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Teachers' and school leaders' agency in relation to a project plan framed by cultural-historical activity theory

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Abstract

Purpose – This article illuminates how school leaders and teachers receive, interpret and reshape researchers' predefined development plan, aiming to shed light on the conditions that appear to support teachers' and school leaders' opportunities to enact agency in school–university collaborative development work grounded in CHAT.

Design/methodology/approach – A qualitative single-case study was conducted as part of a year-long, whole-school intervention that involved a lead researcher, a co-researcher, 30 teachers and a school leader. A chronological narrative was developed from logbooks, debriefing dialogues and communication between the school leader and the lead researcher to trace how the predefined plan was taken up and adapted throughout the process.

Findings – The school leader played an active role in presenting, discussing and clarifying the plan with teachers and, in dialogue with the lead researcher, adjusting it in response to teachers' needs and input. This fostered broad involvement among the participants, who expressed a desire to continue the development work beyond the formal collaboration.

Originality/value – A predefined structure for development work is valuable, but it must allow school staff to adapt it to their local needs.

Keywords School development, Cultural-historical activity theory, Formative intervention, School–university collaboration, Agency

Paper type Research article

Introduction

In Norway, school-based development involving entire schools has been the predominant form of in-service teacher training since 2013, beginning with the national strategy *Lower Secondary School Development* (Norwegian Directorate for Education and Training, 2012; Postholm *et al.*, 2018). This approach to in-service training has since been continued through the *Decentralized School Development Strategy*, which remains ongoing and is implemented in partnership with universities and schools, encompassing all school levels as well as kindergartens (Ministry of Education and Research, 2017). The focus within these partnerships is to develop practice both within schools and in universities.

Leadership and Learning for the Development of Teachers' Professional Digital Competence (LeadDig) is a project that has been funded by the Norwegian Research Council (2023–2026) and conducted within the framework of cultural-historical activity theory (CHAT). It emphasizes both development and research and explores how this work can

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enhance learning at both the university and the participating primary and lower secondary schools within a single municipality. In this developmental work research (DWR) project, the municipality decided that the development processes should focus on teachers' professional digital competence (PDC). Furthermore, drawing on the *Curriculum for the Knowledge Promotion Reform 2020* (Norwegian Directorate for Education and Training, 2020) for schools, the researchers also sought to focus on how school leaders facilitate teachers' collaborative learning within the school. The heading for the work that the teachers and leaders should act on became: "Leader-supported teacher collaboration to enhance the teachers' professional digital competence". Prior to the initiation of the project, the researchers developed a preliminary plan informed by DWR, which was deliberately designed as an open and flexible point of departure. The problem formulation we wanted to pursue in a study conducted within the project was the following:

How do teachers and school leaders enact agency in relation to a predefined but adaptable project plan designed within a CHAT framework?

The purpose of this article is to illuminate what may unfold when researchers enter schools with a predefined plan for development work, and how this plan is received, interpreted and further shaped by school leaders and teachers. Although some studies have examined DWR projects in primary and lower secondary school contexts, our literature review indicates that no previous research has focused on how teachers' and school leaders' agency is enacted in relation to a project plan. Accordingly, the aim is to shed light on the conditions that appear to support teachers' and school leaders' opportunities to enact agency in school–university collaborative development work grounded in CHAT.

It should be emphasized that the plan functioned as a skeletal framework, outlining only the minimum activities from the researchers' standpoint. This made it possible for the researchers, the leaders and the teachers to incorporate further activities as needed. As stated in our problem formulation, we wanted to understand how the leaders and teachers experienced the plan and, thereby, the structure and content of the work. Furthermore, we wanted to understand how leaders and teachers were able to adapt a predefined plan to their own context in collaboration with the researchers. It was therefore important for us to maintain continuous dialogue with the schools.

Below, we present key concepts from CHAT and elaborate on the notion of agency. We then outline the methodology used to transform the data into findings, followed by a description of the development plan and how it was enacted in practice. We conclude the article by discussing the importance of open and transparent communication between universities and schools, both for fostering ownership and for creating the conditions necessary to integrate further development into the everyday practices of the school.

Theoretical framework and related research

Cultural historical activity theory

CHAT is both a theory and a methodology; more precisely, it is a methodology that is enacted through development work research to support expansive learning (Engeström, 2015). Accordingly, this section outlines the key aspects of CHAT that guided and were taken into consideration in the planning of the LeadDig project, which aimed to support learning for participants from both the partner university and the participating schools. Engeström and Sannino (2010) describe learning as the horizontal movement and exchange and hybridization between different cultural contexts and standards of competence (p. 2). This implies that by moving across boundaries and bringing resources from different practices together, participants from diverse contexts are able to learn from each other (Akkerman & Bakker, 2011; Edwards, 2010, 2011; Engeström, 2001; Engeström & Sannino, 2010). This stands in contrast to vertical learning, whereby knowledge is transmitted from more knowledgeable individuals to those with less expertise. Learning within CHAT is understood as taking place in activity systems, which are defined as collective practices that are oriented towards shared

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objects and mediated by cultural and material tools. Learning is thus conceptualized as collective learning and development, which is referred to as expansive learning – i.e., learning that is directed towards what does not yet exist (Engeström, 2015; Engeström & Sannino, 2010). In a school context, this involves developing a new collective practice.

When researchers collaborate with schools to develop new practices, the expansive learning cycle (Engeström, 2001, 2015) can serve as a guide for planning and organizing the development work. The expansive learning cycle contains seven steps that are visualized in Figure 1 below.

The expansive learning cycle begins with the identification of key problems in the current practice (step 1), followed by a historical and empirical analysis of the systemic contradictions at the root of the problem (step 2) and then the modelling of a new solution (step 3). This is followed by initial testing and implementation of the model in small-scale pilot areas (steps 4 and 5) and the full-scale implementation (step 5), before a follow-up session and reflection on the process and the impact of the new solution in practice (step 6), eventually consolidating the new practice (step 7).

In partnerships between universities and schools that are framed by CHAT, both parties act on a constructed, partially shared object that emerges through the process of boundary-crossing between the practices and perspectives of the participating institutions (Akkerman & Bakker, 2011; Engeström, 2001). According to Leont'ev (1978, p. 52): "The object of the activity is twofold: first, in its independent existence as subordinating to itself and transforming the activity of the subject; second, as an image of the object, as product of its property of psychological reflection that is realized as an activity of the subject". In the LeadDig project, the first part of the object became, as already mentioned, the heading of the project: "Leader-supported teacher collaboration to enhance the teachers' professional digital competence". The societal purpose was infused with the intention of improving the students' learning and learning environment as the outcome. Below, when presenting the plan and how it was enacted, we elaborate on how this object was realized as an activity of the subject – that is, the teachers and leaders.

In CHAT, tensions and contradictions serve as the driving force for learning and development (Engeström, 2015). They typically emerge within an activity system as emerging latent primary contradictions within practices or resources, as openly manifested secondary contradictions between, for example, the object and a new tool, such as the use of digital tools in schools, or as tertiary contradictions between the previously established way of carrying out an activity and the new modes of activity. This was also the case in the LeadDig project, where the municipality had identified persistent challenges related to teachers' PDC prior to the researchers' entry into the project. From a CHAT perspective, these challenges can be understood as underlying tensions that constituted the problem space and oriented the subsequent development work. Quaternary contradictions may also

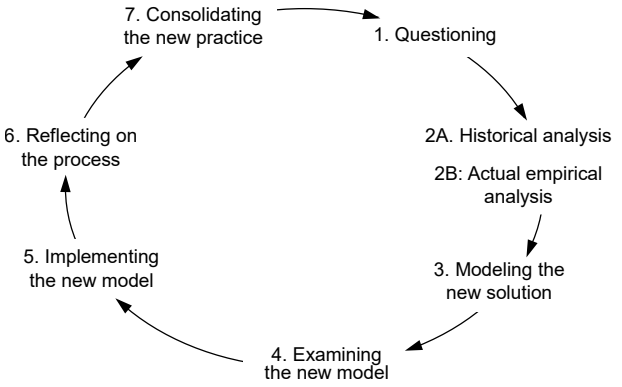

Figure 1. The expansive learning cycle

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arise between two or more activity systems (Engeström & Sannino, 2010), such as the university and school. Such contradictions may, for example, emerge in a DWR project when researchers introduce a predefined plan to practitioners, even when this plan, as in our case, is conceived as a skeletal starting point to be developed throughout the process. When working to resolve tensions and contradictions, it is essential that all voices are heard. In CHAT, facilitating a dialogical space that embraces and encourages multivoicedness is emphasized, meaning that "all the conflicting and complementary voices of the various groups and strata in the activity system under scrutiny shall be involved and utilized" (Engeström, 2015, p. 247). In DWR that is conducted in the framework of CHAT, it is the practitioners' problems that should be the starting point, which are also referred to as formative interventions. Engeström and Sannino (2010, p. 15) formulated this as follows: "In formative interventions, the researcher aims at provoking and sustaining an expansive transformation process led and owned by the practitioners." They furthermore state that: "In formative interventions, the contents and course of the intervention are subject to negotiation, and the shape of the intervention is eventually up to the subjects. Double stimulation as the core mechanism implies that the subjects gain agency and take charge of the process" (Engeström & Sannino, 2010, p. 15). Double stimulation refers to a given task that is grounded in an identified problem (the first stimulus), such as the need to develop teachers' PDC. This task is not addressed independently by participants; instead, researchers introduce mediating artefacts (second stimuli) to teachers and school leaders, which they can draw on in their practice to work towards resolving the task (Engeström & Sannino, 2010).

According to Engeström and Sannino (2012), learners will always act in ways that differ from what the instructor, researcher, or intervention designer has planned or attempted to implement. Therefore, instruction and learning, the plans and actions of instructors and the actions of learners must be viewed as dialectically intertwined. This means that the prescribed and planned process that the instructor seeks to implement must be compared with and contrasted to the actual process enacted by the learners. The two will never fully coincide. The gap, tension, negotiation and occasional convergence between them must be treated as key resources for understanding learning processes as processes in which agency is formed. In our predefined plan, instruction was embedded in the activities. Understanding the connection between instruction and learning brings us to the notion of agency.

The notion of agency

Engeström (2005, p. 313) argues that "human agency gains unusual powers when future-oriented activity-level envisioning and consequential action-level decision-making come together in close interplay". This means a connection between the immediate practice and the distant societal purpose, the activity-level envisioning, formulated as "Leader-supported teacher collaboration to enhance the teachers' professional digital competence", in our DWR project. According to Engeström (2005), human agency derives its power from a set of collective intentions, which implies that individual intentions must be integrated into a collective motive.

In CHAT, the emphasis is on collective teacher agency (Morselli & Sannino, 2021). However, as noted above, all voices should be acknowledged within a multivoiced teacher collegium (Engeström, 2015). Wertsch (1998) introduced the concept of appropriation, meaning the process of making something one's own. The plan for the development work can be used actively as a mediating artefact structuring the development process at schools, if school leaders and teachers make it their own by negotiating with researchers – a process in which their agency can be formed (Engeström & Sannino, 2012). Teachers and leaders can thus act according to their own intentions and view the "tool as belonging to them" (Wertsch, 1998, p. 56). According to Biesta and Tedder (2007), agency is something that is achieved through the active engagement of individuals in their context, leading to the shaping and creating of their future setting and situation.

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According to Vygotsky (1978), both the individual sense (what each one perceives as the purpose) and the societal meaning or purpose are motivated by the object of the activity. Bringing everyone's understanding and intentions together means that they must get the opportunity to negotiate and interpret the societal purpose of the work and relate the object to their everyday activities. This process can facilitate the emergence of the teachers' transformative agency – i.e. a movement from the individual teacher's perspective of the here and now practice to a future-oriented collective activity (Hyrkkö & Kajamaa, 2025). In this collective activity, they got the opportunity to relate their perspective to others in the same context.

Edwards (2010) defines relational agency as the capacity to align one's thoughts and actions with those of others to interpret problems of practice and to respond to those interpretations. According to Edwards (2010), the development of "where-to" tools, such as project plans, rather than merely prescribing immediate "how" procedures, creates opportunities for researchers, school leaders and teachers to engage in the co-configuration of these tools. Such collaborative processes enable participants to shape and refine the plan in relation to emerging needs and insights, thereby supporting a more dynamic and context-sensitive approach to school development. This form of joint work fosters what Edwards (2009) conceptualizes as relational agency, which is understood within CHAT as the capacity to work with others to expand the object of activity – that is, to deepen and enrich the understanding of the problem space. Edwards (2010) further argues that, through co-configuration, researchers and practitioners are able to align their distinct professional resources and perspectives, thereby contributing to a shared and expanded understanding of school development.

In line with these definitions, Pyhältö *et al.* (2014) highlight teacher agency in educational change as a relational capacity that involves drawing on others as a resource for learning and contributing to the development of the professional community. In this sense, teacher agency encompasses not only individual decision-making and problem-solving but also the collaborative and collective capacity to achieve meaningful changes in practice (Edwards, 2011). This is in line with CHAT and approaches to whole-school development, where agency must be conceptualized as a collective capacity that is directed towards the development of the school community.

Related research

According to a formative review by Hopwood (2025), which synthesized empirical studies from diverse international contexts, development work framed by CHAT represents a growing approach across educational levels, from kindergarten to upper secondary schooling. The review concludes that CHAT approaches have the potential to generate substantial changes across diverse aspects of schooling, support the meaningful participation of multiple stakeholders and create the conditions in which participants are able to actively shape both the developmental process and its outcomes. When narrowing the focus to DWR studies enacted through collaboration between researchers and school staff in primary and lower secondary education, the literature reveals substantial variation in participant involvement, ranging from studies engaging a single teacher (e.g. Jarvoll, 2019) to a small number of studies (e.g. Engeström *et al.*, 2002; Spante *et al.*, 2022) that include all teachers within the same school, as in the present study. Postholm (2025), based on findings from a whole-school intervention, emphasizes the importance of well-structured DWR projects and argues that a predefined plan can provide teachers with a clear sense of direction. Previous research also points to the importance of flexibility when planning the project. In Jarvoll's (2019) study of the initial collaboration between a researcher and a teacher at one school, the researcher's role is described as supportive and adaptive, including providing various practical solutions, such as assisting the school in finding time for the teacher to actually be able to collaborate and engage in development

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work. This concern is also echoed by Silva-Macaia *et al.* (2020), who show how researchers' own needs related to timelines and research agendas may come to dominate schools' actual needs, potentially undermining the sustainability of development work.

Although prior research highlights the necessity of a predefined yet adaptable plan for development work, our literature search suggests that the development plan itself is most often positioned as background scaffolding, with limited analytical attention directed towards how teachers and school leaders enact agency in relation to it. Rather, DWR studies have primarily analyzed agency in relation to how participants engage with, negotiate and transform specific aspects of their professional practice and work environment. For example, Hyrkkö and Kajamaa (2025) analyzed how emerging transformative agency supported teachers in addressing problems in schoolwork, whilst Diao *et al.* (2022) analyzed teachers' discursive expressions of transformative agency by identifying the specific types that emerged across speaking turns during meetings within a school development initiative. Hence, the focus of the present study, which is not to evaluate the effectiveness of DWR or to further theorize agency as such but to analyze how agency is enacted in relation to a predefined development plan, appears to be under-examined. In this study, we as researchers adopted an interventionist approach to CHAT in designing the project plan, taking as a starting point that the project was owned by the practitioners. CHAT was also used retrospectively, drawing on its theoretical concepts to illuminate and substantiate our findings.

Methodology and methods

Five primary and lower secondary schools in the municipality participated in the development work of LeadDig, each for one year. The project was piloted in one primary school during the first year (the core school). The school that forms the focus of this article is grades 1–10 school that was included in the second year of the project (2024–2025). We conducted a qualitative case study, drawing on Creswell and Poth's (2018) definition of such studies as being bounded by time and place. During the year of collaboration between the university and the school in question, most of the work was carried out on site at the school, whilst some activities took place through digital collaboration and phone calls in the boundary zone, that is, in the space between the university and school practices (Akkerman & Bakker, 2011; Edwards, 2010, 2011).

Data collection

At the focal school, there were 30 teachers and 150 pupils. In addition to the school leader, the school leadership consisted of three teacher leaders, each responsible for their own teacher team (grades 1–4, grades 5–7 and grades 8–10). Continuous communication with the school took place primarily with the school leader. However, during each school visit, two of the four researchers (the lead researcher and the co-researcher – the first and second authors, respectively) also reflected on the development process, including how it was organized and experienced together with both the leader and the teachers. The school leader further acted as a conduit for the teachers' perspectives, remaining attentive to their experiences throughout the year. The data corpus for this study consists of communication between the researchers and the school leader, including (1) debriefing dialogues between the researchers and the school leader and between the researchers and teachers conducted before and after each of the 12 school visits, (2) five instances of email communication between the school leader and the lead researcher and (3) five telephone calls initiated by the school leader to the lead researcher, two of which took place on a Sunday while the school leader was planning the week ahead. The email communication was initially documented in written form. A logbook was used extensively by the researchers to record reflections and immediate interpretations following both debriefing conversations and telephone calls, amounting to a total of 45 pages.

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Data analyses

To enable the transformation of the data into findings, we developed a chronological narrative that traces the plan and shows how it was continually adapted and revised in relation to the school throughout the process. Accordingly, we employed narrative analysis (Riessman, 2008). Data were selected to capture how the collaboration processes were understood as they unfolded over time. The researchers' perspectives are interwoven with those of the school leader, who also represents the teachers, as well as with the teachers' own voices expressed through their statements, creating a coherent narrative of how the work unfolded. This is also in line with Czarniawska's (2004, p. 17) definition, which states that a narrative approach presents a spoken or written text that provides an account of one or more events or actions assembled in chronological order. Attending to processes in the analysis and what they lead to is also a key feature of the constant comparative method of analysis (Strauss & Corbin, 1990).

Having developed the narrative, we conducted open and axial coding, drawing on Strauss and Corbin's (1990) approach to analysis. The analytical approach is grounded in an understanding of continuous development, with a focus on process and action. We read through the data material, looking for instances of collaboration around the plan and posed analytic questions such as: When did this occur? Why did it happen? In what context did it occur? and What were the outcomes? (Strauss & Corbin, 1990, pp. 99–107). This analytic process helped us to structure the narrative into categories, each labelled to reflect its content. In turn, this clarified how the university–school collaboration unfolded over the course of the year. During this axial coding phase, we developed the following subcategories: "Agreement on the Development Plan"; "Lectures and Tasks: Adaptation and Follow-Up Work"; "Communication to Align One's Thoughts"; "Taking the Initiative to Invite Researchers"; and "Expanding and Revising the Planned Activity". During the open coding process, which was aimed at developing the main category encompassing the subcategories, we found the following category: "The Planned and Enacted Development Work". These developed categories structure the presentation of the findings.

Ensuring quality and ethical considerations

We ensured the quality of the work by using member-checking (Lincoln & Guba, 1985), meaning that all participants – the school leader and the teachers – have read the presentations of the findings and confirmed their accuracy. The description of the DWR project and how it was adapted to the school is tied to the specific project, in which only a small number of participants were involved. However, the findings may serve as a thinking tool (Gudmundsdottir, 2001), which means that they can inform the planning and revision of similar projects involving collaboration between teacher educators and schools. The reader of the text may perceive the narrative as parallel experiences and make naturalistic generalizations (Stake & Trumbull, 1982), thereby adapting the activities to his or her own context and situation.

Permission to conduct this study was sought from and granted by the Norwegian Agency for Shared Services in Education and Research. All participants in the school signed an informed consent form. This form informed them that their names would be anonymized and that they would be granted full confidentiality (NESH, 2021). The emails were sent to and from password-protected computers. The school leader has granted consent for the use of all the data presented in this article.

Findings

The planned and enacted development work

Agreement on the development plan. The plan for the development work, which functioned like a framework that would later be fleshed out, was agreed upon in a meeting between the lead researcher and the school leader already in January 2024. The collaboration between the

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researchers and the school began in early September of the same year. Before the first meeting between the researchers and the school in September, the school leader presented the plan for the work to the teachers and discussed what it involved for them twice, thereby seeking to align the work with their perceived needs. The plan was first presented in June, before the summer vacation and then again in mid-August, with a focus on their expectations and commitments. The plan outlined that the work was to be divided into two phases. In the first phase, the start-up phase, the focus was on teachers' own classroom practice, identifying digital needs and formulating development questions. The second phase built on this through observation and joint analysis of teaching sessions that had been designed and framed by the development question. During the start-up phase, the researchers used Engeström's (2001, 2015) expansive learning cycle as a guiding framework for the work, with particular emphasis on step 2 to anchor the processes (see Figure 1). At step 2, practitioners are expected to carry out historical analyses as well as here-and-now analyses of their practice. The aim was to give teachers the opportunity to identify what they truly wanted to focus on in their development work to enhance their PDC.

Lectures and tasks: adaptation and follow-up work. In early September 2024, the lead researcher delivered a lecture on CHAT, teachers' learning, school development and ownership for teachers and leaders during their joint meeting. At the end of the lecture, the researcher assigned the first of two intermediate tasks to complete. The purpose of these tasks was to raise teachers' awareness of their own teaching practices, with a particular focus on the use of digital tools, thus functioning as double stimulation (Engeström & Sannino, 2010). The first task aimed to help them to identify challenges in their teaching and formulate a development question, while the second sought to deepen their understanding of their shared focus for development. Each teacher was encouraged to reflect on the following in Task 1:

(1) What do I find works well in teaching when I use digital tools?

(2) In what other ways can I use apps to help students learn?

(3) What opportunities do I see for developing my use of digital tools in teaching?

(4) I feel that I need help to develop. . .

(5) I feel that I have a need to develop. . .

The teachers were given three weeks to reflect on their teaching before meeting in teams to share their reflections and to start their process on forming a development question as the focus of their development work. The school leader explained that he had reworked the lecture and incorporated selected slides from our PowerPoint before presenting it to the teachers in a plenary session, tailoring it to make it recognizable and relevant to them. He also gave the teachers time to reflect on the intermediate task, setting aside three sessions for them to work on it, while also making it clear that he expected them to complete it. For our part, it had not yet been decided whether teachers across the entire school should work with the same development question, or whether different arrangements should be adopted. During this plenary session led by the school leader, the teachers decided that they wanted to formulate development questions within their teams: grades 1–4, 5–7 and 8–10. The team leaders facilitated team-based dialogues over two sessions that were dedicated to working on the development questions. The teachers stated that they greatly appreciated being given ample time to reflect on their practice.

In late October, a lead researcher delivered a new lecture, this time focussing on the observation of teaching and communication during analysis of the observed teaching. Towards the end of the meeting, the second intermediate task was presented to the teachers, inviting them to observe their own teaching practices through the lens of the newly formulated development question.

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They were also provided with guiding questions to help focus their observations. These included:

(1) What do I use digital tools for in my teaching?

(2) What is the purpose of using them?

(3) What do I find works well in teaching when I use digital tools?

(4) What do I feel uncertain about when using digital tools in teaching?

(5) I feel that I need help to develop. . .

(6) I feel that I have a need to develop. . .

Once again, the school leader reframed the researcher's introduction for the teachers in a plenary session and facilitated a joint discussion of Task 2, allowing them to clarify questions and develop a shared understanding of what the task entailed. A teacher reflected after one of our visits at the school: "I don't think we've ever had this much time to reflect, now we actually have the opportunity to think things through."

Communication to align one's thoughts. The following email, dated 12 October 2024, was sent by the school leader to the lead researcher before the teachers in the various teams were to present their development questions to one another:

> Yes, we are looking forward to seeing you on Wednesday😊
> We have worked both together as a whole group (one session) and in our teams (two sessions) on the development questions, a very valuable learning process!
> I/we assumed that the school's overall research question had to be quite similar to the one the core school used, since this is what the project is based on. So, we decided to keep it. Have I understood this correctly?
> – *How* can *leader-supported teacher collaboration contribute to learning through the use of digital tools?*
>
> On Wednesday, the teams will present their preliminary development questions, so it will be exciting to see where we end up in the end! This is, after all, a dynamic process, and some things will probably change along the way. . .
> I'm looking forward to your visit on Wednesday😊

The leader of the project took part in the presentations of the development questions and also provided comments, particularly asking how learning could be made central to the questions. This process resulted in the following development questions at the school:

> Grades 1–4: *How can digital tools be used to engage students and thereby promote motivation and learning?*
>
> Grades 5–7: *Based on student learning: How can we help students enhance their learning through digital tools?*
>
> Grades 8–10: *How can digital tools be used to create variety and student-active learning?*

Taking the initiative to invite researchers. From late November, after the development questions had been established, the structure of the DWR project's second phase was classroom observations followed by a joint analysis to assess whether they were progressing towards their object as defined by the development question. The focus of the observed teaching was a problem formulation that was framed within the development question.

We had initially planned the observation of four lessons followed by a joint analysis in which the teacher who had taught the lesson, two colleagues who had observed the teaching, the school leader and two or three of us researchers took part. We had also planned that just one teacher should take responsibility for planning the lesson that was to be observed. Throughout the development process, more teachers than originally planned expressed a desire to be

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observed and the number of observed lessons and joint analyses therefore increased from four to six. In addition, the organization of the process changed, as the teachers preferred to plan together rather than individually.

The following email was received from the school leader on 24 March 2025:

> Last Wednesday's observation and reflection session was really valuable!
> This is truly enjoyable😊
> If you would like an additional observation at the upper grade levels, an opportunity has opened up during the last week before Easter (Wednesday 9 April). A teacher wants to be observed in the subject of Norwegian.
> The school leader furthermore confirmed that the teachers wished to continue the development work even after we, the researchers, had ended our collaboration with them.

Expanding and revising the planned actions. Participation in the reflection sessions was gradually opened up to all staff by following the reflections via streaming, in response to the teachers' wishes. The school leader stated: "Some of the teachers are jealous and say they want to take part in the analyses of teaching." Teachers reported that it became easier for them to participate in analyses and discussions across the entire staff after they had begun to follow the analysis in which only three teachers had been involved. This dialogue and joint analysis within the entire staff were also part of an organized activity that was initiated by the school leader to maintain continuity in the development work – an activity that was likewise welcomed by the teachers.

The ways in which reflections on observations were conducted in the first reflection session modelled by the lead researcher also became revised by the school leader. First, the observed teacher was asked to analyze his og her teaching, with particular attention to both the aim of the lesson and the development question guiding the work. Then, leaders and teachers took turns offering one positive piece of feedback, and this feedback had to be linked to a specific action that had been observed in the teaching. This was followed by a round in which each participant asked one or two questions or provided comments aimed at clarification or further elaboration, again tied to concrete teaching actions. The session concluded with a summary in which participants reflected together on what had been learnt and what they wanted to take with them going forward. The school leader wanted the teacher who had taught the lesson to select one or two questions, comments or points of curiosity and explore these in more depth before everyone around the table participated in a joint summary. The school leader also shared this framework for joint analysis with the other schools in the municipality that were participating in the project, presenting it as his own structure for analyzing observed teaching and adding the municipality's logo at the top of the document.

Analyses and discussion

The aim of the study was to explore the conditions that seem to promote teachers' and school leaders' opportunities to exercise agency in research–school collaborative development work within the CHAT framework. The study shows that the school leader, together with team-leaders and teachers, kept the process moving even between our visits to the school and highlights the importance of entering the field of practice with a structured, predefined plan (Postholm, 2025) while at the same time allowing for flexibility as the process unfolds (Jarvoll, 2019; Silva-Macaia *et al.*, 2020) to enable teachers' and school leaders' ongoing exercise of agency. It is interesting to note how a predefined plan can be transformed into a dynamic document that is continuously adapted to the needs of the school – needs that both teachers and school leaders discover throughout the process. Contradictions emerged between the plan that they initially agreed upon and the actions and forms of organization that proved more appropriate for the school. This quaternary contradiction (Engeström & Sannino, 2010) was addressed and resolved through ongoing dialogue between the lead researcher and the school leader, whose contributions were informed by his continuous dialogue with the teachers. In addition, the researchers engaged in reflections with the teachers during school visits. This

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joint initiative to enhance collective development at the school was sustained by ensuring that teachers' voices were represented through the school leader, as well as through direct reflection with the teachers. In this way, multivoicedness (Engeström, 2015) and collective teacher agency (Morselli & Sannino, 2021) became integral components of the dialogues. The project plan became a "where-to" tool that was co-configured in collaboration between the school leader, teachers and the lead and co-researcher (Edwards, 2010).

The school leader had presented the plan to the teachers before we met them in the autumn, thereby preparing them for the work ahead. After our visits to the school, he further supported this process of ownership by using the PowerPoint slides that we had presented, translating and adapting them in collaboration with the teachers and jointly clarifying the intermediary tasks. Thus, drawing on the principle of double stimulation, lectures and intermediary tasks served as mediating artefacts that enabled the school leader and the teachers to take charge of the process (Engeström & Sannino, 2010). When the school leader adapted the work to his teachers in the school, he also clarified this with the lead researcher, maintaining dialogue with her by both telephone and email, as when deciding that the overall research question should be the same as the one the core school used. The content and the course of the development work were subject to negotiation based on the participants' needs (Engeström & Sannino, 2010). The school leader demonstrated his relational agency by aligning his thoughts with both the teachers and the lead researcher (Edwards, 2010). The school leader was sensitive to the teachers' expressed wishes and needs and acted in accordance with those. Furthermore, the teachers' and the leaders' agency could gain power because they acted in the classroom on future-oriented activity-level envisioning (Engeström, 2005). The teachers had formulated development questions that they worked on in their classrooms, while also remaining aware of the broader societal purpose of the development work: to strengthen their PDC through collaboration with one another and support from the school leader, representing the first part in Leont'ev's (1978) twofold definition of the object. In this process, when the development questions were formulated, all teachers were given a voice, thereby emphasizing multivoicedness and ensuring that the work could take the teachers' own problems and needs as its starting point (Engeström, 2015). Through active engagement in their context, the school leader laid the foundation for teachers to achieve agency (Biesta & Tedder, 2007), thereby enabling them to develop a motive for acting on their development question. In a movement from the individual teacher's perspective to a future-oriented collective activity, transformative agency also can emerge (Hyrkkö & Kajamaa, 2025) – that is, breaking away from established, here-and-now practices to create something new.

During the second phase of the DWR, the teachers observed each other's practice and analyzed them together. The school leader also made some adjustments to the process based on the teachers' wishes. The planning of the teaching lessons shifted from being handled by a single planner to becoming a collective effort within the teams, thus evolving into a future-oriented collective activity aimed at developing practice through transformative agency (Hyrkkö & Kajamaa, 2025). The teachers also wanted to be more actively involved in the analysis of the observations, so the school leader arranged for the sessions to be streamed to those teachers who were not seated at the table in the meeting room, again activating his relational agency (Edwards, 2010). In this way, they could draw on one another as a resource for learning, thereby contributing to their collective learning (Edwards, 2011; Pyhältö *et al.*, 2014). Furthermore, the school leader revised the structure of the analysis process, allowing the teachers who had taught the lesson to take a more active role by commenting on what was being discussed, thereby enacting his own agency as a school leader. The gap between what was written in the predefined plan and how the school, with the school leader in the lead, wanted to organize and to be supported by us (the researchers) during the learning processes became resolved in the dialogue between the school and the lead researcher, and in debriefing dialogues between researchers and teachers and the school leader at the school.

The constant comparative method of analysis is grounded in an understanding of continuous development (Strauss & Corbin, 1990), and this also became evident in the

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analysis process. The process of receiving, interpreting and shaping the plan for the development work began with reaching agreement on the overall plan, followed by adaptation and follow-up work based on the lectures and further through aligning participants' understandings in relation to the plan.

As the process progressed, the teachers expressed a desire for two additional school visits from the researchers beyond those that had originally been planned, while also taking the initiative to expand and revise the predefined plan for the development work themselves. Throughout the development process, the school leader and the teachers actively demonstrated and enacted their professional agency related to the predefined plan (Edwards, 2010; Engeström, 2005; Engeström & Sannino, 2012). It became particularly evident that the school leader had taken ownership of the work when he presented the document outlining the structure for the joint analyses as his own, further reinforcing this by adding the municipality's logo before sharing it with the participating project schools. To draw on Wertsch's concept, the school leader had appropriated the tool and came to view it as his own – that is, as "belonging to them" (Wertsch, 1998, p. 56). The plan or the instructions that were guided by the expansive learning cycle (Engeström, 2001, 2015) became revised and adapted to the historical and cultural context at the school and the perspectives of the researchers became dialectically intertwined with the school leader's and teachers' actions through their enacted agency (Engeström & Sannino, 2012). The fact that the school leader and the teachers wanted to continue the development processes even after our collaboration had ended indicates that they were motivated and had developed a sense of empowerment and collective agency (Morselli & Sannino, 2021).

Drawing on this discussion, the study demonstrates that school leadership played a crucial role in maintaining continuity throughout the development process. However, the continuous dialogue between the lead researcher and the school leader, beyond the physical meetings at the school, could potentially have led to the initiative becoming the school leader's project primarily, with him developing a strong sense of ownership of the plan framing the work. At the same time, the researchers' visits to the school enabled direct reflection with the teachers, meaning that the school leader's accounts were, in a sense, member-checked (Lincoln & Guba, 1985). This also suggests that researchers need to stay closely engaged with practice through frequent visits in order to fully understand the contextual factors that influence a plan for development. Theoretical sensitivity is a well-established concept (Corbin & Strauss, 2008; Strauss & Corbin, 1990). The present study suggests that *practitioner sensitivity* is a necessary precondition for ensuring that school–university collaboration is grounded in practitioners' needs, as emphasized in research within a CHAT framework and enacted in relation to the redefined plan. Drawing on Hopwood's (2025) review, which highlights the potential of CHAT-informed development work to enable participants to actively shape the developmental process and its outcomes, we argue that practitioner sensitivity is crucial for realizing this potential in practice.

Conclusion

The study concludes that the teachers and the leader emphasized that having a predefined and structured plan was important, yet they also recognized the value of adapting it to their own needs and the context of the school. By enacting their agency, school leaders and teachers can create conditions that integrate learning processes into their everyday practice. Even when the leader and the teachers were given a top-down mandate (the object) for their development work, they endeavoured to make it their own by engaging in processes in which their voices were heard. The plan presented by the researchers became tailored to the school's needs, with each part aligning seamlessly with the other, like the two sides of a zip. However, such a process requires a school leader who is able to observe the ongoing processes in the school, listen to the teachers and their needs and act and provide support accordingly. A process of this kind also requires researchers to remain flexible and to adapt to the school's needs. Such a

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collaborative process between school and university creates opportunities for horizontal movement and learning (Engeström & Sannino, 2010) – that is, learning for both the school staff and the researchers. An interesting direction for future research would be to examine how researchers exercise their agency by adjusting their own activity to evolving development processes to support optimal learning outcomes in the school and their own organization.

Declaration of AI-assisted technologies

Generative AI-assisted technologies [M365 Copilot] were used exclusively as a supportive tool during the writing process to enhance readability and linguistic quality, as well as to check grammar, spelling and references. The authors reviewed and edited Copilot's suggestions as needed and take full responsibility for the content of the published article.

References

Akkerman, S. F., & Bakker, A. (2011). Boundary crossing and boundary objects. *Review of Educational Research*, *81*(2), 132–169.

Biesta, G., & Tedder, M. (2007). Agency and learning in the lifecourse: Towards an ecological perspective. *Studies in the Education of Adults*, *39*(2), 132–149. doi: 10.1080/02660830.2007.11661545.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research*. Sage Publications.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage.

Czarniawska, B. (2004). *Narratives in social science research*. Sage.

Diao, C., Zhou, X., Mao, Q., & Hong, J. (2022). The development of transformative agency of teachers in teaching research activities in China. *Frontiers in Psychology*, *12*, 724175. doi: 10.3389/fpsyg.2021.724175.

Edwards, A. (2009). From the systemic to the relational: Relational agency and activity theory. In A. Sannino, H. Daniels, & K. D. Gutiérrez (Eds), *Learning and Expanding with Activity Theory* (pp. 197–211). Cambridge University Press.

Edwards, A. (2010). *Being an expert professional practitioner: The relational turn in expertise*. Springer.

Edwards, A. (2011). Building common knowledge at the boundaries between professional practices: Relational agency and relational expertise in systems of distributed expertise. *International Journal of Educational Research*, *50*(1), 33–39. doi: 10.1016/j.ijer.2011.04.007.

Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work*, *14*(1), 133–156. doi: 10.1080/13639080020028747.

Engeström, Y. (2005). Knotworking to create collaborative intentionality capital in fluid organizational fields. In M. M. Beyerlein, S. T. Beyerlein, & F. A. Kennedy (Eds), *Collaborative Capital: Creating Intangible Value* (pp. 307–336). Emerald.

Engeström, Y. (2015). *Learning by expanding: An activity-theoretical approach to developmental research* (2nd ed.). Cambridge University Press.

Engeström, Y., & Sannino, A. (2010). Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review*, *5*, 1–24. doi: 10.1016/j.edurev.2009.12.002.

Engeström, Y., & Sannino, A. (2012). Whatever happened to process theories of learning? *Learning, Culture and Social Interaction*, *1*(1), 45–56. doi: 10.1016/j.lcsi.2012.03.002.

Engeström, Y., Engeström, R., & Suntio, A. (2002). Can a school community learn to master its own future? An activity-theoretical study of expansive learning among middle school teachers. In G. Wells, & G. Claxton (Eds), *Learning for Life in the 21st Century: Sociocultural Perspectives on the Future of Education* (pp. 211–224). Blackwell.

Gudmundsdottir, S. (2001). Narrative research in school practice. In V. Richardson (Ed.), *Fourth Handbook of Research on Teaching* (pp. 226–240). Macmillan.

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Hopwood, N. (2025). Twenty-five years of change laboratories in schools: A critical and formative review. *Educational Action Research*, *33*(4), 571–598. doi: 10.1080/09650792.2024.2379343.

Hyrkkö, S., & Kajamaa, A. (2025). Transcending tensions between school leadership and instruction: An activity-theoretical study on distributed leadership and expansive learning. *International Journal of Educational Management*, *39*(6), 1531–1546. doi: 10.1108/IJEM-04-2024-0234.

Jarvoll, A. B. (2019). Exploring initial collaboration in an intervention: Creating a meeting place between educational research and educational practice. *Nordisk Tidsskrift for Utdanning og Praksis*, *13*(1), 44–61. doi: 10.23865/up.v13.1836.

Leont'ev, A. N. (1978). *Activity, consciousness, and personality.* Prentice-Hall.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* Sage.

Ministry of Education and Research (2017). *Meld. St. 21 (2016–2017): Desire to learn – early intervention and quality in schools*. Ministry of Education and Research.

Morselli, D., & Sannino, A. (2021). Testing the model of double stimulation in a change laboratory. *Teaching and Teacher Education*, *97*, 103224. doi: 10.1016/j.tate.2020.103224.

NESH (2021). *Guidelines for research ethics in the social sciences and the humanities*. National Committee for Research Ethics in the Social Sciences and the Humanities. Available from: https://www.forskningsetikk.no/en/guidelines/social-sciences-and-humanities/guidelines-for-research-ethics-in-the-social-sciences-and-the-humanities/

Norwegian Directorate for Education and Training (2012). *Strategy for the lower secondary level – motivation and mastery to promote better learning, 2013–2017.*

Norwegian Directorate for Education and Training (2020). *The curriculum for the knowledge promotion reform 2020*. Available from: https://www.udir.no

Postholm, M. B. (2025). The importance of structure and trust in developmental work in school: With observations and joint analyses as the key activity. *Frontiers in Education*. doi:10.3389/feduc.2024.1524295.

Postholm, M. B., Normann, A., Dahl, T., Dehlin, E., Engvik, G., & Irgens, E. (2018). *Skole- og utdanningssektoren i utvikling [The school- and the education sector developing]*. Bergen: Fagbokforlaget.

Pyhältö, K., Pietarinen, J., & Soini, T. (2014). Comprehensive school teachers' professional agency in large-scale educational change. *Journal of Educational Change*, *15*, 303–325. doi: 10.1007/s10833-013-9215-8.

Riessman, C. K. (2008). *Narrative methods for the human sciences*. Sage.

Silva-Macaia, A. A., Querol, M. A. P., Fischer, F. M., & de Gouveia Vilela, R. A. (2020). Conflict in a formative intervention at a public school: Lessons for researcher-interventionists. In R. Vilela, M. Pereira Querol, S. Beltran Hurtado, G. Cerveny, & M. Lopes (Eds), *Collaborative Development for the Prevention of Occupational Accidents and Diseases*. Springer. doi: 10.1007/978-3-030-24420-0_6.

Spante, M., Varga, A., & Carlsson, L. (2022). Triggering sustainable professional agency: Using change laboratory to tackle unequal access to educational success collectively. *Journal of Workplace Learning*, *34*(2), 162–175. doi: 10.1108/JWL-02-2021-0019.

Stake, R. E., & Trumbull, D. (1982). Naturalistic generalization. *Review Journal of Philosophy and Social Science*, *7*(1), 1–12. doi: 10.4135/9781412957397.n224.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Thousand Oaks, CA: Sage.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Wertsch, J. V. (1998). *Mind as action*. Oxford University Press.

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