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From activity to transdisciplinarity and back again – Preschool teachers' reasoning about pedagogical goals

ABSTRACT: This study presents an analysis of preschool teachers' reasoning about pedagogical goals. Of specific interest is how teachers in a Swedish and a Finnish context describe goals for children's learning and how they describe them implementing these goals into their practice. The research question is thus: How are pedagogical goals perceived and enacted, in the thematic-oriented and play-based pedagogical practice of preschool? In-depth interviews were conducted with six preschool teachers, of which three expressed learning goals guiding their pedagogical work. The Variation Theory of learning is the guiding principle throughout the analysis, and reveals indirect and direct objects of learning and content for learning described by the three teachers. A deeper analysis of the features of these provides a comprehensive picture of pedagogical goals that are intertwined and move between activity goals, working goals and transdisciplinary goals. These results contribute to our understanding of the characteristics of preschool pedagogy and the complex pedagogical practice preschool entails.

Keywords: early childhood education, goals, objects of learning, preschool pedagogy, preschool teachers

Introduction

This study presents an analysis of preschool teachers' reasoning about pedagogical goals, and how they implement these goals into their practice. National guidelines for preschool in the Nordic countries (see e.g. Swedish National Agency for Education 2011; Utbildningsstyrelsen 2016) give directions for the content in preschool work, but do not specifically dictate how to differentiate and implement goals for learning. Learning and development is nevertheless primary in the policy documents for preschool practice. This highlights the need for scrutinizing the ways of implementing pedagogical goals into preschool practice, as expressed by the teachers. This study may contribute to the ongoing debate about how pedagogical goals are shaped and the ways in which children are involved in activities that facilitate learning towards these goals. The research question is thus: How are pedagogical goals perceived and enacted in the thematic-oriented and play-based pedagogical practice of preschool?

Preschool pedagogy

Preschool pedagogy involves teachers' commitment to provide a public service (caring for children during parents' working-hours) but also, and recently more emphasized, a profession that aims to facilitate children's learning and development in accordance with a curriculum. The preschool teacher profession then comprehend skills to identify teaching possibilities that are suitable for the children, considering children's different pre-existing knowledge and interests, and adapting teaching methods in-action (Maskit & Firstater 2016).

All pedagogical practices are normative in nature. This means that there are pedagogical goals; that someone wants someone else to achieve some level of competence, knowledge or skill. How this process is orchestrated is the basic work of the teacher, which relates to his/her approach to knowledge and teaching. This indicates that there are differences in how teaching is organized, based on teachers' knowledge, methods and experience. The concept of didactics is relevant here, as it frames the teaching act as a relationship between three parts: the learner, the teacher, and the content. The concept helps explain teaching through the order and appearance in which content is

made possible for the learner to experience and develop an understanding of, related to the means of instruction (Hopmann 2007). This calls attention to the ways in which the learner meets the content and makes sense and coherence of what is presented to him/her.

Learning objects in Nordic preschool differ from those in formal school, due to the nature of the respective pedagogical goals. Formal education sets goals to achieve at a certain school level, while preschool education is more likely to set goals to strive for and knowledge areas to work with (see Swedish National Agency for Education 2011; Utbildningsstyrelsen 2016). Another difference is the differentiation of learning content into subjects, versus thematically integrated knowledge areas. Still, the current debate emphasizes meaningful coherent knowledge acquisition in both school forms.

Teachers in preschool are mostly educational generalists, meaning that they do not specialize in any specific subject. They are presumed to master all possible knowledge areas that emerge as possible for learning in the preschool practice, such as literacy, mathematics, arts, motor skills and social competence. This brings about a pedagogical dilemma, since what is actually taught is likely to depend on the teacher's attention to and pedagogical content knowledge in the different domains of knowledge. On the other hand, preschool teachers have a broad pedagogical competence that embraces the whole child and understands children in terms of their development (Pramling & Pramling Samuelsson 2011).

There is a mix of different pedagogical paradigms directing how and what to teach in preschool, which in turn are based on different ways of interpreting children's learning (Bennet 2005). For example, in Finland and Sweden, which is the context of our study, there is a history of the Fröbelian tradition of kindergarten, picturing the natural child learning skills and techniques, for example in arts. In recent years there has been interest in the philosophy of Reggio Emilia, also influencing preschools' pedagogical goals and methods in both countries. This approach emphasizes the child's freedom to develop multiple ways of communicating and creativity as a process rather than a product. Another connecting perspective in preschool practice is the social-pedagogical approach (Hujala 2002; Jönsson, Sandell, & Tallberg Broman 2012), the influence of which can be found in both the national curricula and guidelines. Of importance in this tradition is to foster a child who is to be a participant in society and who is therefore in particular need of social and communicative skills.

Bennett (2005) describes the social-pedagogical approach as one of two dominating paradigms of preschool pedagogy in Europe. The other one is influenced by primary school goals and teaching aiming at preparing for school. These approaches are distinct in both what children should learn and how education should be conducted in the early years. Contemporary research on early childhood education give reasons to avoid such dichotomies between education that emphasise knowledge development and care. Instead, Siraj-Blatchford (2010) shows how high quality preschool practice embraces children's cognitive and social learning as complementary and equally important. Recent revisions in the preschool curricula in both Finland and Sweden are in line with this latter complementary approach, emphasising both social and cognitive skills as important for children to develop. This approach is however challenging to implement in preschool practice, shown in a study by Williams, Sheridan and Sandberg (2014). Williams et al. further conclude that this approach to teaching presumes a simultaneous focus on goals on a micro level and a macro level: "It is important that learning about, for example, maths, reading and writing, science and technology is integrated with learning abilities such as listening, understanding and dealing with others' opinions and developing good self-esteem" (Williams et al. 2014, 237).

Contemporary early childhood pedagogy, according to Pramling and Pramling Samuelsson (2011), refers to the interaction and communication between a teacher and a child, based on the achievement of intersubjectivity or sustained shared thinking (Siraj-Blatchford 2007). This communicative and explorative approach to early childhood education calls attention to how children can make sense of their experienced world, and teaching means to extend their experiences. Essential for interaction, then, is that the child encounters and is supported in exploring relationships and concepts that help him/her make sense of a certain domain of knowing.

Theoretical framework

The theoretical framework for this study is the Variation Theory of learning, which emphasizes what is made possible to learn in different learning situations and how teachers and learners experience the learning object (Runesson 2005). How a teacher makes it possible to experience a learning object in a particular way is decisive for what the child will actually learn (Marton 2015). This focus is of interest in the context of preschool, where thematic work and children's initiatives and interests are at the centre of education: what is made possible for children to learn in such a child-centred practice.

The dynamic and complex practice of preschool challenges the teachers' pedagogical work, particularly how learning objects are constituted and resources utilized. Preschool teachers' reasoning about pedagogical goals is thereby in this study, in accordance with Variation Theory, analysed in terms of the *intended object of learning*, and furthermore the *direct object of learning* and the *indirect object of learning*. These theoretical concepts make it possible to describe a structure of pedagogical goals, as they are experienced by the preschool teachers.

The object of learning is central in the Variation Theory approach, and is the focus of attention in any teaching situation: it is what the teacher strives to direct the learner's attention to and develop knowledge about. In order to learn, or extend one's experiences, certain aspects of a phenomenon are necessary to discern, to be or become aware of the phenomenon in some specific way, according to this theory. For example to understand the mathematical concept of 'patterns' the learner needs to explore how patterns constitute of repetitive units following some rule, which will expand the idea of patterns as they are commonly recognized on clothes and textile for aesthetic purposes. In this case, the aspect of repetitiveness is necessary to discern if the concept is to be used in mathematical terms, but also to construct own patterns in art and constructive play. Teaching means, then, enabling the learner to discern such aspects that will change the way he/she experiences the object of learning (Lo 2012). In preschool practice, where goals are shaped in terms of "knowledge and skills to strive for", teaching is to facilitate the child in extending his or her experiences, making the experienced surrounding world more comprehensible and meaningful (Pramling & Pramling Samuelsson, 2011). A more nuanced understanding of 'patterns' then means that children can make use of their knowledge in new situations, expanding their play and interaction with others.

Any object of learning constitutes two parts, which are of interest when studying teaching acts: *the direct object of learning*, defined as what the child is intended to extend his/her knowledge about (for example the repetitiveness in patterns, or time as a musical content); and *the indirect object of learning*, which refers to a child's capabilities or the ways in which he/she tries to master new knowledge, for example analysing, discerning, interpreting, or viewing (Marton, Runesson, & Tsui 2004; Marton 2015). In our study we add the notion "content for learning", since the teachers prefer to talk about learning objects (as described earlier) closely related to a theme or in terms of some concrete activity towards which their interaction and communication with the children are centred.

This is also related to the “space of learning” (see Marton 2015) which constitute the possible learning objects and learning outcomes that may emerge within a specific situation.

Lo (2012) distinguishes between learning goals as pre-defined knowledge to achieve, such as goals described in the national curriculum, and objects of learning, which will ensure that the learner achieves the goals. This is of relevance to our study, in which the teachers reason about pedagogical goals and need to express themselves in terms of how they implement these goals into their practice; in other words, what they make possible for the children to explore.

The object of learning can be described as either an *intended object of learning*, which refers to the knowledge or skill the teacher intends to highlight in the teaching situation, or *the enacted object of learning*, which on the other hand is what is realized in the actual teaching situation and what is made the object of exploration in the situation. *The lived object of learning* means what the child learns to understand about the object of learning (which may be very different from the intended object of learning) (Marton & Tsui 2004; Marton 2015). What a teacher intends to develop knowledge about may not be the same as what the teaching situation actually encourages the learners to explore, since different experiences among the learners inform what they discern as prominent and relevant. The teacher may, for example, have planned an excursion to an exhibition to study artwork and handicraft, while the pieces of art inspire the learners to explore patterns and symmetry. Our study directs focus to the *intended object of learning*, by exploring how teachers reason about the pedagogical goals they plan for and strive towards. We touch upon the enacted object of learning through the teachers’ examples from their practice, but since these are only the teachers’ reflections, the enacted object of learning cannot be analysed or discussed in ways other than as potential learning opportunities.

Method

The study is small-scale, and is based on in-depth interviews with in-service preschool teachers. We use qualitative analyses to describe how the teachers perceive pedagogical goals and how these are enacted in pedagogical activities. The specific focus on goals is a delicate issue in Nordic early childhood education discussions, but is nonetheless important to highlight and study more thoroughly. In the following section we present the participants in the current study and the methods used in the data generation and analysis.

Participants

The empirical data are generated from in-depth interviews with preschool teachers from Finland and Sweden as part of a larger study (see, e.g. Ahlskog-Björkman & Björklund 2016a, 2016b; Björklund & Ahlskog-Björkman 2017). Twenty-one teachers, who had previously participated in a digital survey on thematic work in preschool, had given their consent to be contacted for the current follow-up in-depth investigation. Of these, six were invited to participate. The selection of participants was based on their extensive answers in the previous survey and their geographical location. Our aim was to cover a broad area in both Finland and Sweden, and to ensure that participants had experience of thematic work and embraced the idea of arts and mathematics as content for learning in preschool. The teachers all work with children 3-5 years old. All participants gave written consent, ensuring that they were informed of the purpose of the interview and that their integrity would be secured in line with ethical guidelines for research (Swedish Research Council 2011). In all public presentations, the participating teachers are given fictitious names.

Data

All interviews were conducted in spring 2014 at the preschool teachers' workplace. They were planned as semi-structured interviews (Brinkmann & Kvale 2014), which means that the interview was designed as a dialogue rather than following a strict list of questions, to enable the teachers to express themselves freely and in-depth. Certain themes were to be covered: creative arts, mathematics, and the integration of arts and mathematics. The interview guide contained questions regarding general aims of thematic work (what, how, why and when), and more specific questions about goals for learning within the field of mathematics and arts (for example: "What is your intentions regarding children learning aesthetics/mathematics?", "What is the purpose with the mathematical content you are working with?"). A reoccurring question in all themes was the purpose of the activities and the learning goals the teachers intended to implement in the activities. Each answer was followed up in-depth to ensure that the teachers' intentions and meaning of the content was brought to the fore. The interviews lasted 75-130 minutes, and were documented with an audio-recorder and transcribed verbatim.

Analysis

The analysis is data-based in that the categories constitute similarities and differences in the teachers' expressions. To make sense of the differences and similarities, Variation Theory of learning (Marton 2015) has been the guiding principle throughout the further analysis. Our intention was to determine how teachers perceive pedagogical goals in preschool practice by studying how they describe intended objects of learning and ways of implementing them. Therefore, in the analytical process we aimed to reveal what aspects were said to stand in the foreground in the teaching situations, and what aspects were present but not necessarily made objects of learning for the preschool children.

The data were analysed in three steps. First, utterances containing answers to questions about pedagogical goals and spontaneous expressions about goals for learning were singled out. Second, the goal-oriented expressions within each interview were categorized according to the characteristics of the expressed goals. This second step was done individually by the two researchers, followed by a mutual discussion about the variation in expressions and meaning found in the data. The analysis revealed qualitative differences in the depth and breadth of the expressions. Three of the teachers talked about providing children with experiences of different kinds as the main purpose of planned activities, but not in terms of developing any specific skills or striving towards a developed understanding of some particular learning object. In other words, they did not express any goals for learning in the sense that the children would develop in any way; nor did they reflect on what the experiences would lead to. The other three teachers expressed their views on goals and implementation in ways that reflect a more dynamic and multifaceted approach and were selected for a more thorough analysis.

In our analysis of the selected three teachers' expressions we found utterances describing very specific objects for learning and some on a more general level. These could be described in terms of direct and indirect objects of learning in accordance with our theoretical framework, but not comprehensively: some expressions were closely related to the content per se and the learning opportunities that the thematic work with its available resources offered. To understand the relationships between pronounced pedagogical goals (direct or indirect objects of learning and content for learning) we conducted a third step of analysis: Informed by Variation Theory (Marton 2015) we interpreted the teachers' different ways of describing the pedagogical goals and their implementation as aspects of the phenomenon 'pedagogical goals in preschool'. We found that these aspects or features of pedagogical goals could be differentiated on three levels, reflecting: 1) transdisciplinary goals, 2) working goals, and 3) activity goals. These are intertwined, and provide a

comprehensive picture of the dynamic flow between pedagogical aims and activities in goal-oriented preschool practice as they are expressed by the teachers.

In the following presentation, we start with an overview of the relationship between the objects of learning and the content for learning that was prominent in the three teachers' reasoning about their pedagogical goals. Thereafter, we present the specific features of the pedagogical goals.

Results

The first step in the analysis singled out expressions of pedagogical goals. This revealed that the teachers seemed to find it difficult to verbalize their intended learning objects in mathematics, but particularly concerning learning in arts. The second step of the analysis revealed a dynamic approach to pedagogical goals among three of the participating teachers, meaning that the pedagogical goals were not generally related to subject knowledge but rather to developing skills of a transdisciplinary nature, which in turn were connected to more specific skills and understanding. In the following presentation, the teachers' perceptions as they are expressed in narratives from their practice, are related to the indirect object of learning, direct object of learning, and content for learning, which help us unfold the complexity of the teachers' intertwined pedagogical intentions. The relationship between these learning objects will be presented with examples given in the interviews.

Teachers' reasoning about pedagogical goals

Teachers express their ways of working in the pedagogical practice as striving to develop children's skills and knowledge of different kinds. We find that the teachers express their pedagogical goals using a narrative approach, whereby different goals are often intertwined. This becomes prominent in their description of their pedagogical work as the themes they have been working with, emphasizing coherence and contextual frameworks rather than core subject knowledge.

A project described by teacher Emma centres on choreographing to music through body movements and instruments, and is said to be a frame for exploring and using the idea of patterns and knowledge about aesthetical content (musical elements, dance and instruments). The activity is furthermore said to have a certain purpose (a programme for a spring party), whereby the children have to make use of these skills at the same time as they need to develop the skills and knowledge in order to conduct the activity in accordance with their intentions. Through the act of exploring and practicing their old and new skills that are needed to perform the choreography, including being familiar with the idea of and having the ability to follow a pattern, they develop their analytical and communicative skills, as intended by the teacher. Figure 1 shows how the different pedagogical goals are related to each other, exemplified by the teacher in her example of the choreography activity.

Figure 1 here

FIGURE 1 Pedagogical goals directed at analytical and communicative skills, understanding and creating choreography, and planning a programme for a spring party.

All three teachers cite democracy and ethics as examples of goals they strive towards through collaborative teamwork, and the experience of values as something that concerns every child. We find several acts and activities expressed by the teachers that at first glance look very concrete, reminiscent of pottery. However, according to the teachers' statements these activities are carefully planned and have a direct relationship to the overarching learning goals.

Another project, also by teacher Emma, involving making structured lists and rules for turn-taking, can be seen on one of the preschool walls. This list is the result of a longer process of deciding which

method is fair, and providing each child with equal opportunities when it comes to making decisions about order. The strategies they explore are different nursery rhymes, random selection through a digital application, voting or lottery. These methods help the children make rules for fair decisions and problem-solving, which they need in their daily lives. Making sound decisions about methods for turn-taking involves mathematical reasoning and the creation of graphic representations, and serves as an excellent example of both mathematics and arts learning, according to the teacher. The project furthermore actualizes the notion of equality and rights, which the teacher asserts is an important aspect of democracy, which they work with as an indirect object of learning in every act and activity. Decision-making activities are therefore made a content for learning, which in turn is in the centre of their daily interaction at mealtimes (see Figure 2).

Figure 2 here

FIGURE 2 Pedagogical goals aiming at valuing democratic influence and equality through exploration of different decision-making strategies and their outcomes.

Another more subtle feature of democracy is collaborative work in making instruments, maracas. The activity, described by teacher Hanna, is part of a project involving sound. The teacher, however, is very explicit in expressing the maracas activity as a collaborative act in which certain skills are needed in order to design an instrument that can be used for playing. The purpose is furthermore to facilitate joint experiences in an attempt to visualize differences and individuality as parts of democracy and human rights, as shown in Figure 3.

Figure 3 here

FIGURE 3 Democratic values including the appreciation of individual differences challenged in collaborative work with making maracas.

A highly concrete example of intertwined pedagogical goals is described by teacher Lisa. The children are encouraged to develop their fine motor skills by learning to sew with a needle and thread. This act is a deliberate choice as a complement to expressing oneself by drawing with pen and paper. The teacher finds this appropriate as a means to make the children aware of different ways of expressing themselves: a thought can be communicated through different modalities. These activities are inspired by an art exhibition that encourages them to frame their sewing activities as pieces of art. The relationship between the learning goals is expressed as a planned activity to encourage children to do their own artwork, while developing their fine motor skills. The different modalities are then expressed as an overarching aim to develop communicative and aesthetical skills and expressions (see Figure 4).

Figure 4 here

FIGURE 4 Sewing activity, to create art pieces, offers the children to train fine motor skills, and develop the children's repertoire of communicative tools.

The general impression of the teachers' expressions of their pedagogical goals is that there is a dynamic flow between highly concrete activities and the learning objects that are implicit in the activities, and more comprehensive objects of learning that run through every act and activity. Interestingly, it is the latter all-embracing goals and objects of learning that are the most clearly verbalized by the teachers when asked about the pedagogical purpose.

Features of pedagogical goals

The flow of the pedagogical goals, described using the empirical examples in Figures 1–4, constitute the general perception of the pedagogical goals in the preschools. The further analysis of the aspects that emerged as pronounced by the teachers are in this section described in terms of features of the pedagogical goals, as expressed by the teachers.

The analysis revealed that the indirect objects of learning emerged in several of the teachers' narratives of their pedagogical work. This indicates that these skills and competences are considered to be transdisciplinary. We also found that the direct objects of learning the teachers described were very prominent in the projects, and were necessary for making the activities successful and possible to develop in the desired direction; we call these *working goals*. Content for learning frames what the children are invited to make meaning of, which also requires goals, in terms of some project to attend to; we call these *activity goals*. These constitute the features of pedagogical goals as expressed by the teachers, and will be described and elaborated on in the following text. Figure 5 gives an overview of the goals and their relationship to learning objects.

Figure 5 here

FIGURE 5 The relationship between learning objects and content for learning and the constituting features of the pedagogical goals.

Transdisciplinary goals for learning

When the participating teachers talk about pedagogical goals in preschool practice they start on a very general level, indicating that goals they establish for the children to learn are transdisciplinary and run through most of their practice. The learning objects they specify are described as analytical skills and communicative skills, lived democracy, and an ethical approach to the surrounding world. These do not refer to any specific content or knowledge area, but are rather general skills and approaches that ensure sustainable development for both the child and society. However, these learning objects are indirectly involved in their practice but prominent in the teachers' verbalization of pedagogical goals. For example, art is said to be used as a means for learning goals such as cooperation and for establishing a sense of fellowship within the child group.

The transdisciplinary goals are more or less "invisible" in the practice, but are actually what the teachers talk about in terms of their primary goals for learning.

Working goals

In the participating teachers' discussion about their pedagogical work and what they consider goals for learning, certain skills and ideas appear central, such as working with the idea of patterns, exploring musical content and body expressions in relation to each other, collaboration and social skills, and experiencing values in nature. These are also expressed as objects of learning, but are simultaneously described as means for the overarching transdisciplinary goals. Through activities that develop mathematical ideas such as the idea of patterns, the children's analytical skills are said to be challenged and facilitated.

A common working goal found in the interviews is to encourage children to collaborate, and to emphasize joint exploration as a way to make meaning of democratic values and children's influence on their own life. One example of this is the making of maracas as a collaborative project for the group to be involved in, both in the artistic making of the instruments and in the artistic expressions of using them. Another example is when musical elements become the direct object of learning (learning about rhythm, time or form), taught through creating and following choreography, which in turn serve as facilitator for developing communicative skills.

Working goals are what the teachers strive to accomplish – some kind of development in the children’s knowledge or skills necessary for carrying out a project.

Activity goals

All pedagogical goals, whether they are indirect or direct objects of learning, are described by the teachers with examples of learning objects situated in practice. The teachers in our study talk generally about thematic work or projects that frame the learning in familiar settings where concepts, skills or values can be made meaningful. However, these projects that are empirical by nature do not always point directly towards the learning objects intended by the teachers. The activities are what an outsider (a parent or visitor) would see as going on in the preschool, and may also be what is primarily in focus for the children themselves. For example, planning and rehearsing a programme for a spring party may be prominent in the activities with the children. On the other hand, the pedagogical goals directed at basic literacy skills and collaboration as well as the transdisciplinary communicative skills (which are necessary aspects of both literacy and collaboration) are less obvious to a potential observer.

Activity goals are most likely what the children experience as “doing” during their day in preschool. This framing of the learning goals is necessary for the teachers’ enacted teaching practice and for their ambitions to reach their learning goals.

Discussion

The results from our study are of particular interest to practices that embrace a child-centred and thematic approach. The study offers insight into the goal-oriented practice, and brings attention not only to the opportunities that the integration of learning content and knowledge areas provides, but also to the complexity this pedagogical practice entails and the difficulties teachers may experience when asked to describe their pedagogical goals. Earlier studies (Sheridan et al. 2011) of preschool teachers’ perception of their professional work highlight the ambiguity concerning teaching and goal-orientation in the preschool practice. A practice that by tradition embraces play and children’s spontaneous ideas as the departing point for thematic work. The teachers in our study do on the other hand emphasize a coherent and contextual framework (in terms of thematic work), rather than subjects, even though they express a complex perception of them conducting *teaching*. Their perceptions of pedagogical goals reveal a reflected approach to preschool pedagogy, very much in line with contemporary research on early childhood education (Pramling & Pramling Samuelsson, 2011).

The general aspect of learning objects that Marton, Runesson and Tsui (2004) refer to as the indirect object of learning is described by the teachers in this study as transdisciplinary: the goals are not related to a certain discipline or knowledge area. However, the teachers do not problematize, for example, the ways in which the skill to analyse is commensurable to its nature or whether there are aspects of the analytical skill that are related to the content to be analysed.

The specific object of learning that refers to what is acted upon (the direct object of learning) emerges in our study as certain skills and knowledge that the children are made aware of and explore the meaning of. These furthermore concern ideas that are not necessarily framed in subject areas such as mathematics or arts, but mathematical and artistic skills are included as both means for achieving learning goals and possible content for a pedagogical activity. The preschool teachers, when reasoning about pedagogical goals, primarily emphasize general aspects that are transdisciplinary. Furthermore, they discuss direct objects of learning or specific aspects of learning objects as ways to achieve the general and transdisciplinary skills. The relationship between goals of

different features may contribute to teachers' understanding of their teaching practice and provide notions that make the complexity of their pedagogical work both comprehensible and communicable.

Our analysis, highlighting the specific features (transdisciplinary, working and activity goals) and their relations, may contribute to our understanding of preschool pedagogy and complement the conclusions drawn by Williams et al. (2014) that current curricula need to be interpreted as complementing goals on micro and macro levels. The order and appearance in which content is experienced by the learning child is a central issue for all pedagogical practices (Hopmann 2007), but has not been studied in abundance when it comes to education in early childhood. Our study makes it clear that pedagogy in the early years practices constitutes a dynamic process in which several learning objects are present but not necessarily stated, and in which they are assumed to interact cross-disciplinarily.

However, this way of perceiving pedagogical goals, or being able to frame preschool practice in terms of learning goals and object of learning, is not obvious. Three teachers from the original sample did not express any learning goals in either mathematics or arts, or even on a more general level. The purpose of their practice concerned providing experiences as the main aim. The teachers in the study presented here also talk about experiences, but in their case these are attributes of a learning process in which a specific experience is considered part of developing some deliberate knowledge or skill. The pedagogical goal is known, whereas in the former case the learning opportunities may take any direction or remain unattended.

The results of this study are descriptive in the sense that the teachers' reasoning is at the centre of the presentation. They are also analytical in the sense that we present a structure that may shed light on the complex practice within which preschool teachers work. By revealing the possibility to see pedagogical goals as a dynamic flow between general and more specific objects of learning, the challenges – not least in thematic and project works – can be discussed as part of teacher professionalism. Pramling and Pramling Samuelsson (2011) claim that preschool teachers have a broad pedagogical competence and understand children in terms of their development. This is necessary professional competence that enables the dynamic move between different goals, as described in our study. However, even though several aspects of pedagogical goals were all present in the teachers' expressions, intertwined, this is presumably one reason for the difficulties they share in expressing what the children are intended to develop knowledge about. This becomes particularly intriguing considering Siraj-Blatchford's (2010) strong claims that high quality education with sustainable effects for the wellbeing of the child in both short and long terms, rely on early childhood teachers who consider cognitive and social learning goals as equally important and complementary. Pedagogical goals in preschool are in this sense not only important, but *necessary* to reflect upon.

In our study, the teachers perceive their pedagogical work in terms of general as well as specific objects of learning, which is very much in line with the preschool curricula in both countries and the tradition of preschool practice. The Finnish curriculum (Utbildningsstyrelsen 2016) emphasize ethical values as a goal to work with in preschool and Swedish curriculum (Swedish National Agency for Education 2011) put fore respect for human rights and democratic values as the basic aim for education already in the early years. The teachers in our study holds this kind of goals as their main focus, while implementing them in the practice through developing more specific skills and knowledge. This is critical for preschool pedagogy: it embraces learning as a coherent whole including relationships between the learner, the teacher and the content, whereby general and specific goals are intertwined and not subject-based. In this respect, the objects of learning are

allowed to emerge from the intentions and ideas of the children, while at the same time the teachers are striving towards known learning goals.

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