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Investigating Teacher Leadership in ECE Centres in Finland

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ABSTRACT: This study was aimed at investigating the enactment of teacher leadership in early childhood education (ECE) centres in Finland. Theoretically, the study was informed by the emerging scholarship of early childhood distributed pedagogical leadership and school based research on teacher leadership as well as classical theorizing of ECE leadership. Staff from three ECE centres participated as a purposive sample of informants in this study.   The study involved participative observations of ECE staff comprising teachers and child care nurses as a research method. The analysis of findings suggested that the enactment of teacher leadership was strong in all three centres. The study identified three aspects of teacher leadership enactment. This work was highly dependent on the conditions and structures created for teacher leadership as well as the teachers' attitudes in leading and improving pedagogical practice.

Keywords: *Teacher leadership, Distributed pedagogical leadership, Early childhood education, Finland*

Introduction

This study set out to investigate the enactment of teacher leadership in early childhood education (ECE) centres in Finland. The theoretical underpinnings of the study were connected with the review of scholarly literature on school based teacher leadership (eg. Fairman & MacKenzie, 2012; 2015; Harris, 2003; 2005; York-Barr & Duke, 2004) and emerging research on distributed pedagogical leadership associated with ECE settings

(eg. Heikka, 2014; Heikka & Waniganayake, 2011). Data was collected from a purposive sample of ECE staff employed in three centres located in different municipalities in Finland.   At each centre, a team of three staff working with children was observed for three days. At each centre, the researcher also attended an ECE team meeting to observe and record conversations for discussion and analysis in this research. In addition, at each centre, three ECE staff and the centre directors were interviewed on a 1:1 basis. Findings from the analysis of these interviews have been reported in the article by Heikka, Halttunen and Waniganayake (in press). In this article, we now focus on the analysis of the observations of the three ECE staff teams, comprising childcare nurses and teachers at each centre.

The significance of this study arises from global interests in developing ECE leadership, which indicates the growing importance of investigating ECE teachers' involvement in leadership (Hognestad & Boe, 2015; OECD, 2012; Ord et al., 2013; Waniganayake et al., in press). Leadership is a key factor influencing the quality of ECE. Quality ECE promotes children's development and school success (Melhuis et al., 2006; Sammons et al., 2007; Sylva et al., 2010), and prevents marginalization. Growing body of research indicates that teacher leadership impacts organisational learning and pedagogical functioning of multi-professional staff teams (Waniganayake, Rodd, & Gibbs, 2015). As research on ECE teacher leadership is evolving, conceptualisation of this phenomenon is at an early stage of development. In association with the community contexts of children and families using ECE services, teachers' professional work is culture-specific as reflected by local regulations and steering within each country (Hujala, Waniganayake & Rodd, 2013; Peterson et al., 2016).

Inspired by the idea that all organisational members can lead, Heikka (2014) investigated the enactment of leadership as distributed within ECE organisational contexts. She identified the core elements of distributed pedagogical leadership in ECE were: multiple persons involved in leadership, the enactment of pedagogical leadership in distributed ways, and the interdependence in the leadership enactments across different levels in the system. In ECE organisations, distributed pedagogical leadership focuses on curriculum work and pedagogical improvement, which were enacted by ECE stakeholders working at the micro level as teachers and centre directors in ECE centres, and at the macro level of municipal organisations as ECE leaders and municipal committees. Similarly, Singh, Han and Woodrow (2012) suggested that distributed leadership may be enacted between teachers, parents, and children as children were also able to demonstrate leadership in their own learning.   However, findings from diverse countries (see for example, Aubrey, 2016; Ho, 2011; Waniganayake et al., 2015) indicate that leadership challenges are connected with the relationships between leaders and teachers, their skills and positions in enacting pedagogical leadership as well as national policies that guide the everyday

work of teacher leaders. Deeper investigation is needed to enhance our understanding of the local and universal dynamics of the phenomenon of teacher leadership to create multiple understandings and solutions to challenges encountered in everyday practice.

Within ECE organizations, administration, management and leadership reflect diverse roles and responsibilities (Ebbeck & Waniganayake, 2003). This study investigated leadership enacted by ECE teachers in multi-professional teams. In these communities, the teachers had responsibility for pedagogy and curriculum plans specially at the team level, and the centre director's work was often remote from this daily work. By analysing the teachers' work within the framework of administration, management and leadership we were able to see the intersection of pedagogical work amongst the team members at each centre, and in turn, understand how distributed pedagogical leadership at the team level was being enacted in every day work.

Contemporary policy documents in Finland emphasise the ECE teachers' role as the most pedagogically qualified professionals in centres. In the latest draft for the early childhood curriculum, the teachers' position was noted as being responsible for ECE pedagogy now for the first time in Finland (Finnish National Board of Education, 2016; Varhaiskasvatuksen henkilöstön koulutus ja osaaminen, 2007). In practice, ECE teachers are considered as pedagogical experts having a great deal of autonomy. Within ECE centres, pedagogy is influenced by national and local policies and guidelines, as well as the needs, interests and abilities of individual children and their families. Pedagogical advancement must be considered as a purposeful and planned process (Heikka & Waniganayake, 2011). According to Stephen (2010) along with the local community, early childhood policies, curriculum guidance and training as well as values and perceptions of a practitioner, can influence pedagogical practice. Siraj-Blatchford (1999) states that understanding learning is central to thinking about pedagogy. The policy documents in Finland (Finnish National Board of Education, 2016) emphasize play, children's participation and own activity as a basis for pedagogy. Pedagogy means 'knowledge-based, planned and goal-oriented activity for children's well-being and learning, which is professionally lead and enacted by the professional staff' (Finnish National Board of Education, 2016, p. 20).

In early childhood pedagogy, planning and goal-setting is based on the observation and assessment of children and activities within the framework of the Finnish Early Childhood Curriculum (Heikka, Hujala, & Turja, 2009). The plans developed during team meetings, contribute to the centre's goals and could be adjusted according to the functioning of the group during the daily activities of an ECE team and a child group (Fonsén, Heikka & Elo, 2014). Pedagogical development demands reflexivity by team members lead by the teacher in the weekly team meetings (Heikka, 2016). For professional and pedagogical

development, the team members have to learn together and from each other (Ord et al., 2013). These processes are dependent on the teachers' dispositions to utilize their expertise and to lead their multi-professional teams.

Teacher leadership research is mainly addressed in school contexts (York-Barr & Duke, 2004). According to York-Barr and Duke (2004) for instance, teachers take on an increasing number of leadership functions both at pedagogical and organisational levels. This research suggests that teacher leadership is connected with the belief that all organisational members can lead and that leadership is a form of agency that can be distributed. York-Barr and Duke (2004) state that teacher leadership could be enacted through different forms of activities, roles and positions. They identified seven dimensions of practice to indicate what teacher leaders do: coordination and management issues, school or district curriculum work, professional development of colleagues, participation in change and improvement, parent and community involvement, contributions to the profession and preservice teacher education.

According to Fairman and Mackenzie (2015), teachers in their research emphasized even more informal leadership activities and relationships. Nevertheless, the main facet of a teacher leader is to develop an organisation moving towards its goals. To reach the goal, teacher leaders facilitate, lead, influence others and participate in decision making. Fairman and Mackenzie (2015) explain that these actions by teachers demonstrate the modelling of professional attitudes, coaching colleagues, collaborating with colleagues and advocating for change. Likewise, both Danielson (2003) and Harris (2003) also refer to leading organizational change and the importance of the leader's role in motivating others to advocate and embrace change. The main aim of implementing teacher leadership is to ensure interdependence between the key ECE leadership stakeholders in enacting pedagogical leadership (Heikka, 2014) as well as enhancing pedagogical improvement and change (Camburn & Han, 2009; Firestone & Martinez 2007).

The study conducted in Finland indicated that ECE teacher leadership was perceived as a pedagogical responsibility by the professionals. The perceptions about how teacher leadership was enacted included assessment, planning and ensuring that pedagogy was connected with the ECE goals at each centre. In addition, teacher leadership was perceived as sharing pedagogical leadership with the centre director and teachers from other groups. The centres differed in terms of how they perceived support and how it was provided for the teachers (Heikka et al., in press). However, the characteristics of Finnish ECE have not always supported the ECE teachers' having strong leadership. Based on previous research, the notions of equality and harmony among the employees were emphasised and even the leadership of a centre director has been quite invisible and vague. In Finland, traditionally, to a large extent the work of ECE staff have been defined

by the centre's routines for the children's education and care. This has meant that the timing of the work shifts was very influential in determining the type of work carried out by staff (e.g. Rouvinen, 2007). The devaluing of the professional orientation of ECE staff was one of the consequences of the traditional approach. Today however, there is increasing awareness about the core business of focussing on ECE pedagogy being led by well qualified teachers (Alila et al., 2014).

Study objectives and methods

The aim of the study was to investigate the enactment of teacher leadership in ECE contexts, and in particular, it examined two key aspects:

1) *how teacher leadership was enacted in ECE settings, and*

2) *identify the main acts of administration, management and leadership as performed by ECE teachers*

Three ECE teams from different municipalities of Eastern Finland were selected as a purposive sample for this study and the data collection was completed during 2015. The enactment of teacher leadership was investigated by observing the team meetings and the daily practices of ECE professionals participating in the study.

The selection of the centres was made together with the administrative ECE leaders in the selected municipalities. The centres consisted of 6-10 child groups, and in each group there were 12-21 children. The selection of the teams was done at the centre level on a voluntary basis. From each team, all members, comprising an ECE teacher and two childcare nurses, participated in the study. Typically, in the Finnish context, there are three staff members in a team. The combination of the professionals can be either one ECE teacher and two childcare nurses or two ECE teachers and one nurse.

Data collection

Participant observation was conducted during ECE teachers' work shifts on three days and in one weekly team meeting in each centre. Participant observation did not mean actually participating in the daily activities but observations were made through close interaction with the participants discussing the work with the researchers as it was being carried out (Bryman, 2004). The participants of the research were therefore aware when they were being observed and what was the focus of the observation. This awareness was also an important ethical issue in the present study (Hammersley & Atkinson, 2007). In keeping with research ethics, prior to commencing the research the participants were

made aware about the observations and about its aims by sending an information letter about the study to the centre director and the centre team participating in the research.

During the three days when the observations were done, the researchers focused on the work of the ECE teacher at each centre. The observations on each day were arranged to fit with the teacher's work shifts. In Finland, ECE teachers usually work 7 or 8 hours per day. The researchers followed the teachers in this study, except when they were working alone with an individual child or children in a separate room. The focus of this study was on how leadership was being practiced within a particular team. At each centre, the researchers also observed one team meeting which was arranged once a week and the teacher was the chair of these meetings. About 1-1½ hours were usually reserved for each meeting and staff from other teams worked with the children during these meetings.

According to Hammersley and Atkinson (2007), observational data can be collected in different ways, including as field notes done by the researcher either during the observation period or after it. In the present study, the field notes were done during the centre visits, and included a semi-structured observation form designed to maintain a consistent focus of the observations and documentation on predetermined themes capturing broad leadership functions and incidents where pedagogical leadership occurred. These themes were identified as questions such as: What kind of acts of leadership occurred during a particular incident? Who was involved? Who demonstrated leadership? How? What was the focus of the act of leadership? and how did the other team members respond to the act of leadership? Each leadership incident was documented on a separate sheet and was considered as one episode in the observation data.   Some field notes were written freely using pen and paper without the semi-structured form. Where possible, observations were also recorded either as an audio recording or a video recording.

During each visit to a centre, all communication which was observed occurring between the ECE teachers and team members were recorded or at least documented in paper by the researchers. Brief informal comments such as, 'I'll go to the toilet' or 'I'll have a break', were excluded from the documentation. Although these observation notes did not cover and focus on the children and parents, they were also informed about the study including the observation and video recording processes occurring during this study.

Data analysis

The data analysis process aimed at identifying the functions of leadership as performed by ECE teachers as well as discussing the identified acts followed the conceptual framework of administration, management and leadership as developed by Ebbeck and

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Waniganayake (2003). This approach led to the framing of the data analysis in two ways: first, the substantive inquiry of the content of the observation data were investigated through an inductive content analysis and second, the analysed data were then deductively examined through the roles and responsibilities identified by Ebbeck and Waniganayake. The notion of doing an inductive analysis was initially inspired by Fairman and Mackenzie (2012; 2015) who developed a model of 'Spheres of Teacher Leadership'. This research was based on school contexts and therefore not directly applicable as such but the idea about how to create our own ECE spheres or categories inductively, is important to acknowledge.

We began the inductive analysis of the observation data using Kripendorff (2013). In qualitative content analysis, the theoretical concepts and conclusions are generated through the process of interpretation and inference of participants' original expressions. The first step in the analysis process is to divide the raw data into context units or categories (Krippendorff, 2013). In seeking to answer the research questions of this study, context categories were defined as an episode presenting a leadership act. An episode was, for example, a conversation in the team meeting focusing on one individual child or guidance given to a team member during daily activities concerned with ECE pedagogy or teaching connected with children's learning. This also means that our analysis was focused on pedagogical activities of teacher leadership.

Each episode ended when the nature of the action transformed into another act. Episodes which were analysed included acts initiated either by the teachers or nurses. The first researcher started the inductive analysis and established a draft set of episodes and categories from the data from a team in one centre. This analysis continued with the data from the other two centres in the other two municipalities, and compared with the initial categories developed from the first centre.

At this stage of the analysis, it was important to compare the analysis done by the two Finnish researchers and confirm that the episodes were being coded in a similar way to ensure the reliability of the findings (cf. Krippendorff, 2013). For example, it was important to clarify what was the difference between directly requesting and guiding childcare nurses during pedagogical activities and play and in organizing daily functions of the child group and the division of labour in the team. The researchers came to an agreement about these two categories by systematically discussing the differences such as, that the first one included ECE teachers being proactive in instructing the childcare nurses. To support the credibility of the study, some excerpts from the data are included in this paper. Subsequently, all three authors looked at the emerging themes deductively by distilling the findings of the inductive analysis through the administration,

management and leadership framework conceptualized by Ebbeck and Waniganayake (2003, p. 32) (see Figure 1).

Administrating pedagogy included acts which supported making arrangements to organise the centre's work and the daily routines. Organizing daily functions and directly guiding childcare nurses aimed at improving quality, were more like managing and guiding the work of others without reflecting or discussing with the team and therefore were placed in the category of Managing pedagogy. Those acts which included reflection and conceptualization were included in the category of Leading pedagogy. The co-operation with the centre director and other professionals was described and included reflection. In addition, acts where the teacher either involved childcare nurses in pedagogical planning and assessment or did it by herself and directed the pedagogy, were included in this category. The findings of the study are presented next, and this follows the continuum developed by Ebbeck and Waniganayake (2003).

The observations captured in this research indicated that the position and tendency of ECE teachers to accomplish leadership both during team meetings and daily activities was strong. Most of the episodes observed were initiated by the teachers. The teacher was also the one who made the majority of decisions concerning children's learning and team work. In the team meetings, the teacher lead the conversations based on the agenda made by her. The pedagogical initiatives were mainly made by the teachers and only in a few cases, childcare nurses raised an issue to be discussed. Childcare nurses followed the teachers' ideas and asked questions when further clarification was necessary. The observations of daily activities also indicated that the tendency for the ECE teachers to accomplish leadership was strong. For example, negotiations initiated by the nurses were concerned mainly with questions about daily routines or the care of an individual child. Despite the initiation of these discussions, leadership was interpreted to be held by the teacher in these cases because their answers often included a solution or decision in response to the nurses' question.

Presentation of key findings

Figure 1 depicts in total, 11 categories of pedagogy related activity identified involving the team participating in this research. Some of these categories were very direct in depicting teachers leading the team members and some were more indirect. Most of these activities took place at the individual or team level and there were only a few episodes observed that occurred at the centre level.
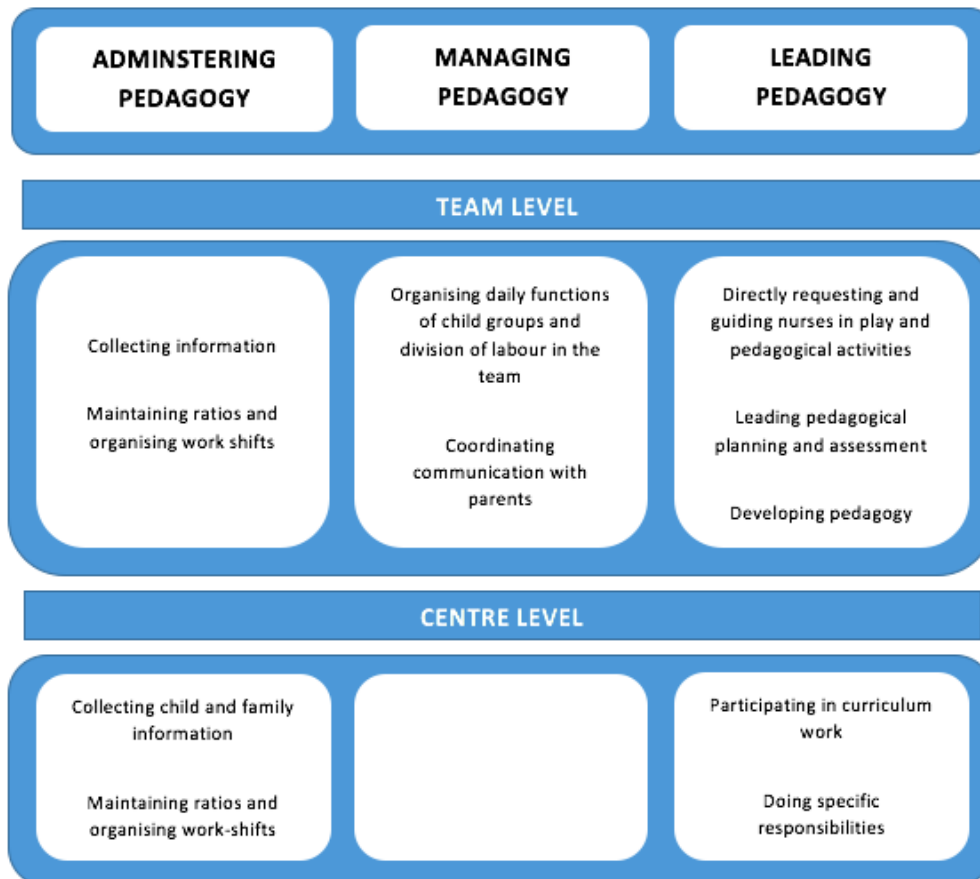

FIGURE 1   Teacher leader actions within the framework of administering, managing and leading pedagogy

All aspects of administering, managing, and leading took place at both the weekly team meetings as well as during the daily activities with the children in each room.

In the following sections, the findings from the analysis of the data collected are presented together under the categories of administering, managing and leading pedagogy in ECE centres.

Administering pedagogy

Traditionally, administrative tasks in ECE centres refer to the basic functions of running an organization (See Ebbeck & Waniganayake, 2003; Kagan & Bowman, 1997). In focusing on ECE pedagogy, we focused primarily on the technical or systems maintenance work concerned with the curriculum and pedagogy of each team participating in this study. These functions were observed during this research as acts of administering pedagogy, and these were enacted both at the team and centre level in cooperation with the centre directors. There were situations at the centre level which the researchers could not observe first-hand because they occurred outside the three observation dates. It was, nevertheless, observed at a team meeting how the teacher told about the co-operation done with the centre director and other teachers concerning the planning of the pre-school groups for the next year.

At the team level, administrative duties completed by the teachers were connected with organizing the work shifts, ensuring ratios as well as collecting or reminding childcare nurses to collect information from the parents about the coming holidays and the need for day care. Although acts of administering pedagogy by the teachers took place both at the team meetings as well as during daily activities, these acts were more present in the weekly team meetings. For example, maintaining ratios and organising the work shifts by assuring that there were enough qualified persons with the children in different activities, these discussions took place at each team meeting observed for this study. This work was usually administered by the teacher. The following except shows the discussion at the team meeting of the team 2, where the teacher organized the staff for the afternoon shift assuring that there were enough qualified persons outdoors:

> Teacher: *Wait I'll the take the shift here.*
> Nurse: *If I'm till half five on Thursday, till how long Linda (the teacher from the other child group) will be?*
> Teacher: *Till four*
> Nurse: *And on Friday till four*
> Teacher: *Yes. If the adults from the other group take our children, so that there will be a responsible person outdoors and you'll make the things here inside, which has to be done.*

This excerpt shows that sometimes there is co-operation with the other child groups. At the centre level, these acts included developing services and administering staff. Co-operation and decision-making at the centre level involving the centre director included

teachers' co-operation and negotiation about staff ratios in case some nurses left work earlier and how the pre-school groups were formed.

Managing pedagogy

In contrast to leading, the practice of management is connected with ensuring the day-to-day functions sustain the running of the organization as a viable business entity (Ebbeck & Waniganayake, 2003). In this research, we wanted to understand the role of the teachers in contributing to this work. We observed 'managing pedagogy' at the team level by the teachers included acts like guiding the childcare nurses and a child group into separate locations and activities, the division of labour between team members in the daily functions presented by teachers as well as in organising and guiding the nurses and the child group during transitions from one activity to the next. These were the most frequently observed managing pedagogy activities and were identified during both team meetings and during the daily teaching/learning activities with children.

These acts connected with the daily functions presented by the teacher usually included division of labour for the team members. Organising and managing the upcoming activities and the division of labour between the team members was strong for each of the teachers participating in the study. However, the approach each teacher used varied. In some episodes, the division of labour was presented as an implicit presupposition as reflected below in the first excerpt from the team meeting.

> Teacher: *We'll have math tomorrow*
> Nurse1*:   You'll take math tomorrow*
> Teacher: *I'll take the young children first and the older children could play games at the same time*
> Nurse 2:   *Board games*
> Teacher: *It won't take long*
> Nurse1:   *Yes*
> Nurse 2:   *What when they have finished?*
> Teacher: *Then we'll go out*
>
> *(*Excerpt, team 2)

In this excerpt, the teacher does not directly request the nurse to take responsibility for a certain child group or activities. However, after discussion with the teacher, the division of labour was clear for both. In addition to the implicit presupposition, the division of labour was presented as an explicit request directed to the nurses, as shown in the next excerpt from the same team meeting.

> Teacher: *And then our Elf day tomorrow…I have the letter here, I'll drop it to the mailbox on the fly. Who will run it in advance?*

Nurse1:   *I can run it.*
Teacher: *Put it under your skirt. I'll take the math cards with me, so that I can take them around me, and you'll put it in there in the meantime.*
Nurse1:   *Ok.*
Teacher: *About the 1st of May celebration things, we'll do the swimming room, we'll cover it and put the jingle sack there.*
Nurse1:   *ymm (agrees)*
Teacher: *The disco thing. Our cd player is so bad. Where do we put it so that we can hear it?*

(Excerpt, team 1)

In this excerpt, the teacher uses questions and direct advice to manage and plan for future activities and division of labour. During the daily activities, these acts involved guiding the childcare nurses and the group of children in the same room or organizing the team members into separate locations and activities with a group of children. Guiding the team members in these events also included asking nurses to assist the teacher during the activity. Organizing and guiding the team members and the child group during the transitions were also a significant part of managing this work.

There were variations among the teams about what were the roles and responsibilities of the childcare nurses and how they were involved in the daily activities. In Team 1, where the emphasis was on the use of so called small group pedagogy, each team member took care of the daily routines of their small group. In other words, the group of 21 children was divided into three groups and both the teacher and the childcare nurses were responsible for organizing the routines (e.g. going out, lunch time) of their small group. In this team, each member of the team had a very strong sense of autonomy about her/his child group:

> Children come inside from the playground in small groups. First John [childcare nurse] takes his child group, reads a rhyme with the children and takes them to have lunch. Then Celia [childcare nurse] and Paula [teacher] read rhymes with their own small groups and go for lunch. During lunch, when Celia is not present, one of Celia's children asks Paula if she can leave the table without having eaten everything. Paula replies to the child: "*What have you agreed with Celia about this*?"
>
> (Observation diary, Team 1)

This excerpt from the researcher's diary shows a different way of organising daily activities compared with Team 2 and 3, where the teacher had responsibility for the whole child group more clearly.

In those situations, where the nurses in Team 1 were in charge of the daily routines and activities for the whole child group, they had the right to make decisions:

> John [childcare nurse] was in charge of breakfast. One of the children asked the teacher permission to leave the breakfast table and the teacher said to the child: "*Let's listen to John when he says who goes first.*"
>
> (Observation diary, Team 1)

However, regardless of the small group pedagogy in Team 1, this teacher was also acting in the same way as the teacher in the other two teams. That is, the teacher was the main person, for example, responsible for defining the plans and structure of the day.

> The teacher came to the latest work shift around 9 a.m. Both nurses had come earlier and were taking care of breakfast activities. The weather was bad and rainy and without negotiation with the others the teacher said that let's change the program for the day. "I will create something else. I will take some math things and we have those workshop activities this week." Both of the nurses follow the situation but do not say anything.
>
> (Observation diary, Team 1)

In the other two teams, the nurses initiated actions more frequently in organizing the daily activities or asked the teacher for advice. Childcare nurses in the Team 2 and especially in the Team 3 made several initiatives out of the overall total of such episodes where the daily activities were organized. An example of the nurse's initiation of pedagogical activity in organizing skiing activities for the following week is taken from the team meeting of Team 3:

> Nurse 1: *How about skiing? Then it is already skiing holiday. Will we carry them with us then?*
> Teacher: *When it will be the sliding day, however, then there is the team meeting of the other group, so we have to think if we can go skiing on that day. On Monday it is the role play day and then we can very well go, when we have finished playing, it can be during the outdoors time, the skiing. And on Friday, then it is the own cd's day and it's not impossible on that day to go skiing either…*

In the above excerpt it can be seen how the question presented by the nurse makes the teacher think about how they could fit skiing into the next week's plan.

Coordinating the communication with parents included informing child care nurses about what to inform and ask from parents, distributing information to parents, organizing discussions for individual children with parents and discussing with child care nurses about individual children in preparation for the discussions with parents. The questions to be coordinated entailed, for example, asking parents about the need for day care or issues related to the children's well-being (such as, nutrition or health-care). Managing communication with parents comprised tasks the teachers performed in maintaining the centre's pedagogical work by establishing systems to collect data and coordinating communication with others beyond the centre staff.

Leading pedagogy

Leadership is about vision and foresight in thinking about long-term possibilities (Ebbeck & Waniganayake, 2003; Nivala, 1998). In practice, in relation to 'leading pedagogy', we should be able to observe this work as acts of planning curriculum as well as facilitating the thinking of others about long-term outcomes for children's learning.   As such, leading pedagogy as observed in this research comprised of acts related to planning pedagogy and curriculum work both at the team and centre levels.

At each centre, the majority of these acts were observed as they took place during the team meetings. However, there were not many episodes when the teachers directly requested and guided childcare nurses either during the team meetings or during the daily activities.

The acts of leading pedagogy by the teachers included, for example, teacher specified guidelines for the childcare nurses how to guide children in the daily activities. If the teacher directly requested or guided childcare nurses, it included advice like how to support individual children during curriculum activities, how to guide children's' play, how to handle teaching children with special needs, and informing childcare nurses about pedagogical skills and what and how to do pedagogical documentation. These aspects are illustrated in the following episode involving Team 1 initiated by the nurse describing how children had used scissors in an activity she was in charge of. During the episode, the nurse got direct guidance from the teacher:

> Nurse 2: *For Mary it was very difficult to use scissors and cut along a line.*
> Teacher: *Do you think she was afraid to do it or was she just uncertain?*
> Nurse 2: *I think she was just uncertain.*
> Teacher: *Did you check that the scissors were good and there was no problem with them?*
> Nurse 2: *Yes, they were ok.*

In this excerpt, the teacher involves the nurse to reflect the challenges she faced with the child. In these acts the teacher also informed or instructed the childcare nurses how to handle behavioural challenges of individual children that impacted their learning as documented in the following diary excerpt:

> Paula [teacher] tells about the math exercises she has done with the children. She tells that Mark [a child] had difficulties in the exercises and says that they (staff) all have to remember to often take him to the math activities. Paula also reminded the childcare nurses to proactively take some of the children to curriculum activities like games which drill language skills.
>
> (Observation diary, Team meeting Team 1)

Leading pedagogical planning and assessment included both individual planning and assessment made by the teachers as well as planning and assessment done together with the nurses. Most of these acts were present in the team meetings: in each team, the teacher led the planning and assessment and presented plans she had made for the following week or for a short period of time. These plans were discussed and sometimes changed together with the nurses. In this way, the nurses were also invited to make pedagogical planning and assessment. Teachers in Teams 1 and 2 were observed in several instances inviting the nurses to observe, document and assess individual children's performance and needs. In these teams, the nurses actively commented and joined the discussion. There were episodes when a nurse also reported to the teacher how individual children identified colours or how they concentrated on achieving the objectives specified by the teacher during a planned play-based learning experience. Nurses also presented their own views on the problems children encountered in play.

The teacher in Team 2 emphasised involving the nurses in pedagogical documentation during the daily activities lead by the teacher as well as planning and documentation during weekly team meetings. Childcare nurses were, for example, asked for observations and pedagogical documentation about individual children's skills they had seen during play and other daily activities. Their observations were also used in the annual discussions teachers had with parents and in curriculum planning. In the next excerpt the teacher of Team 2 involved nurses in documentation and assessment during a music activity which was guided by the teacher.

> Teacher: *What kind of documentation did you do during the music activity?*
> Nurse 1: *I was the only one who did. I think these are good because it strengthens the notion of Luca and Oliver, Oliver goes along with the larking*
> Teacher: *Yes. Did you notice how difficult it was for Oliver to follow instructions?*
> Nurse 1: *Yes. I documented also that from Oliver, the instructions and understanding. And Amanda's concentration, really, really bad concentration, how she can't …*
> Teacher: *Yes, these issues we have already discussed. And we have also made co-operation with their families about these issues.*
> Nurse 1: *Yes.*

During the daily activities it was quite rare for the teacher to ask for advice from the childcare nurses on pedagogical planning and assessment matters. Nevertheless, it was noted in an episode during the craft activities, how the teacher asked for an advice on how some craft work planned by a nurse should be completed:

> Celia [childcare nurse] makes paper crafts with the children. Paula [teacher] came and had a look at how Celia makes the craft and asked instructions how it was done… In the afternoon, Paula continued the paper craft activity with the children.
>
> (Observation diary, team 1)

This excerpt is also an example about how childcare nurses independently were responsible for some daily activities and in this way lead the activities.

There were a few episodes during the daily activities where the teacher and nurses planned together how to prepare activities for an individual child. However, the teacher made decisions on how the child was to be treated for example during lunch or nap time. Also individual pedagogical planning and assessment done by the teacher herself occurred rarely during the daily activities. The individual planning that was observed took place during the children's nap time. For example, teachers planned the pedagogical activities for the following day or made individual assessments of the curriculum plans of the past month or of an individual child.

Participating in curriculum work at the centre included co-operation with ECE specialists and with the other teachers at the same centre. Co-operation with the teachers from the other groups within the centre included organizing and planning an event for all the children at the centre. Also at the centre level, all the teachers had their own meetings where they planned and discussed the centre level curriculum together as one group.

Conclusions

Overall, the findings of this research show that leadership enacted by teachers in ECE centres in Finland were diverse and bounded by the small team environments as well as each centre as one organisation. This finding is consistent with the previous studies in that teacher leadership existing in diverse contexts and found within school education organizations (Harris, 2003; York & Barr, 2004; Ho, 2011; Fairman & Mackenzie, 2012; 2015). Teachers participating in this research acted as coordinators, leaders of curriculum work, supporters of professional development of their colleagues, and facilitators in creating pedagogical improvements impacting the whole centre.

The findings also indicated the strength of ECE teachers' leadership capabilities. Leadership was constant and embedded in several aspects of their work. The role of the ECE teacher was strong both in the team meetings and during daily activities as the teachers were the ones who usually led the planning and assessment work as well as made the pedagogical decisions related to children's learning and the development of pedagogical skills of the team including childcare nurses. The planning and assessment led by the teachers in the team meetings was realized in organizing the daily functions and in guiding the pedagogical functions of the nurses. It was also evident that the teachers' leadership acts took place mainly at the team and individual room level and only in some episodes at the centre level.

Most of the acts observed both in the team meetings and during daily activities in each team were categorized within the category of organizing daily functions of a children's group and division of labor between the team of staff in that room (see Figure 1). These acts appeared mainly as instructions given to the children. Importantly, through these acts, the teachers also organized the work of the childcare nurses in their rooms. Nevertheless, direct instructions or orders given to the nurses were rare. It seems that although the teacher was the leader of the team, the leadership was usually enacted in indirect ways. The results indicate the nature of ECE practice as collegial work. However, embracing leadership roles is an important aspect expected of ECE teachers in leading pedagogy. In this regard, the findings between the staff at the three centres participating in this research were very similar.

This process of dual analysis as explained in this paper enabled us to connect leadership themes in a systematic way that has not been attempted previously when exploring how teacher leadership is enacted within ECE centers in Finland. Those such as Heikka (2014) and Kagan and Kauerz (2013) have called for the need to establish systems to guide the work of ECE staff. Empirical research to pursue this objective is missing at present and this paper contributes to this discussion by offering an innovative analysis strategy that can enable us to better understand the complexities of teacher leadership in contemporary ECE contexts.

Taking into account the new curriculum framework in Finland which demands change and development of organizational cultures in ECE centres, a more reflective approach to pedagogical planning has to be embraced by today's ECE staff. The challenge of leadership will then be how to enhance reflective and pedagogically aware professionalism by ECE staff. However, there were some differences in the teams in the way that the teacher was involved with childcare nurses in reflective pedagogical planning and assessment. Another distinction was if the nurses initiated an episode and, for example, asked the teacher questions about some pedagogical issues. In each team, the nurses initiated these questions but it seems that these moves could be categorised in different ways with each team.

The existence of strong leadership may also mean that ECE teachers are expected to act as leaders by their colleagues. This finding supports the ongoing discussion about the need to make the leadership of ECE teachers more formal (Alila et al., 2014). Our findings align with Fairman and Mackenzie (2012) who indicated that examples of formal leadership were a minor role. Regardless of the strong leadership of the three ECE teachers participating in our study, it should be noted that ECE teachers in the Finnish context have little or no formal leadership training. To improve the leadership capabilities of ECE teachers there should participate in leadership training both before and after

taking a position of an ECE teacher. There is already research based evidence that those recently qualified ECE graduates who had leadership training in their teacher education degree were better prepared to take leadership roles when entering the workforce (Campbell-Evans et al., 2014; Mistry & Sood, 2012). There is however no agreement about the nature of leadership training that is appropriate or necessary for those working in the early childhood sector.

According to Rodd (2013) effectiveness of ECE leaders are connected with their role and includes responsibilities such as inspiring others, use of open communication skills, being goal-directed, celebrating achievements and fostering the development of others within a team culture. In this exploratory study, we have been able to identify some aspects of effectiveness in relation to leading, managing and administering responsibilities associated with the pedagogical work, the core business of ECE centres. Further research is necessary to ascertain the effectiveness or influence of leading, managing and administering pedagogy, in relation to children's learning as well as in building capacity of the professionals who work with them.

Observations of three different centres and teams have provided a broad picture of leadership acts teachers perform in Finnish ECE centres. However, a limitation of this study is that the researchers were not able to observe different kinds of meetings where, for example, long-term pedagogical planning took place. It was evident that long-term plans had been prepared prior to this study and at a different type of planning meeting. In Finland, the yearly rhythm in ECE follows the school terms from starting in August and ending in July: long term planning is usually done at the beginning of the Autumn term and some of the teams were observed at the end of April. A longer period of observations at the centres could have also made it possible to see more leadership acts at the centre level, including acts that usually do not occur even weekly. Future research could benefit from conducting a longitudinal study to capture more variety in the situations where ECE teachers act as leaders.

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