National Strategy for Supporting the Instructional Leadership of School Principals: A Scandinavian Approach

Introduction

In Scandinavian countries significant responsibilities and authority have been delegated from the state to municipalities in recent decades—that is, to the Scandinavian school district level to strengthen the instructional leadership capacity of school principals (Moos *et al.,* 2016). A number of empirical studies and evaluations in Norway and Sweden have shown variability in the degree to which the municipalities have succeeded in their endeavors to support their principals in leading the instructional effectiveness of their schools (Aas and Törnsén, 2016; Aasen *et al.*, 2012). Variability in the municipal school districts' capacity to support their principals in the instructional leadership chain has, in consequence, motivated the national educational authorities to invest in a series of initiatives—a portfolio of state-funded development projects—set up to support municipalities in their role as system leaders in relationship to their principals. One of these national projects, the subject of the current study, is a longitudinal benchmarking-based arrangement to promote instructional leadership capabilities among the participating principals who are school leaders in Norway and Sweden. The project—labeled "Benchlearning"—is based on a strictly designed learning infrastructure, where the principals take part in observation-based learning activities supplemented by group learning processes in the benchmarking teams. The activities and learning infrastructure are intended to inspire changes in the principals' leadership practices to encourage the development of innovative school environments (Aas and Blom, 2017; Aas and Roald, 2016), where participating principals seek to transfer knowledge from the project setting to their real-life leadership context in the schools. Explicitly, the objectives of the Benchlearning project are to promote innovative learning at two levels in the participating

schools: at the leadership level, in terms of strengthened capacity for instructional leadership, paired with changes at the organizational or teacher level manifest in stronger professional learning practices.

As pointed out in a prior study of a Norwegian public sector benchmarking project, where school principals were the largest group of participants, this kind of inter-organizational knowledge transfer is a difficult and uncertain task (Paulsen and Hjertø, 2014). This is the case not least because leadership competence is context-bound and encompasses tacit elements (Carlile, 2004). The Benchlearning project was therefore carefully designed to deal with well-known learning barriers that occur when people seek to transfer learning experiences from one social and political setting to another (Easterby-Smith *et al.,* 2008). The current paper analyzes findings from a large study of the Benchlearning program and the ways in which the principals perceived that the program supported the changes (Aas and Halvorsen, 2018; Aas *et al.*, 2018). In this paper, we use the findings from the two earlier papers to examine the following research questions: *How can a national leadership program support the instructional leadership of school principals? What are the implications for municipal leadership?* In the first section, we lay the foundation for our research interest by examining international literature about learning from a systemic perspective and modes of learning for school leadership development. We then briefly describe the Benchlearning program before we present the methodology and the study limitations. Finally, we present the results and discuss the findings and implications of the study.

Literature review

In this section, we present a review of the literature that informs the study of how a national leadership program can support the instructional leadership of school principals and the implications for municipal leadership. We draw on literature about how inter-organizational learning can be understood as a process of knowledge transfer across boundaries. We also present different modes of collaborative learning in school leadership development and the factors that enable external learning, focusing on the critical role of autonomy for project-based learning. Finally, we present a review of distributed leadership that seems to be a precondition for the collective learning process in the Benchlearning program.

The process of learning across boundaries

When principals aim to harvest external knowledge through their participation in the Benchlearning project in a manner that is useful for their everyday instructional leadership practices, this form of inter-organizational learning can be understood as a process of knowledge transfer across boundaries (Paulsen and Hjertø, 2014). Knowledge transfer across organizational boundaries has always been a central theme in organizational learning theory (Levitt and March, 1988), and the term generally refers to an event through which one organization learns from the experiences of another, which subsequently manifests itself through changes in the behaviors, action theories, and organizational routines in the recipient unit (Argote and Ingram, 2000). Knowledge transfer is, as such, manifest when the participating school principals integrate some fraction of what is learned externally in the Benchlearning sessions with external colleagues into their existing repertoire of instructional leadership practices.

Prior research across different organizational sectors has uniformly shown that harvesting new knowledge from one setting and transferring it to another is not easy to achieve, even within the same organization (Szulanski, 1996), because organizational learning occurs over three levels: individual, group, and organization (Crossan *et al.*,1999). Consequently, the glue that binds these levels together in an organizational learning cycle entails individual meta-cognition, group learning, and institutionalization of new practices (Crossan *et al.*, 2011). From the perspective of the recipient unit, the more novel a knowledge source is, the more it must be edited, re-phrased, and adapted to match the recipient unit's cognitive, cultural, and social context (Carlile, 2004). As time passes, newly transferred knowledge becomes institutionalized as it loses its novelty and becomes part of the background assumptions of the organization (Crossan *et al.*, 1999). Successful knowledge transfer may also lead to the creation of new knowledge, simply because it stimulates creativity (Argote *et al*., 2003).

Modes of collaborative learning for school leadership development

In the past few decades, new approaches to modes of learning have been developed and used in school leadership programs. In addition to the cognitive (theoretical) approaches that have dominated the field, alternative learning modes are now used when they are considered more effective. Students and faculty members are often required to interact with each other through collaboration, which may involve project-work, action research, coaching, and/or mentoring (S. G. Huber, 2010; Robertson and Earl, 2014). However, no matter what mode of learning is engaged, school leaders' experiences and practice are crucial in the learning process (Hallinger and Bryant, 2013). Professional learning is relevant and authentic for adult learners when it is job-embedded, instructionally focused, collaborative, supportive, and ongoing (Cochran-Smith and

Lytle, 1999; Hunzicker, 2011; Little, 1993). National and local education authorities expected the principals participating in the Benchlearning program to implement new reforms involving, for example, more innovative classroom practices, digital learning, and distributed leadership. This means that the topics in the program reflected problems from their daily leadership practices. The link between practice and theory in professional development for school leaders is also shown in a study of principals participating in the Norwegian National Leadership Program (Aas, 2017).

Learning leadership must provide opportunities for leaders to think more about knowledge as well. Metacognitive skills can help the individual leader understand what the new knowledge means for school leadership practice and for the individual's identity development as a school leader (Robertson, 2013). In other words, school leaders being active and involved in development processes in their own school is crucial to their own and their schools' learning, as well as for remaking practices (Dempster *et al.,* 2011). This corresponds to practical action research (Kemmis, 2009) that builds on collaborative and self-reflective principles through which practitioners remake their practice for themselves. Transforming practices means transforming *what we do*, *what we think and say*, and *the ways we relate to others and to things and circumstances around us* (Kemmis, 2009).

Factors enabling external learning from projects
A series of empirical studies across different organizational types has shown the critical role of autonomy for project-based learning. Project-based learning entails two different phases of the learning cycle: identification of relevant knowledge among the colleagues participating in the same project and, subsequently, the possible transfer of what has been gained to the "home organization" of the participating principals. In both phases,

autonomy is critical, even within a strict learning infrastructure such as the Benchlearning program. Autonomy is generally understood as the degree to which the context of the work provides substantial freedom, independence, and discretion to the individual in scheduling work and determining the procedures to be used in carrying out the work (Hackman and Oldham, 1980). It has for some time been posited that autonomy is positively associated with exploratory learning, including the search for new solutions, experimentation, and the creation of new solutions (March, 1991; Weick and Westly, 1996).

At the group level, autonomy describes the degree of freedom, independence, and discretion in a group's work (Kirkman and Rosen, 1999). Group autonomy entails that a group holds the power to set agendas and task boundaries for itself in pursuit of larger goals set by the organization (Hackman, 2002). The group experiences a space to freely negotiate shared understandings and directions of action (Crossan *et al.*, 1999). Prior studies have revealed the positive effect of autonomy on a team's learning behavior (Kirkman *et al.*, 2004).

Findings from the two earlier Benchlearning studies suggest that one of the learning modes the participants consider important is how the established learning groups support their learning, both as increased transformations in understandings and in relationships (Kemmis 2009). Sharing experiences is an interactive process, including both telling and listening, and can only happen within an inclusive and safe environment (Clutterbuck, 2007; Aas and Vavik, 2015). Many of the participants found the group-learning environment to be successful because it is an arena for sharing and learning from

experienced and enthusiastic colleagues and at the same time is also an arena for learning, not competition.

Taking back to the home organization what has been externally observed with principal colleagues in Benchlearning sessions and identified as innovative and applicable for practicing instructional leadership in the "home school" is naturally a case of situated learning (Brown and Duguid, 2001), because what has been identified as innovative must be situated into the social relationship that includes the individual principal and his or her teachers. Research on non-educational settings has, for decades, concluded that such situated learning across boundaries is dependent on the learning capacity in the home school. In the study of inter-organizational knowledge transfer from municipal benchmarking in the early 2000s, learning capacity was found to be a decisive factor (Paulsen and Hjertø, 2014).

Distributed leadership as precondition

A number of studies have shown that, in schools with high-quality teaching and professional learning, distributed leadership is a stable pattern that manifests in teachers and school leaders who interact regularly with each other in the performance of leadership tasks (Harris, 2013; Spillane *et al.*, 2009). In this conceptualization, "the principal is responsible for providing her/his staff with opportunities for participating in decision making, working with them as partners and devolving authority and power, thus building leadership capacity for all" (Sarafidou and Chatziioannidis, 2013, p. 180). The concept of distributed leadership therefore represents a more radical reframing of how leadership is understood and sees leadership as an emergent phenomenon that arises through complex, interactive processes involving formal leaders and non-leaders across groups

within the school organization (Woods and Woods, 2013). As noted by Leithwood and colleagues, however, distributing leadership is *not* a way of reducing the workload of the school principal, because distributed leadership "does produce greater demand: to coordinate who performs which leadership functions, to build leadership capacities in others, and to monitor the leadership work of those others, providing constructive feedback to them about their efforts" (Leithwood *et al.*, 2006, p. 40). Based on their longitudinal large-scale study in Australia, Silins and colleagues concluded that student outcomes were more likely to improve when leadership was distributed throughout the school community and when teachers were empowered in areas of importance to them (Silins *et al.,* 2002).

In the literature review we have presented literature that underlines the challenges in learning transfer in organizations and how different learning modes in the national leadership program can support collective learning and changes in schools. In the next section, we will present the Benchlearning program in more detail.

Benchlearning – A bilateral collaborative learning program

The Benchlearning program is a bilateral collaborative learning program for principals in Norway and Sweden. The program, which since 2015 has been offered to about 210 principals in the two countries, is a collaborative project between the Swedish and the Norwegian National Agencies of Education. Four process leaders, two from Sweden and two from Norway, have been running the program. All of the process leaders are running national principal programs in the two countries. The aim of the program is to empower the participants to develop leadership practices and school environments that are more innovative, inspired by the two OECD reports "Innovative Learning Environments"

(OECD, 2013a) and "Leadership for 21st Century Learning" (OECD, 2013b). For the third and fourth groups, leadership and information and communication technologies (ICTs) were given particular attention. The design of the program includes theoretical inputs, sharing experiences, school visits, and training in new leadership practices (Aas and Blom, 2017).

The program contains two modules, each consisting of a two-and-a-half-day meeting. For the first module, the participants meet in Sweden in October and for module two, they meet in Norway in March/April. The participants are organized in learning groups of principals from both countries and within the same type of school. One of the four process leaders is assigned as mentor to each group, whose members work together throughout the whole program. Participants prepare for module one by reading texts about innovative learning environments and learning leadership. They also reflect on the learning environment at their own school and on what it means for the school and for themselves as principals.

Module one provides theoretical input on learning leadership and innovative learning environments, based to a large extent on the OECD reports. This theoretical framework creates a screen to help participants describe what they see during the school visits and to analyze and reflect on their observations. Participants are also trained to observe without judgment and be aware of how previous experiences have influenced them. At the end of module one, participants identify innovative measures that they will initiate in their own schools, how the school environment will be affected and involved, and what their next step will be. This action plan is shared with fellow participants on Google Drive. Between modules, participants post short reports on their experiences of leading innovative school

leadership processes in their schools. These reports are also posted on Google Drive, which is used as a collaborative learning platform throughout the program. The organization of material on the platform is transparent across groups to increase participation and enhance sharing and learning from each other's reflections and experiences. Based on the feedback from group one, participants in groups two and three were organized in pairs of learning partners that were responsible for commenting on each other's reports to enhance learning interactions between participants. For group four, two internet meetings for the learning groups and their mentors were introduced to support the school-based activities between modules (Aas *et al.*, 2018).

The venue for the second module is in Norway. Participants exchange experiences of leading innovative school development between modules, as well as their reflections on the process and the literature. As in module one, considerable time is spent preparing for school visits, with subsequent analyses of and reflections on their observations. This module also includes theoretical input, focusing on innovative learning environments, learning leadership, and school development. For cohorts three and four, particular attention was given to affordances and challenges provided by digital technologies. At the end of module two, participants reflect on the Benchlearning process, their own learning, and the further development of their schools individually and in groups.

Because many principals consider metacognitive activities something that normally comes in addition to their daily leadership practice, the process leaders in the Benchlearning program have promoted individual and collective reflections to encourage double loop learning (Argyris and Schön, 1978) and organizational learning (Hargrove, 2008). In doing so, the process leaders are both supportive and demanding, a combination the participants seem to appreciate (Aas *et al*., 2018).

Methodology

We draw on data from two studies of participants who completed the program in June 2015, June 2016, and June 2017, respectively. The data are based on individual reflection documents from students on their learning and new leadership practices 4 months, 16 months, and 28 months after the end of the program. To qualify for participation in follow-up meetings in November 2016 and November 2017, school leaders who completed Benchlearning in 2015, 2016, and 2017 were required to provide a paper addressing the following questions formulated by the Norwegian and Swedish Directorates of Education:

(1) What changes have been implemented, and why?

(2) How has the program helped to support you in the implementation of these changes?

(3) What obstacles have you experienced in the effort to change practices?

(4) How did you overcome these obstacles?

(5) How does this develop on previous practices?

(6) Other comments or reflections

In the first study (Aas and Blom, 2017), which included the first two groups of participants, 25 Norwegian participants and 11 Swedish participants in the program sent in reflection notes with rich 4–10 page descriptions. In the second study (Aas *et al*., 2018), which included the first two groups plus the third group of participants, 42 Norwegian participants and 20 Swedish participants sent in reflection notes. In sum, we received reflection notes from about 50% of the participants in both studies. Their length of service as a principal varied from a couple of years up to about ten years, and they represented different school levels, including elementary schools and upper secondary schools, and

their schools were situated in all regions of the two countries. Because the reflection notes should be anonymous and the number of participants was small, we did not ask them to provide personal information in the reflection papers. We have not taken gender into account.

The Norwegian Directorate of Education conducted an online survey of participants about their experiences of the program, and a number of process documents were produced in the learning groups on Google Drive throughout the program. The latter include individual reflection documents made before the program started, in the period between modules, and at the end of the program. All documents related to the participants' own learning, the learning groups' preparation for school visits, their analyses, and the final school reports. Together, the process documents on Google Drive provide a longitudinal perspective on the participants' learning. The data from the survey and the process documents on Google Drive served as contextual background data, and they facilitated an extended understanding and picture of participant satisfaction with the program. Furthermore, they shed light on the challenges encountered by school leaders in understanding and managing the complexities they face in their daily practice.

Both studies have a discursive approach to the analysis of documents. Discursive analysis aims to clarify how certain patterns in texts emerge from the main ideas embedded in the texts (Fairclough, 2003). In the first reading, each of the documents was analyzed to understand the whole (vertical). For the second reading, the documents were analyzed through comparisons of all answers to question 1, to question 2, and so forth (horizontal). We used content analysis to investigate changes in leadership and school practices that evolved through principals' participation in the program and the ways in which the principals perceive that the program has supported these changes.

The findings from the first study was that the principals' motivation and willingness to start change processes can be created in the synergy between structured school visits, work in learning groups, and a theoretical foundation. Working in groups across schools in two countries seemed to enhance principals' sense of efficacy, which in turn has been shown to have a positive effect on their willingness to trial new practices (Aas and Blom, 2017). The second study found that the theoretical inputs and practical learning modes stimulated transformations of the principals' thinking about leadership practices, what they do in practice, and how they relate to others. In particular, the study suggests that the principals' active participation in *trialing new leadership practices* in their own schools stimulated transformations (Aas *et al.,* 2018).

In this paper we reanalyze the data to examine how a leadership program can support instructional leadership, as well as the possible implications for municipal leadership. We used content analysis to identify how the Benchlearning program can support school principal's instructional leadership by looking at the following: (a) changes in instructional leadership and (b) the program's contribution to the transformation of leadership and school practices. Instructional leadership is, in this analysis, understood as the leader's initiative to make changes in leadership and school practices, including student and teacher learning. The analytical categories to identify the changes and the longitudinal effects were linked to leadership practices and organizational learning, such as *distributed leadership, professional learning communities*, and *organizational structures*. The analytical categories to identify the program's contribution evolved from the theoretical foundation of program, such as *school visits, the theoretical foundation, work in learning groups*, and the effect of the *compulsory tasks related to trialing new leadership practices*. In the presentation of the empirical findings, we refer to the different

reflection documents with the following coding: P1 (Principal 1), P2 (Principal 2), and so forth. The data were analyzed country by country, but, owing to very similar responses, we present our findings without distinguishing between the two countries.

Limitations of the study

One methodological issue for this study is that the researchers have the dual role of researchers and process leaders for the program studied. To validate the analysis, the research team has been extended by external researchers bringing critical views and arguments from "outside" to the professional discussions. Member checking has also been used (Postholm, 2009). Findings from the study were presented and discussed with the participants in a seminar in November 2017.

Another limitation is that we only have data from 50% of the participants, which could produce bias. Data were also self-reported by the participants, and as researchers we only had access to the participants' own reports. Taking into account how the leadership competencies developed in the Benchlearning project have actually contributed to transformations in leadership practices and school cultures has therefore been an overall challenge for the researchers.

Findings

In the presentation of the results, we start with the participants' descriptions of changes in instructional leadership, followed by the participants' descriptions of the program's contribution to the transformation of leadership and school practices.

Topics for new instructional leadership practices

The findings indicate that three topics appear as change areas: innovative learning, the school's digital development, and learning assessment. The first two topics have been central in the Benchlearning program, while the inclusion of learning assessment reflects that many schools still work with one of the national authorities' initiatives. The OECD's seven principles of *innovative learning environments* (ILE) are reported by many of the participants to have constituted a central focus area for change, either as an inspiration, as a "leading star," or as a legitimation of practice. Although several of the participants were not familiar with the reports from OECD and the reports were demanding reading for them, participants' reflections suggest that reading and working with the documents in the seminars was a strong source of inspiration for their own development efforts. The change projects related to the use of *digital technologies* ranged from projects still in the planning stage to projects that have been in progress for a few years. For some participants, the Benchlearning program represented a support to start with the digital change process; as one principal stated: "We are not a very advanced school with regard to digitization. This was one of the reasons why I applied to participate in the Benchlearning project" (P17).

Professional learning communities and organizational structure

The primary focus is to improve student learning. To do so, many of the principals start by developing collective practices among the teachers and, if necessary, enhancing the teachers' professional learning about innovative learning or ICTs, for example. These changes may require a new and more distributed leadership structure and a new leadership style.

Most of the participants reported that they have seen the need to work on developing collective professional practices among the staff and the leadership team (Stoll *et al.*, 2006). The group focus reflects the idea that development of new teaching practices must take place through the work of professional learning communities (Stoll and Louis, 2007). This is achieved through organizational changes that increase the learning involvement by establishing developmental groups at school, for example, or by professional learning processes among staff aimed at student learning. These *organizational changes* create new modes of learning. Several principals maintained that they have become more aware of the positive effects of their own participation, as principals, in professional group processes. One principal observed: "The work we do in our common time differs from what it used to be. Staff involvement is much broader now. I—as principal—feel that they develop a much stronger ownership to the process we're going through" (P25).

Many of the descriptions concerned starting conversations about the relationship between students' grades and teaching quality. One participant said, "We have moved from a strong focus on the assessments of student achievement in developing formative assessment, collective learning, and an intercultural approach" (P3). Another participant explained how the changes have affected collaboration among the staff: "This work

differs most from earlier work with respect to staff involvement in the development process, not forgetting that the changes we have implemented are inspired by recent research and methods from other countries" (P34).

Distributed leadership

Innovative learning, the school's digital development, and learning assessment reflect changes at the classroom level, and collective practice reflects changes at the teacher and organizational level. In the participants' reflections there seem to be connections between changes on the classroom and school levels, both of which are changes that require alterations in their leadership practice, reflecting a stronger focus on distributed leadership and instructional leadership. Several participants stated that they were attempting to develop working modes that could create distribution within the organization. They have initiated projects aimed at clarifying and changing roles in the leadership team with a new division of labor. Among these respondents, there seems to be broad consensus that distributed leadership is a prerequisite for creating innovative schools. Several of these principals reflected that more distributed leadership also requires that they themselves change their leadership style. Empirically, it has been consistently observed that instructional leadership practices are enacted and executed by people at all levels, implying that the leadership function is "stretched over the work of a number of individuals and the task is accomplished through the interaction of multiple leaders" (Spillane *et al.,* 2001, p. 20).

The program's contribution to change

On the question of how the program has helped to support the participants in implementing changes, the principals report that the overall methodology of the program

has both inspired and supported them. The informants appreciate the thematic and theoretical focus of the program, the systematics of the school visits, the establishment of learning groups, and the obligatory tasks between the seminars. One participant explained: "I came to the first meeting in Stockholm with many ideas and a lot of inspiration to change the way we run our school. What had motivated me the most was to change my leadership style towards more distributed leadership" (P42). Most of the participants emphasize the synergy between the different learning modes; one of them observed:

> "Through Bench-Learning I have been inspired to make many changes in my leadership and the way the school is run. Some of these changes have been inspired by lectures and the articles we have worked with in the meetings and read on my own, while a lot has been inspired by what we have experienced and observed during the school visits and what others have shared from their own practices. (P21)

The methodology related to *the school visits* was highly appreciated. Together with advance preparation and the post-visit analysis made by the learning groups, the school visits created deeper reflections and a more systematic approach to observations than is usual for more unanticipated school visits. One of the principals explained: "It was also interesting to participate in the preparations for the school visits, and the work we did after the visits. I think that these ways of working ensured better outcomes, and I have taken them to my own school" (P9).

The importance of how *theory* can enhance the participants' understanding of the school visit is underlined by several participants, as expressed in the following comment from

one principal: "I emphasized the strong and direct link between theoretical discussions and a very well-prepared visit in practice" (P8). This also describes the significance of seeing something familiar in the visited school, as mentioned in the following comment: "When you get concrete practical ideas to talk about and a picture of how change is possible, it helps you to believe that you can do the same" (P10). *The learning groups* were also highlighted as an important arena for sharing experiences and doing collective reflections, in terms of information, inspiration and validating leadership practice. One principal commented: "In conversations with colleagues from other schools and within an inclusive climate, it is possible to get oneself and one's school mirrored" (P2).

The compulsory tasks between the seminars were pointed out as being highly valuable. The fact that participants were required to implement new practices in their own schools and share the outcomes with other participants on Google Drive initiated increased activity in schools. Many principals found that feedback from colleagues in their learning group supported quality assurance of their own development projects. Listening to experiences from colleagues led to more confident leadership practice and willingness to test new leadership and school practices. As one principal said: "I feel very confident as a leader of this development work. One of the reasons for that is that I have both heard about it and seen it in practice and experienced that it is actually useful" (P13).

Although the participants mainly reported on successful changes in school and leadership practices, they also mentioned *obstacles in the change process*. The main obstacle tended to be resistance from the teachers. When the principal tried to transfer the new ideas to the school context, they found that their theoretical and practical knowledge helped them to motivate and convince teachers to support the process. An overall experience was that

change processes that influence the school organization take time, and the principals do not have enough time for change efforts when they also have to run the school at the same time.

Discussion

To sum up, the program has contributed to increase the participants' (a) inspiration and motivation for change, (b) confidence in the leadership role, (c) professional input and reflection, (d) reflection-based and systematic approaches to change, and (e) new leadership practices, including a more closely targeted approach to the teachers (Marit Aas et al., 2018). In particular, the study suggests that the principals' active participation in experimenting with new leadership practices in their own schools has stimulated transformation and change and enhanced instructional leadership. In the discussion, we will focus on following topics: shifting from individual to organizational learning and change, implications for theory development, and further research and implications for school district support.

From individual cognition to organizational learning through peers and groups

Benchlearning involves learning from the experiences of others, observational learning, dialogic group learning, and in the final round, translating what is learnt to the social and cultural context of the individual school principal's school. More specifically, the process involves translating, editing, re-editing, and integrating novelties and innovations with existing organizational rules and leadership practices. From a theoretical stance, the practices that emerge from the data capture important elements of the organizational learning cycle as portrayed in seminal theoretical works (Crossan *et al.,* 2011; G. P. Huber, 1991). For instance, Crossan and colleagues have suggested that an

organizational learning cycle be built on four distinct yet interconnected practices spanning the levels of the individual, group, and organization: individual intuition and interpretation, integration of individual knowledge in groups and further towards organizational knowledge through the process of institutionalization (Crossan *et al.*, 1999). Specifically, the process of institutionalizing new insights into existing rules and organizational routines involves the transfer of knowledge across internal and external boundaries, which is a theme that has occupied a key position in organizational learning theory since its origins in the 1970s (March and Olsen, 1975). When participating school principals experienced observation-based learning together with trusted colleagues, followed by vicarious learning from these experiences in their schools, we found some facilitating factors to be of particular importance, including learning infrastructure, digital tools, compulsory tasks associated with preparation, and subsequent experiments with their teachers. A delicate balancing act of autonomy and structure also emerged from the analysis, in line with prior theoretical work (March, 1991; Weick and Westly, 1996). Finally, strong evidence was found that developing core competence in digital learning and formative assessment among teaching staff required enhanced distributed leadership across the whole school organization. Through the sharing of leadership tasks on instructional issues with teachers and other non-leaders, principals succeeded in radically leveling up instructional leadership. These findings emphasize the importance of providing opportunities for leaders to enhance their metacognitive skills (Robertson, 2013), which can help them understand how they can be active and involved in development processes in their own schools for remaking practices (Dempster *et al.*, 2011). The connections between individual learning and organizational learning corresponds to practical action research that builds on collaborative and self-reflective

principles during a process of transforming understandings, sayings, and relating to others and surrounding things and circumstances (Kemmis, 2009).

Implications for theory development and further research

Two interesting paths for further research and theoretical development emerge from the findings provided by the two separate studies considered in the current paper. First, the study suggests vicarious learning—or knowledge transfer from an external benchmarking setting—to be a fruitful approach to the practice-based learning of core leadership skills. More specifically, the findings point to the crucial importance of learning infrastructure, including a strict design of sessions and learning objects such as compulsory preparation tasks, to be important preconditions for the participants to harvest external knowledge from the project activities. In this manner, the findings are in line with a prior Norwegian study on experimental learning in non-educational settings, underscoring the importance of design as a learning parameter (Andersen, 2012). The use of digital frameworks, in this case Google Drives, as part of the design emerges as a promising path for further exploration.

A second theoretical path is the visible co-existence of distributed leadership and instructional leadership practices as preconditions for instructional improvement among teaching staff in the home organizations of the individual principal. The inference corresponds well with large-scale and longitudinal studies in the American context (Louis *et al*., 2010). A shared and distributed leadership orientation indicates "teachers' influence over, and their participation in, school-wide decisions with principals. This view of shared leadership reflects an emerging consensus among scholars about the people who are concerned with formal and informal enactments of leadership roles"

(Louis *et al*., 2010, p. 41). It is worth noting that instructional leadership emerges as distinctly different from shared leadership, both conceptually and in terms of statistical predictions in most large-scale studies. Whereas shared leadership predicts teacher instruction indirectly through the culture of professional community, instructional leadership affects teachers' instruction directly. This conception of school principal leadership corresponds with the main findings from a Norwegian study of school principals' preferences that tested established models of transformational and instructional leadership. Norwegian school leaders tended systematically to bow to a distributed and democratic leadership orientation paired with elements from instructional leadership (Aas and Brandmo, 2016). As Møller (2012) asserted in her study of the identities of Norwegian school principals: "A distributed leadership perspective recognizes that there are multiple leaders in a school and focuses attention on the complex interactions of leadership in action. It offers a lens to more adequately capture the dynamic nature of school life and may provide accounts of subtle daily negotiations and micro-political activities" (Møller, 2012, p. 456). From another perspective, the findings suggest that mobilizing non-leaders in instructional leadership tasks, paired with the learning infrastructure embedded in Benchlearning, creates a distinct kind of learning capacity that is close to the concept of absorptive capacity: "a school's capacity to identify, acquire, assimilate across organizational boundaries and finally to utilize it in the core activities" (Paulsen and Hjertø, 2014).

Implications for school district support

The implications of the study can be summed up by the following three principles: first, school district administrators should take into account the fact that changing practices will be supplemented by changes in how activities are thought about, talked about, and

justified. Shifts in language and actions will also involve shifts in the ways people relate to each other and to their context (Kemmis, 2009). Second, leadership support, either within a formal leadership program or a short-term program, should include trying out new practices as the focal learning mode, accompanied by individual and collective reflective activities. Third, educators should be trained as process leaders who can support transformations in school principals' understanding and practice models in a challenging yet supportive manner.

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