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RESEARCH



Teachers' and principals' diverse experiences expand the understanding of how to lead collective professional learning among teachers

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ABSTRACT

Focus is shifting from individualized to collective learning for teachers, but many schools struggle to structure and enhance collective professional learning. This interview study aims to explore possibilities for and barriers to leading collective professional learning in school by studying teachers' and principals' perspectives on how school leaders facilitate and monitor teachers' collective professional learning. The data include group interviews with teachers and individual interviews of principals from two schools who participated in an initiative to develop lower-secondary schools in Norway. We find a difference between school leaders' intentions and their enactment as reflected in teachers' experiences, revealing the complexity of leading collective professional learning in school and transforming leadership theory into practice. We argue that the potential to facilitate collective professional learning among teachers emerges when leaders set and incorporate a collective direction, systematically follow-up and adapt collective learning processes over time, and include systems thinking and sensitivity toward the school context. Furthermore, a transparent and collectively oriented implementation plan can better involve teachers when planning and adapting the collective direction and learning processes. Teachers' and principals' diverse experiences contribute to expanding our understanding of how to lead collective professional learning among teachers.

Introduction

Focus is shifting from individualized to collective professional learning for teachers (e.g. Hargreaves et al., 2018; Vangrieken & Kynndt, 2020), but many schools struggle to facilitate collective professional learning. The results from The Teaching and Learning International Survey (TALIS) report few changes in teachers' cooperation from 2013 to 2018 (OECD, 2020). Teachers discuss students' development and exchange materials, but few teachers engage in deeper forms of professional collaboration, such as observation-based feedback or frequent collaborative learning (OECD, 2020). Accordingly, many

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teachers describe their learning activities as mainly individual when participating in school-based professional development (Solheim et al., 2018). Potential remains to develop teachers' collective professional learning in school.

The present study aims to explore possibilities and barriers to leading collective professional learning in school by studying teachers' and principals' perspectives on how school leaders facilitate and monitor teachers' collective professional learning. Review of the research finds that it emphasizes how certain leadership practices, conditions and models of enactment and engagement contribute significantly to organizational and learner outcomes (e.g. Leithwood et al., 2020). Accordingly, extensive research and literature have noted the link between school leadership and teachers' collective responsibility and development (e.g. DuFour et al., 2010; Fullan, 2010; Fulton & Britton, 2011; Hall & Hord, 2020; Lillejord & Børte, 2020; OECD, 2016). Despite the large body of literature concerning leadership conditions and models affecting learning-oriented cultures among teachers, there is a gap in the literature concerning how school leaders enact collective professional learning practices and how teachers experience school leaders' enactments. Leaders' intentions to set collective direction or support collective learning processes must be experienced by teachers to make a difference. Greater insight into school leaders' and teachers' perspectives of similar collective initiatives is required to grasp the complexity of collective learning processes and broaden our understanding of the potential of collective professional learning in school and the barriers to its implementation. The present study is designed to meet these demands by analyzing group interviews with teachers and individual interviews with principals from two schools who participated in an initiative to develop lower-secondary schools from 2014 to 2016. The initiative lasted from 2012 to 2017 and sought to improve school culture for learning, sharing and collaboration to increase lower-secondary students' motivation and learning outcomes (Norwegian Ministry of Education and Research, 2012). The two schools were chosen for this study based on the teacher groups' contrasting experiences of collective professional learning during the initiative.

Collective professional learning among teachers

Traditionally, teaching is considered an individual and autonomous activity (e.g. Hargreaves, 1994), but recently, the collective capacity within schools as organizations has been underscored (Fullan, 2010; Kools & Stoll, 2016), and collective learning and joint practical experience are viewed as enhancing teachers' professional development and promoting their job performance and personal satisfaction (e.g. Vangrieken et al., 2015). Moreover, teachers' collective learning has received much attention from educational researchers and practitioners due to its importance to supporting students' learning (e.g. Fairman & Mackenzie, 2012; Lomos et al., 2011; Moolenaar, 2012; Vangrieken et al., 2015).

Tangential concepts are used to describe teachers' collective and professional learning, e.g. professional development and capital, school-based learning, or collective capacity. In this study, we use collective professional learning to highlight what teachers engage in collectively 'to stimulate their thinking and professional knowledge and to ensure that their practice is critically informed and up-to-date' (Kools & Stoll, 2016, p. 4). The concept of collective learning builds on a variety of theories related to

learning, organization theory, sociology, and psychology. It acknowledges the role of social interactions in constructing values, identities, and knowledge and conceptualizes a dynamic and cumulative process that results in knowledge often institutionalized in the form of structures, routines, norms, discourses, and strategies that guide future actions (Garavan & Carbery, 2012). Collective learning goes beyond collaborative learning as a form of learning together and emphasizes teachers' efforts to achieve common learning or outcomes that will enhance the work of all (Kools & Stoll, 2016). Both individual and collective learning processes are interrelated and necessary to accomplish change within an organization (Fullan, 2010). According to Kerka (1995, p. 4), 'There can be no organizational learning without individual learning, but individual learning must be shared and used by the organization'. Therefore, collective professional learning represents an essential part of organizational learning and becomes a prerequisite for schools as learning organizations; such organizations are characterized by the capacity to change and adapt routinely to new environments and circumstances as their members, individually and together, learn their way to realize their vision (Kools & Stoll, 2016).

Collective learning is, for example, facilitated by creating and supporting continuous learning opportunities for all staff; promoting team learning and collaboration among all staff; establishing a culture of inquiry, innovation, and exploration; and embedding systems for collecting and exchanging knowledge and learning (Yang et al., 2004). These collective learning processes affect schools' professional capital, which involves humans' individual competences, social interactions among staff, and the staff's ability to make informed decisions based on experiences and professional reflections (Hargreaves & Fullan, 2012).

Leading collective professional learning among teachers

A comprehensive research base underlines the importance of collective learning and leaders' crucial role in creating and maintaining collective learning processes (e.g. DuFour et al., 2010; Fullan, 2010; Hargreaves et al., 2018; Leithwood et al., 2020). These are complex processes, assuming the presence of leaders who initiate, plan, and monitor interactions among all the staff and assume responsibility for the professional learning processes in school. In the Ontario Leadership Framework, five domains of successful leadership practices are listed: set directions; build relationships and develop people; develop the organization to support desired practices; improve the instructional program; and secure accountability (e.g. Leithwood, 2019). Several of the domain-specific practices are related to strengthening collective learning among staff, for instance, by building a shared vision, stimulating growth in professional capacity among staff, enhancing the collaborative culture and distributed leadership, and building staff members sense of accountability. Vangrieken et al. (2015) systematic review on teacher collaboration adds to these practices by emphasizing how processual and structural support can facilitate successful teacher collaboration. For example, leaders can support aspects of collaborative processes by realizing task interdependence, clarifying roles and defining focus for collaboration. Furthermore, structural support through the provision of meeting time and the composition of groups is important (Hargreaves & Fullan, 2012; Vangrieken et al., 2015).

The optimal balance between top-down initiatives and distributed forms of leadership is addressed to ensure teachers' engagement and collective learning (e.g. Hall & Hord, 2020; Kools & Stoll, 2016; Slavit et al., 2011). Teacher collaboration spurred by top-down initiatives and definitions of needs might lead to contrived collegiality and superficial collaboration and encourage teachers to hold a recalcitrant and apprehensive attitude toward collaboration (Vangrieken et al., 2015). The role of the leader is, among other things, to promote shared authority, monitor without being dominating, and be a model as a learner (Hall & Hord, 2020). Distributed leadership is emphasized as one relevant strategy to secure teachers' commitment and active participation in school-based professional development (e.g. Kools & Stoll, 2016; Leithwood, 2019). Harris (2013) describes distributed leadership as 'actively brokering, facilitating and supporting the leadership of others' (pp. 546–547), making it a form of leadership that is primarily concerned with the co-performance of leadership and the reciprocal interdependencies that shape that leadership practice. Distributed leadership develops and is maintained through collective processes such as collaboration, teamwork, and participation in professional communities and networks (Kools & Stoll, 2016).

The literature on implementation sheds light upon how to structure and support collective professional learning among teachers. Implementation is defined as a specified set of activities designed to put into practice an activity or program of known dimensions (Fixsen et al., 2019, p. 20). Implementation theory distinguishes between *what* to initiate and *how* (Blase et al., 2012) and addresses the necessity of understanding, adapting, and managing the structure and driving forces of the implementation processes to achieve high implementation quality. An implementation plan is described as a relevant tool for guiding implementation and anticipating potential challenges (Meyers et al., 2012a). To ensure the quality of the plan, it needs to list the tasks required for implementation, establish a timeline for them, and assign them to specific stakeholders (Meyers et al., 2012b). Knowledge of implementation and potential barriers is necessary to develop a qualitative implementation plan.

Furthermore, knowledge of schools as learning organizations can contribute to improving professional collective learning among teachers. P.M. Senge (1990) identifies five disciplines that a learning organization should possess: Team learning, which emphasizes group learning activities; building shared visions that foster genuine commitment across the organization; use of mental models of how the world works; personal mastery, which helps one continually clarify and deepen personal visions, focus one's energies, and develop patience and objectivity; and systems thinking that highlight the ability to view the organization as a whole. Systems thinking connects and integrates the other four disciplines and is important for leaders if they are to understand, orient themselves within, and facilitate complex change processes (P. M. Senge, 1996; Patti et al., 2015). Systems thinking concerns identifying and managing the systemic challenges in schools, for example, those related to structures, change direction, collaboration, and organizational culture. Based on a systemic overview, leaders can assess the school and make decisions adapted to the various needs for improvement that exist in the different parts of the organization and within different contexts. Contextual factors influence policy enactments (Braun et al., 2011) and require contextual sensitivity when leading professional learning processes. For example, technical leadership becomes a possible implementation driver when the organization is characterized by agreement

among staff, certainty due to the direction of the change process, and a mutual understanding of the problem definition (Fixsen et al., 2019). Such preconditions enable leaders to initiate and monitor the implementation process. However, adaptive leadership and deeper change processes aimed at existing norms, values, and working methods are required when the context is characterized by less agreement and more uncertainty (Fixsen et al., 2019). Balkanized cultures serve as an example where subgroups of teachers pull in different and competing directions, challenging collective learning processes, loyalty, and communication within the organization (Hargreaves & Fullan, 2012).

To further explore the possibilities and barriers for leading collective professional learning, contextual and cultural issues must be considered. Accordingly, the literature emphasizes how collective processes are driven by setting direction and developing the organization to foster collaborative structures, distributed leadership and ownership of the learning process. Finally, how collective learning processes are underscored and supported may affect learning experiences and collective professional outcomes. In sum, theories related to collective learning, school leadership and implementation shed light on principals' leadership of collective professional learning among teachers.

Research questions

This study attempts to answer the following two research questions:

- How do the teachers and principals in two lower-secondary schools experience their school culture and its influence on their collective professional learning?
- How do teachers and principals experience leadership's approach to setting a collective direction and supporting collective professional learning processes?

Method

Overarching study and Norwegian context

Children in Norway have a right and an obligation to complete seven years of primary school and three years of lower-secondary school. Pupils begin to attend primary school the calendar year in which they turn six, and 96 percent of the pupils attend public schools (NOKUT, n.d.). The Norwegian Directorate for Education and Training is responsible for supervising the quality of primary and secondary education. As an example of such activity, the national authorities launched three major initiatives for school-based development in the period 2010–2017 (Norwegian Ministry of Education and Research, 2017b). At present, the new national curriculum emphasizes professional-environment and school-based development as a principle for the school's practice (Norwegian Ministry of Education and Research, 2017a). A focus on collective professional learning is therefore familiar in Norwegian schools. Notably, together with England, Scotland, and Sweden, Norway scores on average higher on distributed school leadership than other European countries (Duif et al., 2013).

The present study draws on data from an overarching mixed-method study on Classroom Interaction for Enhanced Student Learning (CIESL), which explored 13 Norwegian lower-secondary schools participating in an initiative, abbreviated as SiD,

to develop lower-secondary schools between 2014 and 2016 (Ertesvåg et al., 2021). By developing teachers' professional capital through school-based learning activities, the initiative sought to change teaching practices in the classrooms and increase 13–16-year-old students' motivation (Norwegian Ministry of Education and Research, 2012). Within the overarching study, 81 of 450 teachers from the 13 schools volunteered to participate in group interviews and classroom observations. The principals participated accordingly in individual interviews at the beginning and end of SiD. Within the present study, the interviews with principals and teachers were analyzed.

Sample – two contrasting schools and their informants

In-depth analyses of the 13 teacher groups' experiences of the collective learning processes grounded a purposeful sample of two schools, presented here as Fjell and Dal. These schools present a contrast due to their teachers' descriptions of the collective learning processes, collaborative structures, mutual ownership, and professional focus during the national initiative.

Fjell school

The teachers at Fjell described several collective learning processes, collaborative structures, and an increasing collective focus during their participation in SiD. Fjell had approximately 250 pupils and 30 employees. The principal was an experienced school leader and had previously been a teacher. When initiating SiD, he had been principal at Fjell for more than five years. He had previously led professional development initiatives at the same school. Together with the principal, four female teachers served as informants at Fjell. The teachers varied in age and teaching experience. Two teachers had 3–6 years of teaching experience, while the other two teachers had more than 15 years of teaching experience. In addition, the teachers varied in terms of subjects taught and student age-level groups. Two teachers taught the 9th grade (14–15-year-olds), and two teachers taught the 10th grade (15–16-year-olds).

Dal school

The teachers at Dal described few indications of collective learning processes during their participation in SiD. Dal had approximately 500 pupils and 75 employees. The principal was an experienced school leader and had previously been a teacher. He had been the principal at Dal for more than five years when SiD was initiated and had previously led professional development initiatives at the school. The principal served as an informant at Dal together with four female teachers. The teachers taught different subjects and student groups and varied in age and teaching experience. Three of the teachers had more than 10 years teaching experience, and one teacher had less than 5 years experience. Two teachers taught 8th grade students (13–14-year-olds), and the other two taught 10th grade students (15–16-year-olds).

Design and data collection

Qualitative interview data were collected twice during the schools' professional development initiative: at the beginning (T1) and at the end (T2). Principals and teachers were interviewed at both timepoints (Figure 1).

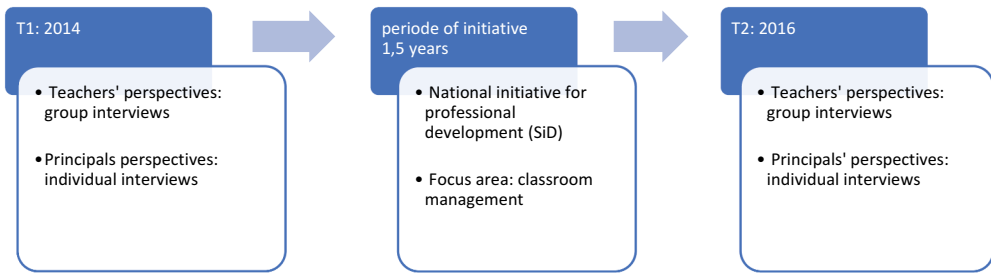


Figure 1. Design – data collection.

Teachers' perspectives – group interviews

Four volunteering case teachers from each school were interviewed in groups at time-points T1 and T2; each interview lasted approximately 90 minutes and was digitally audio recorded. Methodological approaches to focus groups were employed, even though the groups did not meet the criteria of 6–8 participants (e.g. Kreuger & Casey, 2015). However, the composition of the groups met the balance between similarity and diversity necessary to share reflections and allow several perspectives to evolve (e.g. Creswell & Poth, 2017). The teachers within each group were familiar to each other, shared the same educational background, and had a minimum of three years of teaching experience; they also taught different subjects in different grades and their length of employment varied. Typically, teacher collaboration in Norway is structured in groups consisting of teachers teaching the same grade (within-grade collaboration) or teachers teaching the same or related subjects (disciplinary collaboration). Teachers' experience of collective professional learning may therefore differ substantially based on what group they belong to and how their collaboration is structured.

The group interviews were semi-structured and moderated by one of the researchers. The interview guide combined an open with a structured approach based on three main elements: research themes, open questions, and follow-up questions. Seven research themes were introduced: 1) classroom management (subject of initiative), 2) self and collective efficacy, 3) collaborative practice, 4) transformation of theory to practice, 5) school organization and school culture, 6) training and 7) coaching. Both rounds of interviews included similar themes but differed due to the concretization of the follow-up questions. At T1, the interviews focused upon general experiences and practices at school. At T2, the same research themes were related to the conducted initiative. Each theme was introduced with an open question intended to capture new ideas or perspectives from the informants, as well as existing word associations that could reveal underlying meanings (Stewart & Shamdasani, 2014). The questions of research theme 3 (collaborative practice) illustrate how the themes were structured in the interview guide. First, an open question was asked: How do you and your colleagues collaborate to develop classroom management? Then, more specific prompts were used to follow up on responses and explore the teachers' answers in more depth; these contributed to concretizing the mentioned practices. Examples of these prompts are as follows: How is the collaboration structured? Could you give an example of a collaborative project or process? How do you experience the staff's loyalty toward collaborative practices?

The group interviews were characterized by a mix of moderated questions and spontaneous interactions between the informants. The moderator encouraged the informants to share their reflections, ensured time for all informants to express their thoughts, and followed up on the teachers' statements to explore new thoughts and ideas about the phenomenon studied.

Principal's perspective – individual interviews

The principal from each school was interviewed individually at timepoints T1 and T2. Each interview lasted approximately 60 minutes and was audio recorded digitally.

The interview guide was semi-structured based on sections similar to those in the teacher groups: research themes, open questions, and follow-up questions. Six research themes structured the interview: 1) classroom management, 2) different roles when developing classroom management, 3) the initiative for professional development, 4) collaborative practices, 5) school organization and culture, and 6) training and coaching. The first and second interviews included the same research themes but differed based on the concretization of the follow-up questions, as mentioned for the group interviews. The fourth theme (collaborative practice) is used to illustrate how the research themes were structured in the interview guide. First, an open question was asked: How do you collaborate with others to develop competence related to classroom management? More specific prompts were used to follow-up on responses to the open question and explore each principal's experiences in more depth and contributed to concretizing the mentioned practices: How do you collaborate with your teachers/other principals/school owner or other cooperative partners? Give examples. Are there any standards for classroom management at school or in the municipality? How might collaboration on classroom management influence your work as principal?

Data analysis

The process of analysis was interactive between the two researchers and with respect to the data and involved data collection, data condensation, data display, and conclusions (Miles et al., 2019). The interviews were transcribed verbatim and kept as close to the audio recorded versions as possible. Both researchers worked closely with the data but had different main tasks: one collected data together with a fellow researcher; the other led the coding process. Data condensation followed three steps. First, the fellow researcher created summaries of the principal interviews to obtain an overall impression of the school and its leadership and to prevent researchers becoming lost in the highly detailed transcripts (Brinkmann & Kvale, 2015). Second, the researcher leading the coding process coded the transcribed interviews using QSR International's NVivo 12 software. Third, the researchers thoroughly examined the summaries, transcripts, and the codes together, resulting in two cycles of modified and revised codes to establish consistency between the researchers and a satisfactory level of coding saturation such that no new codes occurred (Urquhart, 2013).

NVivo 12 was used to store, organize, display, code and link the data. All data concerning the same school were grouped and defined as one *case*. The two *cases* were coded separately following the same procedure before they were compared. The coding tools *case* and *tree nodes* were used to cluster codes and display data.

Within-case analyses (Miles et al., 2019) were used to explore experiences and praxis related to collective learning processes at each school. First, provisional coding was carried out based on researcher-generated codes derived from theory on leading collective learning (e.g. Leithwood, 2019; Vangrieken et al., 2015). Furthermore, fine-grained coding was used to explore the data in greater depth. *In vivo* codes derived from expressions in the data material and *process* codes connoting conceptual action in the data were added (Miles et al., 2019). The *tree nodes* represented a hierarchical structure of codes containing *parent nodes* and *child nodes* (Richards, 2005). The main hierarchy of nodes was established after coding and recoding the transcripts two times based on the fit to the data material and the final focus of the analysis. Three parent nodes were established: school culture, setting collective direction and supporting collective professional learning processes. The child nodes represented the nuances of each parent node to further explore and cluster data (Figure 2). Differences and similarities between the two schools (between-case analyses) were used to further explore possibilities and barriers in leading teachers' collective professional learning.

Methodological integrity

Methodological integrity can be evaluated through two composite processes: 1) fidelity to the subject matter and 2) utility in achieving the research goals (Levitt et al., 2018). In this study, the data were collected to identify teachers' and principals' experiences of

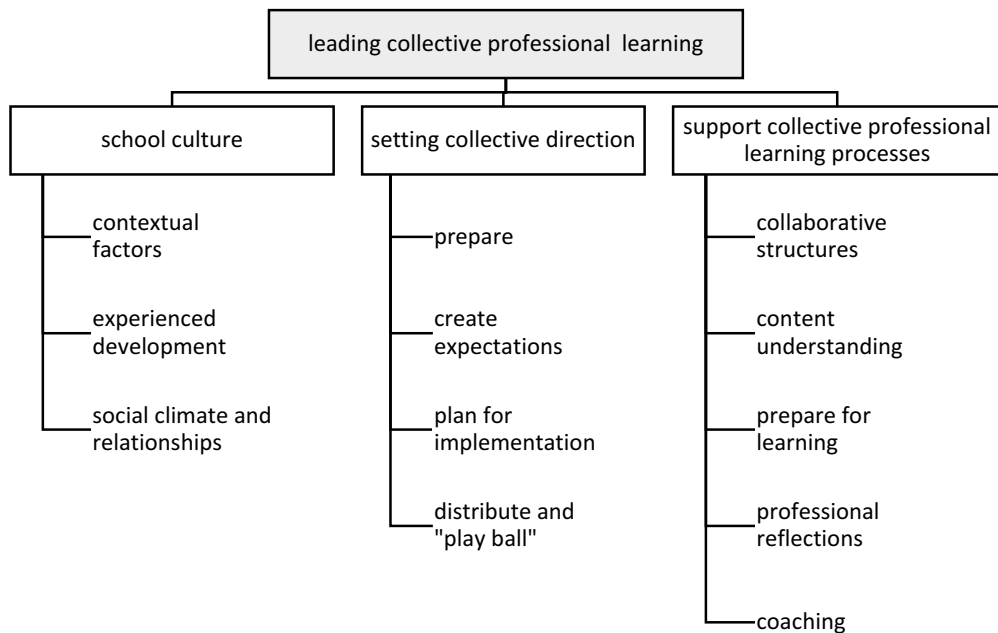


Figure 2. Tree-structure for analysis.

collective professional learning and leadership in promoting teachers' professional learning. Based on data suitability, two of the thirteen schools were sampled based on their contrasting experiences of collective learning to increase the variation within the data. Next, we increased the possibilities for exploring the potential of and barriers to leading collective professional learning and sought to develop allegiance to the studied phenomenon. The sample size in this study is small, including eight teachers and two principals. However, two periods of data collection and the process of the semi-structured interviews enabled us to enhance data richness and identify enough redundancy in the data to provide a sufficient degree of data saturation (Saunders et al., 2018). Together, the data included approximately 100 transcribed pages of teacher group interviews and approximately 90 transcribed pages of individual principal interviews.

The interviewing techniques used in this study sought to capture the complexity and real life of the school organization. By combining the views of people at both an individual and collective level and asking follow-up questions to address specific and concretized practices, it became possible to explore organizational practices in the schools (Blossing et al., 2019). By dividing principals and teachers into different interviews, we also intended to decrease the possible effects of any power imbalance among the informants. Nevertheless, we noted a certain hesitation among teachers to share any negative experiences of their leaders.

We sought to strengthen the utility of this study by describing our process for obtaining data, data coding, and the generation of meaning. Accordingly, the analyses identified findings that addressed the analytic goals, context information was provided for each school, and contrasts and differences within the findings were noted and explained during the presentation.

Ethical approval

The teachers and principals received written and oral information about the project. They were informed that participation was voluntary and that they could withdraw from the project at any time without consequences. A written consent form was obtained from all participants. Guidelines from the National Committee for Research Ethics in the Social Sciences and the Humanities (NESH, 2016) were followed, and the Norwegian Data Inspectorate at the Norwegian Center for Research Data confirmed that the project was in line with privacy legislations.

Findings

The findings from the two schools will be presented separately but with similar structures. First, the teachers' and principals' experiences of the *school culture* during the initiative are presented as a contextual frame. Next, teachers' and principals' experiences of how collective professional learning is structured and supported are presented based

on how school leadership *sets a collective direction and supports collective professional learning processes* at each school. Quotes from the individual- and group interviews are used to illustrate the findings.

Fjell school

School culture

Both the principal and the teachers described Fjell as an ‘intimate school’ consisting of a unified building and compact workplaces that facilitate regular meetings between staff during the day. According to the principal, this structure allowed and stimulated cooperation and a feeling of fellowship among school employees and provided him with hands-on information (Principal T1):

We meet all the time. I am regularly at the teachers’ grade offices talking. There is a strong feeling of fellowship, which is a huge strength. There is an enormously close collaboration.

The principal described himself as close to his staff and reflected further upon the importance of being good at relationships and the necessity of being trusted. The teachers expanded upon the principal’s experience by reflecting upon the challenges and strengths due to their compact and sharing workplaces (Teachers T1):

As a teacher, you often wish for a single office to concentrate. But we are placed in compact offices, which provides a lot of peer learning. During the years, we have shared a lot of experiences and responded to each other’s experiences.

The teachers acknowledged the collaborative potential in their compact working facilities; however, they emphasized the need for peace to concentrate individually. Although the school structure facilitated collaboration, the teachers and principal also addressed how the staff worked more collectively at the end of the initiative than at the beginning. In the second group interview, the teachers stated the following (Teachers T2):

A: I feel we differed more earlier.

B: Yes, and I think we are more collaborative and loyal to what we decide now than two years ago.

The principal added to the teachers’ experiences of collaborative development by stating that the most important and exciting development accomplished during the initiative was a change from mainly privatized practices where teachers worked individually to a collective culture where teachers worked together.

Setting collective direction

The principal emphasized that collectivity was the most important element of the initiative. He highlighted ‘the inclusion of all’, ‘collective competence’, ‘learning organization’, and ‘collective learning’ as important concepts and acknowledged his role in setting the collective direction (Principal T1):

I want to have my hands on the steering wheel. Both to ensure variation but also to secure the direction.

To be ‘hands on’ was seen as important both to secure the direction of the initiative and to enable varying approaches and strategies. Accordingly, he emphasized the value of ‘playing ball’ with the teachers to obtain direction and secure their opinions, contributions, and commitment to school-based development. He argued with reference to the theory of school leadership (Principal T2):

The most important for me has been this quote from Hargreaves and Fullan: ‘Sustainable development can never be done against, and not even for teachers. It can only be obtained of and with them.’ This requires many ball games. In addition, I need to join the game.

This distributed and collectively oriented leadership style was accordingly described and valued by the teachers. The teachers addressed the significance of being heard and given responsibility for collective practices and professional development. They experienced their leadership as interested and well informed of the processes in the grade-level teams and classrooms.

All informants addressed the school’s ongoing use of an implementation plan, named the ‘action plan’, that described what to do on a given timeline and how to do it. The plan secured continuous evaluation. The principal found the plan played an important role in helping the leadership group to guide the initiative. He did not think the plan was likely important for the teachers, even though it was transparent for them. However, the teachers emphasized the plans’ importance for their collectivity (Teachers T2):

The school leadership has been very good at keeping us on track. We have developed an action plan, which is continuously revised and describes our next step. The leaders were good at collecting the teachers’ experiences and sharing those experiences across grade levels.

The teachers described how the plan helped them keep track during the initiative. Accordingly, their continuous use of ‘we’ highlights an experienced co-construction and co-revision of the collective learning processes among staff. The plan designed a collective direction and helped experiences be shared across grade-level groups.

Supporting collective professional learning processes

The principal emphasized the need to support the teachers’ collective professional learning and facilitated collective learning processes by structuring collaboration, preparing teachers for collective learning, and linking theory and practice in reflection groups. Both the principal and the teachers emphasized how the organization developed to better facilitate collaboration during the initiative. For example, school leadership increased teachers’ time for collaboration at the within- and across-grade levels. The principal also mixed professional competence within the three grade-level teams by balancing alternation and continuity to avoid having the three teams develop in different directions. By prioritizing time, focusing on mutual reflections, and addressing reflections related to concrete practices, the principal structured the processes and content of teachers’ professional learning. Furthermore, he continuously emphasized the staff’s mutual responsibility for collective learning, for example, by addressing the teachers’ attitudes toward professional input at the beginning of the initiative (Principal T2):

It was important to address early an expectation of the teachers' active participation. The purpose of this initiative is not to become silent recipients of information.

The principal prepared the teachers by addressing their attitudes as learners and gave them assignments ahead of professional input, such as 'What can I learn from this lecture, and what can I bring into my further practice?' Prior to external input, the teachers prepared individually and within teams. Afterward, they processed the professional input within and across teams. Accordingly, teachers read thematic articles to prepare for structured collective reflections. Furthermore, the principal highlighted the importance of facilitating the translation of theory into practice in the classrooms. He fostered collective reflections among different groups of teachers through structured time for collaboration and addressed possibilities for translating theory into practice through different methods, e.g. done – learned – wise rubrics. Evaluation and the possible adaptation of practices and methods were facilitated during the initiative.

The teachers described their daily and more spontaneous collective reflections as mainly practice oriented and based on exchanging ideas. However, they addressed a development toward professional collective reflections during the initiative, acknowledging the professionalism of combining theory and practice through reflections and coaching in the classrooms. Finally, they described how they worked collectively. One of the teachers put it like this (Teachers T2):

We made posters addressing our classroom practices and our collaboration and collective school development. We found it important to summarize how we work. Because now, when we have finished this initiative, we need to remind ourselves of what we have agreed upon to continue collectively.

The posters were put up in the staff rooms and contributed to operationalizing central focuses into practices by recapping what they had agreed upon during the initiative. Accordingly, by raising the focus to collaboration and collective school development, the collective culture at the school was thematized across the entire organization. However, when the teachers and principal were asked to describe the core content of classroom management, they found it difficult because it was such a 'wide' and 'huge topic'.

Dal school

School culture

Both the teachers and principal described teachers' privatized practices as central to Dal's school culture, characterized by autonomous teachers working behind 'closed doors'. Starting as a principal, he experienced professional culture, development and sharing among the teachers as voluntary and not anchored in the school organization or leadership. Accordingly, some teachers were experienced informal leaders. However, after alternating team members and clarifying expectations concerning collaboration, the principal experienced a positive development concerning the professional community at the school (Principal T2):

Now, the staff is easier to lead. They cooperate in new ways and receive new thoughts and inputs. Over time, we have worked to split counterproductive constellations and breakdown destructive traditions. Nevertheless, we have some hard nails left, some isles in the culture.

Although the principal experienced improvement in staff collectivity and cooperation, some challenges remained as 'isles' in the organization. The teachers added to these experiences and emphasized a positive climate where teachers teaching the same class shared their experiences. A system for sharing across grade-level teams was also mentioned. They described themselves as solution oriented, grounding solutions on their own experiences and less on theory or research. They expressed a general loyalty toward the school leadership but also a parallel resistance and skepticism in prompts: 'Why should we change our ways of acting, when we always have acted this way and it works well?'. In the second interview, the teachers emphasized how the school had developed toward a single unit: 'It is more a we-school'. However, when they concretized this collective development, they scaled down the changes related to the school culture (Teachers T2):

Nothing revolutionary has changed at our school. It relates to our school culture. We have no traditions for achieving change at this school.

Both the teachers and the principal expressed how the school culture influenced their way of understanding and led professional development. Subsequently, both the principal and the teachers emphasized leadership as distinct but with close relationships with the teachers. The principal stated (T1): 'Deep inside, they know that I wish them well'. The teachers confirmed this by describing a leader who acted immediately on behalf of students' and teachers' wellbeing and offered help through observations, advice, and administrative support.

Setting a collective direction

In general, the principal emphasized the importance of clear leadership, where the leadership group agreed and acted as a whole, setting clear directions. He prioritized taking the time needed to sort things out in the leadership group with his middle managers before he presented ideas or new guidelines for the teachers (Principal T1):

We need coherent leadership. We need to promote the same attitudes to agree upon what we decided.

To establish coherence concerning the initiative (SiD), the school leadership used the first year of the 1.5-year initiative to analyze the organization's strengths and weaknesses and establish a platform for further development. The principal used the concept of 'a fumbling phase' to refer to this initial period of preparing, analyzing, and planning. When responding to what he would have done differently if starting over, the principal noted a clearer plan beyond a timeline of gatherings for the staff (Principal T2):

Maybe I should have been clearer on the action plan from the start. We wondered too long on how to approach the initiative.

The teachers added that they experienced vagueness during the initiative. They found their leaders only doing what was imposed upon them and that the information and processes were unclear. Although they acknowledged the principal's clear vision, they wished the leadership had monitored better and developed a transparent plan.

The principal emphasized ‘uplifting leadership’, acknowledging the reciprocity between the teachers and school leadership and expressed how the scheduled meetings for the leader group, the team coordinators, the within-grade-level teams, and the whole staff contributed to distribute responsibility across the organization. However, the teachers observed a lack of distributed responsibility and acknowledgment of their perspectives during the initiative (Teachers T2):

The staff could have contributed more if the school had its own plan. We had felt more involved.

The teachers expressed a wish for a transparent plan and more participation in developing the content and the processes of professional learning. Furthermore, they wished that the leaders could have organized more time for the initiative and created more learning processes among the staff. The teachers addressed how the leadership group was passively present at their grade-level meetings and did not address the initiative or their collective learning.

Supporting collective professional learning processes

The principal supported the teachers’ collective professional learning processes by structuring time, methods, and content for collaboration. The schools’ challenges related to different subcultures affected their learning processes across grade-level teams. However, the principal emphasized that he invested effort into unifying the school culture through collective expectations and structured collaboration (Principal T1):

I cannot force anyone to participate in the debates. However, I can make sure they sit in groups where they are being challenged, that they are present at dialog conferences or make write-ups of actions made.

The principal described how he facilitated collective expectations by structuring teachers’ collaboration and participation. Accordingly, he established some school standards for practices, such as mutual design for students’ workplans and standards for teachers. Furthermore, the principal described how he monitored collective learning processes and addressed professional commitment by facilitating the sharing of practice stories, café dialogs, done-learned-wise rubrics, and the active use of personal resources. He prepared for professional learning by spreading theory among staff, expected the teachers to read ahead of assemblies, and noted some varying experiences concerning classroom observations and coaching. However, these initiatives were not systematically followed up, and the teachers did not experience the support intended by the principal. The teachers, on the other hand, addressed frustration based on a lack of understanding of the content of the initiative (Teachers T2):

I wish I understood classroom management good enough to pick out elements to practice and further share my experiences with my colleagues.

The teachers’ frustrations reflect how a lack of collective understanding challenged their development of classroom practice and shared reflections. According to the teachers, theory and practice were poorly linked in their reflections and classroom practices, and

the learning processes lacked a collective focus and follow-up. They described how the increased and systematic use of classroom observations and coaching could have supported their collective professional learning.

Discussion

We next discuss how school culture affects the leadership of collective professional learning, the complexity of incorporating a collective direction, and how leadership supports collective professional learning processes. Elements within each of these dimensions can both represent potential for or create a barrier to leading collective professional learning in school, and the variations between teachers' and principals' perspectives stress the complexity of such leadership.

How does the school culture affect the leadership for collective professional learning?

We find a contextual contrast between the two schools. While the teachers and principal at Fjell described an organization pulling in a single direction and a physical context facilitating dialog and collaboration, Dals' staff described a long autonomous tradition and varying loyalty in the organization. These opposing forces, expressed as 'isles' at Dal, reveal barriers to school-based development related to balkanized cultures (Hargreaves & Fullan, 2012). In balkanized cultures, teachers who are more loyal to subgroups than to the organization challenge and counteract the school leaders' visions of collective professional learning.

A relevant question is whether these contextual differences require different leadership practices. Leithwood et al. (2020, p. 7) state that 'almost all successful leaders draw on the same repertoire of basic leadership practices', but the ways in which leaders apply these practices demonstrate responsiveness to the context in which they work (p. 9). Leaders' sensitivity to context is critical to adapting leadership practices and strategies in different stages of school development (Fullan, 2019). Accordingly, balkanized cultures and uncertainty about collective direction require deeper changes due to existing attitudes and values and address the importance of adaptive leadership (Fixsen et al., 2019).

In this study, the contexts differ between the schools, such as their professional contexts including values and commitments, their situated contexts including locale and school history, and their material contexts including infrastructure, staffing, etc. (Braun et al., 2011). In particular, differences within professional contexts affect leaders' focus, enactments and self-efficacy and teachers' collective efficacy and learning experiences (K.A. Leithwood & Beatty, 2008). At Fjell, the principal described strong self-efficacy regarding the school's collectivity, which again seemed to positively affect the teachers' experience of pulling in the same direction. One can argue that reinforcement existed between the professional context and the ways in which the principal adapted, directed, and monitored collective professional learning. In contrast, the principal and teachers at Dal repeatedly expressed frustration due to the school's tradition of individuality, and the principal experienced difficulties in involving, structuring, and following

up upon the collective processes. The experiences at Dal might address the challenging balance between sensitively adapting leadership practices and the risk of being dictated by contextual challenges.

The complexity of incorporating a collective direction for professional learning

The principals in the present study acknowledged the importance of a shared and school-based vision for professional learning, as supported in earlier literature (e.g. Leithwood, 2019). However, the principals differed in how they operationalized their visions and how they facilitated a collective and shared direction. Furthermore, the teacher groups' experiences of clarity, involvement, and commitment contrasted.

At Fjell, the development and use of a dynamic, collectively oriented implementation plan contributed to decomposing the schools' vision for collective professional learning into common and achievable goals and specified approaches. The teachers at Fjell experienced the goals and approaches as transparent and described how they were involved and committed to developing and adapting the implementation plan. In contrast, the leadership at Dal struggled to establish a plan for the initiative, and the teachers experienced less involvement and reported a lack of clarity around learning goals and processes. These contrasting experiences add to the knowledge of how leaders' practices affect teachers' commitment and possibilities for participating in collective learning processes. An articulated and shared vision, decomposed into common and achievable goals and approaches, contributes to motivating and inspiring staff engagement and learning (e.g. Leithwood, 2019). The creation of an implementation plan, where tasks, timelines and responsibilities are listed, contributes to operationalizing and sharing visions in an organization and enables leaders to monitor the direction and systematic progress of teachers' professional learning (Hall & Hord, 2020; Meyers et al., 2012a, 2012b)

Furthermore, the quality and distribution of leadership functions, social interactions, cooperation with the leadership team, and participative decision-making influence teachers' organizational commitment (e.g. Hulpia et al., 2011). We found that both principals acknowledged the importance of distributed leadership, but they chose different patterns of distribution. The principal at Dal focused mainly upon distribution and cooperation within the leadership group, emphasizing a clear and united strategy among the leaders. He placed less emphasis upon involving teachers and monitoring progress in achieving shared goals. Such top-down initiatives and definitions of needs might lead to contrived collegiality and superficial collaboration and encourage recalcitrant and apprehensive attitudes among teachers toward collaboration (Vangrieken et al., 2015). Therefore, the lack of teacher involvement when developing and adapting initiatives for professional learning illustrates a potential barrier to collective professional learning. On the other hand, the distributed responsibility and reciprocal interaction between teachers and leadership found at Fjell demonstrate a key factor affecting teachers' experiences of collective professional learning. The principal balanced the acknowledgment of teachers' ideas with communication in a clear collective direction, illustrating a potential balance between top-down initiatives and distributed forms of leadership that ensures teachers' engagement and collective professional learning (e.g. Kools & Stoll, 2016).

How does leadership support collective professional learning processes?

A main finding in this study is the discrepancies between the principal's intended support of collective professional learning processes and the teachers' experienced support. There were examples of structural, affective, and instructional support at both schools. For example, both principals structured teachers' collaboration by providing time for meetings, clarifying the focus for collaboration, and deliberately grouping teachers, which are confirmed as essential structural factors for teacher collaboration (e.g. Datnow, 2011; Vangrieken et al., 2015). Both principals were described as affectively supportive in general and as acknowledging the teachers' challenges in the classrooms. Next, differences in the strategies of instructional support for collective professional learning will be illustrated, such as linking theory and practice, collective tasks, methods, and reflections.

Even though the principals describe and facilitated relevant support for collective professional learning, we argue that the varying experiences of support in the teacher groups reflect how collective professional learning is incorporated and systematized over time. The importance of continuity is emphasized within the definition of collective learning through the continual enhancement of collective capacities and the improvement of team effectiveness (P.M. Senge, 1990). The two schools differ in their provision of systematic and continuous collective professional learning among teachers. At Fjell, the principal facilitated the continual enhancement of the teachers' learning through focused preparations, identified and communicated objectives, mixed the use of individual with collective tasks and reflections, and supported systematic follow-ups and evaluations. He continuously stressed the collective direction and the mutual responsibility for learning processes and outcomes. Through these approaches, the principal communicated clear expectations of collective learning, recognized it as important for effective school leadership (Leithwood, 2019), and directed the teachers' attention toward collective learning objectives and processes. These preparations were followed up by the provision of lectures followed by reflections within and across teams. The subsequent evaluations facilitated the continuous adaptation of the initiative and focused on both collective professional learning at school and individual classroom practices. Finally, the staff summarized and concretized the outcome of the initiative in posters capturing the schools' collective practices. By contrast, the findings reveal a lack of systematic and continuous follow-up at Dal. For example, the principal shared theoretical articles with his teachers by e-mail, but he did not follow-up on the use of the articles, and the teachers did not remember receiving them.

To improve professional decision-making in the classroom and require continuous and systematic learning processes (Patti et al., 2015), theory, research and practice must be closely linked (Schön, 1983). The teachers at both schools described a gap between the presented theory and classroom practices. The leaders acknowledged these challenges and were aware of their responsibility for facilitating the connection between theory and practice. For example, the teachers were asked to identify aspects of theory relevant for their classroom practice. Accordingly, coaching based on classroom practices was tested. The translation of teachers' reflections and collaboration into actual changes in classroom practices contributes to increasing the knowledge base of a team and improving their practices (Slavit et al., 2011).

The quality of the learning processes and potential for deep-level collaboration depend on the affective, structural, informational, and instructional support of the principal together with the staff's commitment, engagement, and acceptance (e.g. Slavit et al., 2011). We argue that the leadership at Fjell supported the collective professional learning process by addressing different layers of learning: the shared and individual responsibility for learning, the focused reflections across teacher groups, the continuous evaluation of classroom practices and collaborative activities, and the developed standards visualizing and reminding the staff of collective practices. Even though the findings raise questions regarding the content understanding during the initiative and could have included several methods linking theory and practice and enhanced professional collectivity, these continuous learning processes illustrate a systematic process toward shared content clarity and deeper content understanding during the initiative.

Potential and barriers to leading collective professional learning – concluding remarks

Extensive research emphasizes the importance of collective professional learning processes to achieving sustainable development in school organizations (Fullan, 2010; Kools & Stoll, 2016; Vangrieken et al., 2015). Accordingly, leadership is presented as a key factor in facilitating and monitoring collective professional learning (Hall & Hord, 2020; Leithwood, 2019). To navigate and lead complex professional learning processes, leaders need to establish a deep understanding of both the subject of change (what to learn) and the process of change (how to learn it; Blase et al., 2012).

A mutual challenge at both schools relates to understanding the subject of change. When asked to describe classroom management, both teachers and principals lacked concrete and precise descriptions of the core elements of the initiative. They used few professional concepts, and the core components were unclear, which created challenges for staff's understanding of the relevance of collective professional learning and became a barrier to implementation quality (Blase et al., 2012).

We find a mix of potentials and barriers related to the processes of change. Both principals expressed similar theoretical perspectives on leadership, but they differed in how they implemented their theories. At Fjell, key success factors related to the leader's positive attitude toward collective processes and collaboration; the clear collective direction developed and distributed among the staff and decomposed through a transparent and co-constructed implementation plan; structured follow-up processes regarding professional reflections; close relationships between leaders and teachers; and continuous evaluation processes. At Dal, the lack of similar factors appeared to create a barrier to collective professional learning. The principal at Dal expressed less self-efficacy regarding the achievement of collective professional learning; the direction of change was mainly top-down, failing to involve the teachers and not tied to a clear implementation plan; and initiated collective professional learning processes were less systemized and followed up upon. We must consider the contextual differences between the schools when understanding the distinct ways of leading professional learning processes (Braun et al., 2011). While Fjell was described as having a collaborative culture, Dal was characterized by long-term balkanization (e.g. Hargreaves & Fullan, 2012). Dal's starting point was more challenging and constituted a barrier toward the collective direction and commitment.

In summary, the complex and contrasting experiences of the two schools emphasize the importance of school leaders' ability to transform leadership theory into practice, work systematically over time and include systems thinking (Patti et al., 2015). Leaders need to navigate and be sensitive to a complex array of factors to achieve collective professional learning in organizations. Such complexity requires leaders with a high-level perspective and the competence to set and monitor a collective direction, adapt, and handle various needs for improvements in the organization, and structure, follow-up, and support collective learning processes. The potential for achieving collective professional learning in school emerges if collective goals are operationalized at the beginning of an initiative because it enables leaders to monitor a shared direction and facilitate common understanding, expectations, and commitment within the organization (e.g. Leithwood, 2019; K. Leithwood & Sun, 2012; Meyers et al., 2012a). In addition, when conducting collective professional learning among teachers, leaders must understand and apply knowledge from several theoretical areas, such as change management, implementation and organizational learning.

Strengths, limitations, and implications

The strengths of this study relate to the study design and access to both teachers' and principals' perspectives. Our understanding of school cultures, learning experiences, and the facilitation of collective professional learning at each school expanded through access to these two perspectives. Some findings were validated and clarified by the two perspectives, while others revealed variations between the perspectives, for example, when leaders' intentions did not reach the teachers' experiences in practice. These parallel perspectives strengthened the data material and allowed the study to reveal the complexity in leading collective professional learning. Furthermore, the two periods of data collection gave access to experiences before and after an initiative for change.

The small sample size represents a relevant limitation of the study and makes it difficult to generalize the findings. Similarly, a sample of contrasting experiences might bias analysis and presentation to confirm the contrasts within the cases. However, we sought to meet these challenges by purposefully searching for variations within each school and found the teacher groups' contrasting experiences to strengthen the data, analysis, and presentation by expanding access to potential success factors and creating barriers to leading collective professional learning in school.

Based on the increased focus on collective professional learning in school worldwide, a deeper understanding of the potential for and barriers to leading collective professional learning is relevant for policymakers and school leaders. Similarly, specifying, categorizing, and reflecting upon how collective professional learning is enacted by principals and how teachers experience these enactments are relevant to further develop school leaders' competences. A focus for future research to strengthen these findings would be to explore these enactments in more depth and across several schools.

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