Admiraal et al., 2021) A school community’s shared vision can also be perceived as vague, which leads to the vision not being connected to the development of school work, but rather remaining abstract and distant from the actual improvement of the learning community. (Murphy & Torre, 2014). Thus, a vision should not be a mere slogan but a foundation for daily activities within the school community that teachers can relate to (Pekarsky, 2007). This means that a shared vision is not just about agreeing on ideas generated together but should also be a consistent tool for decision-making and community growth (Hord, 1997).

4.3.4 Team learning

In today’s society, we face many changes and challenges, including the emergence of new and disruptive technologies, and the need to support students from diverse backgrounds. As a result, teachers must collaborate within educational communities to address various issues, such as improving schools, enhancing teacher expertise, and promoting effective teaching and learning (Hargreaves, 2019; Honingh & Hooge, 2014). There is, of course, no single solution or so-called “silver-bullet” to the problems that schools face, and it

cannot be said that collaboration alone will solve the challenges in education. However, the collective intelligence and problem-solving capacity of teams are crucial for organizational learning. Thus, school development and change stem equally from considering structures and from linking learning and guidance alongside school development. For example, teamwork can be improved by developing better teamwork skills (Ronkainen, 2012).

Kools and Stoll (2016) suggested that a school's development into a learning organization requires seven overarching dimensions. In addition to promoting team learning and collaboration among staff, these dimensions include developing and sharing a student learning-centered vision, creating and supporting continuous learning opportunities for all staff, establishing a culture of inquiry within the school, exchanging knowledge and learning among staff, retaining external learning partnerships, and developing leadership. In the ULA project and this study, efforts were made to ensure that as many of these changes as possible occurred simultaneously to foster better collaboration within the school. However, teacher collaboration in learning communities is a promising form of professional development that improves the quality of education (Stoll, 2015; Vescio et al. 2008); addresses complex issues in education and schools, such as teachers' professional growth (Hauge & Wan, 2019); supports the learning of all school community members (DuFour et al., 2016; Senge et al., 2012); and helps teachers meet their students' needs (Forte & Flores, 2014).

Team learning is considered a team-level discipline, as it emphasizes the importance of collective learning through which the team learns from the experiences and insights of its members (Bui & Baruch, 2010). Team learning aims to construct new knowledge and enhance team and organizational learning (Senge, 1990). Thus, the discipline of team learning builds upon the foundations of shared vision and personal mastery, as teams consist of individuals who contribute to the team's and organization's collective growth (Appelbaum & Goransson, 1997). Bell et al. (2012) highlighted the benefits of team learning, stating that it not only enhances the adaptability of both employees and organizations to changes in the operative environment but also leads to enhanced performance. Edmondson (1999) provided a comprehensive understanding of team learning as a continuous process: the discipline of the team learning process includes numerous activities and practices that aim to enhance the team's collective learning and development, including reflection, experimentation, feedback, and evaluation of the initiatives. Hautamäki et al. (2020) defined team learning as a dialogical process "in which the team, in order to achieve its goals, takes risks, solves problems, alters its own mental models, and through sharing and recombination, co-creates entirely new ways of thinking and acting" (p. 166).

Unlike most teacher collaboration, which, even if useful, is not always instructive, team learning explicitly seeks to build deeper learning interactions in teams. Team learning is based on continuous learning and improvement rather than on short-term groups. Team learning involves sharing knowledge in teams, thus leading to positive changes in team members' knowledge (Argote et al., 2001; Boak, 2014). Decuyper et al. (2010) noted that team learning is about collectively

participating in activities designed for the co-construction of new knowledge (i.e., “to learn by doing”; see also DuFour et al., 2016) and that team learning among teachers can greatly enhance a learning community’s capacity for learning. Teacher teams are important for individual and organizational learning, development, and innovations within a school community (e.g., Bouwmans et al., 2017; Senge et al., 2012; Witherspoon, 2021). Team learning is a powerful process that, when effectively implemented, can drive growth, foster innovation, spark new ideas, and improve performance for everyone in a team and the organization.

At its core, team learning involves exploring new ideas with a hands-on approach. Decuyper et al. (2010) highlighted that team learning is about collectively participating in a set of cyclical collective processes at the team level. While the importance of team learning is recognized, interdependent collaboration among teachers, such as observation, feedback, collective learning, and team teaching, is less common than collaboration focusing on individual student progress or resource sharing (OECD, 2019). Rajakaltio (2011) insightfully pointed out that Lortie’s (1975) seminal study asserts that the solitary nature of teaching is reinforced during initial teacher education. As a result, researchers in team learning are exploring ways to build learning communities, which are essential for staff learning and development. Senge et al. (2012) highlighted the influence of team learning on a community’s learning capabilities. They argued that it enhances a community’s ability to learn by promoting collective thinking. Team learning involves coordinated actions to encourage teachers to collaborate in teams, thereby fostering knowledge sharing across the school community. This process benefits both individual teachers and the entire school community by encouraging continuous collective learning and development.

4.3.5 Systems thinking

Systems thinking promises to help understand deep-rooted practices, perceptions, and resulting events in a community. It enables communities and organizations to evolve and address real-world problems and complex challenges (Arnold & Wade, 2015; Senge et al., 2012; Wilson & Van Haperen, 2015). As a collaborative discipline, it may also improve education by contributing to both curriculum and pedagogy (Spain, 2019). As the world and its various systems become more complex, systems thinking is needed to solve increasingly intricate problems. Thus, in education and organizational development, it has gained importance for understanding and addressing evolving challenges in organizations or communities and for improving their performance in the constantly evolving world (Senge et al., 2012; Shaked & Schechter, 2017). Paananen and Kork (2023) stated that “interpreting a community change, formulating a shared objective, and achieving comprehension require an examination of the community’s operating environment, agency, and actions” (p. 207). Despite its potential and acknowledged importance, systems thinking has been underused in education, partly due to its ambiguity (Arnold & Wade, 2015).

Systems thinking, like many other disciplines, has been defined in several ways. Richmond (1994) described it as the art and science of making reliable inferences about behavior by developing a deep understanding of an organization's underlying structures. More recent interpretations, such as Arnold and Wade's (2015), have suggested that "[s]ystems thinking is a set of synergistic analytic skills used to improve the capability of identifying and understanding systems, predicting their behaviors, and devising modifications to them in order to produce desired effects. These skills work together as a system" (p. 675). Some scholars have argued that systems thinking is not a discipline but an interdisciplinary conceptual framework. Systems thinking is about "seeing the whole beyond the parts and seeing the parts in the context of the whole" (Shaked & Schechter, 2017, p. 701), a perspective that highlights its holistic approach to understanding. Senge (1990; Senge et al., 2012) claimed that learning organizations strive to comprehend themselves as complex systems in which the school's components interact and interrelate. Therefore, systems thinking serves as a cornerstone that connects and integrates the other four disciplines of a learning organization.

In systems thinking, an understanding of the interconnectedness of things is essential, but merely understanding that things in an organization are connected does not make them learning entities. Additionally, the purpose of the organization or community must be clarified (Meadows, 2008). The success of development processes is always contextual to the system itself—here, to both the school and education system as well as to society—as processes should not be seen as changing the system but as part of the system (Laitinen & Stenvall, 2012). However, changing them is not straightforward. Meadows (2008) argued that systems are reflections of the deeper layers of human behavior, including cultural beliefs, emotional needs, and human strengths and weaknesses. As social systems are complex, meaningful change requires addressing concrete hierarchies (Mincu, 2022), as well as underlying values, emotions, and the way people think and interact, and involves transforming the school staff's mindset and the school culture.

4.4 Three disciplines in closer examination

From a research perspective, the scope of this doctoral dissertation has been limited to three disciplines: mental models, shared vision, and team learning. This decision ensures the construction of a coherent study that enables the comprehensive examination of learning disciplines and school communities across multiple organizational levels—individual, team, and organization. These were chosen due to their importance in the ULA project's development approach, which focused on creating a more systemic view of school change. Although this study focuses on a more detailed examination of mental models, shared vision, and team learning, personal mastery and systems thinking were also part of school development activities and the overall structure of the ULA project.

Particularly in the initial and final interviews, themes associated with personal mastery were discussed—for example, conversations about teachers', teacher team leaders', and principals' learning and development, their professional learning and development needs, and their continuing education in the past and future. Systems thinking served as the philosophical underpinning of the ULA project and guided efforts to examine the school and its development more comprehensively. As the ULA project aimed to create a new unified school community, acknowledging the change's holistic nature was an essential part of the process. Thus, throughout the process, systems thinking served as a foundational structure through which the school and its transformation were consistently approached. Moreover, efforts were made to introduce systems thinking to the school staff through various development and discussion settings, such as during the planning of an interdisciplinary learning module, as the goal was for two distinct communities to collaboratively build a new cohesive school environment, facilitated by an understanding of the interactions between various aspects of the school community, such as diverse teacher groups and students' varying needs. The underlying philosophy rooted in learning organization development theory with five learning disciplines helped in both understanding the uniqueness of the school and building bridges between the various functions and stakeholders within the school.

5 DATA AND METHODS

This thesis and its substudies can be characterized as a qualitative case study aiming to describe and understand the formation of a unified comprehensive school and examine how teachers and principals perceive the establishment of a unified comprehensive school. Moreover, this study sought to improve the unity and coherence of a new school community by making changes in all aspects of the school community, including the school's management practices and teachers' collaboration, teaching, and learning. The aim was to answer the question of why the school community was as it was and why it developed in a particular way. Thus, this case study stemmed from the tradition of explanatory case studies (Eriksson & Koistinen, 2014). The implementation of the case study primarily involved observation of the case subject in authentic settings, interviews or discussions, and interactions, in this case with the school staff, as well as documentation of other relevant materials during the research process (Woodside, 2017). Moreover, the theoretical underpinnings were derived from pragmatic scientific theory, which, in this thesis's context, meant a method of understanding the real-world usage and practical benefits of learning disciplines in school development. With its transformative ontology, normative commitment, and highlighting of human activity (Miettinen, 2006), pragmatism is a fitting approach in the context of school development research.

5.1 Pragmatism in the context of school development research

This study viewed school development as a process of continuous learning and improvement involving interaction and collaboration among teachers and staff within the school community. School development was underpinned by staff learning, which occurred through interactions with colleagues and researchers within the everyday school environment. Thus, the study was rooted in a pragmatic understanding of knowledge based on the practical experiences and real needs of the school's members.

Pragmatism is a philosophical movement that originated in the United States during the late 19th century. Charles Peirce and William James are recognized as key figures in pragmatism development. Pragmatism also owes a great deal to the thinking of John Dewey, who particularly influenced its development. Pragmatism highlights practicality and usefulness as the criteria for evaluating knowledge and truth (Siljander, 2014). Central to this philosophy is the idea that a clear boundary cannot be drawn between theoretical knowledge and various practices (Lehtinen, 2010). Pragmatism emphasizes the effort to eliminate dualistic ways of constructing knowledge. This includes overcoming dichotomies, such as those between facts and values, realism and relativism, and theory and practice (Miettinen, 2006). A pitfall of dualistic thinking is that it prevents us from understanding the true nature of experience and from recognizing, for example, the inherent connections between research findings and our values (Alhanen, 2013). Dewey's guiding principle (as cited in Puolakka, 2021) highlights that experiences are not distinct, isolated events. Instead, they are interconnected, each building upon the last to form a continuum. According to Miettinen (2006), "Dewey himself characterized his approach using the complementary categories of empiricism, naturalism, instrumentalism, and functionalism" (p. 392).

The concept of pragmatism emphasizes the application of ideas and concepts as part of human experience to clarify their real (pragmatic) meaning. Thus, functional effects are central to the acquisition of knowledge and beliefs and their validity assessment (Helsinki Term Bank for the Arts and Sciences, 2024). According to Holma and Kontinen (2020), "Pragmatism sees the relationship between theory and practice as bidirectional: all theories must be subjected to revision in light of practice but, at the same time, a crucial role of theories is to critique current practices" (p. 15). As pragmatism underscores the importance of action and practice in testing and evaluating theories and concepts (Lehtinen, 2010), a central feature of pragmatism is the human experience as a relevant starting point of inquiry (Holma & Kontinen, 2020). In this study, the mapping of teachers' mental models provided guidelines for the shaping of a school development project, as it offered valuable insights into teachers' perceptions, expectations, and readiness for collaborative work (Toikka & Tarnanen, 2022), thus encompassing their understandings of causes, events, and outcomes to gain deep insights into individual perspectives within a case (Woodside, 2017). This perspective emphasizes the relativity and contextuality of knowledge, meaning that knowledge can change and develop over time, depending on changes in the school environment and in teachers' interactions (Miettinen, 2006). Knowledge is not static or fixed; rather, it is flexible and dynamic, evolving and adapting continuously in our interaction with the environment.

Pragmatism is reflected as a practical approach to education in which teachers' professional autonomy is valued. In a pragmatic approach, research should focus on determining whether people's perceptions are justified and whether they produce beneficial outcomes for their actions and goals instead of

whether they align with reality (Siljander, 2014). Therefore, in this research process, we aimed to connect theoretical knowledge with practical application, a method commonly used in teacher training programs. Hellström et al. (2015) referred to this as a Finnish educational tradition, in which teachers are free to choose the teaching methods that they see best, without interference from school leadership, if the educational goals are met. Moreover, pragmatism recognizes each school as unique and, in a way, suggests that knowledge is always related to the specific environment of the school and its community and is not static but constantly evolving through interaction with the school (Biesta & Burbules, 2003). Thus, in the context of comprehensive school development, it was crucial to consider the interplay between practice and theory during the development process with the school. In other words, it was necessary to examine how and how much evolving practices, such as development teams inform theory, and theory influences the implementation of practical development, such as the creation of a shared vision. However, it must be noted that pragmatism had its limitations in this context, as the nature of the reported studies was inherently retrospective compared to the lived everyday life and changes within the school.

5.2 The school development process in a university-school partnership

The focus of this doctoral research was on examining the development of a learning community within a school transitioning toward a unified comprehensive system. Initially, the primary school (Grades 1–6) and the lower-secondary school (Grades 7–9) functioned independently, each with separate management and principals. However, during the development project, these schools merged into a single unified comprehensive school. Thus, this dissertation presents a study closely tied to the development of the participating school. The case study design drew from the explanatory case study tradition, involving a detailed and intensive examination of a single school community, with a certain focus on understanding the unique aspects of the school (Eriksson & Koistinen, 2014). In a case study, explanation involves an effort to address the question of why something occurred (Woodside, 2017).

The school's development was facilitated in joint meetings between teacher educators and the school staff, with the teacher educator team responsible for guiding the workshops and activities. However, a key aspect was to create a shared understanding among the participants regarding the direction and goals of the school's development. Discussions were held between the researchers, principals, team leader teachers, and the school's management team to review how the development should be directed in all stages. Previous studies have highlighted the need for collaborative efforts between researchers and educators to drive positive change in educational settings (Rosendahl & Rönnerman, 2006). As a researcher, I took part in planning, facilitating, and evaluating changes

within the school community, in collaboration with our researcher team, the school’s principals, teachers, and other staff.

The school development process was described as a series of stages. The first stage involved understanding the school community and its members, as well as exploring the factors that facilitated or challenged the change process. This study included conducting interviews with staff and organizing collaborative development days, during which the future school community was outlined. These activities played a crucial role in fostering collective learning and understanding within the community. The co-creation of a shared understanding was crucial to the development process, as it was easy for the involved parties to form and maintain differing views on the goals and direction of the development efforts (Rosendahl & Rönnerman, 2006). In the second stage, the aim was to promote the concept of a unified comprehensive school by creating the school community’s shared vision, which depicted the school’s future and served as a practical tool for guiding development efforts. The third stage provided a framework for the development process through the establishment of development teams and the school leadership team. The activities of these teams aimed to implement and reinforce the vision by promoting team learning and new school development methods and practices, such as cross-boundary development teams. Moreover, the facilitated development efforts included shared training sessions for all school staff; participation in ULA project network events, school visits, team activities, meetings with principals and school personnel, and management team meetings; and a multidisciplinary learning module. The development continuum is shown in Figure 4.

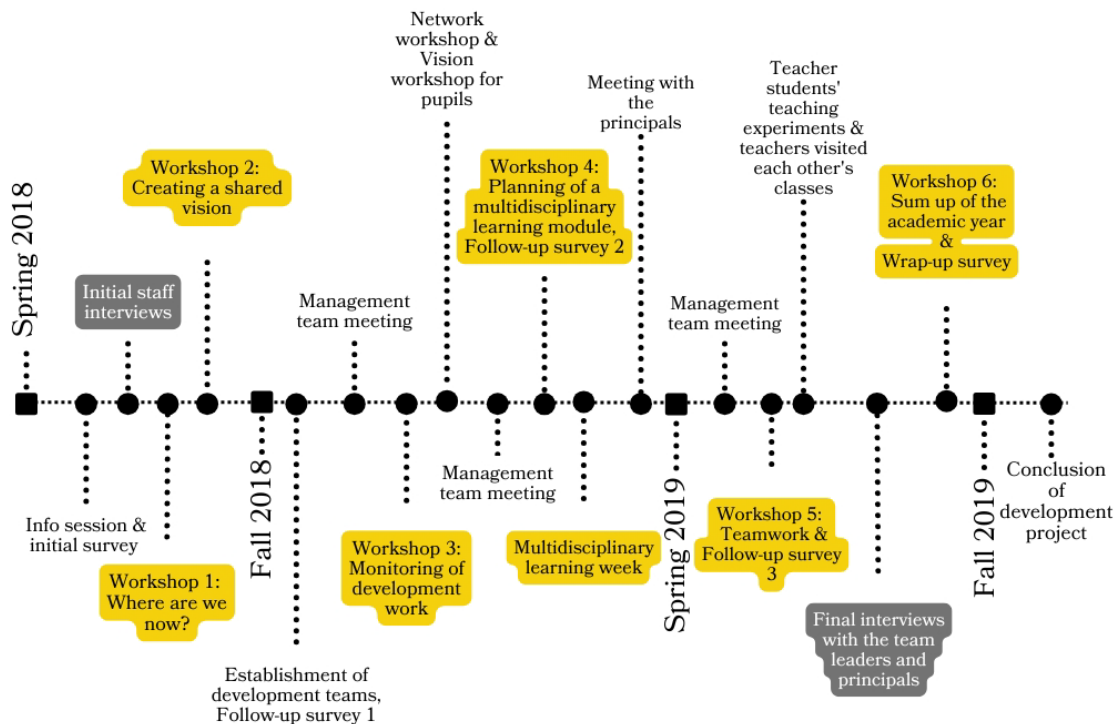


Figure 4 The timeline of the school’s development project

The development project with the school began with initial interviews (N=41). The initial interview data, collected in spring 2018, included teachers' perceptions of collaboration, school structures that foster or hinder the future of the unified comprehensive school community, and aspects of school community functioning. These interviews also addressed classroom interaction, teaching, teacher leadership, and school management (Tarnanen et al., 2021). The first substudy of this dissertation was also based on this data, and investigated teachers' mental models of collaboration (Toikka & Tarnanen, 2022).

Collaborative planning and development sessions were organized for the staff in the early stages and focused on identifying internal needs and readiness for change. A key objective was to co-create a shared vision for the school community to guide its development. In the spring of 2018, the researchers collected the hopes, ideas, and concerns of the school community during workshops. These workshops resulted in a shared vision (Toikka & Tarnanen, 2024a) and the formation of development teams for the school to support team learning (Toikka & Tarnanen, 2024b). These workshops showcased collaborative work strategies, gathered information about the school community's current state, and established a foundation for community development using various working methods. The workshops allowed time for community discussions that were supported by tasks and prompts to guide the developmental discourse. In the vision workshop, teachers and other staff initially drafted the vision for the new school in small groups. Afterward, they had the opportunity to hear and discuss the visions proposed by the other groups.

A notable addition to the school's structures was the introduction of new development teams in which all staff members participated. These teams were formed based on a shared vision, which also guided the creation of team profiles and allowed teachers to select the team they wished to join. Initially, multiple team themes were established, but these were later consolidated into three larger development teams, each covering 2-3 smaller themes. The primary role of these development teams was to oversee and advance development related to their specific themes within the school. However, they occasionally also addressed more routine and daily issues.

The development teams' activities were centered around regular meetings during which members discussed and developed various topics and themes. Each team had the autonomy, guided and supported by teacher educators, to manage its operations and determine its working methods. Team leader teachers were responsible for reporting their teams' activities and progress to the newly restructured school management team. This restructuring was part of a broader initiative to establish a new comprehensive school. In this evolving management structure, the development team leaders played a pivotal role in aligning their teams' efforts with the school's overall vision and goals. In the school development project, assessing the preparedness and awareness of the school community and teams for the next phases of development was essential. A pragmatic approach was adopted, remaining open to various experiments within the teams to explore new methods of collaboration and to learn from these

experiences. As Senge (1990) has pointed out, individuals' past experiences shape their perceptions, beliefs, and mental models. Thus, generating new experiences became a key aspect of the change and development phase.

Additionally, during the school development process, several tools were implemented to monitor progress, including a Kanban board tailored to the project's needs. This board, prominently displayed at the school, enabled teams to review both their own and others' progress. The visual aid promoted transparency and collaboration, ensuring that everyone remained updated on development efforts. Furthermore, the participating school visited another school where development teams were an integral part of operations. This provided validation and models for their own initiatives. The school also participated in network meetings within the project, with staff from other schools attending its development meetings to share their experiences with improvement processes. A cross-boundary multidisciplinary learning module was also introduced for all students from Grades 5 to 8 and their teachers. This module, spanning both primary and lower-secondary school levels, aimed to promote collaboration within the school community and offer new learning experiences to students and teachers. The multidisciplinary learning module also involved a group of student teachers, for whom this served as a teaching practicum as part of their training. In this way, the facilitation bridged both initial teacher education and in-service training, aligning with one of the core objectives of the ULA project.

Table 2 Overview of the original studies

Title	Research question(s)	Data	Analysis method
<p>Substudy 1 Understanding teachers' mental models of collaboration to enhance the learning community</p>	<p>RQ1: What forms of collaboration do teachers attach to their work?</p> <p>RQ2: What do teachers think about different forms of collaboration, and what types of collaborative work do they consider relevant during a period of change?</p>	<p>41 teacher interviews at the beginning of the development process</p>	<p>A qualitative, data-driven but theory-informed content analysis</p>
<p>Substudy 2 A shared vision for a school: Developing a learning community</p>	<p>RQ: How do teacher team leaders and principals associate a collaboratively created shared vision with the process of developing a learning community?</p>	<p>5 team leader teacher and 2 principal interviews at the end of the development process</p>	<p>A qualitative thematic analysis</p>
<p>Substudy 3 School development through team learning: Exploring the potential of teams in a learning community</p>	<p>RQ1: How do teacher team leaders perceive team learning in development teams?</p> <p>RQ2: How do teacher team leaders consider their professional development in relation to their new role?</p> <p>RQ3: What key aspects contribute to the success of development teams in terms of promoting school community development?</p>	<p>5 team leader teacher and 2 principal interviews at the end of the development process</p>	<p>A qualitative thematic analysis</p>

5.3 Participants and data

Substudy I focused on understanding Finnish basic education teachers' mental models of collaboration within a school community. The aim was to explore the factors that either enhanced or hindered collaboration, both in the current and envisioned future school contexts. The substudy examined 41 primary and lower-secondary teachers (class teachers, subject teachers, and special education teachers) from one school community at the onset of the school development project. These teachers included 21 primary school teachers (Grades 1–6) and 20 subject teachers (mainly Grades 7–9), with teaching experience ranging from 1 to 34 years. Semi-structured interviews (Galletta, 2013) were conducted and focused on four themes: professional development and learning, collaboration, the school as a work community, and classroom-related work. Each interview, conducted by teacher educators, lasted approximately 45 minutes, and all were recorded and transcribed verbatim for analysis.

The data for Substudies II and III were collected through semi-structured thematic interviews with the school's management team members at the end of the development project and academic year. The interview themes included 1) professional learning and development, 2) the school community and shared vision, and 3) collaboration and development teams. The interviewees consisted of six team leader teachers from the development teams (subject, primary, or special education teachers) and the two school principals. They were interviewed to understand their views on transforming the school into a learning community that aligned with the co-created shared vision and team learning. The interviews ranged from 41 to 65 minutes.

Exploring teachers' individual mental models offered additional data to direct observations (Woodside, 2017). The studies aimed to gather deep insights into the theme of school development, and interviews served as a method to capture this data in teachers' and principals' own words. Interviews also enabled an interaction between the interviewer and each participant to clarify and explore deeper meanings in their responses. However, the research data were supported by secondary data collected during the development research, which included, for example, outputs from joint meetings and workshops, photographs, and researcher diaries. These were not directly used as data in the research but were utilized for recalling events and reviewing the development process.

It is important to note that the development and research data collection were carried out alongside each other throughout the study. The data of the substudies consisted of interviews with respondents. This primary data, which included interviews with open-ended questions, allowed for a deep exploration of the teachers' and principals' personal mental models and their perceptions and experiences regarding the school's development process. While Substudy I explored the school community's initial state and the teachers' mental models related to collaboration, Substudies II and III involved a smaller group of interviewees, focusing on teachers who served as team leaders and were members of the school's new management team and the school community's two principals. This choice was partly justified by the need to study the experiences and perceptions of teachers working in the new peer leadership role. However, it is important to acknowledge that studies have highlighted that teachers involved in school management, such as in the management team, may have a stronger commitment to and responsibility for school development compared to their peer teachers with no involvement in management (Heikonen & Ahtiainen, 2024). However, in Substudies II and III, the focus was narrower because team leader teachers, among all teachers, are a relatively underresearched group, especially in the context of a school's transition toward a unified school system, for which bridging the varying teacher groups is essential. The richness of the data is reflected in the fact that the teacher team leaders represented a broad spectrum of the school's teaching staff, including classroom teachers, subject teachers, and special education teachers. With the exception of one teacher who joined the school as a new staff member during the development project, both the principals and the team leader teachers were also interviewed at the project's

beginning. However, at that point, the team leader teachers were not yet aware of their upcoming roles as team leaders.

5.4 Data analysis

The data of Substudy I were analyzed using a qualitative, data-driven, theory-informed content analysis (Bernard & Ryan, 2010; DeCuir-Gunby et al., 2011). The analysis was conducted in three phases. Initially, coding was guided by Rouse and Morris's (1986) three-part description of mental models. The analysis of Substudy I was conducted via collaborative discussions, which allowed us to obtain an in-depth understanding of the data. Alongside the analysis process, the researchers cross-checked the coding to ensure consistency. The coding logic and discrepancies were negotiated and carefully reviewed. The coding was conducted with a qualitative analysis program Atlas.ti Cloud that allowed multiple users to work simultaneously and in real time. The codes were then discussed for agreement and clarification. The participant data were anonymized without distorting its scholarly meanings. This led to an examination of three levels in the teachers' responses: their description of the school community's purpose and form, their explanation of the community's operation and system states, and their prediction of the school's future system states. Finally, the analyzed data were reexamined to identify patterns and determine responses to the research question.

The thematic data analysis of Substudy II was a multistage process. Teacher interviews were analyzed using a six-phase thematic analysis (Nowell et al., 2017) to examine teachers' and principals' perceptions of school development. Initial coding was carried out in Atlas.ti Cloud. The thematic analysis aimed to shed light on how a shared vision is associated with developing a learning community and to critically observe change processes involving uncertainty about the future. Thematic analysis is a valuable technique for examining research participants' perspectives and recognizing recurring themes in the data; this method involves identifying, analyzing, organizing, describing, and reporting study data (Braun & Clarke, 2006). In conclusion, the thematic analysis method was used to reveal commonalities and differences in interviewees' perceptions and to generate a systematic theming of the dataset concerning the research question.

In Substudy III, thematic analysis was used to organize the fragmented interview data into a more conceptual understanding of team learning and school development to provide meaning to the findings (Oplatka, 2021; Puusa, 2020; Tuomi & Sarajärvi, 2018). The first step of the analysis involved conducting an in-depth reading of the interview data. This initial phase focused on becoming thoroughly familiarized with the content, followed by the formation of reduced expressions to process the data into more concise representations. Afterward, initial codes were identified, which led to the development of preliminary subthemes that would guide further analysis (e.g., Belotto, 2018; Braun & Clarke, 2006). Then, subthemes were reviewed individually and assigned to one of four

main themes: 1) working in teams, 2) team learning, 3) development of the interviewees, and 4) school development. To address the research questions of this study, we organized the data-based findings into three thematic categories to provide a structured framework for understanding the key aspects of the school development: “team learning perceptions of teacher team leaders,” “team leader teachers’ experiences of their development,” and “overcoming challenges of promoting change in a school community.” Moreover, the three thematic categories allowed for a comprehensive exploration of the complex dynamics involved in team learning, development team development, and schoolwide change initiatives.

6 OVERVIEW OF THE ORIGINAL STUDIES

6.1 Substudy 1: Understanding teachers' mental models of collaboration to enhance the learning community

Substudy I explored Finnish basic education teachers' mental models of collaboration to identify the factors that either facilitate or hinder changes in a school community and teacher collaboration. The study examined the mental models of collaboration on three levels: descriptive, explanatory, and predictive (Johnson-Laird, 1983; Rouse & Morris, 1986). Mental models are one of the five disciplines of a learning organization, as outlined by Senge (1990) and Senge et al. (2012). The study aimed to answer the following research questions: 1) What forms of collaboration do teachers attach to their work? 2) What do teachers think about different forms of collaboration, and what types of collaborative work do they consider relevant during a change? The study depicted the initial state of a school community separated into primary and lower-secondary levels, with a transition toward a unified comprehensive school in a new building.

The findings of Substudy I revealed that teacher collaboration within the school primarily involved planning and exchanging ideas, while administrative tasks often limited opportunities for in-depth pedagogical discussions. Moreover, teachers found it challenging to balance their workload between individual work and collaboration, which, in turn, prevented them from exploring more complex issues, such as student learning, co-teaching, and deeper collaborative practices. In the separated school setting, collaboration among teachers primarily manifested through the exchange of ideas and joint planning rather than through co-teaching. This collaboration was especially evident among primary school teachers, who worked closely with colleagues teaching parallel classes, which allowed them to share experiences and strategies tailored to similar age groups and learning levels. Similarly, some of the subject teachers found it beneficial to collaborate with colleagues who taught the same subject area, as it provided a

platform to discuss and plan subject-specific matters and share teaching materials and resources. However, this type of collaboration was not universal among all subject teachers, for example, due to the absence of colleagues teaching the same subject.

The main obstacles to deeper collaboration among subject teachers stemmed from existing mental models shaped by factors such as working hours, non-teaching duties, and the balancing act between joint work and upcoming teaching. These assumptions, which influence how teachers approach their work, were also reflected in their busy schedules, administrative meetings, and lesson planning, further limiting the time for more meaningful collaboration. While teachers leaned on traditional one-on-one collaboration with close colleagues, their desire for more diverse collaborative activities signaled an awareness of the need to rethink these mental models and explore new ways of working together. However, their busy schedules, filled with teaching duties, administrative meetings, and lesson planning, left little room for such expanded collaboration and further challenged the efforts to increase or improve the collaboration. Although time for teamwork and collaboration had been allocated in teachers' schedules, frequent cancellations of team meetings due to schoolwide scheduling conflicts and collective agreements further restricted opportunities for collaboration. Despite these limitations, teachers' desires for more diverse collaborative activities, such as simultaneous teaching and multidisciplinary learning, suggested a recognition of the need to challenge and reframe their existing structures to enable deeper collaboration.

The findings also highlighted how teachers' mental models influenced the success of teamwork and the varying approaches to collaboration. The research findings indicated that collaboration and teamwork could foster a more distributed sense of responsibility among teachers. However, the success of these efforts depended heavily on interpersonal dynamics, which were shaped by the underlying mental models that guided teachers' approaches to teamwork. Many teachers felt that collaboration only occasionally met its goals, with preferences varying—some favoring independent work and others being more open to deeper cooperation. Class teachers reported greater success with teamwork, possibly due to the established mental model derived from working in grade-level teams, whereas subject teachers experienced more challenges in adopting collaborative practices.

In conclusion, a diversity of mental models were found among teachers regarding collaboration in the evolving school community where all grades would be together. Some teachers assumed that their jobs would involve more collaboration with other teachers and cross-boundary collaboration with class and subject teachers or special education teachers. Conversely, other teachers expressed no immediate need for change in the current school community's collaborative practices. Nonetheless, most teachers agreed that joint efforts are important for the school community to face the challenges of the future learning environment. Teachers expressed a desire for students of different ages to learn together and for teams to dedicate time to building this collaborative and more

positive atmosphere, reflecting a shift in their thinking toward more integrated approaches within the new unified comprehensive school.

6.2 Substudy 2: A shared vision for a school: developing a learning community

Substudy II focused on understanding how a collaboratively created shared vision (Senge, 1990; Senge et al., 2012) was perceived during the integration of a primary school and lower-secondary school, which had previously been culturally and physically separate and which the project aimed to unify into a new comprehensive school community. The study explored the following research question: How do team leader teachers and principals associate a collaboratively created shared vision with the process of developing a learning community? By emphasizing the role of a shared vision, Substudy II examined how teachers and principals viewed vision-driven school development and whether the vision effectively supported the school's growth and adaptation during the time of change. The findings emphasized five major themes of school development related to a shared vision: 1) communication of the shared vision and transparency, 2) present and absent themes in the shared vision, 3) tradition and innovation, 4) the long-term nature of school development, and 5) the role of the vision in everyday school life. Clear communication and transparency are essential in establishing a shared vision in a school, as a lack of these elements can lead to friction within the school community (Voulalas & Sharpe, 2005).

The findings underscored the importance of clear communication regarding the school's shared vision and the need for discussion and negotiation during its development. Moreover, Substudy II's findings indicated that the vision was also considered timely and biased, touching on the role of safety and well-being in the school's vision. Teachers and principals acknowledged that these aspects should not overshadow vital school development themes, which include sustainable development, curriculum enhancement, and multidisciplinary learning initiatives. Substudy II's findings offered insights into how a school community's preconditions contributed to the implementation of a shared vision as a catalyst for change. These findings suggested that a shared vision was beneficial for reflecting on school development, as challenging customary ways of doing things was essential yet could be difficult. The findings also indicated that the connection between the shared vision and everyday work needed to be stronger. This implied that the link between daily work and the vision could be made more concrete, meaning that the vision could better reflect or be more aligned with the school development process. In other words, the development based on the vision could have been more effectively supported by revisiting and discussing the vision in staff meetings. For example, the vision should have been more visible in aspects of daily life at school, in line with the

idea that an existing shared vision should be closely tied to knowledge acquisition and dissemination in the learning community.

In conclusion, the findings of Substudy II underscored the importance of a shared vision in relation to knowledge acquisition and dissemination in schools. Developing a unified and comprehensive learning community within a school was a complex task that required the active participation of all school community members. In the facilitated development process, the success of new initiatives largely depended on whether school community members perceived a collective effort toward shared objectives, and the shared vision of the school community was vital in establishing a common goal and development teams. However, in terms of the vision, it was essential to recognize its nature as a guiding background influence and to strengthen its connection to the school's everyday work.

6.3 Substudy 3: School development through team learning: exploring the potential of teams in a learning community

Substudy III investigated teachers' and principals' perceptions of collaborative work in designed development teams and team learning within the school community. The aim of this study was to highlight the potential of teacher collaboration in teams to enhance the team learning of educators within the context of merging separate lower-secondary and primary schools into a single unified school community. This was achieved by employing the learning community development framework and team learning theory (Senge, 1990; Senge et al., 2012). By examining the insights of teachers and principals, the study sought to provide a deeper understanding of how collaborative practices could facilitate team learning and foster development-oriented collaboration among teachers and other staff members. Substudy III aimed to explore critical aspects of collaborative practices within the school community by addressing three research questions: 1) How do teacher team leaders perceive team learning in development teams? 2) How do teacher team leaders consider their professional development in relation to their new role? and 3) What key aspects contribute to the success of development teams in terms of promoting school community development?

Similar to Substudy II, this study involved interviewing five team leader teachers and two principals from a school community in Finland after a two-year collaborative development process aimed at merging separate schools into a single unified comprehensive school. The focus of this study shifted from the shared vision to exploring the discipline of team learning. The research included conducting interviews with team leaders and school principals to examine their perceptions of teamwork and team learning within the newly formed development teams. Additionally, the study investigated the personal development of team leaders and how school development through team

learning could create and promote learning within the school community at both the individual and team levels.

The findings indicated that existing perceptions of the school community, teachers' competence in collaboration, and their commitment to collaborative development impacted team dynamics and interactions among teachers. The results highlighted that the effectiveness of the school's development teams was influenced by teachers' expectations and their readiness to work collaboratively, as well as by the traditions of the school community. Additionally, the findings emphasized that changing a school's culture and promoting teachers' collaboration and professional development was a complex process. Although the value of team-oriented development and shared thinking was acknowledged, a central challenge lay in enhancing clarity within teams by better integrating the work of development teams with the school's management.

To support the development of the school, the study proposed that actively enhancing team leader teachers' skills in leading and facilitating peer learning should be a priority in such processes. Throughout the project, team leaders encountered a mix of motivated teachers and those who were either unmotivated or doubtful about the changes. In conclusion, the study suggested that transforming a school community and promoting collaboration and professional development among teachers were complex tasks that required substantial support for teachers in their roles as team leaders. The findings indicated that generating and facilitating team learning within the school community relied on sharing and combining knowledge through discussion and dialogue, ultimately leading to the creation of new knowledge and practices that further enhanced learning within the school.

6.4 Synthesis of the findings

Overall, the findings of the three substudies provided a comprehensive view of the persistent difficulties in unifying primary and lower-secondary schools with different working methods, thus providing insights into the complexities of creating a cohesive learning organization, which is one of the central goals of unified comprehensive education. The findings identified multiple barriers to collaboration, which included a lack of time, space, and familiarity among teachers at separated schools. In a concrete way, this restricted collaboration even more to within grade-level or subject-specific teams. Across multiple interviews, teachers from primary and lower-secondary schools were unfamiliar with each other prior to their interaction within development teams, which may have further complicated the collaborative efforts and aims during the project. The school did not share a strong common ground for collaborative development before the start of the development project. In particular, the temporary facilities were found to restrict collaboration in the participating school's context, emphasizing the importance of appropriate infrastructure in fostering a learning community.

This dissertation and its substudies aimed to generate a new understanding of the transformation and development of a school community into a unified comprehensive school. The substudies examined how the proposed learning community approach could facilitate this transformation, particularly through the disciplines of mental models, shared vision, and team learning. They explored various stages of the development process and identified learning disciplines and themes that were likely to assist the school community in its change toward a unified comprehensive school. The first substudy, based on initial interview data, offered insights into the school community's starting point by focusing on teachers' mental models of collaboration. Substudies II and III provided a more comprehensive understanding of the development of the unified comprehensive school in collaboration with the ULA project and offered both theoretical and practical insights into school development. Figure 5 shows the synthesis of the study structured around three substudies. The first substudy focused on teachers' mental models, using data collected at the project's outset. In contrast, Substudies II and III, which involved shared vision and team learning, used data from the final interviews. The initial situation is presented at the top of Figure 5, providing an overview of the collaboration practices within the school at the beginning of the project. The figure's perimeter depicts the distinct "paths" taken by the two substudies. At the bottom of the figure, these substudies converge, illustrating how the development teams, grounded in the shared vision, were reevaluated at the project's conclusion.

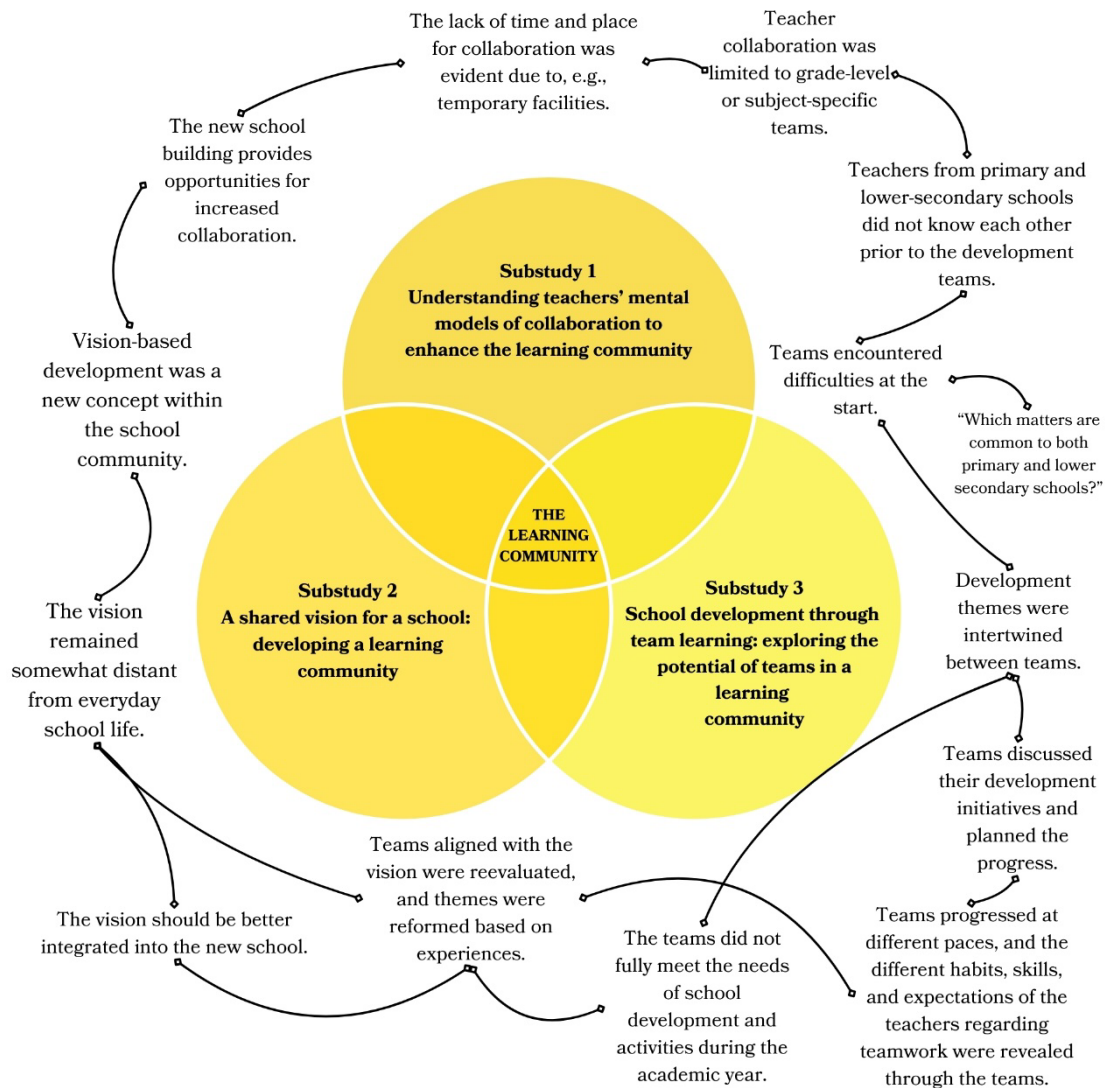


Figure 5 Synthesis of the findings

The substudies conveyed the message of separate schools that were accustomed to different working methods taking the first steps toward a unified comprehensive school and stressed the need for a shared foundation for collaborative development. Vision-based development was a new idea within the school community. While the community's development seemed somewhat aligned with this shared vision, it was perceived as a distant, minor part of the school's development process. The shared vision was not perceived as a motivating factor for teachers to collaborate or to concretely shape the future of the school, despite being identified as the driving force behind the development work. However, team leaders and principals believed that the activities of the development teams and their alignment with the shared vision represented the right approach to guiding school development and staff engagement. This indicated that the vision should be actively integrated into the new school environment to ensure that it may become a more visible part of the new school community.

The school's development team structure, based on the shared vision, did not adequately address the varying needs of the school's other activities and development throughout the academic year. Due to the differing mental models among teachers regarding collaboration and the challenges of adhering to the school's shared vision, the development teams progressed at varying paces. The initial stages for each team proved to be time-consuming, which was predictable but still challenging, given the need to monitor the teams' efforts. Furthermore, team learning was influenced by the observation that some teachers who participated in the development teams genuinely expected the team leader to share knowledge during meetings rather than to foster a more collaborative approach to development and team learning. This highlighted the diverse habits, skills, and expectations that teachers brought to the development teams, which resulted in varying levels of commitment to teamwork. Thus, to address these issues, development teams aligned with the shared vision underwent reevaluation at the end of the academic year and prior to moving to the new school. This iterative process was justified so that the teams could more effectively align with the developmental needs of the school, thus fostering a more integrated and collaborative school community.

The examination of mental models of collaboration, the school's shared vision, and team learning yielded interesting and relevant perspectives regarding the change and development of the school community. The findings confirm that learning community-related disciplines are strongly interrelated (Senge et al., 2012). In summary, the findings from all three substudies suggest that teachers encounter a range of challenges when attempting to cultivate a collaborative culture within the school community. Taken together, the findings imply that certain forms of teamwork, notably one-on-one collaboration between teachers and grade-level or subject teams, are a more integral part of the teaching profession. The findings offer a nuanced understanding of how cross-boundary collaborative methods between teacher groups, such as building a shared vision, development teamwork, pedagogical discussions, and co-planning and development of a new school community, require time, investment, dialogue, and discussion within the school community to become truly community work methods and to better serve the school development.

7 GENERAL DISCUSSION

7.1 The aim of the study and conclusions

This study explored the development process of a unified school in Finland through the framework of the ULA project's learning community development concept, based on Senge's (1990; 2006; Senge et al., 2012) concept of improving a learning organization. This study aimed to contribute to the existing body of knowledge by highlighting the challenges and processes involved in developing unified schools, particularly in the context of merging different school levels and cultures. More precisely, it aimed to generate new knowledge and a novel perspective on both the theoretical and practical understanding of the early stages of unified comprehensive school development, with a focus on tailored staff training to integrate different operational cultures into one cohesive and shared learning community by providing new evidence on teachers' mental models, promoting team learning, and fostering a shared vision within the school community at the time of change.

This thesis and its substudies were carried out as part of the ULA project and included the school development process in which the project's researchers and teacher educator team facilitated and supported the transformation of the participating school community toward a new unified comprehensive school. The ULA project aimed to enhance both initial and continuing teacher education through shared expertise and organizational learning within schools. The overarching research questions in this study were as follows: What are the existing conditions involved in the merging of primary and lower-secondary schools into a unified comprehensive that influence the development of a learning community? What new insights can be gained about the role of the learning community approach in shaping collaboration, shared vision, and team learning in unified comprehensive schools?

The main conclusion is that, although Finland's national core curriculum for basic education and national legislation create a solid foundation for the implementation of unified comprehensive education, the boundaries between primary and lower-secondary schools are still clear in the comprehensive education system, and the establishment of a unified comprehensive school model challenges the traditional and persistent model of basic education with separated levels (see Rajakaltio, 2011; Sahlstedt, 2015). The challenge lies in the fact that a truly cohesive comprehensive education is challenged by many enduring characteristics of the system (Salminen, 2018). Thus, it is not straightforward to say that school levels with differing backgrounds and rooted in strong traditions and varying teacher training would form a genuinely cohesive school community in a brief period (Rajakaltio, 2011). A novel understanding about the development of unified comprehensive school communities is required, as the number of unified comprehensive schools in Finland has increased by 10% over the last 10 years (Statistics in Finland, 2020) and students' educational pathways are becoming increasingly important as a more concrete phenomenon in the Finnish context for both today and in the future.

7.1.1 Teacher's mental models of collaboration, shared vision, and team learning

The ULA project's model for community-based coaching, which involved facilitating development efforts grounded in Senge's (1990) concept of a learning organization, provided a framework for closer examination through the lens of three disciplines of a learning organization. The three substudies investigated how to develop the school as a learning community in which knowledge sharing, collaboration, dialogue, and discussion and continuous learning of teachers, principals, and other staff are a central part of the school community's developmental activities. This approach aimed to facilitate a deeper understanding not only of the new school community among educators, thereby fostering a more cohesive educational environment, but also of the school community's initial state in the separated primary and lower-secondary school structure.

The first substudy examined the initial situation of the school. Since the key working method in the later development phases was based on collaborative methods and the foundational idea of building the new school community was to increase cross-boundary collaboration between teachers, the first substudy of this dissertation focused on using mental models to explore the collaboration among teachers in the initial situation and what kinds of thoughts, expectations, or beliefs they had about working together in the new shared school spaces. Teachers' collaboration did not initially appear to have a profound school development aspect but rather a more day-to-day approach. Although the teachers were familiar with a collaborative design in teaching, new ways of working, setting objectives, and conducting development work required a considerable amount of practice and restructuring, as collaboration among

teachers is one of the key methods to increase the effectiveness of education, promote school development, and enhance teachers' job satisfaction and self-efficacy (Hargreaves & O'Connor, 2018; Vescio et al., 2008). In addition to the data collected in the initial interviews about teacher collaboration, we also reported on the teachers' mental models related to, among other things, leadership, students, school management, the school community, classroom work, teaching, and learning (Tarnanen et al., 2021), which also have an impact on teachers.

Collaboration in building a learning community was central, as collaboration among teachers within educational communities helps address a set of challenges related to, for example, school development, teacher professionalism, and teaching and learning (Bouwman, et al., 2017; Hargreaves, 2019; Honingh & Hooge, 2014) and it is seen as a vital part of teachers' work life and continuous learning (De Jong et al., 2019). The role of exploring teachers' mental models to achieve an in-depth understanding of the school community was twofold. The extensive mapping of the initial situation of the school community served as a tool to generate strong new research data on the starting points for developing school communities. However, its practical value was in enabling the tailoring of the development process for the participating school community, ensuring that the development actions would be as well suited as possible to the specific needs of this school.

The main finding was that teachers were less familiar with deeper forms of collaboration, such as collaborative teaching, but they had positive attitudes toward collaboration in the unified comprehensive school. Teachers' different starting points regarding collaboration are natural in a large school that is also divided into several buildings, but they nevertheless indicated that building collaboration would require guidance and time in later stages of the development process. The examination of mental models succeeded in bringing forth often hidden and overlooked tacit mental models, as previous research has shown that they influence teachers' actions and decisions regarding the school (Mevorach & Strauss, 2012; Senge et al., 2012). In a school community, the key challenge lies in uncovering and understanding what mental models are and what kind of understanding they represent about the school community (Senge et al., 2012). In particular, the different experiences of primary and lower-secondary school teachers, as well as the fact that they knew relatively little about each other's work and teaching methods, emerged as an area to emphasize during the development process.

Based on the findings of the first substudy, sufficient time was negotiated for the development teams. When building the development teams and assigning staff to them, the aim was to create teams that took into account the teachers' different professions, skills, and personal interests. Therefore, each team had two team leaders, one from the lower school and one from the upper school. According to the interviews, this solution was effective, as the team leaders confirmed that collaboration and communication between them worked well within the development teams.

Substudy II focused on examining shared vision, as this was considered a foundation for the successful implementation and long-term sustainability of educational innovations, strategies, and programs (DuFour et al., 2016; Senge et al., 2012). In this study's context, a shared vision was the basis for the development process in development teams, and it aimed to promote organizational learning based on a shared picture of the desired future. Moreover, a shared vision was regarded as an important part of a school's development efforts and the change process, which, with ULA teams' facilitation, aimed at far-reaching changes within a learning community. Throughout the development process, efforts were made to communicate and strengthen the link between the school community's shared and everyday work. However, shared vision was described as being isolated from the school's hectic everyday life. This finding also confirmed the earlier remark that a vision can be difficult to understand and assess if it is considered only an abstract concept (Murphy & Torre, 2014). This abstract nature may have been heightened at a stage when the new school was still being built, as teachers readily received a considerable amount of information related to the new school. However, the vision for the new school may have been accompanied by many individual hopes and expectations, along with a hint of fear. Thus, the ultimate consideration is how much the co-created shared vision was effectively disseminated and utilized as a tool for shaping the school community's future, as posited by Senge (1990). Shared vision work partially helped in building the school's development teams and defining their themes so that the efforts to connect the vision to school operations were genuine. However, the adoption of the vision alongside the knowledge and the developing of the new school may not have been the most crucial or clearest aspect of the school development for individuals.

In Substudy III, the focus shifted to exploring teacher team leader's and principals' experiences with team learning and its link to larger school development initiatives. The team learning discipline was vital in enhancing collaboration among teachers, professional growth and development and innovations, and it emphasized collective learning within the school community (Bui & Baruch, 2010). In this study, the introduction of team-based development necessitated the implementation of shared leadership practices, as teacher team leaders led the development and team learning in their teams. The shared vision had a direct impact on the themes and structure of the development teams and bridged the different stages of development work and learning disciplines of shared vision and team learning. Team learning was examined in the context of development teams by highlighting questions and observations regarding teachers' readiness to work in teams, the differences in attitudes and skills among members of the school community, and the team leaders' experiences with managing and learning from the teams. In Substudy III, team leader teachers reported successful outcomes regarding new teamwork within development teams, despite also encountering challenges regarding team learning. The purpose of the teams was twofold: to prepare teachers for the transition to the new school, including getting to know each other, and to bring together teachers

who think differently in a way that is essential for development, thus enabling the enhancement of the school's operations by drawing from a broad pool of expertise (see also Bell et al 2012). Team-based school development aimed to facilitate a deeper understanding of diverse community perspectives, but dealing with contrasting ideas and thoughts among teachers was somewhat challenging. As team learning relies on the openness and willingness of teachers and principals to engage in collective thinking (Senge et al., 2012), team leaders emphasized the importance of recognizing a school's background and its staff's readiness for the future in the shared premises.

Team learning and community development were novel approaches for a school of this scale, as the construction of the new school building and the work in temporary facilities limited the staff's chances to engage, for example, in pedagogical discussions. Moreover, teachers' varying mental models, as presented in Substudy I, regarding the forms, quality, and needs of collaboration affected the process of development teams. Decuyper et al. (2010) emphasized that teamwork fundamentally involves collective participation in activities designed for the co-construction of new knowledge ("learning by doing"). In this study, the internal diversity of the teams was intended to promote this process, as different ways of thinking and approaches can encourage creative problem-solving and innovation. However, "learning by doing" can also occur more deeply and with new meanings for the learning experience when team members get to know each other better and gain more shared experiences.

The teams hoped for feedback from both the school leadership and the researchers as facilitators. Thus, during the project, it was also important to adopt a more systemic approach to development, for example, by transforming the structures of school leadership so that the feedback for teams would not remain merely random shouting in the school's hallway but would include more structured feedback. The development team's actions, such as innovation, experimentation, feedback, and evaluation of the teams, needed to be connected to the school's development, particularly the new management team structure (see also Edmondson, 1999). Moreover, as Ronkainen (2012) aptly reflected in her research, simply organizing teachers' activities into teams does not build a new kind of school community cohesion; instead, teachers need guidance in teamwork and teamwork skills. This work was initiated during the project with the new leadership team, but, for example, collective rethinking and reflecting on the themes of the teams at the end of the school year was exactly the kind of guidance and input that was needed in the long run.

7.1.2 The intertwined nature of learning disciplines in school development

The findings of the three substudies uncovered delicate and conflicting perspectives on community and collegial relationships within the school. Although each substudy in this thesis examined a specific learning discipline, the interconnectedness of these disciplines remained fundamental, as the school's shared vision played a pivotal role in guiding development teams, and it prompted questions about the division of responsibilities among teams. Aligning

the vision with team development was essential in enhancing the overall impact of the vision work. However, feedback from teachers and principals suggested that the role of the vision could have been further emphasized in the development process, highlighting the importance of Senge's disciplines as key drivers for improving organizations and communities. According to Senge et al. (2012), these disciplines offer considerable leverage for those aiming to improve organizations and communities.

Although collaboration has become a common way of tackling increasingly complex issues (e.g., teachers' professional development, improvements in teaching and students' learning; Hauge & Wan, 2019), in general, major differences were found in how teachers and teams perceived collaboration in each of the substudies. First, while some teachers were engaged in extensive collaboration, for some, teacher collaboration tended to be limited to planning and idea sharing, as especially examined in Substudy I. Initially, as addressed in Substudy I, teachers expressed that the school's situation was challenging due to the construction of the new school building and the work in temporary facilities, and teachers' collaborative experiences were predominantly limited to sharing teaching materials and ideas, with less familiarity with deeper forms of collaboration, such as co-teaching. Teachers reported that involvement in administrative tasks, such as monitoring the construction process of the new school building, and a lack of collegiality hindered pedagogical discussions, which was also mentioned in Substudies II and III. During the development project, it may have been challenging to carve out space for pedagogical discussions, even though the interdisciplinary learning week at the school hopefully sparked teachers' pedagogical thinking. However, the need for such discussions repeatedly emerged, as the first academic year concluded with a redefinition of development teams and fine-tuning of the themes, thus providing an opportunity to evaluate and build teams around new themes. In a way, this may facilitate continuous improvement in the school community and enhance pedagogical discussions in the future.

As schools are ever-changing systems driven by both environmental and internal changes, all of the substudies shared the closing remark that, when teachers must make a change in their teaching practices, adopt new skills, and participate in a school's community development, school reforms must be supported by enhancing teachers' learning disciplines, which have great value for learning community development. As, for example, vision work has more often been researched and defined in relation to school leadership, this thesis aimed to shed light on how schools' varied contexts may limit a principal's ability to promote and develop a shared vision. Previous studies have well emphasized the vital role of the principal in identifying the needs and atmosphere of a learning community; thus, this thesis aimed to understand how a collaboratively created shared vision relates to school community development when two culturally and physically separate school levels (e.g., primary and lower-secondary schools) are being unified and how shared vision links with teachers' collaborative practices in development teams.

7.1.3 The historical shadow of comprehensive school development

To address the overarching research question – “What are the existing conditions involved in the merging of primary and lower-secondary schools into a unified comprehensive that influence the development of a learning community?” – I present here three observations on the challenges and opportunities of school development in relation to the historical context of comprehensive school reform.

The challenge of a more uniform comprehensive education system is not a new phenomenon, as presented in the historical overview. The will to change the school system to be more equal, cohesive, and coherent for all learners has been present in the education sector for many decades. Although legally the establishment of a more consistent basic educational structure with comprehensive schools has been possible for over two decades, each school’s transformation to a unified comprehensive school brings to light certain commonalities. One such commonality is the division of teachers within schools. This division, which is deeply rooted in the history and structure of our educational system (e.g., teacher education and tradition inherit in the two-track system era), seems to resurface in these development projects (Rajakaltio, 2011; Sahlstedt, 2015). In the ULA project’s participating school community, there was a lack of prior collaboration among teachers, especially cross-boundary collaboration. Although teachers worked together with their closest colleagues, the primary obstacle to more expansive collaborations was the institutional and physical separation of the schools from each other. This lack of prior interaction among teachers led to challenges and the search for common and shared concerns in our school.

On a system level, this same misalignment and lack of true interaction generate a lack of continuity or cohesion between the different stages of a student’s schooling experience. This is unsustainable if we aim for a more cohesive basic education. For example, who has not heard a teacher say at some point, “This should have been learned at *insert a lower level of education*”? Practical experience shows that we still have much work ahead if we want to build a more cohesive comprehensive education system. For the change to be effective, it would be beneficial for it to occur on multiple levels—within communities, teaching structures, and curricula, which, at least until now, have remained quite subject-based. Thus, during the ULA project’s facilitation and coaching, efforts were made to shift away from the model of an isolated teaching profession. This goal was not just a theoretical ideal but a practical, visible change promoted in the school’s daily life, as, in traditional schools, teachers too often work in isolation (OECD, 2019) with little to no interaction or collaboration with their peers.

Although the project did not manage to fully address teachers’ teaching work within its framework, attempts were made to stimulate this change. For example, teachers began planning and implementing visits to other teachers’ classrooms during the project. This allowed them to observe and learn different teaching styles and methods and promoted a more collaborative and open learning environment. Moreover, a multidisciplinary learning module that

involved almost all teachers from Grades 5 to 8 was introduced. Although this was an experimental approach that aimed to break down the boundaries between different subject and class teachers and encourage experiments within the school, it also represented initial steps toward a more collaborative and unified comprehensive school.

Second, although the historical review may not have sufficiently introduced this aspect, the change in teacher collaboration may require new openings in collective contracts for teachers in terms of, for example, a new kind of thinking regarding joint planning time (e.g., Antinluoma, 2024; Rajakaltio, 2011; Sahlstedt, 2015). Compelling teachers to engage in co-teaching through directives alone is ineffective; instead, they must be involved in the decision-making processes that affect them. Our data suggest that, while most teachers are initially receptive to collaboration, many existing school structures—particularly the allocation of teaching hours—present obstacles to implementing high-quality collaborative practices. As the saying goes, you get what you measure. If we measure time instead of quality, we easily get stuck with time.

Third, school (both the system and each school) has always followed societal changes and responded to these. Moreover, school is part of all of our growth as human beings. School systems are powerful and valuable “players” in building a better society. Thus, the school is at the middle of these reforms and societal changes. The historical overview aimed to shed light on the layering of our school system, as, in today’s school structures and practices, we can see parts inherited from the system designed for more centrally led governance, such as hierarchy and occasional tension between teaching and school development, where teaching is the core of teachers’ work. We have come a long way from the time when the principal’s main task was to act as a supervisor of teachers and the implementation of teaching (Pietarinen, 2005). Principals in the 2020s are required to have diverse management skills, a pedagogical development approach, and expertise in developing the entire school community together with the teachers (Kurland et al., 2010; Mitchell & Sackney, 2006). Although opportunities for teachers’ development are also beneficial for school change, we still face challenges in integrating individual and communal development.

The recent practices in teachers’ professional development and learning have shifted the focus away from individual and isolated courses or lectures toward a more holistic understanding of development and learning that emphasizes the importance of improving schools as learning communities, or, as Senge (1990) calls them, learning organizations. This approach focuses on transforming schools into organizations in which learning is continuous, adaptive, and integrated into the overall organizational structures and culture. Learning communities are characterized by student-centered learning, supportive leadership, a shared vision, collaboration, and collective reflection discussion and dialogue (Bolam et al., 2005; Senge et al., 2012; Stoll et al., 2006). Due to the reasons listed above and changes in economic conditions, schools are compelled to adapt their operations. As learning within communities depends on the learning of individuals (Guskey, 2002; Senge, 1990), teachers require

adaptive expertise, meaning the ability to take ownership of their own professional development and to continually learn from their colleagues. Part of this challenge is attributed to teacher education, which still largely revolves around initial teacher education. Thus, a relevant question might be how well current initial teacher education and teacher continuing education support this change and challenge both our perceptions and the image conveyed by collective agreements of the teacher's work. There are many aspects related to students, the curriculum, and the school community that are not learned in basic education (Jokinen et al., 2014). Thus, supporting teachers' professional development and the maintenance and updating of expertise, along with bridging teacher education and everyday school life, requires increasing and comprehensive attention in the coming years.

7.1.4 Experiences of developing a unified comprehensive school

As increasingly more unified comprehensive schools are founded, research regarding the development of unified comprehensive school communities is vital. The foundation of unified comprehensive schools is deep within a more equal and coherent curriculum, which will facilitate, among other things, smoother school transitions (see Atjonen, 2005; Halinen & Pietilä, 2005). To foster coherence and unity within school communities, many school communities may require external facilitators who have an outsider's eye and the will to understand the community and learn with the teachers but who are also engaged and skilled in enhancing communication, dialogue, and discussion in the school community's working practices (see also Hauge & Wan, 2019).

This study's approach to the school community's development offered an opportunity to understand the change and development of the school as a learning community. In this chapter, I offer answers to the second overarching research question and new insights into the role of the learning community approach in shaping collaboration, shared vision, and team learning in unified comprehensive schools. As this study was derived from the pragmatic tradition of school development, I hope that the following observations may encourage further research to examine in-service teachers' mental models and collaboration and the school's shared vision and implementation of team learning in various team settings.

Throughout the ULA project, we observed that the development measures facilitated must be practical and easily applicable in the daily life of the school. At the same time, it is necessary to build a shared aim for school development and establish and deepen the collaborative culture between researchers and teachers, principals, and other staff throughout the development project. Another observation, particularly in the spirit of pragmatism, was that continuous evaluation of school development emerged as crucial, as ongoing assessment of development practices best addressed teachers', teams', and the school community's new and changing learning needs. In the school change process, seeing multiple levels and supporting learning and development were essential,

as school development throughout the project was dynamic and flexible, allowing for adaptation based on new knowledge and accumulated experiences.

Previous studies have shown that, despite a shared goal of school development, contradictions can arise among various stakeholders during the process (Rosendahl & Rönnerman, 2006). Our study confirmed this through observations of such phenomena among teachers, researchers, and other school staff. Team leaders noted that teachers from diverse backgrounds sometimes struggled to find common ground and collaboratively advance school development. This underscores the critical role of a shared vision—it should not only serve as an end goal but also guide interactions and conflict resolution throughout the entire development process.

As the transition to a unified comprehensive school approached and materialized, the importance and need for learning appeared to increase. The challenge then lies in the fact that the demand for change in this case is undoubtedly enormous in relation to the organization's current learning capabilities, as organizations that operate in static, stable conditions may perceive the necessity of learning as relatively minor within their activities (Moilanen, 2001). Thus, teachers' learning and development should be understood more strongly as processes connected to the school's management, operations, and culture. In schools, especially during times of change, learning and development should be understood as practical activities, at the core of which are experiments and experiences (Ronkainen, 2012). Thus, creating and sustaining a learning-focused environment for ongoing improvement within school requires innovative leadership strategies.

A new type of school community that unites diverse teachers and learners of various ages requires innovative leadership. This leadership must identify and foster teachers' growth in cross-boundary collaboration while enhancing community spirit and interdisciplinary interaction within the school. Managing this complex system is challenging amid the hectic and high-pressure school environment. However, it is contrary to the goal if schools are unified only on paper, with this unity absent from teaching and learning practices upon closer examination (Ronkainen, 2012). In Finland, the law mandates that principals have a teaching background. Consequently, it is crucial to examine and evaluate principals' capacities to lead diverse school communities and determine the expertise required for these communities' successful development (Kurland et al., 2010). Equally vital is assessing how current teacher education—both initial and continuing—effectively prepares teachers for comprehensive schools.

While it is possible to strongly attribute reasons to why our current school system is as divided as it is (e.g., its roots in the strong tradition of the two-track school system), it is more important to focus on building actions rather than just pondering how different educational paths in teacher training can be brought together in a boundary-crossing manner. As presented in Substudy III, the constructive conflict in the development of schools needs to be understood as a factor that improves the school community. When we bring together teachers with diverse ways of thinking and varying professions, there is an opportunity

for fruitful, comprehensive collaboration that recognizes the current situation of the school community and education landscape more prominently. The intersection of diverse knowledge in cross-boundary collaboration holds value in its potential to challenge and alternate each stakeholder's thinking. This occurs within an environment of mutual understanding and respect for varied expertise. This collaboration is not free from problems and conflicts, and this study does not try to claim that change is easy or that collaboration itself removes challenges from sometimes hectic everyday school life.

Novel approaches to boundary-crossing collaboration between teacher education and local schools are as valuable as those combining teachers within the schools, as joint development based on school needs and interaction is relevant to all parties involved. The development work also made it possible to integrate the studies of student teachers into the project through various activities, such as a week of interdisciplinary learning modules at the school. Thus, the collaboration with the school provided teacher students with an opportunity to apply theory and research knowledge in practice and to work in, as they say, "a more authentic school environment" compared to practice school. While integrating the teaching and learning of student teachers into the school development process, the aim was also to familiarize the teachers in the school with the innovative teaching that had emerged from the teacher education development work.

The role and current state of teacher education should be reviewed, and it is appropriate to ask and reflect on how well the current fragmented and differentiated teacher education system is succeeding in training teachers to work and succeed in unified comprehensive schools, or whether the differentiated higher educational pathways are maintaining the traditional idea of two separate schools in comprehensive education settings. These questions should not be understood as a promotion of forced similarity or generality but rather as a shift to a more coherent learning pathway for 21st century teachers. If a comprehensive, customized approach to supporting teachers' professional development and learning is put into practice, the facilitators should possess a range of expertise and be ready to address unforeseen tensions that may impact the entire school (see also Tarnanen et al., 2021). As in the case of schools, building a more "unified" teacher education requires a systemic approach to develop multifaceted and multilevel learning opportunities that are based on boundary-crossing learning and teaching, not only on university campuses but with a strong link with the local schools.

In summary, school change requires multiple actors, but ultimately, the school as a community must embrace change and new learning. As Hargreaves and O'Connor (2018) aptly put it, it might be easy to adopt a new model of teacher collaboration, but that model only comes to life if the school community's professionals are able to empower themselves and their colleague teachers to enhance the school as a whole, including individual teaching and learning practices together, and in a genuine collaborative manner without any fears or threats. Without a recognized and emerging need within the community,

commitment to change easily remains superficial compliance (Senge, 1990). In the context of organizational learning, there is often a weighing of options regarding new learning: should learning be sourced from external providers, or should the focus be on fostering internal processes that develop the community (Moilanen, 2001)? In teacher education, efforts can be made to, on the one hand, support the readiness of teacher trainees and, on the other hand, provide in-service training for schools based on their needs, thus allowing the learning to be better integrated into change initiatives. Trusting in internal community change requires the school community to make concrete investments in terms of time to ensure that space is allocated for discussion and dialogue that can lead to learning and development.

7.2 Reflections on research method

7.2.1 Ethical considerations

This thesis was conducted by following the ethical guidelines of the Finnish Advisory Board of Research Integrity (2023). To confirm that all participating school staff fully understood the nature and purpose of the research aims of the ULA project, as well as their rights as participants in it, at the beginning of the project, informed consent was obtained from all members involved. As participation in the ULA project's study was voluntary for all members of the school community, only teachers and principals who gave active consent took part in the research on the university-school development project. They were informed that they could withdraw from the study at any time and were provided with information on how to contact researchers in case of personal withdrawal.

Furthermore, only necessary information was gathered and saved from the data. Pseudonyms were used to protect the privacy of individual participants. During the research process, our team planned how to protect the privacy and anonymity of the participants, and any personal information collected during the research process remained confidential. To ensure pseudonymization, all identifiable participant data were replaced with unique codes. This coding system allowed for tracking individual responses across the dataset while maintaining participants' anonymity. This approach was consistently applied when reporting both the substudies and this dissertation. Moreover, to protect the anonymity of the entire school community, all school-specific data were removed, for example, school's vision statement, unless essential for understanding the community's initial state or development process. Only the information necessary for readers to evaluate the studies in context was retained.

This study also ethically respected the voluntary nature of the school community, and it did not intend to harm the school's ability or attractiveness to recruit students or teachers. Thus, the school community is anonymized in substudies and throughout the dissertation, and for example, the school

community's vision is only presented on general level, without presenting the vision statement. Moreover, the ethical consideration included the basis for the research, respecting the cultural values, norms, and beliefs of the school community, and its members, and ensuring that the school community's members were heard in all stages of the development process. We did not want to force the school to adopt our ideas, but rather to come up with ideas together and then try to co-think how to integrate innovative approaches into the process. However, this dissertation and its three substudies were only an interpretation of the school development from the researcher's point of view, and what was examined and experienced during the development project and analysis. This means that, as a researcher, I understand that my role in the study and my participation in it influenced the research choices I made, and these choices are connected to my own experiences and expertise, ultimately shaping this somewhat unique study (Eriksson & Koistinen, 2014). While reporting the research, I often found myself reflecting on whether the facilitation could have been better or whether the school was given sufficient tools for change. A common limitation in case studies is in relation to this pondering, as the tendency to attribute success to one's own actions while blaming external factors for failures (Woodside, 2017). Thus, I have taken extra care to ensure that the positive or negative outcomes have not been overstated or downplayed in my reporting. However, this is not a complete description of the reality of the school's journey of development.

Finally, in this dissertation, I did not aim to explain what the participating school is at present, as over time the community has certainly evolved, perhaps even in unexpected directions. The fact that a doctoral thesis is always a long, drawn-out piece of work means that its relationship with the real subject of the research, in this case, the participating school, has in a way become more and more limited, as both the subject of the research and the researcher have certainly changed since the project with the school ended.

7.2.2 Methodological considerations

Methodologically, this case study combined both the initial interview data (Substudy I) and the interview data collected at the end of the development work (Substudies II and III). Both datasets "speak in their own voice," yet methodologically they cannot be completely separated. When examining the two datasets, it is important to note that the themes that emerged during the initial round of interviews influenced the nature, themes, and research questions of the subsequent studies. For example, the final interviews were influenced by the refined research needs regarding team learning and shared vision disciplines. This indicates that the study's objectives became more focused between the initial and final interviews as the project developed, and we gained new insights about the school along the way. Throughout the research journey, there was a constant need to adapt to the changes within the school community, and for instance, regarding teamwork and shared vision, the study was particularly interested in

understanding how the school community's members perceived the supporting factors, such as development teams, in relation to development work.

This study focused on a single school, a particular case study, and utilized the pragmatic nature of developmental research. This explanatory case study aimed to deeply understand one school community and its transformation to explain why the development happened as it did and which case-specific aspects influenced the school community's change (Eriksson & Koistinen, 2014; Woodside, 2017). Due to this study's pragmatist nature, its explanatory power in relation to the broader school system is limited, but together with previous research, it contributes to the narrative of efforts to unify the Finnish education system, building upon previous research to form a continuum (Puolakka, 2021).

This dissertation is also retrospective compared to the evolving everyday life of the school community. This means that the study aimed to develop and implement concrete practices within the school while also integrating research perspectives and methods into it. Due to the study's nature and duration, a fully iterative approach, typical of developmental research, may not have been fitting for this study, as, in an iterative process, development occurs gradually and cyclically, with researchers constantly evaluating, applying, and modifying their development actions to allow a flexible and adaptive approach to problem-solving and innovation. The development project with the participating school community still aimed to produce practical and functional models for schools to improve. Moreover, this study's approach can offer benefits to both the school and the research, even if it does not fully adhere to the traditional model of developmental research.

7.3 Limitations of the study

The limitations of this thesis stem from its study design of focusing on the development process within one school community. Thus, the data provide insights into only one school community. For example, the limitation of the thesis is that the school involved was in temporary relocation and there was a great distance between separate buildings. This thesis relied on the descriptions provided by teachers and principals regarding how the three learning disciplines examined in the substudies (mental models, shared vision, and team learning) supported school development and what their importance was for transforming the separated school levels and communities into a unified comprehensive school. The initial situation of the school—the change from temporary premises to a partially renovated yet partially new school building—and all the “temporary” aspects of development undoubtedly affected this dissertation and its substudies.

This may have contributed to the previous school culture, as, for example, primary school grades operated in three distinct locations during the development project. This limited the practicality of the study's findings, as school development processes can vary due to unique characteristics, traditions, and practices related to leadership, teacher collaboration, and development

within each school community. However, these processes also share some commonalities, and even though details may alter, the learning disciplines studied in this thesis are relevant in varying contexts. In qualitative research, it is important to thoroughly examine the wide range of aspects of the subject to highlight its main areas and issues. Although the features of the subject may vary in different situations, such as school development projects, its basic structure remains the same. This thesis is not intended to provide a one-size-fits-all approach to school development, as some aspects of the school community involved are deeply ingrained in the history, culture, and context of each school. Instead, I want to highlight the importance of tailoring the development process to meet the specific learning needs and goals of the involved school community. Senge's (1990; Senge et al., 2012) learning disciplines are a great platform or basis for school improvement.

The second limitation involves the limited number of participants. In the substudies, only a relatively small number of teachers and principals were interviewed. A total of 41 teachers participated in this first substudy, and in Substudies II and III, only team leader teachers (n=5) and principals (n=2) were interviewed. This may have narrowed the picture of the school development process. Substudies II and III focused particularly on examining the experiences of team leader teachers and principals. Previous studies have highlighted that teachers who are part of the leadership team may have a more positive and committed view of school development compared to teachers who do not have this relationship (Heikonen & Ahtiainen, 2024). Therefore, it can be argued whether the study intended to examine a narrow group of schoolteachers, thus missing the opportunity for longitudinal data that would have followed the same teachers from the beginning to the end of the project.

However, the method of this study provided a more accurate picture of the perceptions of these key stakeholders, as the experiences of team leader teachers offered a hitherto underresearched perspective on peer learning and leading in the learning community. Moreover, the team leader teachers and principals had a different picture of school development than other school staff, as they were supported and guided during the development by both the school leaders and researchers, for example, in separate workshops and the school's management structure (i.e., management team). The findings may not represent the perspectives of all members of the school community but a limited group of key stakeholders in the school's change process. However, team leader teachers and principals also participated in the initial interviews, with the exception of one teacher, and they represented primary and lower-secondary school teachers as well as special education teachers. Thus, the strength of this thesis lies in the insights gained from the qualitative analysis and the close collaboration with the school community's personnel.

Additionally, our facilitation choices during vision workshops and development activities may have influenced the direction of the development work. Thus, this research is not a depiction of authentic, community-driven development but rather contains elements that may not be repeatable by the

school communities. Also, during the development process with the school, researchers adapted to the existing practices and structures of the school community and collaborated with staff to address challenges and seek opportunities for learning and development in each part of the process. The study's findings are in line with the idea that a key factor in facilitating effective school development is the recognition and appreciation of the diverse and unique characteristics of each school (Senge et al., 2012). In the tradition derived from pragmatism and of development-oriented research, in the school's development project, our researcher team played a twofold role as researchers and collaborative partners in school development.

7.4 Conclusions

The journey from the first moments with the school to this point, when all the words are on paper, was an enlightening journey in many ways. I would like to think that I am looking at the same old picture of the school, but with fresh eyes, thanks to continuous learning, deepened expertise, and new knowledge. The picture of the school remains the same, but my perspective has changed. Moreover, the prolonged nature of doctoral research precisely makes the compilation of research findings and recalling past events challenging. Thus, I have occasionally revisited the photos taken during the activities and meetings at the school, and I have read the notes and reflected with colleagues, sometimes seemingly endlessly, on what we have accomplished together and where we may have stumbled and fallen short of our potential.

As we know, photographs are permanent and static windows into rapidly passing moments that change has vigorously shaken—in a way that is the antithesis of the world.

The world is undergoing changes, perhaps at a faster pace than ever, and regardless of whether we think that we are feeling these changes as positive or negative in our schools, it is crucial to reflect on these changes and strengthen our shared understanding. Here, I refer not only to individual schools but also to the broader education system, sometimes referred to as “the school.” While leading the school toward a new vision requires the integration of new learning into the daily life of the school, courage and commitment within the school are almost as important. Collaborative school development is based on nurturing participation, and if the goal is to move toward a more cohesive system, we need participation at all levels of education.

Developing and ensuring the cohesion of comprehensive education is a long-term endeavor, the progress of which ultimately depends on local-level learning and change in local schools, particularly in the context of Finland. Unified comprehensive school solutions emerge as a result of the resources and commitment of educational providers (i.e., municipalities), and rarely does change to a unified school setting originate from within the school itself. Therefore, school development should adopt an approach that engages and

listens to teachers, rather than relying solely on top-down thinking. However, principals need support in managing various aspects of school change – not only in overseeing the concrete process of building a new school but also in acquiring the tools to lead internal, communal change within the school. Through this thesis and its substudies, I have aimed to give a voice to the teachers and principals involved in the study; collaborating and working with them throughout the project was rewarding. As Hargreaves (2007) pointed out, creating a sustainable learning community that fosters learning is a complex and often slow process that requires the active participation of everyone involved – in this case, teachers, researchers, principals, students, and their guardians. In this thesis, the willingness of teachers and staff to embrace change was influenced by the school community's efforts to cultivate openness and trust among its community members and management structures. As Mitchell and Sackney (2011) argued, perhaps we should emphasize more adaptability and human-centered growth in education systems, in contrast to a managed system view with structured, top-down processes of control and efficiency.

This research on a Finnish school's development into a unified comprehensive school examined how learning disciplines of mental models, team learning, and shared vision may support the development and change in the school community. The findings underscore the importance of recognizing the diverse needs and starting points of schools in future school community development endeavors. My wish is that similar opportunities for research will continue to exist in the future, as crossing boundaries is one possible and essential way to preserve – no, I mean strengthen – teacher education to better support school improvement locally and beyond. I believe that the responsibility for ensuring this lies with all of us who work in various educational roles. Thus, I encourage us all to share our thoughts on schools and learning with each other because no one can single-handedly change the Finnish school – not one school or the education system. I dare to propose that implementing change without its counterpart, learning, seems almost impossible, or at least it is worth questioning what type of change is being pursued in such cases. The development activities that stem from the needs of a school, which connect adult learning practices, collaborative learning, and work-based learning, play a key role in the formation of better and unified comprehensive schools.

YHTEENVETO (SUMMARY IN FINNISH)

Tämä väitöskirja tarkasteli erään suomalaisen perusopetuksen yhtenäiskoulun kehittämistä oppivana yhteisönä (learning community). Lisäksi tutkimuksen tavoitteena oli ymmärtää, kuinka perusopetuksen ala- ja yläkoulujen yhdistämistä voidaan paremmin tukea ymmärtämällä yhdistyvien kouluyhteisöiden taustoja, olosuhteita ja erilaisia perinteitä sekä koulun toimintaa ohjaavia rakenteita. Väitöstutkimuksen osatutkimuksissa selvitettiin uuden yhtenäiskoulun yhteisöllistä kehittämistä tarkastelemalla opettajien yhteistyön mielenmalleja (mental models) ja kouluyhteisön jaetun vision (shared vision) merkitystä yhteisölliselle kehittämiselle. Lisäksi tutkittiin sekä tiimioppimista (team learning) että tiiminvetäjänä toimineiden opettajien kehittymistä kouluyhteisön uusissa temaattisissa kehittämistiimeissä. Tarkastelemalla yhden kouluyhteisön kehittämistä tutkimus tarjosi ajankohtaisen kuvauksen yhtenäiskoulukehityksen tämänhetkisistä haasteista ja mahdollisuuksista yksilön, tiimin ja koko kouluyhteisön tasoilla.

Tutkimuksen keskeisenä tuloksena rakentui ymmärrys siitä, että vaikka Suomen perusopetuksen opetussuunnitelman perusteet ja nykyinen lainsäädäntö luovat puitteet perusopetuksen yhtenäisyydelle, raja peruskoulun ala- ja yläkoulujen välillä näkyy yhä selkeänä perusopetusjärjestelmässä. Tavoitteen mukainen perusopetuksen yhtenäisyyden vahvistuminen ja koulujen muutos yhtenäiskouluiksi tapahtuu ensisijaisesti yksittäisten koulujen yhdistämisen kautta, eli se on luonteeltaan pistemäistä ja paikallista. Yhtenäiskoulujen kehittämisen haasteet liittyvät erityisesti siihen, miten vahvojen ja eriytyneiden käytäntöjen yhteensovittaminen onnistuu parhaalla mahdollisella tavalla. Ajankohtaisena haasteena on tunnistaa, kuinka koulujen yhdistymistä yhtenäiskouluksi voidaan ennakoida ja miten tätä koulun muutosprosessia voidaan tukea yhteisövalmennuksen avulla.

Tutkimus toteutettiin tapaustutkimuksena ja osana Uutta luova asiantuntijuus -hanketta (Martin et al., 2020), joka oli yksi Opetus- ja kulttuuriministeriön rahoittamista Opettajankoulutusfoorumien kärkihankkeista (Lavonen et al., 2020). Tutkimuksessa tarkasteltiin erään suomalaisen kouluyhteisön muutosta ajankohtana, jolloin koulu valmistautui siirtymään uusiin yhtenäiskoulun tiloihin. Koulun kehittämistä fasilitoitiin ja kouluyhteisöä valmennettiin muutokseen sekä yhteisölliseen kehittämiseen lähes kahden lukuvuoden ajan vuosina 2017–2019. Käytännössä tämä tarkoitti koulun muutosta kahdesta hallinnollisesti ja fyysisesti erillisestä perusopetuksen ala- ja yläkoulusta uuteen yhtenäiskouluun, joka toimisi sekä hallinnollisesti että pääasiassa fyysisesti yhteisissä tiloissa.

Väitöstutkimus koostuu kolmesta osatutkimuksesta. Ensimmäisessä osatutkimuksessa tarkasteltiin Uutta luova asiantuntijuus -hankkeeseen osallistuneen kouluyhteisön opettajien yhteistyön mielenmalleja. Tutkimuksessa tunnistettiin mielenmalleja ja rakenteita, jotka edistävät tai estävät opettajien välistä yhteistyötä, mutta myös, mitkä tekijät nousevat esille yhteistyön mahdollistajina ja haastajina uudessa yhtenäiskoulussa. Ensimmäinen osatutkimus keskittyi kuvaamaan ja ymmärtämään kouluyhteisön alkutilannetta kehittämisprosessin

alussa. Tutkimuksessa selvitettiin, millaisia yhteistyön muotoja opettajat liittivät työhönsä ja mitä he ajattelivat erilaisista yhteistyötavoista yhtenäiskouluun johtavan muutoksen ja kehittämisprosessin alussa. Opettajien mielenmalleja koskevat tulokset osoittivat sen, että opettajien yhteistyö vanhoissa rakenteissa painotui ideointiin ja yhteiseen suunnitteluun, mutta esimerkiksi hallinnollisten tehtävien koettiin rajoittavan mahdollisuuksia käydä pedagogista keskustelua kollegoiden kanssa. Lisäksi opettajien yleinen työtaakka, opettajien erilaiset työehdot ja opettajien kokema tasapainoilu yksilötyön ja yhteistyön välillä koettiin vaikuttavan yhteistyön laatuun ja toteutuneeseen yhteistyöhön. Eri oppiaineiden opettajat kuvasivat yhteistyön rajoittuvan lähinnä samaa ainetta opettavien opettajien väliseen vuorovaikutukseen. Samoin luokanopettajat kokivat yhteistyön rajoittuvan oman luokkatason opettajien kanssa työskentelyyn.

Vaikka sekä opettajien aine- että vuosiluokkatiimien yhteistyö nähtiin keskeisenä osana opettajuutta, ylirajaisten yhteistyömuotojen kehittäminen ja uuden kouluyhteisön kehittäminen nähtiin tärkeänä uuden koulun kannalta. Sen ajateltiin kuitenkin vaativan aikaa, panostusta, vuoropuhelua ja keskustelua. Keskeisiksi syvemmän yhteistyön esteiksi nousivat opettajien työaikaan ja työtehtäviin sekä koulun kiireiseen arkeen ja aikatauluun liittyvät kokemukset ja olettamukset. Näiden tekijöiden myös koettiin vähentävän ja rajaavan yhteiseen kehittämiseen käytettyä aikaa. Opettajat kaipasivat monipuolisempia yhteistyömuotoja, kuten yhteisopettajuutta ja uusia pedagogisia avauksia, kuten esimerkiksi yhteisiä monialaisia oppimiskokonaisuuksia. Ensimmäistä osatutkimusta varten toteutettujen alkuhaastatteluiden perusteella opettajat kokivat yhteistyön tärkeäksi palaksi tulevaisuuden yhtenäisen oppimisympäristön haasteisiin vastaamista. Lisäksi useimmat opettajista halusivat kehittää oppilaiden välistä yhteisoppimista. Opettajien toiveena oli, että uuteen yhtenäiskoulun kouluyhteisöön rakentuisi positiivinen ja ylirajaista yhteistyötä tukeva avoin ilmapiiri.

Toinen osatutkimus tarkasteli jaetun vision roolia uuden kouluyhteisön kehittämisen näkökulmasta. Osatutkimus keskittyi viiden kehittämistiimin tiiminvetäjän sekä koulun kahden rehtorin kokemuksiin ja käsityksiin siitä, miten koulun jaetun vision koettiin vaikuttaneen yhtenäiskoulun kehittämisprosessiin. Koulun visio muodostettiin kouluyhteisön yhteisöllisen työskentelyn pohjalta kehittämishankkeen alkuvaiheessa. Osatutkimuksessa selvitettiin, kuinka jaettuun visioon perustuva koulun kehittäminen tuki koulun kasvua ja sopeutumista muutoksen aikana. Tuloksena muodostettiin viisi keskeistä teemaa, jotka liittyivät koulun kehittämiseen ja jaettuun visioon: (1) viestintä ja avoimuus; (2) visiossa esillä olevat ja siitä puuttuvat teemat; (3) perinteen ja innovoinnin suhde; (4) koulun kehittämisen pitkäjänteisyys; ja (5) vision rooli koulun arjessa. Tulosten pohjalta korostui selkeän viestinnän merkitystä koulun yhteisestä visiosta. Tärkeänä koettiin myös tarve keskustelulle ja neuvottelulle, joka tähtää vision kirkastamiseen ja koulun kehittämiseen. Toisaalta koulun vision laadinnassa huomattiin myös tiettyjen teemojen nousevan voimakkaammin esille kuin toisten. Erityisesti koulun lähtötilanne ja hallitsevat olosuhteet sekä uuteen kouluun liittyvät ennakoitavat haasteet ja jopa pelot näkyivät koulun jaetussa visiossa. Tähän liittyen esimerkiksi turvallisuuden ja hyvinvoinnin rooli koulun visiossa

muodostui keskeiseksi. Korostuvien näkökulmien ei kuitenkaan tulisi peittää alleen muita tärkeitä koulun kehittämisen teemoja, kuten kestävä kehitys, opetussuunnitelmatyötä ja monialaisen oppimisen kehittämistä.

Toisen osatutkimuksen tulokset osoittivat, että kouluyhteisön lähtökohdat ja aikaisemmat kokemukset vaikuttavat jaetun vision muotoutumiseen. Tulokset antoivat viitteitä siitä, että yhteyden päivittäisen työn ja vision välillä tulisi muodostua vahvemmaksi. Tämä olisi tärkeää, jotta koulun arki heijastaisi paremmin vision tavoitteita. Haastatellut opettajat toivoivat, että jaettua visiota tarkasteltaisiin ja siitä keskusteltaisiin henkilökunnan kokouksissa. Tällaiset keskustelut tukisivat tehokkaammin koulun kehittämistä. Vision tulisi myös näkyä vahvemmin koulun päivittäisessä elämässä eli sen tulisi olla tiiviimmin sidoksissa ja vuorovaikutuksessa oppivan yhteisön kehittämiseen. Toisen osatutkimuksen tulokset korostivat jaetun vision merkitystä uuden tiedon hankinnassa ja jalkauttamisessa kouluyhteisössä. Vaikka jaettu visio tuki osittain kehittämistyön suuntautumista, koulun kehittämistä koskevien uusien aloitteiden menestys riippuu suurelta osin siitä, kokevatko yhteisön jäsenet työskentelevänsä kohti yhteisiä tavoitteita.

Kolmannessa osatutkimuksessa tarkasteltiin opettajien ja rehtorien näkemyksiä yhteistyöstä ja tiimioppimisesta kouluyhteisön kehittämistiimeissä. Temaattiset kehittämistiimit ja niihin liittyvä kehittäminen olivat koulussa uusi työtapana, joka käynnistyi kehittämisprosessin aikana. Kuten toisessa osatutkimuksessa, tässäkin osatutkimuksessa haastateltiin viittä samaa tiimivetäjää ja kahta samaa rehtoria kehittämiseen osallistuneesta kouluyhteisöstä. Kehittämistiimit perustuivat teemoiltaan jaetussa visiossa esille nousseisiin kehittämistarpeisiin. Tutkimus selvitti tiimivetäjien kokemuksia tiimioppimisesta kehittämistiimeissä, tiimivetäjien ammatillista kehittymistä uudessa roolissa sekä keskeisiä tekijöitä, jotka edistivät kehittämistiimien työskentelyä ja tiimioppimista kouluyhteisön kehittämisprosessin aikana. Tavoitteena oli selvittää, miten koulun kehittäminen tiimioppimisen kautta voi tukea oppimista kouluyhteisössä sekä yksilö- että tiimitasolla.

Kolmannen osatutkimuksen tulokset osoittivat, että kouluyhteisössä vallitsevat käsitykset yhteistyöstä, opettajien yhteistyöosaaminen ja sitoutuminen yhteistyöhön vaikuttivat tiimien toimintaan sekä opettajien vuorovaikutukseen kehittämistiimeissä. Tulokset korostivat myös opettajien odotusten, tiimityöskentelyyn liittyvien valmiuksien ja kouluyhteisön perinteiden vaikutusta tiimityön ja tiimioppimisen kehittämiseen. Tiimioppimisen tarkastelun pohjalta muotoutui käsitys siitä, että koulun ja sen yhteistyökulttuurin muutos ja opettajien yhteistyön ja samanaikaisen ammatillisen kehittymisen edistäminen on monimutkainen prosessi. Vaikka tiimikeskeinen kehittäminen, yhteistyö sekä yhteiseen ajatteluun ja oppimiseen panostaminen nähtiin arvokkaina, koulun kehittämisen aikana ilmeni myös suuria haasteita. Keskeisenä nousi esille tarve parantaa tiimitoiminnan selkeyttä integroimalla kehittämistiimien työ paremmin koulun johtamiseen, joka vähentäisi tiimien päällekkäistä työskentelyä. Tutkimus osoitti myös, että kouluyhteisön muutoksessa tiimivetäjien kokemuksena oli, että tiimin ja kollegoiden ohjaaminen vaativat uudenlaista osaamista ja mukautumista

erilaisiin tilanteisiin. Tiiminvetäjät kohtasivat tiimeissään sekä motivoituneita että muutosta ja kehittämistä epäileviä opettajia. Tiiminvetäjien tukemista ja kouluttamista uusiin tehtäviin tuleekin vahvistaa.

Kolmen osatutkimuksen tulokset osoittavat, että oppivan organisaation oppimisperiaatteet (learning disciplines) –mielenmallit, jaettu visio ja tiimioppiminen –ovat vahvasti sidoksissa toisiinsa (Senge et al. 2012). Opettajien henkilökohtaiset mielenmallit ja käsitykset koulun muutoksesta törmäävät väistämättä kollegoiden käsityksiin yhteistyön muuttuessa ja uusien yhteistyötapojen äärellä, kuten tiimi- ja visiotyöskentelyssä. Kaikissa osatutkimuksissa havaittiin eroja opettajien asenteissa ja oletuksissa liittyen koulun muutokseen ja yhteistyöhön. Uuden yhtenäiskoulun perustamiseen ja kehittämiseen liittyi monia haasteita, jotka koskivat sekä tapoja toimia yhdessä eli yhteistyökulttuuria ja tiimiöskentelyä että tiimioppimisen valmiuksia.

Tutkimuksessa tarkasteltiin yhden kouluyhteisön muutosta yhtenäiskouluksi Uutta luova asiantuntijuus -hankkeen oppivana yhteisön kehittämismalliin perustuen. Tutkimuksen rajoitteena voidaan pitää sen luonnetta, joka perustui pragmaattisen kehittämiseen. Tutkimuksessa tarkasteltiin syvällisesti yhtä kouluyhteisöä ja sen kehitystä. Tarkastelua voidaan pitää syvällisenä, mutta rajoittuneena vain yhteen kouluyhteisöön, jonka kehittäminen oli vahvasti sidoksissa koulun perinteisiin ja historiaan sekä rakenteellisesti että kulttuurisesti jakautuneisiin työyhteisöihin. Tutkimuksessa tarkasteltiin uuden kouluyhteisön rakentamisen ja kehittämisen ensiaskelia ja aikaa ennen yhteisön muuttoa uusiin ja jaettuihin koulutiloihin, jota fasilitoivat opettajankouluttajat. Tutkijoiden roolia voidaan pitää kahtalaisena, sillä samalla kun tutkijat fasilitoivat koulun kehittämistä ja oppimista yhteistyössä koulun henkilökunnan kanssa, tutkijat keräsivät ja analysoivat kehittämisdataa sekä tuottivat uutta tutkimustietoa yhtenäiskoulun kehittämisestä.

Nyt ja tulevaisuudessa on yhä merkityksellisempää ymmärtää maailman moninaisten muutosten vaikutuksia kouluihimme niin koulutuksen rakenteiden kuin arkisen puurtamisenkin eli oppimisen, kehittymisen ja kehittämisen näkökulmista. Vahvistamalla yhteistä ymmärrystämme koulun muutoksesta voimme ymmärtää paremmin, miten kouluja voidaan kehittää osana muuttuvaa maailmaa. Koulun johtaminen kohti uutta visiota edellyttää uudenlaisia tapoja ajatella systemisemmin, mutta myös uusia tapoja oppia ja kehittyä. Muutokset koulun päivittäiseen elämään, mutta myös pidemmälle katsova kehittäminen vaativat rohkeutta ja sitoutumista niin koulujen rehtoreilta kuin opettajilta. Toisaalta muutoksen tulee läpäistä myös opettajankoulutuksen rakenteet, jotta tulevaisuuden opettajilla olisi entistä paremmat mahdollisuudet toteuttaa koulun kehittämistä yksilöinä ja osana oppivaa kouluyhteisöä.

Tämä tutkimus selvitti, miten mielenmallien, tiimioppimisen ja jaetun vision oppimisen periaatteet voivat tukea kouluyhteisön kehitystä ja muutosta, perustuen kehittämismalliin, jossa tulevaisuutta rakennettiin yhteisöllisesti. Käytännössä näyttää yhä siltä, että perusopetuksen opetussuunnitelman perusteiden ja lainsäädännön mukainen yhtenäinen perusopetus rakentuu käytännössä paikallisen kehittämisen kautta, jolloin jokaisen koulun muutoksessa ilmenee

osittain samoja, mutta varmasti myös koulun historian, perinteiden ja nykytilan vaikutuksesta erilaisia haasteita ja mahdollisuuksia. Väitöstutkimuksen tulokset korostavat erilaisten sisäisten tarpeiden ja lähtökohtien parempaa tunnistamista ja niiden huomioimista tulevissa kouluyhteisöjen kehittämishankkeissa. Toivon, että tulevaisuudessa kouluja kehitettäisiin yhä enemmän opettajien ja kouluyhteisöjen ääntä ja tarpeita kuunnellen. Lisäksi toivon, että rajojen ylittäminen ja opettajankoulutuksen perus- ja täydennyskoulutuksen tavoitteiden siltaaminen toimitivat mallina, joka tukee sekä koulujen yhteisöllistä kehittämistä että opettajien ja rehtorien ammatillista oppimista ja kehittymistä.

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ORIGINAL PAPERS

I

UNDERSTANDING TEACHERS' MENTAL MODELS OF COLLABORATION TO ENHANCE THE LEARNING COMMUNITY

by



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Understanding teachers' mental models of collaboration to enhance the learning community

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ABSTRACT

This study examined representations of Finnish basic education teachers' mental models of collaboration to reveal the background features that enable or hinder changes in a school community and teacher collaboration. In this case study, we explored 41 teachers' mental models of collaboration in a one-school community to identify and understand the features that enhance or challenge collaboration. The findings raise the question of how collaboration can support a school's transition to a unified comprehensive school, when teachers are accustomed to working alone with a strong sense of autonomy and diverse mental models of collaboration. The findings revealed that collaboration is mainly limited to planning and sharing ideas and that teachers' involvement in administrative work limits pedagogical discussions between teachers. Our findings suggest that the mental models examined may play a crucial role in building a school's collaborative culture, promoting curriculum principles and developing a learning community.

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Introduction

Strengthening teacher collaboration is an area that has gained interest among educators through the promotion of learning communities. According to Senge et al. (2012), teachers should have opportunities to develop professionally and develop their schools through collaboration with other teachers, school staff and students. Also, teacher collaboration is an important part of teachers' work-life and continuous learning (de Jong, Meirink, and Admiraal 2019). Yet, research has increasingly shown that strengthening teachers' collaboration at the school level is a key method to increase the effectiveness of education, promote school development and enhance teachers' job satisfaction and self-efficacy (see, e.g. Forte and Flores 2014; Hargreaves and O'Connor 2017; Vescio, Ross, and Adams 2008). In a sense, this underlines the understanding that collaboration should not be understood as an end in itself; instead, it must be linked to a school's development goals, of which students' learning is central (Fullan and Hargreaves 2016).

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Although collaboration has become a common way of tackling increasingly complex issues (e.g. teachers' professional development, improvements in teaching and students' learning) (Hauge and Wan 2019), a collaboration that enables interdependence between teachers (e.g. observing, providing feedback, collaborative professional learning and team teaching) is less common than collaborative work, such as discussing the learning of specific students or exchanging teaching materials (OECD 2020). Exploring different forms of collaboration alone does not provide answers to how teachers perceive collaboration, as teacher collaboration concerns a school's social dimension (de Jong, Meirink, and Admiraal 2019). Thus, this study captures teacher collaboration from a less examined perspective related to school development and themes of change in the school context.

This study approached Finnish basic education teachers' representations of mental models of teacher collaboration in a school community to identify and understand the essential features that enhance and challenge teacher collaboration in current and future school communities. This study was part of a larger project called "Creative Expertise – Bridging Pre-service and In-service Teacher Education", funded by the Finnish Ministry of Education and Culture (2017–2021). This project was part of the national Finnish Teacher Education Forum, which prepared the "Development Programme for Teachers' Pre- and In-service Education".

In this case study, teachers' collaboration was examined by interviewing teachers working in the same school community. This study describes the initial state of one school that was in a state of transition to a new building and school community – more precisely, towards a unified comprehensive school. This is a significant shift in Finland as more schools are being unified (Lahtero and Risku 2012). Although the number of unified comprehensive schools has increased by 10% over the last 10 years and 20% of the comprehensive schools are now unified (SVT (Suomen virallinen tilasto) 2019), there is scant research on the unification process and operability of unified schools. Focusing on teachers' ways of thinking might reveal the possible background features that enable or hinder changes in a school community and teacher collaboration.

This study sought to answer the following research questions:

- (1) What forms of collaboration do teachers attach to their work?
- (2) What do teachers think about different forms of collaboration, and what types of collaborative work do they consider relevant during a period of change?

Mental models as representations of teachers' collaboration in a learning community's framework

Unravelling teachers' mental models is not only a way to explain teachers' assumptions or thinking; it is also strongly linked to the effort to understand how teachers collaborate and what forms of collaboration and types of collaborative work they consider relevant during a school's process of change. To explore this, a study was conducted within the framework of Senge's (1990, 2006, 2012) work on learning organisations, famously described in his book *Fifth Discipline* (1990). Senge's idea of a learning organisation refers to five disciplines (e.g. mental models, personal mastery, shared vision, team learning and systems thinking), which are intertwined (Senge 1990). Alongside Senge's work on

learning organisations, this study's framework stems from Finland's national core curriculum for basic education (FNBE 2014), whereby a learning community is at the core of a school's culture. This is the first time that Finland's national curriculum for basic education has empathetically considered the importance of a learning community as part of a curriculum (FNBE 2014). In this section, we briefly review the definitions of mental models, teacher collaboration and a learning community and bridge them by considering previous research.

In terms of school development, the role of mental models is relevant. Interviewing the teachers at the beginning of the school's development project and working with their mental models helped us understand the nature of the persistent but commonly hidden challenges in a school community. This idea is based on the fact that the systems educators strive to improve and develop are often based on attitudes and values, and mental models, "our theories of how the world works", guide the actions of individuals and systems (Senge et al. 2012, 131). Mental models work as mechanisms to generate descriptions, explanations and predictions of social-system states (Johnson-Laird 1983; Rouse and Morris 1986). According to Senge (2006), mental models are "deeply ingrained assumptions, generalisations or even pictures of images that influence how we understand the world and how we take action, and mental models are 'intricately intertwined' with the discipline of systems thinking" (Senge et al. 2012, 127). Thus, mental models alone do not reveal an entire picture of a school community; for example, in addition to teachers' personal mastery, they help to outline development initiatives and generate opportunities to build a shared vision, collaboration and teamwork between teachers.

Exploring mental models helps teachers make sense of their surroundings and act appropriately in different situations (Rouse and Morris 1986; Mathieu et al. 2000). In one of the earliest studies on mental models, Rouse and Morris (1986) expressed that mental models allow people to describe a system's purpose and form, explain a system's functioning and observed system states and predict future system states. However, due to the nature of mental models, they generally remain unexamined and tacit (Mevorach and Strauss 2012; Senge 2006). By nature, mental models function selectively, for example, by leaving out data; therefore, "they are incomplete, sometimes distorted, narrow or single-framed" models derived and constructed from real-world experience (Werhane 2008, 464). The study of teachers' mental models was particularly valuable at the beginning of the development project, as mental models often remain unexamined, which may undermine the success of change initiatives (Senge et al. 2012; Tarnanen et al. 2021).

Research on mental models has been conducted in a variety of contexts in the field of teacher education and learning. Mental models of teacher students have been studied broadly in relation to the development of scientific thinking and concepts (Dinçer and Örsan 2021; Kiray 2016), environment (Moseley, Desjean-Perrotta, and Utley 2010) and learning approaches (Askill-Williams, Murray-Harvey and Lawson 2007). Also, studies on pre-service teachers' mental models suggest that a mental model develops from general to discipline-specific practice (Wilke and Losh 2012), and teacher students' mental models can be built heavily on their own school-time experiences (Askill-Williams, Murray-Harvey and Lawson 2007).

Widmann and Mulder (2020) studied in-service vocational teachers' team learning behaviours to understand team learning and team mental models. Mental models have also been studied in relation to lifelong learning (Barker, van Schaik and Hudson 1998), shared mental model development in school leadership teams (Chrispeels et al. 2008), school management teams (Chen-Levi, Schechter, and Buskila 2020) and elementary school principals' mental models related to instructional leadership (Ruff and Shoho 2005). However, in-service teachers' mental models related to teacher collaboration or school-community development have been scarcely explored.

The term "teacher collaboration" has become popular amid an ongoing change in education. This current study was driven by the need to understand teacher collaboration more broadly – in other words, the multiple aspects of collaboration, as different forms of collaboration require a different depth of collaboration. According to a review, the definition of teacher collaboration is broad, and it is challenging to form a clear, coherent picture (Vangrieken et al. 2015). When studying teacher collaboration, it is necessary to determine whether a collaboration is being explored to, for example, promote practical issues or to develop teaching or teamwork (Vangrieken et al. 2015). Hargreaves and O'Connor (2017) suggested that teacher collaboration should concentrate on teachers' joint work and improve their teaching practices. Furthermore, collaboration is considered a crucial resource for breaking the culture of individualism in teaching, which prevents the development of new teaching practices (Hargreaves 2019).

That said, the picture of collaboration's effectiveness is slightly unclear, and uncertainty still exists about the relationship between collaboration and teachers' development and learning (Forte and Flores 2014; Opfer and Pedder 2011). Not all forms of collaboration positively affect teachers; collaborative professionalism can create anxiety in some teachers due to the nature of a school community (Fullan and Hargreaves 2016). Similarly, regardless of the possible positive impact on school communities, it is difficult to sustain and implement the enthusiasm initially generated by the idea of learning because emotions and power relations can restrict learning (Forte and Flores 2014; Vince 2001) and professional disagreement and mutual critique (Lockton and Fargason 2019). The culture of teachers working alone in classrooms (Vescio, Ross, and Adams 2008) or in silos of different subjects, grade levels or teacher groups (i.e. primary school and subject teachers) are recognised in the educational research literature (Hargreaves 2019).

Although collaboration is an essential part of learning in a school, there is a lack of structures and conditions (e.g. space and time, supportive working conditions, and practices) that support knowledge and skill-sharing between teachers (Opfer and Pedder 2011). If collaboration is not an integral part of teachers' daily work, educators will likely work in isolation (DuFour et al. 2016). Kelchtermans (2006) noted that exploring collaboration in an organisational context is effective method for understanding this phenomenon.

Throughout this article, "teacher collaboration" will refer to the interactions between teachers to share knowledge, perform a shared task related to teaching and school development or reveal about their teaching and learning. In this study, when the teachers talked about their collaboration, they voiced their mental models, making it possible to examine them (see, e.g. Mevorach and Strauss 2012; Senge 2006). A broad definition of teacher collaboration is based on the idea that teachers' professional learning and development, professional growth and well-being and their ability to learn, collaborate

and create a responsive, professional community should be seen as inseparable from their students' achievements and treated as an essential part of a developing school community (see, e.g. Fullan and Hargreaves 2016; Senge et al. 2012).

Because teachers have their own mental models and beliefs regarding schooling and learning, for them to learn together, they must be comfortable challenging their and others' beliefs and assumptions within a learning community. A teacher's job consists of participating in administrative and pedagogical decision-making processes, adapting to new regulations, pedagogical approaches and learning environments and adjusting to continuous learning demands (Paronen and Lappi 2018). Thus, this study combines several perspectives from the learning community literature (e.g. Senge 1990; Senge et al. 2012; DuFour et al. 2016; FNBE 2014). The key for a school is to link the activities to the goals of a national core curriculum to enhance community members' learning, development and growth (Mitchell and Sackney 2011). A curriculum sets goals, as mentioned above, but also leaves room for interpretation regarding how a learning community should be developed in practice.

Learning communities can be understood as a school's collaborative culture, characterised by shared values, visions and learning orientations (Vangrieken 2018). For example, research on professional development has suggested that organisations should expand opportunities for continual learning and foster collaborative work cultures (Day 1999; Fullan 1995; Fullan and Hargreaves 2016; Senge 1990). The key is to understand how to increase individuals' learning capacity because "organisations learn only through individuals who learn" (Senge 1990, 139). Furthermore, learning is no longer just a matter for individuals; increasingly, it is a concern for all school organisations and communities (Senge et al. 2012). According to Finland's national core curriculum, "the school operates as a learning community and encourages all of its members to learn", and "a learning community creates preconditions for learning together and learning from each other" (FNBE 2014, 28).

At the heart of the core curriculum's learning community model is that a learning community touches on both children and adults (i.e. teachers, staff members and parents) and their learning (FNBE 2016), not only professionals such as teachers. The curriculum specifies the common principles on which the advancement and operation of a school are based. Thus, the core curriculum defines that a learning community "takes care of the safety and well-being of each member of the community", "systematically promotes versatile working approaches", "is aware of different languages and sees culture as a richness", "promotes participation and democracy", "promotes equity and equality" and "takes responsibility for the environment and focuses on a sustainable future" (FNBE 2016, 2). Also, the collaboration and interactions of the adults of a school and its surrounding society are emphasised (FNBE 2016). In our view, this may especially consider teachers who and schools that are amid various overlapping changes. For this reason, this study brings together teachers' mental models of collaboration and learning-community development to understand and develop a school community.

Data and methods

Research context and participants



In this case study, 41 primary and lower-secondary school teachers of a one-school community were interviewed to explore their mental models of teacher collaboration and professional learning and to deepen their understanding of their school's situation and aspirations for the future. The school was being turned into a unified comprehensive school, meaning that students from grades 1–9 (ages 7–16) will, as a one-school community, be studying in the same building as a single-track school. The collaborative development project lasted for two years (2018–2019), during which there was close collaboration between the teacher-educators and the entire school community – from students and teachers to principals. The teachers and principals voluntarily participated in this research project and signed consent forms before the interviews. All the teachers were informed of the aims of this study.

The themes of the semi-structured interviews were (1) professional development and learning, (2) collaboration, (3) school as a work community and (4) classroom-related work. We chose a semi-structured approach because interviewing teachers would enable us to obtain data based on their work-community experiences (Galletta and Cross 2013) and uncover possible tacit and hidden knowledge. The semi-structured approach allowed the teachers to share their experiences without predetermining what kinds of collaborations we wanted them to report. The open-ended questions helped the teachers freely share their experiences (Galletta and Cross 2013). The average interview time was 45 minutes. All interviews were conducted by teacher-educators and recorded and transcribed verbatim for analysis. The purpose of the individual interviews was to collect additional information about the initial state of the one-school community. More specifically, the teachers participating in this study were members of the future single-school community, thus representing diversity in the mental models of the one-school community.

Of the 41 teachers interviewed, 21 worked as primary school teachers (grades 1–6) and 20 worked as subject teachers (mainly grades 7–9), and their amount of teaching experience varied from one year to 34 years. This massive variability in teachers' experiences is explained by the nature of community based research and the school community. Regarding the diversity of experience and profession (i.e. primary school and subject teachers), from the perspective of comparing schools, all Finnish primary schools follow Finland's national core curriculum and that all teachers hold a master's degree. Finnish teacher education is a research-based academic education that focuses on combining the practices of teaching and research.

Understanding the teachers' representations and the aspects that may contribute to their mental models of teacher collaboration was identified through qualitative, data-driven but theory-informed content analysis (see Table 1) (Bernard and Ryan 2009; DeCuir-Gunby et al. 2011). The analysis process was conducted in three phases. First, the coding relied on the three-part description of mental models by Rouse and Morris (1986), which led to an examination of three levels in the teachers' responses: how teachers (1) describe the school community's purpose and form, (2) explain the community's operation and system states and (3) predict the school's future system states. The first two of these levels concerned the current state of the school and were parallel, while the third concerned its future. Second, the qualitative data analysis started with an in-depth reading of the transcribed interviews

Table 1. Data collection and analysis

Phase 1	Phase 2	Phase 3	Phase 4
Data collection	Coding of the data	Creation of sub-categories	Interpretation of the findings in terms of the RQs
Semi-structured interviews N=41 Variables: 21 primary teachers 20 subject teachers Experience between 1-34 years of teaching Setting themes: 1. Professional development and learning 2. Collaboration 3. School as a work community 4. Classroom-related work Individual interviews that went on avg. 45 minutes	 <ul style="list-style-type: none"> In-depth reading and coding of the data with Atlas.ti Cloud Mental models on teacher collaboration were identified through qualitative data-driven but theory-informed content analysis 	<ul style="list-style-type: none"> Coding was cross-checked by the researcher team Coded quotations were reviewed and subsumed to sub-categories and themes collaboratively 	RQ1 "What forms of collaboration do teachers attach to their work?" RQ2 What do teachers think about different forms of collaboration, and what types of collaborative work do they consider relevant during a period of change? <ul style="list-style-type: none"> The analysis process and writing were carried out through collaborative discussions, which allowed an in-depth understanding of the data

and preliminary coding (Phase 2). Third, the quotations coded on matter-related representations of the teachers' mental models were the teachers' mental models were reviewed and subcategorised. They were then further categorised into three themes (Phase 3). During this phase, the subcategories were created, divided or combined. Finally, the analysed data were re-examined to identify patterns and determine research-question responses.

The coding (see Table 2) was conducted with *Atlas.ti Cloud*, a qualitative analysis programme that allows multiple users to work simultaneously and in real-time. In the analysis, we identified several levels in the teachers' interviews regarding the description, explanations and predictions of the future school community (Rouse and Morris 1986). The content analysis of this study involved dividing the transcribed interviews into subcategories and themes (Erlingsson and Brysiewicz 2017).

Table 2. Analysis leading to the subcategories and themes

Meaning unit	Condensed meaning unit	Code	Sub-category	Theme	Overarching theme
There, we, from the third to the ninth grade and all the teachers, are all in the same building. We must learn how to understand each other, know how to be flexible and think about more than just self-interest. We need to see the importance of all the roles in our school community. Suppose everyone understands the fact that it may not go as easy as we may think. Maybe, I hope, I have a little too many worries about the new school. (Primary school teacher, 38/41)	Developing shared understanding is important. The teacher fears how the school community will work. Teachers need to value each other's expertise	Predict future systems states	Work culture	Towards a shared school building	Teacher collaboration in the future school building

The analysis was conducted via collaborative discussions, which allowed us to obtain an in-depth understanding of the data. Alongside the analysis process, the coding was cross-checked by the researchers to ensure consistency. The coding logic and discrepancies were negotiated and carefully reviewed. The resultant codes were then discussed for agreement and clarification. The participant data were anonymised without distorting scholarly meanings, and when the data were collected, the research participants received privacy notices.

The research context and participants

Findings

Based on the mentioned analysis, three themes (see Figure 1) emerged: the nature of collaboration in the work community, teamwork and aspirations and expectations related to the shared school community

The nature of collaboration in the school community

In general, the teachers stated that it was challenging to share their time between individually oriented work and collaboration. Many of the teachers perceived that their workload prevented them from delving into complex issues about student learning, co-teaching and collaboration. For primary school teachers, a significant part of collaboration occurs by working with other teachers in parallel classes; similarly, collaboration among subject teachers consists of working with other teachers in teaching the same subject area. According to one subject teacher, the depth

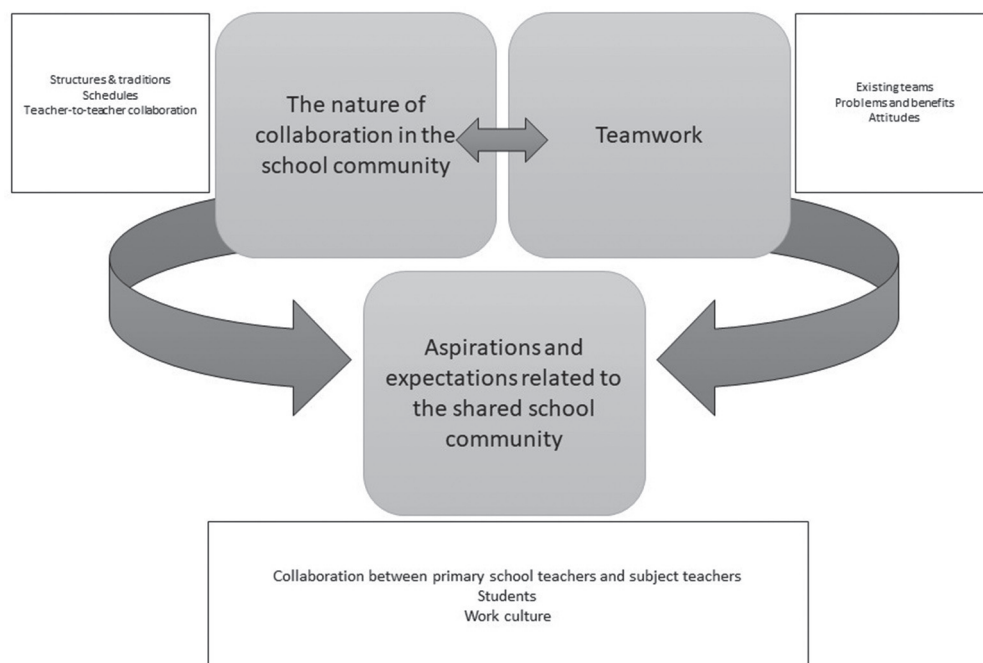


Figure 1. Representations of teacher collaboration.

of collaboration varied from the occasional distribution of handouts and exam templates to cross-disciplinary collaboration, but it was mainly described as sharing and planning rather than co-teaching.

Interestingly, in the case of the subject teachers, the most significant features hindering deeper collaboration were those related to their working hours. According to the subject teachers, teaching hours (which vary according to the subjects being taught) and non-teaching duties (e.g. administrative meetings) set the conditions for collaboration. The main concern was that the teachers' shared time had been used mainly to monitor the construction of the future school building, which detracted from their ability to have a pedagogical discussion and plan. Thus, the teachers felt pressured to choose whether to focus on joint work or issues at hand, such as upcoming lessons. In the case of both primary teachers and subject teachers, it seems that there are tensions between demands to work collaboratively and actual practice:

Well, I can say that every year, someone (in the team) changes jobs or otherwise. Or the location of my classroom and the neighbour teacher changes; then, you can't get in and have time for simultaneous teaching. So, when someone tells you how to implement co-teaching, then they have done it for years. I think it requires that. But yes, we do it to the best of our ability. (Primary school teacher, 12/41)

No matter how much you feel the need to think and discuss together, when the day is over, you prefer to go home. Now, we have that common team time on Tuesdays, but with more time, we would get better results. But it's true that no one wishes to stay after school day because it's thought so that you go home first, prepare food, and then start checking papers or do whatever planning. But by allocating time for collaboration, we would be here until a certain number of hours, and then it would increase collaboration. (Subject teacher, 8/41)

The teachers noted that, partly due to how their days are scheduled, they do not have enough time to collaborate because holding lessons, various administrative meetings and lesson planning consumes most of their workday. The findings revealed that established organisational structures and traditions generally characterise teacher collaboration. According to the teachers, the scheduling of educational activities and the school's physical environment favour more traditional teacher-to-teacher collaboration (e.g. sharing ideas and materials). Some teachers suggested that much more discussion on shared schoolwide goals is necessary, and they questioned whether the school was genuinely cohesive.

While teachers regarded teacher-to-teacher collaboration as generally rewarding, they hoped it would include different activities, such as simultaneous teaching and multi-disciplinary learning. One subject teacher stated:

The thoughts of the new national core curriculum, those sound awfully nice, the multi-disciplinary ones. Still, how to attach those to our practice and schedule is really challenging; then, for us to agree on something like a new structure, it would indeed require thinking about structures, but it seems such a shocking workload. Then it must be something really great (laughter), so it would be worth the effort. (Subject teacher, 9/41)

At the time of data collection, the teachers worked in separate school buildings situated a significant distance apart. This contributed to the weakening of their sense of work community, as distance does not allow for genuine debate on important issues, such as

how learning and teaching are seen (e.g. multidisciplinary learning and teachers' roles). Thus, some of the teachers stated that the temporary facilities made their work feel solitary, as seen in the excerpts of two primary school teachers:

Well, for example, I came here as a new teacher and sat on this new school's project-team. And further, I happen to be a person who is very open and optimistic about these new ideas. So, I'm upset that I don't yet know my colleagues, even by name, due to all the far-apart locations. I don't even have the chance to meet them, and it's a big problem because you don't get that normal practical discussion in the teachers' room. And then the discussion that arises is based on completely wrong things, and there are also misunderstandings. (Primary school teacher, 20/41)

Well, I don't collaborate that much. I collaborate mainly with the teacher in the next class because I teach English to his class, but it's limited. Somehow, right now, being in a temporary facility, the job is lonely. (Primary school teacher, 18/41)

Teamwork

The teachers who talked about the benefits related to teams mentioned that teams have helped teachers share their responsibilities more evenly; thus, they experienced collaboration as being efficient and useful. Some of the teachers expressed that the advantage of teamwork is that it is easier for a team to raise issues perceived as necessary to address. Similarly, the teachers noted that it was difficult for them to address a variety of issues on their own, and they noted that knowledge sharing and practical collaboration worked well in their teams.

However, as with teacher-to-teacher collaboration, there was a clear difference in performance between the assigned teams. The teachers stated that interpersonal chemistry in a work community dramatically influences teamwork. They noted that the chemistry was not good in some of the teams; this hampered the team to the point where nothing worked correctly. These teachers seemed to lose their commitment to the teams. One often-noted experience was that teamwork did not achieve results. Teams were given different tasks to perform, which negatively affected their work. The teachers experienced frustration because the teams tended to unexpectedly receive additional tasks. All of these reasons created a sense of inadequacy among the teachers.

The depth of collaborative planning and other forms of collaboration seemed to vary between the teams, and the culture of working alone was also echoed in the teachers' responses. Some teachers wanted to work alone, but others were forced to do so, as the subject teachers, who were the only teachers of their subject, felt that their work was lonely because the teachers did not share ideas with their colleagues. Several of the teachers were concerned about and had noticed that they tended to have different attitudes towards teamwork in terms of the work input and atmosphere they had experienced. The teachers knew there were problems in the teachers' attitudes, which was also reflected in the school's culture surrounding having discussions about important matters. A few of the teachers noted that even promising ideas do not always progress, which hampers teamwork.

In the following quote, a teacher explains how this is due to a more profound contradiction in the work community, which would require genuine reflection:

In the previous school, where I used to work, we had such a wonderful community; we were able to collaborate with everyone and talk about everything. There was also an open atmosphere. But it has changed, and the atmosphere is not as free as it used to be. You can't just go and say things to everyone anymore. Of course, this is overall because colleagues have changed, and now there have been all these significant changes (e.g., work in separate buildings). It feels like the whole atmosphere and everything has changed due to the new principal, temporary facilities and all, so there are small cracks among the staff. (Subject teacher, 21/41)

When talking about teamwork in their school, the teachers explained the existing team structure and their experiences. Teacher teams are formed around different themes and by grade level (primary school teachers were in teams according to grade level). The teachers noted that the teams had increased the amount of collaborative work. The teachers who are responsible for the entire class (primary school teachers) or a specific subject in a class (subject teachers) always belong to a grade-level team. The teachers who were not involved in the above-mentioned tasks chose which thematic team they wanted to participate in (e.g. events and celebrations or curriculum development).

The teams had weekly meetings. However, the study participants repeatedly noted that teamwork is perceived as subordinate to various schoolwide meetings, which makes it difficult for teams to schedule their meetings regularly because there can always be a reason to cancel a meeting. According to one teacher, this problem is partly due to the constraints imposed by collective agreements, which determine the time spent on collaboration, meetings and teaching (lessons). As planning a team meeting is perceived to be impossible, the content of team meetings is also reduced to sharing information and discussing topical issues.

In general, collaboration seemed to be more often the case for teams of primary school teachers than for subject teachers. Primary school teachers described that teamwork had improved because the schedules had been clarified and collaboration was part of everyday work. A teacher explained that this is because primary school teachers work on the same topics, and teaching tends to progress simultaneously between classes. In comparison, subject teachers often described that they either had no colleagues or had taught different grades due to the division of labour.

Interviewer: Is there something that prevents you from working together?

Well, time and schedules, of course; it is not always realistic for both teachers to have a double lesson without any prearranged theme so that something could be done, let alone take the time to design it. (Subject teacher, 31/41)

Well yeah, we do much collaboration. We have a team with the second-grade teachers, including a special education teacher and a special needs assistant. And yes, we do it all the time, like exchanging ideas. Every week, we meet as a team and plan together. We've had this now for several years, and it works just fine. And I think that our team members dare to say out loud if something is bothering or ask for help or advice. Well, there is an open atmosphere. (Primary school teacher, 27/41)

Aspirations and expectations related to the shared school community

When talking with the teachers about the future of the new school, where all grades, from three to nine, would be in the same shared school community, the teachers predicted that their jobs would include significantly more collaboration with other teachers.

One of the main findings is how the teachers talked about collaboration between primary and subject teachers; some teachers called for closer collaboration, whereas others saw no need for change. The cultural and educational differences between primary and subject teachers echoed in their talk. Some teachers discussed their feelings of suspicion about their roles and identities as teachers in the school community's new situation and structure. One of the teachers' main concerns was the assumption that they, instead of collaborating, would continue to work alone in the new facilities. According to one teacher, this would mean that collaboration could continue as it was before. However, several teachers assumed that teams must be allocated time to develop the work atmosphere. Most of the teachers who referred to the improved collaboration also wished that students of different ages could practice learning together; the teachers believed that the students' roles would grow with structural change. Still, most of the interviewees called for collaborative initiatives because there would be significant challenges in future schools if nothing were done.

As one teacher explained:

There, we, from the third to the ninth grade and all the teachers, are all in the same building. We must learn how to understand each other, know how to be flexible and think about more than just self-interest. We need to see the importance of all the roles in our school community. Suppose everyone understands the fact that it may not go as easy as we may think. Maybe, I hope, I have a little too many worries about the new school. (Primary school teacher, 38/41)

Discussion

This study explored Finnish basic education teachers' representation of mental models of collaboration in a school community to identify and understand the essential features that enhance and challenge teacher collaboration and what forms of collaboration teachers attach to their work. We also explored what teachers think about different forms of collaboration and what types of collaborative work they consider relevant during a period of change – in this case, the formation of a new school community. Referring to the framework based on Senge's (1990, 2012) work on learning organisations and Finland's national core curriculum (FNBE 2014) and its consideration for a learning community, our study examined the progress of a one-school community towards a unified comprehensive school.

In the Findings section, we presented varying aspects of teacher collaboration. Teacher collaboration has structurally supported or challenged elements of teachers' work. The teachers also identified challenges arising from personal chemistry, attitudes, ambitions and relationships; however, these same things also support collaboration.

In general, there are significant differences in how teachers and teams perceive collaboration and how they collaborate in the one-school community. First, the main finding was that while some of the teachers collaborated on a large scale, generally, the collaboration among teachers was limited to planning and sharing ideas. Second,

according to the teachers, engaging in administrative work (e.g. monitoring the new school building's construction process) and the lack of collegiality have impeded pedagogical discussions. Third, the teachers' experiences of collaboration were mostly limited to sharing teaching materials and ideas; they were less familiar with deeper forms of collaboration, such as co-teaching. Fourth, generally, the teachers had a positive attitude towards the unified comprehensive school, and they felt it offered new opportunities to develop cooperation and teaching. On the other hand, teachers felt that in a new school, change does not happen by itself, and old habits and practices may remain strong.

Because of these findings, it is sensible to consider how teachers' mental models and previous experiences have been constructed and how these mental models may affect future collaboration. First, the teachers represented the complex distinction between the classroom and subject teachers and the 'mental distance' between these two groups. This triggered a reflection on teachers' experiences of primary- and subject-teacher collaboration and how this collaboration is associated with assumptions and reinforcements within the school's culture. Thus, in the early stages of the project, the need to build collaboration between the teachers was emphasised. Second, the teachers also talked about the reasons for scarce collaboration, which is supported by previous studies, such as lack of time, having to do numerous tasks and cross-pressure between self-oriented work and learning-community development (Forte and Flores 2014; Opfer and Pedder 2011).

In particular, the teachers experienced their situation as challenging because the construction of the new school building and the work in temporary facilities limited their ability to engage in pedagogical discussions and dampened the school's atmosphere. Third, the findings revealed that the teachers have different mental models regarding the forms, quality and needs of collaboration. Several of the interviewees noted a lack of pedagogical dialogue in their school community. The importance of collaboration was widely emphasised by some of the teachers, but the school community also includes teachers who perceive collaboration as a less important part of their work, either due to time constraints, its minor influence on teaching design and quality or lack of colleagues, which was particularly relevant for subject teachers who taught their subject alone.

To conclude, the teachers' collaboration did not seem to include reflecting on teachers' practices or the collaborative design of teaching methods; in general, the teachers spoke little about improving student learning and more about ways to build school spirit and adopt common rules. Teachers' considerations, such as whether students are allowed to use cell phones while at school or whether students should go outside during their breaks, are related to the school's ongoing transition towards being a unified, comprehensive school. Thus, students' learning does not guide the development of the current community (DuFour et al. 2016).

The teachers expressed that due to all the administrative work, they had limited opportunities for collegial reflections on students' learning; in other words, it was an essential part of the process to share their mental models about learning (Senge et al. 2012). Furthermore, the teachers reported that they primarily work alone; thus, there is no way for them to generate (or have) a shared vision. This also speaks of the prevailing school culture, as the spirit of the school community strongly portrayed teachers working in small groups, notwithstanding the rest of the school community. This is in line with the idea that teacher collaboration is strongly linked to an organisational context and is

influenced by cultural and micropolitical perspectives (Kelchtermans 2006). In this light, it is interesting to consider how the school community could benefit from observing the construction of a future school. Could it, at best, also act as a catalyst for a pedagogical debate, as a new learning environment enables various kinds of learning activities for students and asks teachers to collaborate?

To conclude, this study was driven by the need to understand multiple aspects of teacher collaboration. The findings illustrate that the current schedules and structures (i.e. time and space for collaboration and pedagogical development) do not allow teachers to achieve the goals of the core curriculum. Instead of changing structures, such as schedules, to make room for curriculum goals, some goals have been discarded because they are considered excessively time consuming to achieve (e.g. multidisciplinary learning modules). Some of the teachers did not consider teacher collaboration to be important (see, e.g. Hargreaves and O'Connor 2017; Johnson 2003), even though the national core curriculum emphasises the role of a learning community and dialogue (FNBE 2014). Although the national core curriculum emphasises that schools are developed through participation and that "all practices are geared to supporting the goals set for the educational work" (FNBE 2014, 27), the teachers called for a more clearly shared school vision and increased teacher collaboration, for example, co-teaching. These wishes also echoed the present cultural state of the school.

Although we know the complex nature of mental models, this analysis provides new insights into teachers' collaborations in a school community. The findings suggest that teachers experience diverse challenges related to implementing a collaborative culture. The critical question is how opportunities for teacher collaboration might be bolstered, thus making diverse mental models visible and negotiable (Senge 2006; Mevorach and Strauss 2012). However, according to the teachers, some forms of teamwork are more genuinely accepted as part of their work (e.g. teacher-to-teacher collaboration). In contrast, other forms (e.g. teamwork, pedagogical discussion and planning) either do not receive the same level of approval or teachers cannot see the value of collaborative work. In this case, mental models that remain hidden and silent guide a school's activities and thus potentially prevent change (Senge et al. 2012).

This study has some limitations. First, our data show the experiences of teachers from a one-school community. Second, the research data's collection and analysis were guided by close collaboration with the school, so we also accumulated information about the school community through other means (e.g. workshops, meetings, multidisciplinary learning module), and we made a special effort to describe only the issues the teachers raised in the interviews. Third, as 41 teachers participated in this study, the results contribute to the qualitative generalisations of teachers' representations of mental models, and not all perspectives can be brought to light in one article. Thus, we relied on analysis-based and systematic judgment to highlight individual examples. These issues were considered by exploring mental models, which, by nature, are ever-changing (Johnson-Laird 1983; Norman 1983; Werhane 2008). During the analysis, we kept in mind that the interviewees may have had various and diverse collaboration experiences. Consequently, we had to consider how teachers' mental models of collaboration depend on time and place and how they often remain tacit and undiscussed (Mevorach and Strauss 2012; Senge et al. 2012).

Regarding this study, for school-community, it was essential development to explore how in-service teachers make sense of the school community. Overall, reflecting on these issues is strongly related to this study's design. Furthermore, it was important to understand the information obtained from the research for the ongoing project with the school and Creative Expertise – Bridging Pre-service and In-service Teacher Education project. As learning community-related disciplines are strongly interrelated (Senge et al. 2012), exploring the teachers' mental models helped us build the later steps in a project aimed at the comprehensive development of the learning community.

Finally, schools are ever-changing systems that are constantly changing and driven by both environmental and internal changes. Our analysis suggests that when teachers must make a significant change in their teaching practices, adopt new skills and participate in a school's community development, school reforms must be studied holistically in the context of developing both the in-service and the pre-service phases of teacher education. We encourage similar research on in-service teachers' mental models and collaboration, as our approach and research methods offer an opportunity to understand the functioning and change of a school as a learning community. By examining yet scarcely explored in-service teachers' mental models, future research could address how to support teachers and school communities in advancing the principles and goals of the national core curriculum amid overlapping changes.

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II

A SHARED VISION FOR A SCHOOL: DEVELOPING A LEARNING COMMUNITY

by



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A shared vision for a school: developing a learning community

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ABSTRACT

Background: Developing a school as a learning community is a complex process necessitating active engagement from the entire school community. This paper reports on a study from Finland that focused on exploring learning community development grounded in a shared vision.

Purpose: We sought to investigate the development of a school community with a separate primary and lower secondary school as it progressed towards becoming a unified comprehensive school. The research involved close school-university collaboration to support the community's transformative journey. Our particular interest in this paper is the relationship between the shared vision and learning community development.

Method: At the conclusion of the development project, seven semi-structured interviews were conducted with members of the school management team. Thematic analysis of the interview data was undertaken to identify their perceptions of how the shared vision was linked to learning community development.

Findings: The in-depth analysis revealed five major themes: (1) communication of the shared vision and transparency; (2) present and absent themes in the shared vision; (3) tradition and innovation; (4) the long-term nature of school development; and (5) the role of the vision in everyday school life. The analysis drew attention to how a school's past and present influence a shared vision and school development.

Conclusion: This study provides insights into how the preconditions of a school community contribute to the implementation of a shared vision as a catalyst for change. Recognising the distinct needs and starting points of schools is crucial, emphasising the importance of understanding the pre-existing context in school development.

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Introduction

The development of schools as learning communities is a subject of increasing interest and importance internationally. With the broad notion of a learning community widely recognised and well established, the development of learning organisations has become more significant in global education programmes (see, for example, Kools and Stoll 2016).

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However, several factors within school communities may present challenges to community-based school development. These include the isolated nature of teachers' work (Wei et al. 2009); lack of structures to support teacher collaboration (DuFour et al. 2016); administrative barriers impeding transformation, such as a lack of time and clear communication (Voulalas and Sharpe 2005); and teachers' workload (Hairon and Tan 2017). Furthermore, efforts towards the development of learning communities require collaborative learning with peers, teachers' receptiveness to learning, and a focus on continuous development fostered over time (Hairon and Tan 2017; Hamos et al. 2009). It involves, too, commitment to reflection on objectives, regular evaluation of development work, and the use of knowledge gained from that work.

A school's shared vision is, thus, an important learning discipline, aiming to unite the school community by providing a common picture of the future. Research suggests, though, that it is not always easy to discern the link between a school's vision and its daily practices (Blennow, Bosseldal, and Malmström 2023; Gurley et al. 2014). This paper's interest lies in the complex association between a shared vision and the development of a learning community. The paper aims to contribute to the growing body of research on school community development by reporting on a research-based development project carried out in Finland, which was rooted in the learning community framework. In our study, the concept of a learning community draws from the work of Senge (1990) and Senge et al. (2012), wherein a learning organisation is defined as a space 'where people continually expand their capacity to create results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together' (Senge 1990, 3). Further, we understand a learning school community to be one that consistently acts on its learning and improvement by enhancing the community's effectiveness for the benefit of students (Hord 1997). This implies the implementation of collaborative practices among school staff, wherein teachers and other staff work together to enhance teaching and learning. They share their practices and experiences to support collective learning and improve students' learning in alignment with the shared vision. Before presenting more details about our study, though, we seek to contextualise our work within the relevant literature on learning communities.

Background

Learning communities

Discussions about learning communities, and how they might be implemented, became increasingly evident in educational research and development in the 1990s (Hord 1997; Senge et al. 2012). Learning communities are often characterised by aspects including a student-centred learning approach, supportive leadership, a shared vision, collaboration, collective reflection and dialogue, and a positive working climate to foster organisation or community (Bolam et al. 2005; Senge et al. 2012; Stoll et al. 2006). They are recognised for their ability to enhance the capacity and quality of teachers, teaching methods, and student learning outcomes by facilitating organised collaboration among educators (Hairon and Tan 2017). Teachers work collaboratively, reflect on their professional practice, and focus on pedagogy, supported by shared leadership within the school (Stoll et al.

2006). Creating and sustaining an effective climate for continuous learning requires new forms of leadership that inspire and motivate school community members, provide guidance for knowledge sharing, and direction for the school community's future development as a learning community (Fullan 2003; Hargreaves and Fink 2006).

Learning communities are defined in a range of ways. In this study, we understand Senge's term of 'learning organisation' (Senge 1990, 14) as relatable in education contexts to the notion of 'learning community' or, more specifically, 'professional learning community'. Senge (1990, 5–11) defines five disciplines that may accelerate learning community development: 'mental models', 'personal mastery', 'shared vision', 'team learning', and 'systems thinking'. According to Senge et al. (2012), these disciplines can 'provide a great deal of leverage for those who want to foster and build better organisations and communities' (Senge et al. 2012, 5). The five disciplines are strongly intertwined. For instance, personal mastery is essential to cultivate self-awareness, which is a prerequisite for developing a living and consistent shared vision (Senge et al. 2012). In another scenario, mental models influence how teachers and principals may perceive and interpret information about their school community, impacting their engagement in team learning and systems thinking (Senge et al. 2012). Bui (2019) suggests that personal mastery is specifically an individual-level discipline, team learning is a team-level discipline, and a shared vision is an organisational-level discipline, while mental models and systems thinking represent disciplines that are overarching and applicable on multiple levels.

A shared vision is regarded as an important integral part of a school's development efforts and the change process, aiming to bring about far-reaching modifications within a learning community. According to Senge et al. (2012) and DuFour et al. (2016), having a vision within a school can serve as the foundation for the successful implementation and long-term sustainability of educational innovations, strategies, and programmes. A shared vision promotes organisational learning by offering a shared picture of the desired future, providing direction (Loon Hoe 2007; Senge 1990), and guiding the organisation towards a common goal (Wang and Rafiq 2009). However, shared vision work is far from easy: Murphy and Torre (2014) have argued that one challenge of developing a shared vision is that the concept itself is abstract. In this study, we focus on understanding the nature of vision work as a key part of setting the direction and building the purpose for the broader development of a learning community. To examine the relationship between developing a shared vision and the development of a learning community, it is important to consider what a shared vision is, how it may be developed, and how it has been studied.

According to Senge, a shared vision is the organisation's capacity to hold 'a shared picture of the future it seeks to create' (Senge 1990, 9). A shared vision is a commonly agreed-upon picture of a community's future state that is closely tied to organisational learning, and influences knowledge acquisition and dissemination (Loon Hoe 2007). Developing a shared vision can be seen as a process and tool for a school's development that aims to answer the questions of what a school community wants to co-create and what it hopes to become (DuFour and Eaker 1998; Senge et al. 2012). Thus, a vision should be a tool that can be used continually in decision-making and community development (Hord 1997). In our study, creating a school community's shared vision is about seeking an imaginary space that a community desires to achieve (Gurley et al. 2014; Loon Hoe 2007). Thus, building a shared vision is a formal process in which people committed to a school's

future regularly meet to discuss and negotiate the future of a community (Senge et al. 2012). Senge (1990) describes this imaginary space as ‘pictures of the future’ (1990, 9) and defines five means of forming a vision: ‘telling’, ‘selling’, ‘testing’, ‘consulting’, and ‘co-creating’ (Senge et al. 2012, 89–95). For example, the first two stages, telling and selling, can be beneficial when a community needs a solution quickly (Senge et al. 2012). However, a vision built and communicated only by visionary leaders and administrators cannot be regarded as one that will necessarily support teachers’ attachments or raise their enthusiasm for a vision (Huffman 2003; Kouzes and Posner 2008). As Pekarsky (2007) note, a top-down vision developed by school leaders is unlikely to be embraced by the school community. The last two means, consulting and co-creating (Senge et al. 2012), are useful methods when, first, gathering information from teachers, from which a leader or management team then compiles a vision; or, second, when creating a shared vision as a process that seeks to encourage shared thinking, creativity, and the empowerment of individuals (Senge et al. 2012). Thus, developing a shared vision requires staff members to collaborate, engage in critical reflection, and exchange knowledge (Huffman 2003). As Pekarsky (2007) emphasises, a vision cannot be reduced to a slogan: rather, it needs to work as the basis for daily routines in a school community to which teachers can relate.

It is possible that vastly different visions can emerge during co-creation; for example, a principal’s powerful desire for change may conflict with the perspectives of a school community (Kose 2011). Further, trust and support for teachers and students are crucial for the development of a school as a learning community (Thompson and McKelvy 2007). In this way, a realistic and achievable vision, aligned with organisational values, is vital for providing orientation and driving systemic development, while preventing demotivation in the organisation (Martin et al. 2014). Our study found that the role of teachers in building a vision was particularly significant because, during the development, the aim was to build systemic change in the new school community through joint negotiation rather than top-down communication of a vision.

There is a considerable body of work describing the role of a shared vision for community or organisation development. It is evident that the implementation of a shared vision may be linked to how leadership is exercised – for example, whether leadership and decision-making are shared (Kurland, Peretz, and Hertz-Lazarowitz 2010; Sheppard, Brown, and Dibbon 2009). Studies have highlighted the significance of a shared vision, and, in part, the idea of a shared vision has become mainstream as a characteristic of an efficacious school community (Kose 2011). Building a shared vision requires collaboration, mutual trust, and a sense of security for principals and teachers alike to share their ideas and negotiate, as the process identifies the needs of individuals, and the community, too (Benoliel and Schechter 2017). Interestingly, some research suggests that teachers seem to keep their work towards the school’s vision separate from their everyday classroom tasks, with their students not possessing a strong connection to, or understanding of, the school’s vision (Blennow, Bosseldal, and Malmström 2023). Experiencing a sense of change in line with a vision requires time and resource, and it has been noted that a school’s prevailing culture may be slow to change (Huffman 2003).

In the literature on school development, vision work has often been researched and defined in relation to school leadership. Researchers have pointed out that principals are vital in promoting a school vision (Mitchell and Sackney 2006; Murphy et al. 2007), although it must be borne in mind that schools’ varied contexts may limit a principal’s

ability to promote and develop a shared vision (Barnett and McCormick 2003). In addition to leadership, organisational learning is considered a prerequisite for school development (Kurland, Peretz, and Hertz-Lazarowitz 2010). Studies have emphasised the vital role of the principal in identifying the needs and atmosphere of a learning community (Stolp and Smith 1995). Whilst scholars have emphasised the role of vision work in developing school communities (e.g. Harris and Jones 2010; Huffman 2003; Murphy and Torre 2014; Pekarsky 2007), more needs to be understood about how a collaboratively created, shared vision relates to school community development when two culturally and physically separate school levels (e.g. primary and lower secondary schools) are being unified. More research is needed, too, on the relationship between the school vision and how it links with teachers' daily practice.

Study context

This study was conducted as part of a project named Creative Expertise, which received funding from the Finnish Ministry of Education and Culture for the period 2017–2021. Creative Expertise was an integral component of the national Finnish Teacher Education Forum, tasked with formulating the Development Programme for Teachers' Pre- and In-service Education. The project played a crucial role in supporting the implementation of this programme as an essential element of the national Finnish Teacher Education Development Programme (FTEDP). The school that participated in the research reported in this article was undergoing a transformation into a new unified comprehensive school. This involved the unifying of separate primary and lower secondary levels, and the school was also preparing for a transition to a highly renovated and partly new school building. In Finland, this process is common across many school districts, as unified comprehensive schools have become an increasingly prevalent method of organising comprehensive education. At the municipal level, 22% of the comprehensive schools in Finland are unified (SVT 2020), covering both primary (grades 1–6; pupil ages 7–12) and lower secondary levels (grades 7–9; pupil ages 13–15). Over the past decade, the percentage of unified comprehensive schools has increased by 10% (SVT 2020). In these schools, all grades of pupils are typically housed within the same building. However, primary teachers mainly oversee teaching in the primary school grades (grades 1–6), while subject teachers are responsible for the lower secondary school grades (grades 7–9). All comprehensive school teachers hold a Master's degree in education or a specified subject.

Purpose

Within the project context outlined above, this study sought to investigate the development of a school community as it progressed towards becoming a unified comprehensive school. The focus was on understanding how a collaboratively-created shared vision was perceived during the integration of a primary and lower secondary school, which were both culturally and physically separate. The research involved close collaboration between the school and the university to support the community's transformative journey from separate schools to a unified comprehensive school. We addressed the following research question: *How do teacher team leaders and principals associate a collaboratively-created shared vision with the process of developing a learning community?*

Method

Ethical considerations

This study was carried out in accordance with the guidelines of the Finnish National Board on Research Integrity TENK (2023). Participation was voluntary, and only teachers and principals who gave active consent at the beginning of the project participated in the research part of the university-school development project. Participants were informed that they could withdraw from the study at any time. Before data collection, they were given a brief introduction to the aim of the research once again. To provide full confidentiality to the participants, any data that would allow identification were removed during the data analysis, with researchers using codes to link specific responses throughout the data. All data were anonymised so that neither individuals nor school could be identified from the text.

School-university collaboration context

Preparations for school-university collaboration began in the spring of 2017, when discussions were held with the municipality's head of education and school principals (one principal led the primary school and the other principal led the lower secondary school). Then, a meeting with the school staff was arranged. During this meeting, staff were provided with information about the goals and purpose of the upcoming project. Closer collaboration with the school commenced with the mapping of the school's status and development needs; the examination of teachers' mental models of collaboration, professional development, and learning (see Tarnanen et al. 2021; Toikka and Tarnanen 2022); and by the creation of a shared vision and the formation of development teams. To gather a more informed picture of the school community, all staff were invited to be interviewed individually at the beginning of the project. These interviews were then analysed to build a more cohesive picture of the school community members' personal mastery, mental models and preparedness for collaboration, and more generally, understand how staff perceived the transition to the new unified school.

During the spring of 2018, a shared vision for the future school was created by involving all the teachers from the two separate schools, the principals, and other school staff too (i.e. including special needs assistants, school psychologists, and others) in a vision workshop. This workshop was based on Senge's idea of the 'co-creation' (Senge et al. 2012, 94–95) of the school vision through personal reflection and teamwork. The goal of the workshop was to activate the staff's beliefs and reasoning regarding their personal and collective visions, and in terms of the ongoing processes towards the new, unified comprehensive school. In the vision workshop, the entire staff discussed and considered the school's future, working in groups. Each group presented its ideas and visions to the others. Next, the staff members individually voted on what they felt to be the most important vision for the future school. After the workshop, the school's vision was formed, based on the teachers' reflections and votes, and the main themes of the vision were discussed with the school principals in planning meetings between the principals and researchers. Based on these meetings, and to demonstrate the shared vision, a vision video was created. This video was shown before the workshops throughout the year. The

school's shared vision statement highlighted the need for a positive and experimental learning environment, in which practice creates the school's culture. The vision was based on the notion of a safe and secure, evolving, tolerant, pro-wellbeing and open school where all members were equal and respected. The statement emphasised that the school community was one that would work together to achieve a common goal.

New development teams were launched in the autumn of 2018. The aim was to develop the school community towards the school's shared vision, and, thus, development teams were formed to align with the themes of the vision. The first team focused on promoting a collaborative culture among teachers, and an inclusive school for all learners, by building and developing support for learning and school attendance. The second team developed and discussed common rules for the future unified school, as well as generating activities and events to support the wellbeing of staff and pupils as part of their school life. Finally, the third team considered and developed strategies such as co-teaching and interdisciplinary learning in the new school. Each team had two team leaders working in parallel, but the teams had the flexibility to determine how closely they worked as a team, and how often they were divided into smaller groups to further develop themes that emerged from discussions.

Data collection

At the end of the development project and the academic year (2018–19), data were collected via semi-structured thematic interviews with members of the school's management team. Initially, the management of the school continued with pre-existing arrangements, but the new management team's role increased during the project, especially in the spring of 2019, as the team met more often (about once or twice per month). The members of the school's management team consisted of the leaders of the development teams (subject, primary or special education teachers) and two principals. Overall, seven members of the management team, including both principals, were interviewed individually. The broad themes of the interviews were as follows: (1) shared vision, (2) teamwork, (3) future of the school community and (4) professional development and learning. The focus was on interviewees' reflections about the project and year of planning. Interviewees were asked to describe and explain their experiences, feelings and thinking related to project and school development in general. In most of the interviews, the time was divided evenly between each of the themes. With the leaders of the development teams, the interviews focused more on their new role; with both principals, the focus was on school leadership and how the principals perceived the change in community. The average duration of an interview was 60 minutes. The language of the interviews was Finnish, and the interviews were conducted face-to-face in person, in a setting where the interviewers and interviewees were in the same place.

Data analysis

The data were analysed thematically. An approach based on Nowell et al. (2017) strategies for six phase thematic analysis was applied to support the emergence of rich, insightful and trustworthy findings related to the research question. Thematic analysis, as outlined by Braun and Clarke (2006) is a valuable technique for examining the perspectives of research

participants and recognising recurring themes in data. This involves the identification, analysis, organisation, description, and reporting of study data (Braun and Clarke 2006). Whilst the primary phases of the analysis were conducted by the first author of the article, both authors were involved in reviewing the thematic analysis at every phase. The analysis comprised a multistage process (see Table 1). First, the authors familiarised themselves with the data, listening to the recordings and then transcribing them into written reports. Data were transferred into analysis software, in order to carry out the initial coding. Early themes emerged in this phase. The first author worked on the initial theming, which was then discussed with the other author. This initial theming was also the first draft of the findings, leading to the first round of reviewing the themes. Through this review, it was possible to explore associations between the shared vision and the development of the learning community. The analysis helped to reveal commonalities and differences in interviewees' perceptions, thereby generating a final theming of the data set which addressed the study's research question. Due to the long-term collaboration (i.e. the discussions, observations, and workshops) between the university and the school, the researchers had gathered information about the school, and this served as background information in the analysis. This background information helped the researchers to interpret and contextualise the themes. The final part of the analysis involved defining and naming the themes that would be reported on in the findings.

Findings

By using the qualitative analytical methods described above, five main themes emerged. These were as follows: (1) Communication of the shared vision and transparency; (2) Present and absent themes in the shared vision; (3) Tradition and innovation; (4) The long-term nature of school development; and (5) The role of the vision in everyday school life. The themes reflect the interviewed participants' perceptions about the school's shared vision in relation to the school development process. In this section, an overview of the findings is presented, grouped in terms of these five themes. Our presentation is supported by selected, anonymised quotations from the original data, which have been translated from Finnish, which help to illustrate the findings (Braun and Clarke 2006). To support anonymity, principals' positions and teachers' subjects or roles are not mentioned.

Theme 1: communication of the shared vision and transparency

It was evident from the analysis that, overall, the teachers and principals experienced the development of a new kind of teamwork mainly positively. However, the teachers reported that a lack of communication about the vision sometimes affected teamwork, as it was difficult for the teams to assess the limits of development concerning the vision. Thus, they considered that it was challenging, at times, for teams to focus on collaborative development. Moreover, there were many overlapping concerns to take into account, such as other meetings and additional tasks (e.g. school celebrations) which affected and limited the time given to the teams. As one teacher explained, it was necessary to spend time negotiating, leaving less time for actual development; 'Well, it played a significant role, at least in my opinion. We had quite a lot to deal with in the team'.

Table 1. Phases of the thematic analysis.

Phase 1: Becoming familiar with the data	Phase 2: Generating initial codes	Phase 3: Searching for themes	Phase 4: Reviewing themes	Phase 5: Redefining and naming themes	Phase 6: Producing the findings	
We organised information into archives, identified themes from recordings and transcribed the interview data.	We created initial coding and identified relevant text sections related to the research theme of a shared vision.	We sorted and collated all the potentially relevant coded data extracts into an initial theme of a shared vision. Additionally, we created an early draft of the findings.	We analysed the coded data extracts for each theme to determine whether they formed a cohesive pattern. Data were separated into five themes.	We determined which aspect of the data each theme represented and named each theme.	We provided detailed findings, including any relevant direct quotations.	
Example of transcribed interview data	Examples of notes	Initial codes (n)	Example of theme searching	Data grouped into five themes	The five themes	Example of reported findings
<p><i>Question: Well, if you think about your team and the vision of school community, what thoughts do you have when you look at the past year?</i></p> <p><i>Response: And there are some things we understand a little better, those things that are going to be relevant and important, for example, that we have trust in each other and that we really are 'openly together'. We will not be able to work there in the new school if we stay in our own silos. I can imagine that it must have been a bit of a big threshold for many teachers, that now we have to weigh our own thoughts and attitudes. It can be difficult. But how is all this going to show up then? It is hard to judge at this point. It will probably come with time; development must be given time. It is a really unrealistic idea that all we are doing would somehow suddenly happen there in a new school. All this thinking and work is there in the background. The hope, of course, is that this development will move there and make an impact on the daily life of the school. It would be a sad thing that we have been working on a vision and an idea for a year, but we do not have anything permanent.</i></p>	<ul style="list-style-type: none"> – The new community will not work if there is a lack of trust and staff remain in their silos. – This year taught many new things to teachers. – Teachers have considered many questions. – It takes time for development to become concretely visible. It is unrealistic to expect rapid change. – Hope: development work will have a lasting impact on the work community. 	<ul style="list-style-type: none"> Development teams (65) Summarising the academic year (61) Shared vision (53) Team leaders' experience (52) Personal mastery (50) Future in unified school (47) School leadership (46) Staff development (40) Past year (31) Development project with university (26) Students (24) Team learning (18) Manager team (15) Spring semester (16) Challenges (13) Rules (11) Autumn semester (9) School day structure (9) Assistant principal (7) Multidisciplinary learning week (7) Feedback (6) Special need assistants (4) Pedagogical café (3) Visits to another school (3) Indoor air quality (3) 	<p>'How does shared vision influence the process of developing the learning community?'</p> <p>A lot of time has been spent promoting the vision.</p> <p>Showing a vision video and returning to a vision could have calmed the raging debate.</p> <p>The school should match its vision.</p> <p>The operating culture should correspond with the vision's message.</p> <p>In future schools, the vision should be displayed more clearly.</p> <p>The challenges of community engagement. The vision was broad and had many overlapping aspects of teamwork.</p> <p>The school's starting situation and spirit of time were reflected in the vision. The understanding of well-being, trust and openness increased.</p> <p>The process takes time, but there are visible and promising beginnings in terms of vision.</p> <p>Practices in line with the shared vision need to be supported more strongly to ensure that change is being built together.</p>	<p>Data grouped into five themes</p> <p>For example, 'Communicate the vision' theme included:</p> <ul style="list-style-type: none"> – A lot of time has been spent promoting the vision. – Showing the vision video and returning to a vision could have calmed the raging debate. – The school should match its vision. The operating culture should correspond with the vision's message. – In future schools, the vision should be displayed more clearly. 	<ul style="list-style-type: none"> 1) Communication of the shared vision and transparency; 2) Present and absent themes in the shared vision; 3) Tradition and innovation; 4) The long-term nature of school development; 5) The role of vision in everyday school life. 	<p>The teachers explained that it was necessary to spend time negotiating, leaving less time for actual development.</p> <p><i>Well, it played a significant role, at least in my opinion. We had quite a lot to deal with in the team.</i></p>

During the development process, it was felt that friction could be caused by a perceived lack of transparency regarding the school's future. In reviewing the current state of the school, teachers and principals spoke extensively about the idea that the school community had been most affected by teachers having different attitudes and ideas about the future. The various ways of perceiving and envisioning a shared future in the school were discussed. Whilst a teacher remarked that 'Teams seek for mistakes, and some of us cling to even the smallest things if the principal dares to say something', one principal reflected that 'It may have taken too many months to convince some of them (teachers) of this development project'. The other principal stated that it was important to communicate and present the school community to the students' parents and guardians realistically, rather than paint what might be seen as an unrealistic picture with words from the vision, as it could appear that the school may not correspond with the story being told. The principal was, thus, concerned that the reality of the school and the narrative presented might not align, which could lead to confusion about the school's operations, particularly among the students' parents and guardians.

Theme 2: present and absent themes in the shared vision

One principal reflected about how much of the school's vision was influenced by the school's current state, as some historical and practical issues seemed to give rise to broader notions of wellbeing (e.g. temporary facilities). Both principals described how temporary facilities and concerns related to the future school building may have led to the emergence of, and emphasis on, safety and wellbeing perspectives in the shared vision. Other interviewees raised the same kind of issues about the reality of schools being in separate buildings. In addition, problems with old school buildings may have contributed to the rise of themes, such as wellbeing and safety, with staff members thinking about potential problems with the new school. Teachers and principals hoped the new school would remove such concerns. Moreover, it was noted that some important themes, such as pedagogical development, were less evident, as observed by a principal:

I wonder if it would happen that a certain thing would be emphasised. That everything is 'safe' and 'everyone has wellbeing'. Maybe other themes such as sustainable development, multidisciplinary learning and the ideas of a new curriculum will not rise.

In general, the unified school was perceived as an opportunity for new teaching approaches, especially as it was thought to offer new scope for teaching collaboratively. However, the teachers felt that it might be difficult to see a substantial change in teaching because the teaching would still be based on the same curriculum (FNBE 2014). For example, as one teacher commented, 'I must do my work in the same way, and according to the curriculum, I mean teaching. Maybe the new school will create a new framework for teaching'. Enthusiasm to reform teaching and pedagogy was evident, as well, in the interviews, although the school's vision did not include this aspect of teaching and pedagogy. One teacher mentioned that they felt there was a lack of discussion about pedagogy, which may have been due to the focus on the construction of the new school: 'There should be some allocated time where you can get together, not with these teams but with larger groups. Let us say "pedagogical coffee" or something'.

Theme 3: tradition and innovation

Several interviewees highlighted what they perceived as the school's initial state, the traditional nature of the practices, the challenges involved in the decision-making and insufficient openness. For example, according to the interviewees, especially the teachers, a lack of openness was a problem in the school community. One of the principals interpreted it as a general characteristic of the municipality:

We have a culture here in the municipality where many things are prepared without telling anyone about them. I hope that this culture does not prevail in the new unified school.

On the other hand, the other principal commented that the staff needed to be challenged to discuss and confront their thinking, mentioning that they (the principals) occasionally heard from teachers the argument that 'we are used to doing it this way'. According to this principal, the teaching profession involves building the future ('children are the future'), but traditions often prevent new ways of doing things; 'We are somehow so stuck in that traditional and existing culture'. Related to this, building a vision opened thoughts about, and discussions on, different themes. For instance, one teacher noted that it led to better knowledge of future community members, feeling that not only the trust between teachers but also their capability and will to work together was strengthened:

Some of these things may have been understood a little better (in vision): which questions will be relevant and important for us, such as 'trust', and the fact that we are together in a new premises.

Theme 4: the long-term nature of school development

The teachers and principals discussed the nature of the vision and school development as a long-term process, with all the ideas related to the shared vision materialising over one academic school year. Some teachers described the year as an intermediate space between the old and new school. One of the teachers commented on personally gaining a lot from the development, and hoping that teamwork would continue, but mindful of the idea that, in the new school, change would not materialise on its own and effort must be sustained.

However, the analysis suggested that development work raised negative issues, too, in the school community, such as the 'search for errors' mentality. Negativity was not only a matter of criticism; it affected the way things were handled and promoted in the development teams, as well. Thus, as one teacher noted, a vision-based learning community is not built instantly, and it cannot be assumed that there will be something 'ready-made' in the new school premises:

But how all this will show in concrete terms, it is difficult to determine how all this will materialise in concrete terms. It will probably come with time. It is an unrealistic idea to think that everything we have done will somehow suddenly come from somewhere when we move to a new school.

It was evident that the teachers did not expect rapid change to occur in the new school community. Thus, the vision could not be forgotten although the pace of

change was difficult to predict, with the teachers talking about it taking years. Teachers and principals referred to the need for a new kind of leadership and structure to support development, in line with the shared vision. One principal observed that a vision should be visible for the students and staff in everyday life, if not directly, then at least through interaction. One of the teachers noted that the school must develop a structure that genuinely supported the growth of development teams and the school's management. This teacher referred to the emphasis on openness, and the pursuit towards the common goals within the school's vision, for example, through expanded clarity in decision-making:

I want all these things (from the vision) to be related to the new unified school. Transparency, for example, without a doubt. Moreover, of course, joint decision-making will be important. Indeed, if we decide to continue these teams. I hope that what the teams present will also be considered in the school community's decisions. And we need to evolve (as a school), not continue the same old stuff, especially if it does not work.

Theme 5: the role of the vision in everyday school life

According to the analysis, the teachers felt that the vision could seem somewhat remote from daily life at school. Interviewees identified and discussed how much time was spent working on the vision during the development project, especially at the beginning. Several interviewees questioned how sufficiently the vision had been reinforced during development, noting that vision-based development could have been supported even more effectively by returning to, and discussing, the vision during staff meetings. It was generally agreed that the vision should be presented to parents and guardians at the start of the following school year, as there was much interest in the new school building. In addition, the teachers hoped that the school's vision and values would be more explicitly visible in the new school.

The teachers talked about the importance of the school's common policies. Some of the teachers felt that common rules had been worked on intensively during the past year. On the other hand, one of the principals felt that a lot of time was spent harmonising the rules, especially at the beginning of the project, but since then, talk about rules had become gradually more subdued. According to another principal, the vision work was valuable, with the assumption that the start of the new school would be busy, with everyday matters piling up on the principal's desk. This also emphasised the need for clarity in relation to common rules. One teacher pointed out that an important part of the school community's everyday practices in the unified school would be that these rules would be openly discussed and familiar to everyone.

In all, the interviewees discussed various aspects related to the school's vision and development, as well as the new school building itself and its potential for new teaching approaches. One key point that emerged was the importance of effectively communicating the school's vision and values to parents and guardians and reinforcing these in staff meetings. Overall, the interviewees expressed the belief that through open communication, shared understanding, and a commitment to ongoing improvement, the school could continue to develop on its new premises, although the pace of change might be slow.

Discussion

Through our research, we gained insight into how a collaboratively-created, shared vision was perceived during the integration of a primary and a lower secondary school. Our in-depth, thematic analysis allowed us to investigate how the interviewed team leaders and principals associated this shared vision with the process of developing a learning community. We explored the notion of a shared vision as a catalyst for change and as a way of enhancing a school community's capability to operate as a new school community. In this section, we consider our findings, and their implications, more broadly.

The themes that emerged from the analysis bring to the fore various aspects and considerations that are important in school development, including communication and transparency, tradition and innovation, the long-term nature of school development, and the role of a shared vision in terms of daily school life. They highlight the importance of clear communication about a school's shared vision and the need for discussion and negotiation during a school's development. It is evident that transparency within the school community is crucial, in line with research on the theme of leadership in the community (e.g. Hargreaves and Fink 2006); a culture of lack of transparency may cause friction. The notion of prioritisation of issues and themes in relation to the shared vision was also raised through the analysis: teachers and principals discussed the role of safety and wellbeing within the school's vision, with recognition that this should not be at the expense of other crucial school-development themes, such as sustainable development, curriculum development, and initiatives for multidisciplinary learning. In terms of tradition and innovation within a school community, it was evident that even if a school has a strong vision and a shared direction for the future, old habits can be deeply embedded. From the perspective of school development, challenging customary ways of doing things is essential but, at the same time, can be difficult. Further, the long-term nature of school development was acknowledged, bringing an awareness that not all concepts bound to the shared vision can come to fruition within a single academic school year. Some educators characterised the year as a transitional period, bridging the gap between the old and the new school. It was also noteworthy that interviewees perceived that the shared vision may have felt remote from the school's day-to-day reality. Whilst interviewees recognised and deliberated on the amount of time dedicated to working on the vision during the development project, particularly in the initial stages, they believed, as well, that development based on the vision could be more effectively supported by revisiting and discussing the vision in staff meetings.

Scholars have long drawn attention to the importance of a vision in school development (e.g. DuFour et al. 2016; Harris and Jones 2010; Pekarsky 2007; Senge et al. 2012). Overall, our findings suggest that a shared vision can be a useful tool for reflecting on school development, whilst it is also the case that linking the shared vision and everyday school life can be demanding. This resonates with research indicating that vision may be preserved at an institutional and discursive level but not entirely present within the school community's everyday practices (Blennow, Bosseldal, and Malmström 2023). Further, it is useful to question how well a co-created shared vision can represent a truly shared picture which is useful as a tool for the new school community (Senge 1990). In the particular context of our study, two separate schools, with their own practices and perspectives, were preparing to unify. It is possible that the vision could have, perhaps, been reinforced

more robustly throughout the process. Indeed, some participants suggested that the vision should be more visible in aspects of daily life at school, in line with the idea that a living shared vision should be more closely tied to knowledge acquisition and dissemination in the learning community (Loon Hoe 2007). Moreover, it was observed that changes in the school community tend to appear gradually and may be difficult to perceive. The speed of change is doubtless an interesting factor when assessing the amount of development that could happen in a year, as cultures typically take time to change (see Huffman 2003). In our study, the slow pace of change and the understanding that the school was in a temporary facility (i.e. waiting for the move to the new building) understandably influenced the nature of the development project.

Although time had been designated for vision work, the interviewees felt that the school's traditions related to leadership, pedagogical thinking and development, as well as teaching practices, did not undergo significant changes within a single academic year. Teachers and principals believed that substantial change would likely occur in the new premises and that the outcomes of the development efforts might remain somewhat concealed until the transition to the new school building had happened. With this in mind, it may be necessary to reconsider the vision and re-evaluate school development initiatives as a school community gains experience in new premises, in situations where this is part of the change. Thus, commitment to vision work and collaborative discussions on shared decision-making in the new premises can play a pivotal role in sustaining school development (see Kurland, Peretz, and Hertz-Lazarowitz 2010; Sheppard, Brown, and Dibbon 2009).

Overall, within our project with the school community, it was evident that certain themes became more prominent, while others faded due to factors including a lack of recognition, insufficient emphasis in everyday school life, or minimal impact on the working community. Some questions may not have surfaced in connection with a school's vision either because they closely relate to work (e.g. teaching methods) or may pose challenging issues that cannot be swiftly resolved. For instance, this school's vision did not contain themes directly associated with learning, although this is a fundamental aspect of the school's function. It is possible that this has a contextual basis: in Finland, teachers enjoy significant autonomy, allowing them the freedom to plan their teaching in the manner they deem most effective, so the teachers may, perhaps, have perceived the merging of different schools as having less specific influence on teaching practices.

Limitations

It is crucial to acknowledge the limitations of the current study. Our research focuses on the development of one learning community, specifically, analysing a change process within a school community's unification procedure. Furthermore, a small number of participants were interviewed. As the study is underpinned by the idea that recognising and appreciating the diverse and unique characteristics of each school is a critical factor in facilitating effective school development (Senge et al. 2012), it does not aim to make generalisations about the use of a shared vision to support school development. Instead, the strength of this study lies in the insights gained from our qualitative analysis of the data and deep collaboration with a school community.

Our study found that it was crucial for principals and teachers alike to feel comfortable that the development work aligned with their decision-making practices (Stolp and Smith 1995). As researchers, we needed to adjust to the present practices and structures of the school community. We collaborated with the school staff to address the problems and challenges that emerged during the development process, and we actively sought opportunities for community learning and development. However, we acknowledge that the findings may not fully represent the perspectives of all members of the school community but, rather, are limited to a selected group of key stakeholders involved in the school's change process. Team leaders and principals may have a different perspective on school development in comparison with other staff members, given the support and guidance offered during the development process from school leaders and researchers. Finally, it is important to reflect that the researchers' choices in facilitating the vision workshops and school development may have influenced the work of the development teams and the shaping of the vision in a specific direction. We recommend conducting similar research in other contexts, to explore school change and gain a better understanding of the areas that need attention in both pre-service and in-service teacher education. Considering the identified constraints of this study, a larger pool of participants and schools selected for similar development could open up possibilities for comparable research in diverse school contexts.

Conclusion

The development of a school as a learning community is a complex process that relies upon the active engagement of the entire school community. School development work is always shaped by the community's history and present situation, making every school's progress a unique process (see Senge et al. 2012). New initiatives invariably depend heavily on the extent to which various parties within a school community genuinely feel they are working towards shared goals. The commitment of teachers and staff to embrace change is influenced by the extent to which the school community strives to become an open and trust-building community (Huffman 2003). Our study of the development of a school community in Finland, as it progressed towards becoming a unified comprehensive school, has provided insight into how the preconditions of a school community can contribute to the implementation of a shared vision as a catalyst for change. It draws attention to how recognition of the distinct needs and starting points of schools is crucial in all school community development efforts.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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III

SCHOOL DEVELOPMENT THROUGH TEAM LEARNING: EXPLORING THE POTENTIAL OF TEAMS IN A LEARNING COMMUNITY

by

Toikka, T., & Tarnanen, M.

(manuscript under review for publication)

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