


## Principals' Professional Learning as Praxis-Oriented Change – Leading Digitalisation in Preschool Education

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### Abstract

*This article takes a practice perspective on professional learning to contribute through an empirical example of how professional learning can be arranged to enable change in and for professional practice, as well as for nurturing praxis. The theory of practice architectures is used to analyse the process of an action research (AR) in which principals investigated and changed their ways of leading digitalisation in preschool education. The theorising of the co-production of practices was used to visualise how the changes were enabled in this process, as the practices for professional learning and leading became interdependent through shared practice architectures. The findings describe how such a co-production of practices enabled a process in which the principals went from a technical to a practical approach to change, when leading digitalisation, which further resulted in a critical stance. This was a process that manifested professional learning as praxis-oriented change in which the principals' professional judgement increased.*

### Article Info

#### Article History:

**Received:**

January 9, 2024

**Accepted:**

March 21, 2024

#### Keywords:

co-production of practices, digitalization, leading, preschool principals, theory of practice architectures.

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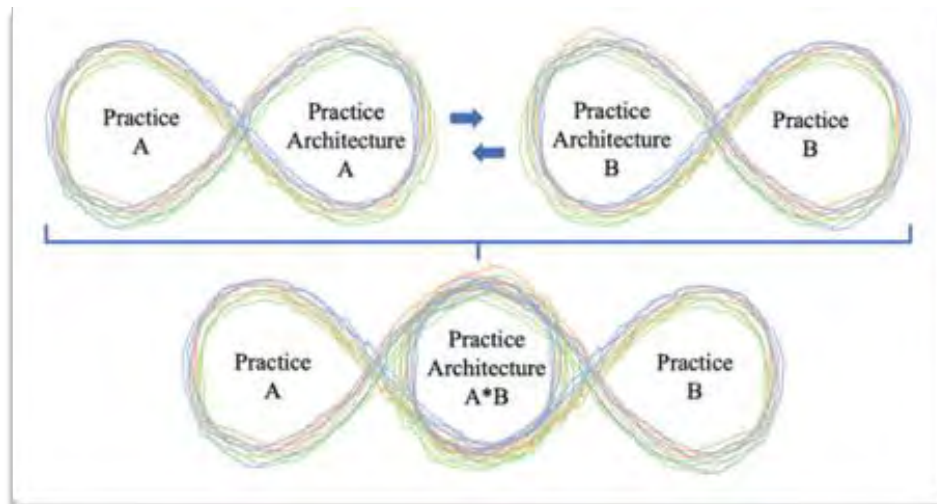


**Cite as:**

Johansson, E. & Seiser, A. F. (2024). Principals' professional learning as praxis-oriented change – Leading digitalisation in preschool education. *Research in Educational Administration & Leadership*, 9(1), 1-38. <https://doi.org/10.30828/real.1416955>

**Introduction**

That continuous learning is a fundamental component for developing or maintaining professional practices is an opinion that many agree upon (Stevenson, 2019; Wenger-Trayner et al., 2014). But why and how this is the case have not been equally established (Kennedy & Stevenson, 2023; Stevenson, 2019). These are the types of questions addressed in this article, which focuses on two specific practices within the ecology of educational practices (Kemmis et al., 2012): practices for leading (Practice A in Figure 1) and practices for professional learning (Practice B in Figure 1). The particular practice of professional learning (Practice B) in this study is designed as action research (AR). We empirically explore when and how these two practices become interdependent in the form of a symbiotic relationship based on mutualism, which means that the two practices are mutually dependent and contribute to improvements in each other (see the symbol at the bottom of Figure 1).



**Figure 1.** *Two Practices Becoming Interdependent Through Shared Practice*

*Architectures (Kemmis, 2022, p. 122)*

Since the mid-1980s, a major ideological shift towards economic rationalism, now widely known as neoliberalism, has been clearly discernible (Rizivi, 2018; Wilkinson, 2021), and today, neoliberal thinking appears to be a dominating ideology beyond education (Heikkinen, 2018; Kennedy, 2014). In line with neoliberal influences, the discourses of professional learning have gone from a wide conceptualisation in the 1980s and 1990s, including situational, contextual and ecological perspectives, to the narrower, individualistic, decontextualised and outcomes-driven discourse of the last decades (Groundwater-Smith & Mockler, 2018; Hardy, 2012). These discourses affect how schools decide for teachers' professional learning. In particular, they have resulted in a rising number of pre-packaged professional development programmes (Hardy, 2012; Norlund & Levinsson, 2023) consisting of courses and activities

organised as temporary or recurring training days or workshops (Hardy, 2010; Norlund & Levinsson, 2023; Webster-Wright, 2009). Hardy (2012) described how these individualistic, technician, and prescriptive approaches to professional learning are dominated by short-term, individual activities, allied to state-sanctioned prerogatives. We agree with Biesta (2007, 2019) that the current circumstance is not some evil plot but more the result of a line of intertwined events that step by step passed from being praiseworthy intentions to having problematic consequences, as is critically addressed in the following sections.

The neoliberal ideology has affected principals' professional learning as well, resulting in training programmes carried out in formal contexts, in which principals are expected to learn about how to carry through standardised methods. Such programmes are often initiated by school authorities (Aas & Blom, 2017; Hylander & Skott, 2020) or the local school administration (Liljenberg, 2021; Nehez, 2019). Meanwhile, the literature on principals' professional learning has shown that such arrangements usually do not lead to changes due to difficulties in transferring and implementing educational content from professional learning practices in principals' leading practices in their local schools (Forssten Seiser & Söderström, 2022; Huber, 2010; Jerdborg, 2022). In addition, research has shown that when demands for principals' professional learning is initiated by the authorities and local administration, changes are even less likely to occur (Liljenberg, 2021).

On a national level, the individualistic perspective on professional learning appears in the ongoing reform of a professionalisation programme for principals and teachers in Sweden. According to the proposition (Prop. U2022/02319, 2022), the reform aims at improving



teaching practices and the professionalisation of teachers and principals, as well as increasing the attractiveness of these professions. The proposition also includes a qualification programme for teachers based on individual merits (Prop. U2022/02319, 2022). Even though the aim of the programme is to improve educational practices, the strategy to do so is likely influenced by the current neoliberal discourse in Sweden. Hardy (2012) argued that a neoliberal system that encourages patterns of consumption, competition and the logic of individualism risks reducing professionals to consumers of development courses and promoting competition rather than collegiality. Hence, professional learning, based on an individualistic approach to professional learning may be counterproductive, as qualifications are measured in credits based on academic skills rather than professional judgement in practice. Also, to enable positive changes in society and to carry out the civic mission of education, practices for teachers' and principals' professional learning need to support and develop the capacity to question institutionalised habits and educational practices that conflict with democratic values, purposes and moral intentions (Francisco et al., 2023). This is the motivation for this study, which provides an alternative to those promoted in the neoliberal discourse.

This study takes an ecological and contextual perspective on professional learning, where professional learning is initiated based on the needs expressed by principals themselves.

Moving away from individualistic approaches, this study takes a practice perspective to study professional learning as changes in the complex of educational practices: students' practices, teaching practices, research practices, professional learning practices and leading practices (Kemmis, 2022). In line with Schatzki (2019), we argue that to manoeuvre changes within the ecology of educational



practices, teachers and principals need to take a critical approach to understand both the structures prefiguring the practices and the social dynamics changing them. By shifting the focus from professional learning as programmes for developing individuals to a practice-oriented epistemology, we offer an alternative to current approaches to professional learning contributing through an empirical example of how professional learning can be arranged to enable change *in and for professional practice* (Salo et al., 2024), as well as for nurturing praxis. Praxis is understood as morally committed professional actions (Kemmis & Smith, 2008, pp. 15–35). We do this by zooming in on the process of an AR in which principals critically investigated and explored how to lead digitalisation in preschool education. The following research question guided the focus of this study: How can professional learning—that is, enabling changes in and for practice and nurturing praxis—emerge?

### **The Swedish preschool and the call for digitalisation**

The Swedish preschool is a public childcare service, including children aged 1-5 years. Since 2010, the Swedish Educational Act (SFS 2010:800) regulates Swedish preschool as the first level of the Swedish school system, with the twofold goal of helping parents combine parenthood with work or studies, and to support and stimulate children's development and learning. Although it is not compulsory, the majority of Swedish children attend preschool in early years (Nordberg & Jacobsson, 2021). The curriculum of Swedish preschool expresses fundamental norms and values, as well as goals and guidelines for preschool education, and emphasizes the importance of play in children's development, learning and well-being. As a juridical document, the curriculum states and provides guidance on the expected outcomes in terms of the preschool's ability to stimulate



learning, development and children's play in a holistic view (Swedish National Agency for Education, 2018). Principals and teachers are responsible to translate these goals into daily activities in the preschool (Nordberg & Jacobsson, 2021). In Sweden, both preschool teachers and principals are obliged to undergo preparation programmes. The preschool teachers' training program is a three-and-a-half-year academic education. After graduating, the teachers apply for their teacher certification that authorizes teaching. Principals at all levels in the school system are obliged to attend The Swedish National Principal Training Program within 3 years from the employment. The program runs for 3 years, and provides 30 higher education credits.

Since 2017, digitalisation has been a key focus in Swedish preschool curriculum. Access to, and the use of, digital tools has increased in Swedish preschools, due to a national strategy for digitalisation (Ministry of Education and Research, 2017), visioning the Swedish school system in the forefront of using the opportunities of digital technology in educational practices. Further, digital technology was included as a compulsory knowledge content and educational tool in the Swedish national preschool curricula (Swedish National Agency for Education, 2018). The policies also state that preschool teachers are responsible for children being able to use digital tools in ways that stimulate development and learning. In addition, the policies express the principals' responsibility to create conditions for the teachers to learn how to use the opportunities of digitalisation in preschool education.

### **Method**

This study is based on a critical participatory action research (CPAR) (Kemmis et al., 2014) in which 16 preschool principals, working in a

midsized municipality in Sweden, collaborated with a researcher (Author 1). In CPAR participants meet in collaborative dialogue (Carr & Kemmis, 1986) to take a critical perspective when constructing and reconstructing understandings, out of experiences from actions performed in practice. Changing practices requires transforming intersubjective spaces which is done by opening a communicative space where participants can reach intersubjective agreements about how to understand the world, mutual understanding of others' positions and perspectives, and unforced consensus about how to go on (Kemmis et al., 2022). In the current AR (Practice B in Figure 1) the participating principals critically examined and developed their ways of leading digitalisation in preschool education. The AR started in September 2021 and went on for almost two years and ended in May 2023. It followed a cyclic process of collegial meetings and individual actions carried out as part of the principals' leading practices in their preschools.

Thirteen of the principals and the researcher (Author 1) had been collaborating in a government-funded project; Collaboration Best School [In Swedish: Samverkan Bästa Skola], with the acronym SBS. A national turnaround programme for schools with challenges in reaching educational goals arranged as a tripartite cooperation between the Swedish National Agency for Education, a municipality and a university. When ending the SBS project, the researcher asked the principals how they were going to continue their work on school improvement. The principals explained that they needed to focus on digitalisation due to their responsibilities expressed in national policies; however, they found it challenging, as they did not know how to lead such a process. In response to the needs articulated by the principals, the researcher initiated the AR studied in this article.





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### **Ethical considerations**

Even though the collaboration during the SBS project was successful in many ways, it had ethical significance to clarify that the AR was neither part of the national SBS programme nor part of the principals' formal work tasks; furthermore, it was important to state that participation in the AR was voluntary. Therefore, a great deal of emphasis was placed on the initiation phase, which lasted for one semester. During the initiation, the researcher met all of the 16 principals currently leading public preschools in the municipality to inform them about the AR and allow them to raise questions. Later, the 14 principals who signed up to join the AR received written information about the research project, and written consent was requested from the participants, following the Swedish Research Council's guidelines (Swedish Research Council, 2017) and research ethics principles regarding research information, consent, confidentiality and utilization (Swedish research Council, 2002). Two of the participants started working as principals 1,5 year into the project and joined the AR the last 6 months. Ethical issues were further addressed as the participants and the researcher discussed and formulated a document expressing shared expectations and expected outcomes of the joint AR.

### **Participants**

The participating principals worked within the same municipality and in numbers their responsibilities were fairly equal. All except for one were women. Their experiences varied somewhat, but the majority had long experience of leading (see Table 1). All of the principals were either attending or had finished the national principal training program.

**Table 1.**

Participants in the two AR-groups

Principals, Group 1 and 2	Gender, Female (F) Male (M)	Number of preschools	Employees	Leading experience (in years)	National Principal Training Program Finished (F) Attending (A)	Comments
1A	F	2	27	>10	F	
1B	F	3	30	3	A	
1C	F	4	34	6	A	Joined the AR the last 6 months
1D	M	3	31	5	F	
1E	F	2	29	1	A	Joined the AR the last 6 months
1G	F	2	40	8	F	
1H	F	2	32	2	A	
1I	F	4	32	>10	F	Participated the first year. Ended when retiring.
1J	F	2	39	5	A	
2A	F	2	39	>10	F	
2B	F	2	28	>10	F	
2C	F	3 (including 1 night unit)	32	4	A	Started to work in another municipality after the first year, but continued to participate in the AR
2D	F	3	25	2	A	
2E	F	3 (including 1 night unit)	38	>10	F	Participated the first year. Ended when stopped working as a principal.
2F	F	2	49	>10	F	
2G	F	3	40	1	A	

### Design

The participants were divided into two groups. The meetings were held two to three times per semester and lasted for 90–120 minutes,



where the participants discussed their understandings of leading digitalisation and formulated different leading actions to perform, reflecting different needs identified at their local sites. A couple of months into the AR, the researcher reflected on her own participation in, and contribution to the joint AR, and formulated actions connected to her research practice to perform between the meetings. The researcher's actions were to analyse the conversations from the meetings. The principals' new experiences and the researcher's analyses were shared for reflection in the following meeting. This enabled the principals to make changes in their leading practices and critically reflect upon experiences from those changes. But also, to reflect upon the process of the AR. In the final meeting, the two groups were brought together to reflect on, and share experiences of the AR.

### **Conceptual Background**

The next section provides a presentation of research and concepts significant for this study.

#### ***Professional Learning as Coming to Practise Differently***

As has been previously noted, current research on professional learning is often conducted in individual contexts, using models with relevance to a specific site. There is a perception that the relationship between individuals' professional learning and the intended improvements in everyday professional practices can reflect linear, dualistic and transactional perspectives (Strom et al., 2021). Consequently, there are studies on professional learning aiming at identifying efficient processes or contextual variables that can be used for causal explanations or for measuring the effects or outcomes of a certain kind of professional learning activity (Boylan et al., 2017). This study examines how principals *learn in and for professional practice* (Salo



et al., 2024) as well as how they nurture praxis, viewing professional learning as anchored in a professional practice and focusing on professional growth.

According to Kemmis (2021), a practice perspective—and practice theory—offers resources for thinking about learning that go beyond the standard view of learning as the acquisition of knowledge. From a practice perspective, knowledge enables individuals to participate in practices. By contrast, Kemmis (2021) consider that knowledge is acquired in the process of coming to practise differently. Learning is not a practice in itself; instead, it is about coming to know how to go on in practice, focusing on the process by which learning happens. Yet, there are specific practices that aim at generating learning, such as professional learning practices (Practice B in Figure 1). In this study, we use Kemmis's (2021) definition of learning as coming to practise differently in relation to new or changed conditions in a specific site. Adapting this view, we are interested in how principals, in a specific site, co-produced their own professional learning and learned how to go on in their leading when changing their leading practices. Kemmis's (2021) practice perspective on learning informs our interpretation of professional learning as “practitioners’ transformations of professional practices, the knowledge acquired in that process and how the transformation of practices happens” (Johansson, 2023, p.4).

### *Consistency and Change*

This practice perspective on learning is closely interlinked with understandings of change. Some philosophers have held that change is constant, equalising change with difference (Bergson, 1911; Deleuze, 1988). In relation to these theories, Schatzki (2019) problematised how such perspectives do not have a place for persistence. We agree with Schatzki's (2019) notion that although the world is not a static place, it



inherently involves both consistency and change. According to Schatzki, only significant differences in complexes and constellations of practices and practice arrangements qualify as social change. In a similar way, Kemmis (2022) refer to social change as transformations of practices, which are made up of sayings, doings and relating, prefigured by different arrangements holding the practices in place.

The issue of how social life is prefigured by structures has been a discussion for philosophers for a long time. According to Giddens and Pierson (1998), structures are created and recreated in a process constantly influenced by agents. Structures are present as patterns that enable and limit agents' actions and create a sense of stability and security in everyday life. They can be seen as a map by which agents orient themselves to create ontological security in a world that would otherwise seem chaotic. In line with this, Kemmis (2022) holds that structures are not entities per se but the results of social practices. It is the practices of everyday life that reproduce the common ways of doing things (cf. *rules* and *routines*; Giddens & Pierson, 1998), which can be related to Schatzki's (2019) idea of changes as disruptions of structures. To overcome structures, people need to change the practices in which the structures are realised. Thus, transforming practices requires changing the practices as well as changing the conditions that make those practices possible (Kemmis, 2022). Kemmis's (2021) definition of learning, as coming to practise differently, does not replace traditional views of learning as the acquisition of knowledge but adds the understanding of learning as changing how a practice is performed. According to Kemmis, this involves the reproduction (with variations) of practices and the transformation (changes) of practices, as well as the production of totally new practices.

Kemmis (2022) outlines three different approaches to the transformation of practice: technical, practical and critical. This division is based on Aristotle's classification of knowledge as *episteme*, *techne* and *phronesis*, which all result in various kinds of human activities, such as teaching and leading (Carr, 2009, pp. 55–64; Forssten Seiser, 2021). Episteme is about seeking knowledge for its own sake and for the purpose of achieving eternal truth. The form of human action related to episteme is *theoria* or contemplative action, informed by *theoretical philosophy*. The technical approach to change is based on knowledge as *techne*. The human action associated with *techne* is *poesis*, that is, a kind of action that constitutes technical expertise and relates to change as an instrumental process to achieve set goals (Carr, 2009, pp. 55–64; Forssten Seiser, 2021). The practical approach to change is connected to knowledge categorised as *phronesis*, that is, a form of practical deliberation and a commitment to do the right thing, which might bring about a better state of affairs in the world (Kemmis, 2022). The form of human action associated with *phronesis* is *praxis*, that is, morally committed action aiming at doing what is ethically right in a specific situation (Carr, 2009, pp. 55–64; Forssten Seiser, 2021). The critical approach to change presupposes and widens the practical view but sees change as a collective enterprise (Kemmis, 2022). It is change towards “collective problem-recognition, collective self-education, collective deliberation, collective decisions, and collective action to bring about change through bottom-up and top-down initiatives and local and global action” (Kemmis, 2022, p. 16), arising from a shared general critique prompted by some kind of injustice.

The perception of *phronesis* as knowledge that nurtures human actions in the form of *praxis* is significant when investigating how



professional learning can be arranged to enable change *in and for professional practice*. Therefore, the concept of praxis is further elaborated in the next section.

### ***Nurturing Praxis***

Praxis refers to morally committed professional actions (Kemmis & Smith, 2008, pp. 15–35). Professional learning connected with the development of praxis is a kind of professional learning that supports and develops the capacity to question institutionalised habits or educational practices that may conflict with values, purposes and moral intentions, with the goal of creating positive change towards more coherent and informed ways of educating. More precisely, it is informed by reflexivity and critical questioning actions that are morally, socially and politically informed (Kemmis & Smith, 2008, pp. 15–35). This kind of professional learning can be achieved both individually and collectively. Mahon et al. (2017) identified critical praxis as “a kind of social-justice oriented, educational practice/praxis, with a focus on asking critical questions and creating conditions for positive change” (p. 464). To develop critical praxis is thus closely associated with the ability to raise critical questions and to create conditions for positive changes.

Three interwoven elements have been identified as enablers for the kind of professional learning (Francisco et al., 2023) that is connected to the development of critical praxis: *agency*, *power* and *trust*. Agency is attached to the aspect of voluntary and willing involvement in professional learning, that is, being able to freely choose to participate. Another aspect of agency is the ambition to reach an unforced consensus of what needs to be done to improve practice (Kemmis et al., 2014). Unforced consensus refers to agreements that are not forced upon anyone and are achieved in dialogue over time. Longevity and



continuity are factors that enable agency, and they become visible in how experienced and established participants often have more agency than newcomers. There are significant relations between agency and *power with* (in contrast to *power over*). As stated by Francisco et al. (2023), “a conventional notion of individualistic and hierarchical *power over* others can be changed to distributed and collective *power together with* others which have a significant positive impact on the quality of collective and professional learning” (p. 9). This kind of power is related to connection, collaboration and trust, which constitute cornerstones in professional learning.

The third and last element that enables the development of critical praxis is *trust*. This includes each category of trust identified by Edwards-Groves and Grootenboer (2021): interpersonal trust, interactional trust, intersubjective trust, intellectual trust and pragmatic trust. Interpersonal trust is characterised by mutual respect, a caring approach and a feeling of belonging, while interactional trust is the kind of trust that is visualised in the form of open and authentic dialogues where participants freely express their ideas while others curiously and attentively listen to them. Intersubjective trust, in turn, is characterised by a shared language, shared activities and the development of a sense of community. The last two categories of trust, intellectual and pragmatic, are related to the recognition of professionalism, as well as expectations about the learning and how it is undertaken. The recognition of professionalism is about trusting others' abilities and valuing their wisdom and capacities. A pragmatic trust involves factors such as a realistic timeframe and achievable goals.





## The theory of practice architectures

The theory of practice architectures (TPA) (Kemmis et al., 2014) works as a practical lens to identify how practices for professional learning and leading digitalisation became interdependent through shared practice architectures, existing in a symbiotic relationship based on mutualism (see Figure 1). The latter means that they are mutually dependent and contribute to improvements in each other, with the aim of nurturing praxis. TPA stresses that practices are human-made and socially established; therefore, it highlights the role of the participant in the practice and in the shaping of the practice (Kaukko & Wilkinson, 2020). A practice is constituted by the sayings, doings and relatings that hang together in the project of a specific practice (Kemmis et al., 2014):

*The notion of the project of the practice refers to the intentions of those involved in the practice, but it also refers, in part, to things taken for granted by participants and things that exist in the intersubjective spaces in which we encounter one another in any particular site (in language in semantic space; in activities and work in the material world of physical space–time; and in relationships of power and solidarity in social space. (p. 14)*

The notion of practices hanging together in a project is critical for “identifying what makes particular kinds of practices distinctive” (Kemmis et al., 2014, p. 31). The projects that motivate the two practices that are in focus in this study are principals’ professional learning in the form of an AR (Practice B in Figure 1) and their leading of digitalisation in preschools (Practice A in Figure 1). Fundamental to TPA is the attention given to the arrangements that enable or constrain (but do not determine) specific practices in specific sites. This means that all practices are prefigured by the practice architectures that are

present or brought into the site of a practice. Practice architectures are the particular arrangements that together shape, and are shaped by, the practice (Kemmis et al., 2014; Mahon et al., 2017). The practice architectures that enabled and constrained what happened in the AR as well as in the leading of digitalisation in preschools are consequently of interest in this study. To understand why these two practices unfolded as they did, the intersubjective spaces in which they took place have to be considered. The three intersubjective spaces in which practice architectures appear are the semantic, physical and social dimensions.

In the semantic dimension, cultural–discursive arrangements enable and constrain the sayings in a practice (e.g., in the form of the ideas and concepts used during the principals' AR meetings). The social dimension includes the hierarchical arrangements in an organisation and the relationships of power and solidarity (e.g., those that emerged when the principals described their interactions with the teachers). In the physical dimension, material–economic arrangements became visible in the actions and work that took place within the AR meetings in the form of physical objects (e.g., the room and the furniture), as well as in the form of time and availability to attend regular AR meetings.

We use the lens of the *co-production* (Kemmis, 2022) of practices to observe, identify and analyse the formation of mutual interdependence between the practice of AR and the leading practice. The lens of co-production shows how the practices became interdependent with one another in the form of a symbiotic relationship based on mutualism, meaning that both practices were mutually dependent (see Figure 1).



## **Data analysis**

The empirical data consists of audio-recordings of the fifteen meetings and comprises about 24 hours of conversations in total. TPA was used to identify changes related to the practice of leading digitalisation within the AR. The audio-recordings were transcribed and analysed by sayings, doings and relatings to identify changes in how the principals described leading as a practice, how they planned and changed their actions of leading and how they related to one another, others, and other practices during the AR. It was done according to Miles et al.'s (2014, p. 10-12) three analytical activities (1) condensation, (2) display and verification, and (3) conclusion. The first activity is a selective and focusing process that makes the data stronger and more solid. This was carried using the theory of practice architectures, coding saying, doings and relatings. The coding led to the second type of analysis activity, in which the codes were organised and compressed into a matrix. This enabled an overview of how sayings, doings and relatings changed over time. The analyses were brought back to the participating principals for verification and further discussions. This step of the process enabled the principals to reflect on the learning process and acknowledged the principals' voices of the analytical work. In the third analysis activity the theory of practice architectures was once again used. This time to visualize how the AR-project and the principals leading became interdependent through shared practice architectures.

A limitation of this study is that it includes 16 principals in a specific context which makes the generalisations of the findings limited. However, the intention is to describe the process of this professional learning. Furthermore, observations of the principals' leading practices could have been done to validate the principals' descriptions



of changed actions in their everyday practices. Meanwhile, AR is a partnership striving for reciprocity between the participants and the researcher, which recognizes one another's competencies and contributions (Kemmis et al., 2014).

## Results

This section presents an empirical example of how professional learning can be arranged to enable change *in and for professional practice* as well as by nurturing praxis, describing a process of transformed leading during an AR.

### **From Technical Expertise to Morally Committed Actions**

The analyses identified a transformation of the leading practice due to changes in how the principals talked about leading, how they performed leading and how they related to one another, the teachers and the practices of teaching and professional learning. In the findings of this study, we zoom in on the process and some specific arrangements that enabled these changes to occur. This is presented as a narrative describing how the principals changed their leading due to the fact that the AR and their leading practices became connected and further interdependent through shared practice architectures. This co-production of practices enabled a process of professional learning in which the principals went from a technical to a practical approach in leading digitalisation, which further resulted in a critical stance. How this happened and what enabled this development are elaborated in the following sections.

### **Enacting New Policy**

When the principals first joined the AR, they addressed the expectations on principals to lead digitalisation, expressed in national

policies. The principals did not know how to meet these expectations or how to understand the policy documents in relation to different functions and practices in the preschool organisation. The initial meetings were dominated by a *technical* approach to leading digitalisation in education, heard in the ways the principals talked about strategies for making the teachers use digital devices when teaching:

*I mean, you connect teaching to a curriculum goal. Just to get it done. The last task I gave them [the teachers] was related to a curriculum goal. It makes them... I think you need to help them. I had to get around it myself, by looking at where digitalisation is actually outlined in the preschool curriculum. What is expected from the authorities, so to speak? What do they find important? It is a way to illustrate to the personnel that this is not something we can opt out of or set aside. (Principal 1A)*

Inherent in this example is a technical understanding of leading change, striving to push the teachers towards using digital devices in their teaching. Another strategy to make the teachers implement digital technology was to let so-called *superusers* (i.e., teachers with technical skills or who were specifically interested in technology) arrange workshops on how to use specific applications and software. A technical approach to leading digitalisation also emerged as an action in the form of adjusting the teachers' pedagogical evaluation documents by requesting reports on how they used digital devices when teaching.

Furthermore, a lack of trust was shown in the principals' ambitions to inform the teachers about the *right* ways to teach with digital devices, as well as to require an account of their work. This kind of obligation was an example of the principals using hierarchical *power over* the



teachers, which decreased the agency promoted by voluntary and willing involvement in professional learning.

### **Defining the Project: Critical Investigation**

In the AR, the principals recurrently met to discuss understandings of digitalisation and leading, which became a discursive arrangement that enabled a practical approach to educational change. It emerged as a joint reflection on digitalisation as a phenomenon, to develop deeper understandings of the purpose of digitalisation in preschool practices. It was clear that the principals found it difficult to imagine how digital technology might affect educational practices in the future. They also found it hard to lead digitalisation due to a lack of time, when relating to time as a material–economic arrangement. In response, the researcher challenged the principals to think of digitalisation as a process of time, as a historical, and future, technological transformation of social practices (for more details on this process, see Johansson, 2023). The principals reflected on how various social practices in society that had transformed in line with technological developments. Reflecting on how technology has shaped preschool practices historically enabled the principals to envision how the technological development may shape educational practices onwards.

Relating to time and practices through a processual perspective became a discursive arrangement that enabled the principals to change their conceptualisations of digitalisation from focusing on the digital devices to on how technology have changed social practices. This in turn affected how the principals talked about leading such development, focusing on their own actions of leading.

*I believe that this is what I struggle with in my leadership. How do I get them (the teachers) with me on that? How do I communicate what*



*we just talked about? Maybe you should avoid talking about digitalisation, but talk about technology instead. And maybe through time, where are we and what do we think forward. Like, present it in another way, not as digitalisation but as a technological development. (Principal 2C)*

The recurring meetings in the AR encompassed longevity and continuity, which enabled agency. Important arrangements included the principals' and the researcher's shared engagement with respect to their voluntary participation in dialogue over time to reach an unforced consensus of what needed to be done to improve educational practices regarding digitalisation. In addition, the relation of agency and shared power emerged as a process in which conversations turned into dialogues, with the principals collectively developing new understandings continuously in the meetings. The open and authentic dialogues showed signs of interactional trust when the participants expressed different ideas and curiously and attentively listened to one another.

*When it comes to leadership. I am not the expert when it comes to the work of the teachers, although I worked as a teacher for many years. Leadership is about leading and navigating, leading the processes and create good conditions. Also, to let the wise rule... For me, it is about distribute leading in different areas. (Principal 1B)*

Intellectual trust was inherent in relation to the teachers as well as in the relations between the principals and between the principals and the researcher, thanks to the recognition of professionalism, the trust in one another's abilities and the valuing of one another's different outlooks and capacities. Everyone's knowledge was respected, and everyone contributed to the dialogues. This was an approach that had



a positive impact on the practice for professional learning when collaborating based on different understandings.

### **Acting and Reflecting: The Co-Production of Practices**

Trying out different actions emerged as an enabling arrangement of shared practice architectures that promoted improvements in the leading practice as well as in the AR. Trying out actions of leading increased the principals' engagement and commitment in the meetings. This was visualised in the fact that they honestly shared and reflected upon their experiences, which in turn supported improved ways of relating to one another and led to a closer, non-hierarchical collaboration. Trying out actions in turn generated consciousness of the complexity, and the principals no longer chased for technical and *correct* solutions. Trying out actions in specific sites supported new ways of understanding and talking about certain issues, new ways of acting and conducting professional assignments and new ways of relating within the joint AR.

*For me, the AR helps me in my reflections, as others ask questions about how I think. When we listen to each other, it helps you sense your own process and realise that things have developed, and it makes you question your own actions when it hasn't. About what you need to adjust—Is it something else we need to focus on? Do I need to provide more research or tools and so on? . . . like one of you [the principals in the AR] said, we usually do not have the time to reflect collegially, which has enabled me to reflect on my own leading practice and to change my actions. (Principal 1B)*

The principal's approach to leading shifted from a technical to a practical approach, as a consequence of changes in understandings of leading as creating good conditions for the teachers to explore when





and how digital technology may improve educational practices. The new ways of relating to the teachers were shown by how the principals embraced a distributed leadership when identifying specific competences and organising for the teachers to meet in collegial forums led by middle leaders (teachers assigned to lead their colleagues) to discuss how digital technology could be used to improve educational practices:

*It is like a guarantee when the middle leaders join the team meetings to support the teachers in the evaluation and in their planning. In that way, knowledge is shared, and the teachers are supported in their work as well as in their learning, as the middle leaders also lead the pedagogical development evenings. (Principal 1G)*

The evaluation documents were now used to support the teachers' dialogues. The new ways of understanding and performing leading as creating good conditions for teachers' and children's learning illustrate how the principals adopted a practical approach to change and how that resulted in actions of nurturing praxis. The principals' new ways of leading replaced the initial individualistic perspective, and their hierarchical power over the teachers was replaced by collective power with the teachers, which had a positive impact on the quality of the collective and professional learning as praxis-oriented change.

When the practices for professional learning and leading became mutually interdependent through shared practice architectures (see Figure 1), the actions formulated in the AR brought about substantial changes in the principals' leading practices. These changes in turn affected other practices in the preschool organisation due to the changed conditions for the teachers' practices and the development of new distributed leading practices. At the end of the AR, the principals described digitalisation in terms of an ongoing technological

transformation in society, and they understood leading as orchestrating conditions in ways that support children's learning and development today and in the future. The principals talked about leading in terms of the practices performed by the principals themselves, as well as leading practices distributed among the principals and middle leaders in the organisations. They described how they planned together with middle leaders (teachers in their organisations) to enable the teachers to meet and reflect on digitalisation in relation to the educational aims and specific contexts of their local preschools.

*I was just thinking that it leading digitalisation is like leading any development; it's no different but has to grow from a need. I mean, like if we have not been able to give the children sufficient conditions for something, or there are goals we do not reach, or not maintain sufficient quality. Then you need to, like you said [relates to one of the other principals], form an idea of the current situation. Where do we stand in this? What do we know? What do we need to build a base? Like you were touching earlier [relates to another principal]. We need to, I mean . . . We all need to understand what before we act, if we want our actions to have an effect. I mean, we need to know the purpose to understand what we want to improve. In other words, for me, digitalisation in education is a means to achieve educational goals. That the children learn the language and mathematics—and other goals expressed in the curricula as well. It [leading digitalisation] is . . . to identify development areas and systematically improve these areas out of different needs, out of the children's needs, but also out of the teachers' knowledge and needs in that specific area. (Principal 1B)*

Instead of relating to leading digitalisation as pushing the teachers to enact new policy, leading digitalisation was understood as part of a



societal technological process that became embedded in the organisational structures. There were signs of intellectual trust, as the principals acknowledged that the teachers needed to elaborate on digitalisation in relation to educational aims to understand how to develop their teaching. This example portrays professional learning as the process of praxis development as morally committed professional actions.

The praxis-oriented approach increased autonomy and strengthened the principals' capacity to adopt a critical approach by questioning institutionalised habits. The same day as the last meeting. The Swedish government had made a complete turnabout by announcing the abolition of a new digitalisation strategy for the Swedish school system. This new political direction was based on statements from physicians and brain scientists concerning the risks of children overusing screens, claiming that digital technology limits children's literacy development and play. The new direction had been visible in the media for a while. One principal expressed how the authorities and the media did not understand the pedagogical aspects of digitalisation in preschool education:

*I have felt this frustration over some articles in the media, expressing that children should not use screens in preschool, as it is not good for them. That makes me think that the authors of the articles do not have knowledge about how they are used in preschool practices. No one writes about that. (Principal 2C)*

The quote expresses that practices of media and politics are disconnected from preschool practices and how power is used over the pedagogical experts working in preschool organisations. The political play out was conflicting with the principals' understandings and experiences of how digital technology is used in preschool practices.



The principals claimed that it was a pedagogical question whether digital technology improves educational practices and supports children's learning and play.

### **Summary**

The findings describe how professional learning, as praxis-oriented change, made the principals shift from a technical understanding of leading as implementing national policy, to a critical approach when questioning new policy. This was enabled when the practices for professional learning and leading became co-produced by shared practice architectures. The dialogue in the AR generated new ways of understanding leading, but at the same time, it was dependent on the experiences of the principals' everyday leading practices. The principals changed their ways of leading through changed understandings and because the planned actions in the AR were the actual leading actions in the principals' everyday leading practices.

This process of transforming the principals' leading practices to create conditions for positive change manifested professional learning as praxis-oriented change. The findings also visualise the importance of connecting to the purpose of the practice in order to nurture praxis-oriented change, as the purpose makes the content of some sayings, doings and relatings of a particular practice more salient than others (Kemmis, 2022). Addressing the purpose made the principals raise critical questions in order to create conditions intentionally directed towards positive change, which is closely associated with praxis development (Mahon et al., 2019). The critical aspects of praxis in this study were achieved collectively, and made the principals look beyond their local preschools to see the bigger picture and widen their social responsibility.



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## Discussion

By adapting Kemmis's (2021) understanding of learning as coming to practise differently, we have been able to present an empirical example of professional learning as praxis-oriented change within a preschool organisation in a Swedish municipality. We think that this way of orchestrating collective and contextualised (i.e., anchored in current practices) professional learning is meaningful and required as a complement to the temporary training occasions that are common within the Swedish education system.

Based on the findings, we emphasise that a conscious striving for symbiotic relationships, in the form of shared practice architectures and mutual dependence, is a wise leading strategy to overcome the difficulty of transferring content from professional learning practices to everyday professional practices (Forssten Seiser & Söderström, 2022; Huber, 2010; Jerdborg, 2022). When practices for professional learning are co-produced with everyday professional practices, learning is related to professional judgement by increasing the professionals' abilities to act in ways that are ethically right in specific sites and situations. In other words, when practices for leading (Practice A in Figure 1) and professional learning (Practice B in Figure 1) become interdependent, in the form of a symbiotic relationship (see Figure 1), this enables the nurturing of praxis in and for practice. In opposite, when practices for professional learning is detached from the everyday leading practice, the principals are likely to improve their ways of participating in those specific practices than to develop and change their ways of leading.

In Sweden, neoliberal influences challenge a long tradition of a comprehensive democratic mission that forms the foundation of the



Swedish school system (Adamson et al., 2016). Such global and national questions may feel overpowering for individual principals, but based on this study we stress that by leading positive changes in local schools, this can contribute to positive global change, and that this can be powerful if many principals act in this way. An example of how to act locally, and thereby contribute to more extensive change, is to raise awareness of the purposes of different educational practices, and how these relate. If the purposes of different professional practices are not addressed, actions risk becoming instrumental, and the performance of the practices tends to become an end in itself.

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