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The importance of the start-up phase in school-based development for learning and enduring change

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ABSTRACT

This study focuses on two schools taking part in a school-based development project in Norway. The research was guided by the following research question: How does the start-up phase in school-based development influence learning and enduring change in school? Few studies focus on the start-up phase. The purpose of the current study is to show how this beginning of a local school development process can influence learning and enduring change. The study was conducted two years and two months after the formal participation of both schools in the project had ended. The study shows that the start-up phase most likely can influence learning and enduring change. The study shows that teacher educators must take the needs of leaders and teachers into consideration and help them become aware of their own practice. Furthermore, teacher educators should contribute with knowledge throughout the process to keep the wheels of learning turning. At the same time they must be aware that new knowledge alone is not enough to enhance learning in school, but structure, culture and content need to be in interplay.

Introduction

Researchers have long recognised that the professional development of teachers is essential to change classroom practice, improve schools, and ultimately to the learning outcomes of pupils (Borko 2004). Professional learning often takes place in formal settings, such as professional development programs, teaching research groups, and formal mentoring programs (Timperley 2011). Fullan (2007) posits that professional learning in school contexts is the only type of learning that ultimately counts for changing classroom practices. This perspective on professional learning emphasises the school as the most important learning environment (Vescio, Ross, and Adams 2008). This article focuses on job-embedded professional development for teachers, and especially on the start-up phase and what this phase means for further development and sustainability in school development. The focus is also on what such job-embedded learning means for the leaders and the pupils' learning.

In a national project conducted from 2012–2017, with a pilot project the first year (2012–2013), the Norwegian education authority wanted to improve the quality of teaching in lower secondary schools by focusing on classroom management, literacy and numeracy in school-based development. The Norwegian authorities define school-based development as follows:

> School-based development means that the school, including school leaders and the entire staff, undergoes a workplace development process. The aim is to develop the school's collective knowledge, attitudes and skills when it comes to learning, teaching and collaboration (The Norwegian Directorate for Education and Training 2012, 5; my translation).

All 1,250 lower secondary schools in Norway were invited to take part in school-based development, and 1,114 decided to participate. All of the 19 teacher education institutions in Norway also took part in supporting the schools as development partners for three semesters in each school. The authorities stated that the school leaders should lead the development processes with assistance from teacher educators, but the local education authorities were responsible for the local projects (The Directorate of Education 2012).

School-based development represented a new practice for teacher educators, school leaders and teachers in Norway. In school, the aim was to develop collective knowledge, attitudes and skills when it comes to learning, teaching and collaborating so that the pupils feel a sense of mastery and thus become more motivated to learn (Ministry of Education 2011). In this article my point of departure will be two schools that took part in the school-based development project. The schools participating in the research had both taken part in the pilot project and the three semesters that followed. The research question that framed the study that this article builds on was: 'How does the start-up phase in school-based development influence learning and enduring change in school?' Research has found that the start-up phase, in which the teachers develop a joint overall goal to act on, can last for almost half a year (Postholm 2008). The study was conducted two years and two months after the formal participation of both schools in the project had ended.

Though there is wide interest in studying teachers' professional development, there are but a few studies that focus on lasting change (Girvan, Conneely, and Tangney 2016), either on the whole school (Haiyan, Walker, and Xiaowei 2017; Postholm 2016; Postholm and Wæge 2016; Sung, Lee, and Choi 2017) or learning at every school level. Furthermore, research also shows that little is known about how teachers come together to collaborate to enhance their professional development (Tan and Caleon 2016). The intention of the current study is therefore to shift attention to the start-up phase at the school as a whole, to enduring change and its relation with teachers, and the leaders and pupils' learning.

In the article I will first present theoretical issues and research related to the topic in question. Next, I will describe the methodology before presenting the findings. The latter will be analysed and discussed prior to my concluding remarks.

Theory and related research

Cultural historical activity theory

The research study was conducted within the frame of Cultural Historical Activity Theory (CHAT). Based on Vygotsky's theory (Wertsch 1981), CHAT was developed by Leontèv

(1978, 1981) and emphasises development and learning in social settings. Leontèv (1981) stated that 'the object is the true motive', meaning that motivation is embedded in the overall goal of the work. According to Vygotsky (1978), learning is a process that starts at the social, external level before it is internalised. At the individual level, the person's learning should be supported in his or her zone of proximal development (Vygotsky 1978). Engeström (1987, 174) has expanded on this individual definition of the concept characterising the zone of proximal development as follows: 'It is the distance between the present everyday actions of the individuals and the historically new form of the societal activity that can be collectively generated [...]'. The concept of expansive learning is central to CHAT and is related to creative processes, indicating that teachers in a collective community can see possibilities and create something new 'that is not yet there' (Engeström and Sannino 2010, 2).

In the context of CHAT, the researcher is called a 'formative interventionist researcher'. The role of teacher educators as formative interventionist researchers is to provoke and sustain an expansive transformation process, meaning to create something new that is not yet there. This is a process led and owned by leaders and teachers (Engeström and Sannino 2010). This type of researcher conducts research together with practitioners, as when collecting mirror data by observing, interviewing and studying documents and using this data material (Cole and Engeström 2007), functioning as a collective mirror for the participants, as Engeström (2000) puts it. Teacher educators can also collect mirror data that can be presented to teachers, meaning that both the insider and outsider perspectives can mesh when deciding on the focus for development.

Related research

Researchers suggest that teachers' professional development in school should be differentiated to meet their individual needs (Kyiakides et al. 2017; Smith and Lindsay 2016). However, according to Lim-Ratnam, Atencio, and Kim-Eng Lee (2016), a key premise for development in school is that teachers can interpret the goals and the desired outcomes. Timperley et al. (2007) found that teachers should at least understand the purpose of the work and why they should attempt to move their practice towards the object of the work. Postholm (2008) found that the start-up phase could be the foundation for further development if teachers were given time to identify with the theme for the work of professional development.

Several research findings emphasise that school leaders should create a learning environment for teachers that promotes mutual trust (Liu, Hallinger, and Feng 2016; Piyaman, Hallinger, and Viseshsiri 2017). King and Stevenson's study (2017) presents a bottom-up approach in which the principal trusts the teachers and takes on a modern form of courageous leadership willing to take a risk in an education system characterised by standardisation, accountability, and performativity.

According to Cravens and Wang (2017), it is a limitation that only practitioners take part in teachers' professional development in school, and the researchers therefore advocate that university professors and schools should form relationships to aid professional development. Tan and Caleon (2016, 128) point to the importance of researchers/facilitators to be sensitive to teachers and allow learning to emerge when defining the problem to work on, but they concede that little is known about how teachers 'jumpstart'

their collaborative processes. Smith and Lindsay (2016) emphasise that providers of external support should scrutinise the current practice in school before providing learning opportunities for the teachers. Research has also found that shared decision-making among practitioners in school supports development, whereas a lack of a shared vision hinders it (Feeney 2016).

Both lesson study (LS) and action research, where teachers are understood as researchers (McNiff 2013), are used as methods for teachers' learning. How teachers can experience development work when using the LS method was found to be dependent on how the region officers positioned the LS work in the overall school improvement strategy, thus forming the contextual conditions. Teachers expressed more professional autonomy when they had decided on the goals together with the lead teacher (Hadfield and Jopling 2016). However, research shows that although the LS method gives teachers an object to focus on thanks to repeated teaching (Chen 2017), the object is only known to just a few teachers, and not the whole school community (Goh and Fang 2017; Shuilleabhain 2016; Kullberg et al. 2016; Skott 2013). This goes against the intentions of LS activities, whose goal it is to be aligned with school development goals (Lewis et al. 2013). As Goodnough (2016) has shown, when action research was used as a method for teachers' learning and the needs of the teachers were used as a starting point, they were motivated and felt in control over their own learning processes.

Though there is wide interest in studying teachers' professional development as this summary on recent research indicates, there are, as already stated in the introduction, few studies that focus on the start-up phase (Tan and Caleon 2016), on lasting change (Girvan, Conneely, and Tangney 2016), either on the whole school (Haiyan, Walker, and Xiaowei 2017; Postholm 2016; Postholm and Wæge 2016; Sung, Lee, and Choi 2017) or learning at every school level. The intention of the current study is to understand the relation between the beginning of a school-based development project and how it influences lasting change and learning at all levels in the whole school.

Methodology

I conducted a qualitative case study in two lower secondary schools within the CHAT framework. The study was, as already mentioned in the introduction, conducted two years and two months after the formal participation of both schools in the project had ended in 2014. As I wanted to focus on the whole school, CHAT with its collective orientation gave direction to my research and contributed with theoretical concepts that functioned as a resource during my analyses and discussion of the findings. A case study, according to Creswell (2013), is a study of a 'bounded system,' and I wanted to examine an activity or programme that was limited in time, i.e., a year and three semesters, and located in a particular place, i.e., two schools.

The schools and data collection

The selected schools had taken part during the pilot year (2012–2013) and the three following semesters of the main project and had ended their participation late 2014. I have named the two schools Aiden and Bedford, with 156 pupils, 17 teachers and two leaders at the Aiden and 310 pupils, 60 teachers and four leaders at the Bedford School.

I collected data at each school through observations and interviews. A requirement was that the principal picked teachers for the interviews that have taken part in both the pilot and the main project ending in 2014. The principal could ask the teachers he wanted to take part in the interviews, and an immediate thought could be that he picked only supportive teachers to give a good impression of the school. The content of the interviews quelled this thought. Furthermore, all the teachers and leaders got the chance to anonymously answer the questions asked in the interviews by writing a letter to me. These answers also supported the understanding I developed from the interviews.

I observed/shadowed one teacher (the main informant) at each school for one week. The two teachers, teaching at grade 9 and 10, volunteered to take part in the research study after the principal had asked them. I conducted focused observations (Angrosino and de Peréz 2000) and wrote observation notes about the practice in the classroom in my protocol. I conducted a semi-structured interview (Kvale and Brinkmann 2015) with the main informants, observed meetings of the main informants' team and conducted a focus group interview (Kamberelis and Dimitriadis 2011) with this team. I also conducted focus group interviews with three pupil groups at both schools from grade 9 and 10, the main informants being their teachers. As I had observed teaching in the pupils' class-rooms, I was not completely unknown to them, and I could start the interview with questions connected to the teaching we had experienced together. I also had a focus group interview with the school leaders and a focus group interview with two teachers from each of the grades 8, 9 and 10. The interviews with the main informants and the focus group interviews with the teachers and leaders lasted for about an hour each of them. Each focus group interview with the pupils lasted for about half an hour. I conducted the interviews in vacant classrooms or in meeting rooms at the school. By using observations, letters and interviews, all of the teachers and leaders of the two schools participated in the study.

The interviews with teachers and leaders had the same topic areas as the starting point. The questions were formed beforehand, but I was open for that the participants would bring up relevant themes that I had not thought of beforehand. First, they were asked to give a description of the school and how the school based-development project had been initiated. Then the questions turned to what and how the interviewees had learned during school-based development, how they had experienced the role of the teacher educators, what had impeded or supported their learning, and how their learning and development had continued into the present. The questions were adjusted depending on whether the interviewees were teachers or school leaders, with the questions adapted to their role. In the interviews with the observed teachers, the interview questions also focused on the observed teaching, as with the interviews with the pupils. Furthermore, the pupils were asked to describe the teaching when they become eager to learn, when they become motivated to work hard on a task, when they struggle with an assignment and who they then turn to for help, what they had learned about literacy and if they had learned about literacy in all subjects, and how they act when it comes to literacy at school and at home. They were also asked to describe a capable teacher. The questions posed to the pupils focused on how they experienced the teachers' teaching and the themes literacy and classroom management that the schools were working on during the project. Thus, the pupils' answers could say something about what the start-up phase could mean

for the teachers' teaching and, consequently, for their motivation to learn and their own learning.

Analysing the data

At first, I analysed the interviews at each school separately constructing a narrative description of each school (Riessman 2008). Based on observations I also included descriptions that gave a picture of practice in the classroom in these narratives. I could thus provide a 'thick description' (Geertz 1973, 6) of the participants' practice and their thoughts and meanings connected to the work with school-based development. The letters confirmed the information presented in the descriptions, and thus strengthened the trustworthiness of my observations and understanding of the interviews, which in turn ensured the quality of the study. With the description of each school as the starting point, I conducted an open-coding process as described by Strauss and Corbin (1990, 1998) to categorise the material according to the frame of the research question. The categories developed during this analysis were 'The start-up phase' and 'Learning and enduring change'.

Quality and ethics

As mentioned above, the letters secured the trustworthiness of the study. I increased the quality of the work by using member-checking (Lincoln and Guba 1985), which means that all participants have read the description of the school and found it accurate. The study was based on informed consent as the participants signed a consent form. Moreover, as the article complies with the ethical principle of making participants anonymous (NESH 2006), all the schools and persons referred to in the text were given fictitious names to avoid recognition.

Though the descriptions and analyses presented here are connected to specific schools with their school leaders and teachers, the findings may have importance beyond their immediate context if the reader is willing to read this text creatively and imaginatively (Geertz 1973), thus transforming it into a thinking tool (Gudmundsdottir 2001). This means that the findings can contribute with knowledge to similar situations and contexts.

Findings

The categories I have developed structure the presentation of the findings, with each category serving as the header of the subsequent section. In each section the findings from each school are presented separately before an analyses and discussion part including findings from both schools.

The start-up phase

Aiden school

The local education authority did not intervene when the teachers and leaders at Aiden School agreed upon participation and the themes to work on. The school had worked on classroom management and literacy before the invitation to take part, and the school

decided to continue to work on these topics during the pilot and the rest of the project. 'Everyone at school got the chance to voice their opinion concerning the target areas', according to the principal. The teachers all agreed on what topics to work on and spent half a year developing a focus in the topic classroom management. The teacher educator who supported the teachers during the project set up a structure for the problem formulation phase that the teachers and leaders decided to follow. During the first semester in the pilot project, the teachers first reflected individually, then in teams and finally the whole collegium got together to create a development question to guide and frame their work in classroom management. To be conscious about their own practice the teachers observed their own teaching before deciding what to focus on. At the end of the first semester they ended up with four development questions, but decided to focus on just one of these during the next semester. This development question reads: 'How to create a good dialogue between the collegium and the pupils and between the pupils?' During the second semester the teachers observed each other and reflected together within the frame of the development question. During the first semester in the pilot project the teacher educator gave the teachers a lecture on action research and observation, so that they were prepared for observation in both their own and their colleagues' classrooms. In the beginning of the second semester of the pilot project the teacher educator observed teaching in a classroom and took part in the subsequent process of reflection. The principal also joined this observation and reflection process, as well as the session when the teacher observed and the teacher educator recreated how the reflection process was carried out after the observation before all the other teachers.

Bedford school

At Bedford School, the start-up phase was completely different than at Aiden School. The local educational authority decided that the school should take part in the project and determined the theme it had to work on. Bedford School was in the midst of a project when this top down decision reached them. The teachers felt that the project was somewhat imposed, as it lacked a more democratic process in which their voice had an impact on what to focus on in the project. As one of the teachers utters:

> You become negative from the beginning, and you have no ownership of the work that will come. Your motivation and engagement are affected and imposed. You will not do a serious job, because the processes had been badly arranged at the beginning.

The teachers told me that they had worked on pupil involvement, but now felt like pupils themselves with no say when the project started. About half of the teachers at the school became sceptical of this project coming from above from the national authorities and that all the teachers are expected to work on the same topic. One of the teachers told me that she was looking forward to her retirement and that the project was a major factor for her decision to retire. The teachers did not remember if they formed a common object or a development question for the work at the school.

The school had focused on literacy during the pilot project and the rest of the school-based development project. The leaders believed that the municipals' plan on literacy should be known for all participating schools. One of the leaders in a middle management position who had been working at the school for about a year, added: 'It should be the leaders who should filter what the teachers must work on because they know

their school and teachers best'. Though it was indeed the local educational authority that decided what topic area the school was to work on, the wishes of the teachers were heard when time was provided for observation and reflection during the second year of the project, but still they had not developed a question framing and focusing the development work.

Learning and enduring change

Aiden school

Kari, the main informant at Aiden school, told me that there are evident traces left from participating in the effort. She informed me that they also worked on literacy before the school's participation, but, as she formulates it, 'the work is now more organised'. Kari needed a break from school because she felt she had to be too strict in her interaction with pupils. She now seldom raises her voice and thinks this is thanks to the focus on classroom management and building relations with the pupils. 'We look at the pupils differently, and we are engaged in building good relations with them. There is a relation of trust between teachers and pupils', she says. Kari and the other teachers share the view that they have developed an awareness of reading as a basic skill in every subject.

The teachers agree that a more open, sharing and dialogic culture developed at the school during its participation in the project, and that they use this way of working while they are currently taking part in a new national effort focusing on assessment. It is in the timetable that the teachers observe each other and reflect on their teaching together afterwards. They believe being observed helps, while they also receive tips and ideas from observing others. Both the teachers and the leaders think that one can learn a great deal from joint observation and reflection and see potential to develop the dialogues on reflection and language to support learning to an even greater extent. The teachers find they have been open and trusting with each other during the project, but they have learned that it is difficult to give each other critical comments. 'You have to be critical in a supportive way,' is how one of the teachers puts it. They also want to observe teachers who teach the same subject 'so that the design and craft teacher does not observe the math teacher', according to another teacher.

The principal thinks that a school-based approach in which everyone takes part is the best way to work if the school is to learn: 'Then we learn about the resources in the collegium and can use them in the school community'. The principal also sees that the teachers reflect more on their practice than before, that they are more confident when working with others, and that it is easier to learn from each other because they now also work towards a common goal that they developed during the start-up phase. According to the principal, the teachers have developed their understanding about relationships during their participation in the project. The leaders also think they have learned during the project when it comes to leading development at the school. For the principal, 'participation was a learning curve, and we have learned how such a project should be deeply rooted in the collegium'. The leaders support the teachers with time and structures for learning, but they also insist that they all read the same text before joint meetings. The leaders feel that through their participation in the project they have gained the authority to do so, and they have learned that joint reading is a helpful tool in their development work.

The leaders saw the teacher educator as a good support, because they then experienced a more professional standing during the project. The teacher educator gave lectures based on the needs of the teachers and leaders. The principal believes the school has undergone a cultural change for which participation in the school-based development project is largely responsible: 'We now have a joint focus, and that is why I think things have developed so well as they have'.

The pupils inform me that they have discussed different teaching methods with the teachers, and believe the teachers have changed their way of teaching accordingly. The pupils tell me that they have learned about strategies, when to use these strategies and that they now use learning strategies in many subjects at school. At home they mainly use these strategies when preparing for tests. The pupils think that the teachers lead the classes in an effective way, and they characterise the climate at school as good, and getting good grades is no longer frowned upon.

What teachers, leaders and pupils have learned seems still to be part of current practice and thus constitutes enduring change at Aiden School. This is not quite the picture at Bedford School.

Bedford school

Gunhild, the main informant at Bedford School, tells me that the pupils learn about reading strategies in grade 8 and that they use them later in teaching when appropriate. The teachers remember that they learned a lot about reading strategies from a teacher educator during the pilot year when all the teachers in the municipality gathered in the gym. Gunhild thinks that she learned from other teachers when observing them but argues that they could have learned even more if one external person had taken part because they do not dare give each other critical comments.

As mentioned above, the teachers got time for observation and reflection during the second year of the project, but this practice has not continued. The teacher educator who collaborated with them during the project from the second year introduced the LS method to them, but the teacher educator did not take part in the group observation and reflection sessions. The teachers just got a method and the time to use it. One of them utters: 'We learned the most during the pilot year when we were presented with learning strategies and got follow-up tasks for the classroom before we met the teacher educator for the next time'. They felt that for the following three semesters the content became almost the same every time they came together to reflect, always harping on the same topic making them lose their motivation as a result.

The principal also reserved time in the timetable for sharing ideas with the whole collegium during the project. Some of the teachers found this joint reflection useful, but others found it meaningless. One of the teachers states: 'I teach French, and to sit there and listen to how they teach math in detail, and you think, I cannot stand this one more second'. Here, teachers think that the topic of literacy is not productive for every subject. They specifically mention arts and crafts, physical education and home economics.

Several teachers think the project taught them how to vary their teaching and that they have become more conscious of the pupils' reactions to their teaching. Those teaching Norwegian, maths, and natural science informed me that the pupils approach these subjects in a different way when it comes to reading. The principal says: 'I have

made clear structures for the work and learned the importance of keeping these struc-tures for observation and reflection in place during the effort, both in groups and the whole collegium'. The principal also thinks they are on their way to a more communal culture, but thinks they have not reached it yet.

The pupils think it is important for their learning that their teachers are engaged, funny and energetic. One of them utters: 'I like it that the tasks are a little difficult, and I become motivated when themes interest me'. The pupils say that they sometimes use the learning strategies they were taught in grade 8, but that they probably use them unconsciously. Furthermore, they use them when they think a text is difficult, but seldom use them at home. The pupils think that the teachers have different expectations to them when it comes to strategy use. According to the pupils this points to a lack of collaboration.

As far as enduring change is concerned at Bedford, the study shows that some teachers have changed their practice. It also shows that the pupils are conscious about strategy use and employ it both in school and at home, though to varying degrees. It must be kept in mind that the main informant, who reported she had changed her own practice, was still teaching these pupils at the time of my study as well as during the time of the project.

Analysis and discussion

The main question of this article is to understand how the start-up phase in school-based development influences learning and enduring change. The findings show that, though they took part in the same national effort, the two schools started very differently. At Aiden School the teachers and leaders got the opportunity to voice their opinions on which topic(s) to work on and got the time to create development questions. In this start-up phase that lasted half a year, they worked individually, in teams and in plenary gatherings at the school. They could interpret the goals and desired outcomes (Lim-Ratnam, Atencio, and Kim-Eng Lee 2016) and got every opportunity to experience professional autonomy (Hadfield and Jopling 2016), and to collectively generate a new form of societal activity in an expansive learning process (Engeström 1987). In this start-up phase of the project, they thus spent time on collective processes that also took individual needs into consideration when formulating the overarching goal that could function as the 'true motive' (Leontèv 1981, 59).

The teachers at Aiden School also researched their own practice after a lecture on action research, which enables teachers to see themselves as researchers (McNiff 2013) and observe their own teaching in this manner. They became conscious of their own teaching and brought their understanding to team reflections as well as the whole collegium. According to Goodnough (2016), when teachers research their own practice, they can become motivated and feel in control of their own learning processes. Similarly, at Aiden School the teachers were in charge of their own development processes.

The teacher educator, an observed teacher and the principal were models for the teachers on how to reflect together when reconstructing the reflection process after one observation session in a classroom. The teacher being observed felt it was convenient that the principal took part during the classroom observation. Being part of the re-creation of the observation and reflection process, the principal also showed an interest in the activity the teachers were going to take part in.

The teachers and leaders found that they could learn a great deal from observing and reflecting together, but that it was also difficult to give colleagues positive comments. The teacher educator's participation in observation and reflection processes was minimal, but the teacher educator gave lectures based on the teachers and leaders' common wishes for content. The lectures given to the teachers and leaders contributed with knowledge that they could use during collaboration processes. The principal also instructed the teachers to read the same texts, and present knowledge they could discuss and connect to their daily practice. In this way these teachers developed new ideas and knowledge which fed back into their teaching, propelling their practice towards the joint object.

Research also shows that if time is allocated during the start-up phase so that teachers and leaders feel the content of the work is important or they at least understand the purpose of the work (Timperley et al. 2007), this phase can become the fundament and the driving force for further development (Postholm 2008). According to Tan and Caleon (2016), researchers should be sensitive to teachers and open to future issues when defining a problem. Smith and Lindsay (2016) have even emphasised that researchers as providers should scrutinise current practices before supporting teachers' learning processes, so that researchers may also act as formative interventionist researchers (Engeström and Sannino 2010) collecting mirror data (Cole and Engeström 2007) to develop a joint understanding of school practices together with teachers and leaders during the start-up phase. Research has found that shared decision-making as well as shared vision among teachers support development in school (Feeney 2016). The principal at Aiden School believes that the joint focus developed during the start-up phase explains the positive development at school.

The local educational authority decided the topic for Bedford School to work on, with the consequence that a start-up phase did not become a driving force for the teachers at this school. They did not develop a joint overall goal or a development question, they just had to start up with the topic decided by the local educational authority. The teachers felt that the school leaders merely acted on the wishes at the municipal level without listening to them first. One of the middle management leaders believed that the leaders should filter what the school receives since they know their teachers best. If, following Elmore (2000), we can agree that leaders must take care of inner responsibility and act as a buffer against outside pressure, then we must conclude that in this case the leaders failed. Instead, they took no risks against the system, which King and Stevenson (2017) characterise as the courageousness required from true leaders. All signs point to the fact that the start-up phase of the project at this school impaired the foundation and force for further development, with the school community separating in two opposites, with one part resisting while the other part became motivated. One teacher even stated that she became motivated, not for the project, but for retirement.

The findings based on the study in Bedford school show that the teachers' motivation for development also varied throughout the work. Despite feeling that their needs were not taken into consideration during the start-up phase, the teachers admitted they had learned something during the pilot project, while they found the next three semesters unproductive. Forte and Flores (2014) have found that culture and structure need to interact to enhance teachers' learning. The structure was in place at Bedford school, but a collective culture with motivated teachers was lacking. The study also shows that content needs to be part of this interplay to overcome stagnation and develop something

new. Thus, learning happens not just in the interplay between structure and culture, but in the interweaving of structure, culture, and content. The teachers expected that the teacher educator would give them more than a structure to conduct LS, taking part in observation and reflection processes, meaning that the teacher educator had failed to create a relationship supportive of professional development, which Cravens and Wang (2017) identify as an aid in school. Moreover, since the teachers did not share a common goal, the observation and reflection processes during the LS activity were never in tune with school development goals, contrary to what LS is supposed to facilitate according to Lewis et al. (2013). The development activity was unable to move the practice at the school towards a collective object (Leontèv 1978; Engeström 1987).

Findings in this study based on data from Bedford School illustrate that teachers teaching the same subject want to collaborate, which entails that not all teachers need to work on the same focus to move their practice to a common object for the school. Thus, teachers' professional development can also be differentiated to meet the teachers' needs (Kyiakides et al. 2017; Smith and Lindsay 2016). Teachers can work on different partial goals to bring the general practice towards the overall goal for pupils' learning and development. This requires courageous principals willing to take risks in the educational system (King and Stevenson 2017), and principals taking inner responsibility (Elmore 2000) creating trusting learning cultures (Liu, Hallinger, and Feng 2016; Piyaman, Hallinger, and Viseshsiri 2017). Though there was a split between engagement and resistance with the teachers at Bedford School, several teachers still felt they had learned something from taking part. The findings for this school indicate that it is not the municipalities that should decide what topics schools should work on. This is also supported by the findings from Aiden School, but these show that it is not necessarily a constraint when national authorities decide the overall national goal. What is decisive for the development process is that the work is grounded in the needs of the teachers in the start-up phase.

Enduring change can be seen in both schools, but to varying degrees. The study shows that all parties at Aiden School had learned, and that this learning was still part of the practice after the school had ended its participation. It is likely that leaders, teachers and pupils' learning will continue in the future thanks to the communal culture developed at the school. Regarding Bedford School some teachers and pupils did learn, and it is likely that future pupils of these teachers will benefit from them as far as their learning is concerned.

Concluding reflections

This study focused on the start-up phase which, according to Tan and Caleon (2016), has received scant attention. The findings show that a start-up phase stretching over a whole semester will most likely influence learning while bringing about an enduring change, thus making it fundamental to development. The study shows that the local educational authority and teacher educators as researchers and facilitators in school-based develop-ment should take leaders and teachers' needs into consideration, giving them the opportunity to voice their opinions. Furthermore, teacher educators should support them in the creation of development questions in the start-up phase. Teacher educators should be aware that it can take time to develop ownership for the work to come. The

study shows that a joint focus expressed in a development question explains the positive development at one school, and that school leaders must take care of inner responsibility and act as a buffer against outside pressure from school owners.

Teacher educators can also help teachers and leaders to become conscious of their own practice by collecting mirror data (Cole and Engeström 2007) during the start-up phase and keep the wheels of learning turning by contributing their knowledge. Additionally, teacher educators should be aware that new knowledge alone is not enough to enhance learning in school, but that structure, culture and content need to interact. Only then can teacher educators act as formative interventionist researchers (Engeström and Sannino 2010) catalysing and sustaining expansive transformation processes led and owned by teachers and leaders. This study presented findings from two school and more research is needed to understand how the start-up phase can function as the foundation and centre of force for further development in schools.

Disclosure statement

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