

Lundqvist Johanna<sup>1\*</sup>

Allodi Westling Mara<sup>2</sup>

Siljehag Eva<sup>3</sup>

# Special Educational Needs and Support Provisions in Swedish Preschools: A Multiple-Case Study

## Abstract

*The purpose of this multiple-case study was to investigate the abilities and needs of children in some comprehensive and specialised preschools adopting some form of inclusive education, and to describe the provided support that was designed to enhance children's participation and learning. Fifty-six children and eight preschools located in four municipalities were enrolled. The data was collected via observations, conversations, interviews and a questionnaire. The abilities of the children varied and the need of support among the children ranged from some needs to high and very high needs. Environmental and interpersonal support was integrated into ongoing activities, routines and plays, both in the comprehensive and specialised preschools. In the specialised preschools, one-on-one training and speech therapy, as well as an extended timeframe, were also provided. The descriptions of the preschool practices are related to national and international discussions concerning the topics of inclusive education and support provisions in preschools.*

*Keywords: Disability, early childhood, inclusive education, special educational needs, support provisions.*

## Introduction

The implementation of inclusive education is presently on the agenda in many countries, and great efforts are being made to educate children with special educational needs among typically developing children within general education systems (European Commission, 2013). The reason for this is that inclusive education can promote social justice, facilitate the formation of a welcoming society and can deter discrimination

---

<sup>1</sup> PhD. Student, Stockholm University, Department of Special Education, SWEDEN.  
e-mail: johanna.lundqvist@specped.su.se  
Correspondence should be addressed to this Author.

<sup>2</sup> Professor, Stockholm University, Department of Special Education, SWEDEN.

<sup>3</sup> PhD., Stockholm University, Department of Special Education, SWEDEN.

(United Nations Convention of the Rights of Persons with Disabilities, UN CRPD, 2006; United Nations Educational, Scientific and Cultural Organization, UNESCO, 2009; World Conference on special needs education: access and quality, Salamanca Statement, 1994). Inclusion can also positively impact children's social and academic development (Leyser & Kirk, 2004; Odom, et al., 2004; Schwartz, Sandall, Garfinkle & Bauer, 1998). Odom et al. (2004) expressed the positive impact of inclusive education as follows: "Positive developmental and behavioural outcomes occur for children with and without disabilities in inclusive settings, although as a group, children with disabilities are not as socially integrated as their typically developing peers" (p. 17).

The forms and levels of inclusive education may vary in preschools (Guralnick, et al., 2008; Hanson et al., 2001). Hanson et al. stated that inclusive education is a process that can take the form of full inclusion, but it can also be described in terms of partial inclusion and integrated activities. In fully inclusive preschools "children with disabilities participate as full members of the general education class", whereas in partial inclusion placements they "participated in a typical age appropriate program with children without disabilities for at least 50 % of their educational day and part of the day in a separate experience with other children with disabilities". In programmes adopting integrated activities they "were predominately in self-contained experiences but participated in joint classes of activities with age appropriate typically developing children" (Hanson et al., p. 71). Guralnick et al. have also described the various forms and levels of inclusive education in preschools with the terms full inclusion and partial inclusion and adopted concepts corresponding to integrated activities. According to them, full inclusion refers to settings in which a child spends the "entire school day in a class in which most of the children require no special educational services" and partial inclusion refers to settings where "some of the school day is spent exclusively with children who receive special educational services", but most of the day is spent in "classes in which most of the children require no special educational services" (Guralnick, et al., 2008, p. 243). Such conceptualising and practice of inclusive education assumes that children may attend 'more or less' inclusive preschools and have 'more or less' inclusive educational placements.

The adequate provision of support, that is additional help and attention to children with special educational needs, is considered crucial within inclusive practices. Researchers on inclusive education have reported that support provisions are needed, since these enable and enhance participation in activities, routines and play, and thereby facilitate development and learning for children with special educational needs (Sandall et al., 2008; Sandall, Schwartz & Joseph, 2001; Soukakou, 2012). Sandall, Schwartz and Joseph (2001) have reported that different levels of support provisions can be needed in inclusive preschools. Their didactic framework on effective preschool inclusion (Sandall et al., 2008) recommends ensuring a high overall quality of preschools, and that several levels of support are provided to children if needed. The first level of support provisions in the didactic framework consists of *curriculum modifications and adaptations* that are needed to assist the children's participation in preschool activities, routines and play. Activity simplifications, specific equipment, working with child preferences and

providing adult support are examples of curriculum modifications and adaptations. The next level, *embedded learning opportunities* consists of the provisions that are offered within regular activities in order to work with the particular educational objectives of children. Speech and language training related to a learning objective of a child that is embedded in circle times with the entire group, is an example of an embedded learning opportunity. If the specific training of a skill is not possible to embed within an on-going activity among peers, *child-focused instructional strategies*, such as one-on-one training in speech and language, is an additional level of provisions that can be applied. Soukakou (2012) describes various types of support provisions in inclusive classrooms, such as classroom adaptation, support in interactions, encouraging feedback on children's efforts and support in transitions between activities. Soukakou underlines the importance of maintaining good quality of provisions, that is high-quality adaptations and feedback. The importance of support provisions in inclusive practices is also stressed in international conventions. For example, the UN CRPD (2006) states that persons with disabilities should "receive the support required, within the general educational system, to facilitate their effective education" (art. 24). Consequently, the lack of support provisions may risk creating circumstances in which children struggle with participation and learning and do not benefit optimally from early childhood education.

#### *The Swedish preschool context*

In Sweden, all children have a right to have access to preschool for care, play and education in science, technology, mathematics, language and communication as well as for school preparation (Education Act, 2010:800; Swedish National Agency for Education, SNAE, 2011). Most of the children aged one to five years old (83%; 485 700 children) attend preschool (SNAE, 2014), and a majority of the children with special educational needs are attending regular preschool units (Lutz, 2009). In Swedish preschool policy (Education Act, 2010:800; SNAE, 2011) there is no alternative educational arrangement to regular preschools for children with difficulties, disabilities or special educational needs.

Preschool is the first step in the education system of Sweden (Education Act, 2010:800). The second step is one year in a preschool-class, which is followed by compulsory first grade. Preschool staff typically consists of a preschool head, preschool teachers with a university degree and child minders with secondary education. Additionally, other professionals may visit or work in preschools, for example speech and language therapists or special educators from Health services, as well as cooks and janitors. Preschool-teachers with a university degree comprise approximately half of the staff (43%) in preschools (SNAE, 2014). A Swedish preschool typically consists of several units, enrolling on average 17 children. Each unit has certain staff permanently assigned. A preschool unit may thus correspond to a 'class' or a 'classroom' in other countries education systems.

The education system of Sweden is decentralised. This means that the national policies (Education Act, 2010:800; SNAE, 2011) leave ample room for local interpretations at

the municipal level concerning how to organise education and care for children with and without special educational needs. The Education Act (2010:800) and the national Curriculum (SNAE, 2011) stress the importance of meeting the needs of children that arise and states that all children with physical, psychological or any other need should be given the special support they individually need in their educational settings. The policies can be described as inspired by a relational view of special educational needs (Emanuelsson, Persson & Rosenqvist, 2001). This means that it “places less focus on disability labels and instead involves the environment as an important factor in the emergence as well as the handling of school difficulties” (Nilholm et al., 2013, p. 382). In Sweden, children with special educational needs are often referred to as ‘children in need of special support’ or ‘children in difficult situations’ so as to stress the role of relational and contextual factors.

In Sweden, preschool staff faces several challenges; a variation in the quality of services, a reported increase in number of children with special educational needs and the necessity to adapt the preschool environment to children’s various abilities and needs (Allodi Westling, 2007; Lutz, 2009; Siljehag, 2007)

Support provisions and inclusive preschools have to some extent been previously investigated in Sweden. The researchers concerned with these topics have described the teachers’ view of educational support to children in need of special support (Sandberg, Norling & Lillvist, 2009), the preschool staff’s definition of special support (Sandberg, Lillvist, Eriksson, Björck-Åkesson & Granlund, 2010), the inclusion of preschool children with autism and the attitudes and perceived efficacy of preschool teachers (Engstrand Zakirova & Roll-Pettersson, 2012), in addition to the disabled children’s play and activities in preschools (Skogman, 2004). However, at this moment there is a lack of studies that describe didactical aspects of support provisions in inclusive preschools attended by children with special educational needs and disabilities.

#### *A bioecological approach*

This study is framed by a bioecological model of human development (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 1998). Children’s development is considered to be influenced by their biosystem, for example their cognitive ability, by proximal processes such as staff-child and child-child interactions. Moreover, they are also considered to be influenced by microsystems such as the organisation of proximal educational settings and by several other systems (i.e., mesosystem, exosystem, macrosystem and cronosystem) surrounding them. In keeping with the bioecological model, the preschools that participated in this study are viewed as microsettings that are part of a nested bioecological system.

#### *Aim, rationale and research questions*

The purpose of this multiple-case study is to investigate the abilities and needs of children in some comprehensive and specialised preschools in Sweden that adopt some form of inclusive education, describe the support designed to enhance children’s participation and learning that they provide, and examine differences between these

types of preschools with regard to support provisions. A didactical oriented study on support provision and inclusive preschool education is motivated because it can provide a description of the forms of support that are presently employed in preschools. The introduction of a policy of inclusive education is an objective that is pursued in many countries, but there seem to be challenges in the realization of an inclusive educational system. International research has shown that the provision of support is essential for the accomplishment of inclusive education, but in Sweden there is still a limited amount of research that describes how preschool support is provided to children with various special educational needs. To enhance and facilitate the understanding of support provisions and inclusive education, we consider it important to link the support provisions to the levels of abilities and needs of the children as well as to some contextual circumstances in their preschools. The questions posed are as follows: Which are the levels of abilities and needs of the preschoolers that receive support provisions in the comprehensive and specialised preschool units investigated? Which types of support provisions, designed to enhance the children's participation, learning and inclusion are provided in these units? What are the differences between comprehensive and specialised settings with regard to support provisions?

## Method

### *Design*

The abilities and needs of children with special educational needs, and their support provisions, were investigated with a multiple-case study design (Yin, 2014) and via a mixed methods approach (Johnson, Onwuegbuzie & Tumer, 2007; Teddlie & Tashakkori, 2010). A multiple-case study design creates opportunities to draw cross-case conclusions and comparisons (Yin, 2014). The primary benefit of a mixed method approach is the possibility to integrate data, quantitative and qualitative in nature, into research investigations and descriptions (Teddlie & Tashakkori, 2010).

### *Participants*

Preschools (cases) were searched on the internet and selected according to the principles of a strategic maximum-variation (Mertens, 2010) with the intention of enrolling preschools that varied in characteristics. The criteria considered for determining these preschools were the following: Children with and without special educational needs should participate in the same educational activities, routines and play; the preschools should represent socioeconomic variation; and a variation of geographical locations such as town and countryside, and a variation concerning the responsible authority, should be present. In order to facilitate the data collection, participating preschools were located in the middle east of Sweden.

Eight preschool units, located in eight preschools in four different municipalities came to be part of the study after verbal and written information had been shared and consent had been obtained from all head teachers, staff and 89% of the parents. The parents that did not consent to their child's involvement had no objections to the preschool's participation in the study. The children received a separate child-friendly letter, along

the letter of consent to parents that the parents were to read for them. During the field work the children were verbally informed about the research and asked for consent. Each preschool was visited by the first author for a period of four to seven consecutive days from autumn 2012 to spring 2013. The total time for fieldwork was two month.

A total of 56 children, 28 boys and 28 girls, participated. At the time of the study most of the children were 5 years old, and they were thus attending their last year in preschool. Almost one third ( $n=16$ , 29%) of the children had special educational needs and almost half of the children with special educational needs had a disability diagnosis ( $n=7$ ). Two of those seven children had language disorder, two had Down syndrome and three children had autism and intellectual disability. A majority of the children ( $n=40$ , 71%) were considered as typically developing and not in need of support provisions in order to participate and learn in preschool educational activities, routines and play.

The organisational typologies of the preschools that participate in this study are reported in more detail elsewhere (Lundqvist, Allodi Westling & Siljehag, in press; Lundqvist, 2015). Six preschool units were fully inclusive and comprehensive, one was partially inclusive and specialised, and one had adopted integrated activities and was specialised. The fully inclusive and comprehensive units enrolled typically developing children and children with various difficulties and disabilities. The partially inclusive and specialised unit enrolled typically developing children and children with a specific disability diagnosis (i.e., language disorder). The staff in this unit was specialised in speech and children's language difficulties. The specialised unit that had adopted integrated activities enrolled children with a specific disability (i.e., autism and intellectual disability) that were regularly offered meetings and connections with typically developing children in another preschool. This unit's staff had specialist competence in autism and in speech and language difficulties. The two specialised units had more resources, more staff and teachers to children and fewer children in the units. In total, three units enrolled children with a disability diagnosis; two of these were specialised and one was comprehensive.

#### *Instrument*

The ABILITIES Index questionnaire (Simeonsson & Bailey, 1991) was used to gain a quantitative comparable profile of the functional and developmental status of the children with special educational needs. The Swedish version of the ABILITIES Index (Roll-Pettersson, Granlund & Steenson, 1999) consists of 18 subdivisions on a 5-point scale, in which 0 demonstrates typical ability and 5 demonstrates very low ability. The profiles were calculated by adding the scores on the various domains that had been weighted according to the ABILITIES Index: Research Composite Score (AIRCS, R. Simeonsson, personal communication, May 28, 2014). A result of 0 indicates typical functional and developmental ability. A result of 138,5 indicates very low abilities in audition left and right, behaviour, social skills, cognitive ability (intelligence), limbs (use of hands, arms and legs left and right), intentional communication, communicating with others, muscle tone (tight and loose), health, and eyes (vision) left and right. The instrument is reported to be useful, valid and reliable (Bailey, Simeonsson, Buysse &

Smith, 1993; Simeonsson, Chen & Hu, 1995; Roll-Pettersson, Granlund & Steenson, 1999, Granlund & Roll-Pettersson, 2001). Simeonsson, Chen and Hu (1995) reported that the inter-rater agreement of ratings made by parents, teachers and clinicians averaged 67.2% for exact agreement, 86.2% for agreement within one subdivision and reported a kappa coefficient mean value of 0.60. The scorings of the children were made by staff who knew the children well under assistance of the first author. Instruction to the staff regarding how to fill the instrument was provided by first author. Since in one unit the staff did not rate the abilities of the children, the abilities were rated by the first author on the basis of information from observations, conversations and interviews.

#### *Interviews, observations and conversations*

Eight group interviews with staff, one at each preschool, in the form of shorter case study interviews (Yin, 2014), were conducted and encompassed the verbal prompt: “Tell me about your work with children in need of special support”. The interviews, with one exception, were voice recorded and listened through several times, and the parts relating to the topic of study were transcribed. One interview was documented in field notes. The interviews were conducted within the preschool units at a time and place chosen by staff. They lasted for circa one hour and all staff members, with few exceptions, participated. A total of 29 staff members (e.g., teachers, child minders, a speech and language therapist and teaching assistants working in the preschools) took part in the eight group interviews. Direct observations (Yin, 2014) of abilities, needs and support provisions in the educational settings, and informal researcher-staff conversations on these topics, were also conducted. These observations and conversations were documented in handwritten field notes (Yin, 2014).

#### *Data analysis*

The quantitative and qualitative data on the abilities and needs of the children enrolled in the preschools formed the basis for a description of levels of abilities and for identifying levels of supportive needs in the educational settings. The quantitative and qualitative data on support provisions formed the basis for a description of the support provided. In the analyses of the support provisions and the levels of supportive needs thematic analyses were adopted (Braun & Clarke, 2006). The analysis of the support provisions was inspired by the didactic framework on effective preschool inclusion (Sandall et al., 2008; Sandall, Schwartz & Joseph, 2001). We used frequencies, means and ranges to describe the children’s levels of abilities and needs.

#### *Validity*

By means of several strategies we attempted to ensure the trustworthiness of the study. Each preschool unit was visited for several full days and both indoor and outdoor activities, routines and play were observed in order to gain a rich and accurate understanding of abilities, needs and support provisions. No interventions in the observed activities, routines and play were made so as to avoid the potential impact of the researcher on what was being observed. It is possible that the observed activities could have been partially influenced by the presence of the researcher, in the sense that the staff could have been motivated to give good impression of their work to an external

observer. However, the staff and the children seemed to perform their activity as usual and they did not show discomfort regarding the situation. Besides this, the data were collected via several methods so as to enable data triangulations. The staff had opportunities to ask questions about the ABILITIES Index both before and during the scorings, which may have decreased the risks for errors. In addition, respondent validations were conducted with staff in each preschool. Simeonsson and Roll-Pettersson supported the application of the ABILITIES Index before, during and after data collections.

## Results

The preschool units enrolled children with a broad range of ability levels and different needs of support provisions, that is, additional help and attention in order to be able to participate and learn in preschool. The staff in the comprehensive and specialised preschool units provided a number of support provisions to the children with special educational needs. The results begin with a description of this broad range of ability levels, and the different needs of the children, followed by a description of the support provisions. The results section ends with an overview of the characteristics of the eight units.

### *Biosystem, abilities and needs*

The children with special educational needs were estimated to have some, high or very high needs of support. Six children were considered as having *some* need of support provisions. These children did not have a diagnosis and commonly had some difficulties in the areas of behaviour, social skills or learning. Five children were considered as having a *high* need of support provisions, due to difficulties in the areas of behaviour, social skills, speech, communication and/or learning. Two of them had medical disability diagnosis which is language disorder. Five children had a *very high* need of support provisions. These children had low abilities (i.e., high scores on the ABILITIES Index AIRCS) and they had difficulties in several areas, such as behaviour and social skills, cognitive ability, motor ability, communication, muscle tone, health and vision. They needed considerable help and attention during educational activities such as circle times, routines such as arrivals, departures, mealtimes, and toileting and also at times during play, on their own or with peers. They all had a medical disability such as autism, intellectual disability, Down syndrome or visual impairments. Children with high and very high needs of support were found in both the comprehensive and specialised preschool units.

### *Microsystem support provisions and proximal processes*

The support provisions provided to the children with some, high and very high needs in the preschool units were environmentally and interpersonally oriented. The environmental and interpersonal support was integrated into ongoing activities, routines and play. Additional help and attention was also provided in the form of one-on-one training and speech therapy, and in the form of an extended timeframe in preschool.

### *Integrated support provisions*

Integrated support provisions were designed to enhance participation and learning in preschool activities, routines and play. These were available for the children with special educational needs and also for typically developing peers. The integrated support provisions were *environmental* and related to objects, modifications and adaptations in preschool settings or *interpersonal* and related to staff or peers.

Examples of **environmental integrated support** provisions provided in the preschools are as follows:

- Time visualisations such as timers and minute-glasses to support sustained engagement in and activity or illustrate the length of activities not having a natural end, for example; play with cars or blocks.
- Shared daily visual wall schedules, built of photographs and illustrations to inform the children about the activities of the day
- Individual daily visual wall schedules, built of photographs and illustrations, to inform children with disability diagnoses about the activities, routines and play of the day and to support their transition from and to activities, routines and play (see Vignette 1 below from a specialised preschool unit).
- Mobile visual schedules that could be brought outside during outdoor activities and play.
- Half-group circle-times to reduce the number of participating children.
- Adaption of the material employed in order to facilitate the activity, for example clamping paper to the table and using big bowls for the colours during painting.
- Special toys, for example offering big building blocks and ‘easy to grab’ jigsaw puzzles.
- Thematic organisations of toys in boxes, for example; all toys related to cooking were in the same box.
- Child preferences such as singing a child’s favourite songs in circle times to enhance engagement and participation and an interactive whiteboard used to motivate the training of fine motor skills such as how to write and form letters.
- Special equipment is offered, such as speech training board games aimed at training certain oral motor skills and a little ladder to the toilet seat, to enhance autonomy during toileting.
- A step by step guide for getting dressed for outdoor play placed in the cloakroom, next to a child’s coat hook (see Vignette 2 below from a comprehensive preschool unit).
- Enclosed spaces and locked outer doors to ensure children’s safety and decrease the risk that children leave the preschool.
- Picture Exchange Communication System® (PECS) to support a child in selecting and communicating what he/she wants during transitions, free play and mealtimes, and to answer questions from staff (see Vignette 3 below from a specialised preschool unit).

- Individualised independent work stations were adopted where a child autonomously accomplished a task given by a staff member regarding motor skills and academic training, so as to repeat and maintain learned skills in one-on-one training (see Vignette 4 below from a specialised preschool unit).

*Vignette 1 (Individual wall schedules):* In order to inform a child about the activities of the day individual wall schedules built of photographs and illustrations cards concerning activities, routines and play were provided. These were placed on the wall and at the children's eye level. The photographs and illustrations were laminated and attached to the wall with Velcro tape. When a child arrived at preschool and had walked around for a while, the child received a white blank transitional card from a teacher. The child went to the wall schedule, dropped the white card in the box placed under the schedule, picked up the card at the top of schedule, looked at it and went to the specific place of activity, routine and play showed on the card. After a while, when it was time for outdoor play, the teacher once again gave a white card to the child who went to the wall schedule, dropped the white card in the box and picked up a new card at the top of schedule. This time, it was a photograph of the outdoor yard. If the child forgot what to do, the teacher gently prompted the transitions and the use of the schedule. For instance, the child was verbally reminded of picking up a new card and the hand of the child was steered in direction towards the schedule. During the day the schedule was systematically used to inform the child about activities, routines and play and all transitions were facilitated by the use of transitional cards and wall schedule.

*Vignette 2 (A step by step guide):* A visual wall schedule for getting dressed for outdoor activities and play was placed in the cloakroom close to child's coat hook. It suggested an order for the activity: The child should start with the outdoor overall and end with the mittens. Each step was illustrated with a picture and thus ended with a picture of a pair of mittens. The schedule aimed to make the activity simpler for the child.

*Vignette 3 (A communication system):* Each child with very high needs in the unit had a personal own picture-folder. The folders were placed within reach for the children. The folders consisted of photos and illustrations, such as pictures of food and toys. When the children wanted or needed something they went for their folders, looked for a certain picture, picked it up, went to the teacher, and placed the card in their hands so as to get help to find it. The teacher labelled the object on the photo and helped the child to find it. Sometimes the child wanted something that he/she could not get or do at that moment. To communicate such a circumstance the teacher clear and kindly said; "no" and placed the card on the red no-side in folder. The folders were used daily and in a systematic way, for example during meal- and snack times. Whilst eating, the children picked up pictures showing the food they wanted and placed the card in the hand of teacher, for instance a photo of a potato, a glass of milk, bread or slices of cheese. If they asked for food that was not available the teacher place the picture on the no-side of the folder.

*Vignette 4 (An independent work station):* The child was given a transitional card (see Vignette 1), went to the wall schedule, dropped the white card, took the card at the top

showing practice time, went to the independent work station, ‘checked in’ and started to do all the tasks on the child’s left hand side given and placed there by teacher. During this practice time the child repeated trainings conducted with a staff member. When all repetitions were finished and positioned on the right side of child, the child starts to walk around in the setting.

Examples of **interpersonal integrated support provided from staff** are as follows:

- Sitting next to a child, having a child in their lap and prompting hand movements to songs during circle times.
- Adapting circle time activities to the abilities of children and making all steps involved clear, quick and easy to follow.
- Placing typically developing peers next to a child with special educational needs while staff directed activities such as snack-times.
- Being close to children during play with peers in order to support peer communications, conflict resolutions and purposeful use of materials in play.
- Offering one-on-one assistance in the use and understanding of individual schedules, educational activities, and routines such as eating, toileting, hand washing, getting dressed and play.
- Adopting sign language to support spoken language during activities, routines and play and giving instructions to the peers in sign language.
- Preventing disruptions through transitions into new activities such as jigsaw puzzling or play with toys.
- Boosting activities with peers.
- Initiating play with board games designed to train speech.
- Adopting peer modelling such as sequenced turns in circle times and meal times, so as to give children opportunities to look at peers before doing tasks themselves.

**Interpersonal integrated support** was also offered and initiated **by peers** in the preschools. Some examples are as follows:

- A child mediated in a conflict situation and explained verbally to the teacher what she thought the other child felt (see Vignette 5 below from a comprehensive preschool unit).
- Peers supported participation in play by encouraging children with special educational needs to take part and by offering help and attention during play (see Vignette 6 below from a comprehensive unit).
- Peers modelled play activities for children with special educational needs (see Vignette 7 below from a comprehensive preschool unit).
- Peers supported transitions from one preschool activity to another through warm verbal prompts and gentle manual prompts.

*Vignette 5 (Peer mediation in a conflict situation):* A teacher said: “Come and join circle time. You are a big child, you should join circle time”! [A boy having a high need of support provisions was lying silent under table close to the circle time, while the other

children sat in the circle]. A peer to the boy looked at the teacher and said: “I think John [figured name] is trying to say that he finds circle times difficult”. The teacher turned to John under table and asked: “Do you found circle time tough”? The boy: “Yes, I do”! The teacher: “Ok, you may stay under the table and rest for a while”.

*Vignette 6 (Peer support in play):* When the children in a preschool went sledding, a girl actively involved a boy with a very high need of support. The girl warmly told the boy to “sit down, sit down, sit down”, while at the same time pointing at the toboggan and leaning against the boy, looking into his eyes. After a while the boy sat down. The girl then pulled the boy to the hill. She tried to drag him up, but when not succeeding, she managed to make him walk up by his own. Once up, they sat down in the toboggan together and went down the little hill, with smiles on their faces. A teacher explained that the girl was a friend to the boy with very high needs and that she took care of him.

*Vignette 7 (Peer modelling of play):* A boy with a very high need of support joined peers during free play with kick cars. They drove fast over the playground and down a little hill, bumped into each other, had fun and had also a little conflict related to the coolest kick car since all children wanted to have a particular kick car. A teacher explained that the boy had been looking at the kick car activity for quite a long time and now he started to join in.

#### *One-on-one training and speech therapy*

One-on-one training and speech therapy were provided in the specialised preschool units and were aimed at facilitating individual children’s learning. These activities were provided in separate areas of the preschools or in a corner of the units where a child and staff member would not be disturbed. The training sessions were directed by child-minders and/or teachers, and the speech therapies were provided by a certified speech and language therapist in one of the specialised units. The therapist stressed during the interview that she was not a teacher, but was trained in the field of medicine.

The one-on-one training and speech therapies were provided several days a week for around twenty minutes each alongside ongoing activities in the preschools and paid particular attention to speech, language and communication. Training also involved practising of gross and fine motor skills such as balance, picking up and holding a pen, and practising academically oriented skills such as sorting animals into groups, sorting objects after colours, assembling jig-saw puzzles and drawing. Moreover, these activities involved training social skills such as response by name, and initiating conversations and play. The staff, including the therapist, used gentle prompts, both verbal and manual, and modelled training and speech therapies. In addition, time delays were used to decrease the need for prompts so as to provide extra time and enhance the opportunity for the child to act on his/her own. Rewards such as positive verbal feedback, warm manual promptings and/or a small snack were also offered. The staff also provided children with massages.

#### *Extended timeframe in preschool*

Another support provision provided to children with a disability diagnosis in the specialised units was an ‘extended timeframe in preschool’ instead of a regular transition to preschool-class. The extended timeframe represents one more year of preschool activities, routines, play, integrated support and one-on-one support provisions. The transition to preschool-class could be postponed for several reasons, according to the staff: One motive was that the parents want to wait with the transition and another motive was that the desired effects of the training had not yet been achieved. Moreover, the child was in risk of missing out on opportunities for speech therapies provided by the speech and language therapist.

#### *An overview*

An overview of the preschool characteristics is presented in Table 1.

**Table 1.**

*Overview of preschool characteristics; (1) organisational typology, (2) enrolment of children and their characteristics, (3) levels of need of support, and mean (m) and range (r) of the ABILITIES Index: Research Composite Score (AIRCS) and (4) type of support provided.*

Characteristics	Cases								
	1	2	3	4	5	6	7	8	
1	Organisational typology	Comprehensive preschool unit		Specialised preschool unit					
		•	•	•	•	•	•	•	•
2	Enrols typically developing children (n=40)	•	•	•	•	•	•	*	•
	Enrols children with special educational needs (n=16)	•	•	•	•	•	•	•	•
	Enrols children with special educational needs that have disability diagnosis ( n=7 of the 16 children)				•	•		•	
3	Enrols children with <i>some</i> need of support (SEN n=6; AIRCS m=5; AIRCS r=4, 6)		•	•			•		•
	Enrols children with <i>high</i> need of support (SEN n=3; SEND n=2; AIRCS m=14; AIRCS r=6, 20)	•		•	•	•			
	Enrols children with <i>very high</i> need of support (SEND n=5; AIRCS m=49; AIRCS r=29, 71)				•			•	
4	Environmental integrated support provisions	•	•	•	•	•	•	•	•
	Interpersonal integrated support provisions	•	•	•	•	•	•	•	•
	One-on-one trainings and speech therapies					•		•	
	Extended timeframes in preschool					•		•	

*Note.* Children with Special Educational Needs, (SEN). Children with Special Educational Needs that have a formal medical disability Diagnosis, (SEND). \*The preschool ensures regular meetings with typically developing children in another preschool.

There were both similarities and differences between the preschools in terms of the abilities and needs of the children enrolled and support provided (Table 1). The children with special educational needs had some need, high need or very high need of additional help and attention in preschool. Children with low abilities and very high needs were educated and cared for in both comprehensive and specialised preschools. The support provisions were environmental and interpersonal. These provisions were integrated in

ongoing activities, routines and play in the comprehensive and specialised preschools. In the specialised preschool units, one-on-one training and speech therapy, and an extended timeframe in preschool were also provided. Not all children with special educational needs were provided additional help and attention by means of one-on-one training and speech therapy or extended timeframes. The children in one of the comprehensive units with low abilities, very high needs and a disability diagnosis were not offered one-on-one training and speech therapy and extended timeframes when their unit was visited. Moreover, not all children with special educational needs were provided ample opportunities for peer support and meetings and connections with typically developing children. When the observations were made, the children in a specialised unit with low abilities, very high needs and a disability diagnosis were not offered opportunities for peer support and meetings and connections with typically developing children throughout their preschool-days.

### Discussion

The purpose of this study was to investigate the abilities and needs of children in some comprehensive and specialised preschools in Sweden, describe the support designed to enhance children's participation and learning that they provide and examine differences between these types of preschools with regard to support provisions.

Our results suggest that children with special educational needs may vary in levels of abilities and needs and that they are likely to have some need, high need or very high need of support provisions in their preschool. This means that there can be a significant variation of needs in inclusive preschool units and that the concept of special educational needs may have different meanings. Moreover, our results suggest that children with special educational needs may require environmental and interpersonal integrated support during preschool activities, routines and play, in both fully inclusive comprehensive units and specialised preschool units adopting partial inclusion or integrated activities. This is important to take into account when inclusive education is planned and implemented. Conversely, one-on-one training, speech therapy and extended timeframe may be provided exclusively to children with high and very high need of support provisions in partially inclusive specialised preschool units or in specialised units adopting integrated activities.

#### *Differences between comprehensive and specialised preschool units*

The differences in support provisions between the comprehensive and specialised units investigated do not seem linked directly to the children's biosystem, abilities and needs. It is not always so that the children with the highest needs are the ones that experienced the most integrated support, one-on-one training and speech therapy. In this study, there are in fact children with equally low abilities and high needs in the comprehensive and specialised preschool units. It appears instead that the differences are linked to contextual factors in the microsystem, exosystem and macrosystem.

One possible explanation, linked to the microsystem, is that the staff in the comprehensive preschool units believes that a fully inclusive educational strategy with a regular transition to preschool-class is the preferable educational solution. Hence, they prefer to avoid pull-out provisions, partial inclusion and integrated activities, and they do not suggest to the parents an extended timeframe in preschool. Conversely, the staff in the specialised preschool units believes that pull-out provisions, partial inclusion, integrated activities and extended timeframes are the preferable educational solutions. The provisions of one-on-one support, extended timeframe and integrated support in the specialised preschool units, demonstrates that the staff in these units was concerned with the training and speech therapy of the children as well as making modifications and adaptations to the preschool units in order to meet the needs of the children. Therefore, the staff in the specialised units did not seem to look at the issue of special educational needs as a dichotomy, where they had to choose between a psycho-medical (categorical) and a relational paradigm. Instead, they make the two paradigms coexist in their practice.

It could also be taken into consideration that the staff in the fully inclusive comprehensive preschool units is not able to provide one-on-one training, speech therapy and an extended timeframe because these comprehensive settings have fewer resources than the specialised preschools. This is an explanation for the differences that can be linked to the exosystem, that is, to the distribution of resources to preschools in the municipalities.

Another possible explanation is linked to the macrosystem and the content of policy documents. Since the education system of Sweden is decentralised and decisions on how to organise preschool education are made at a local level, didactical differences between preschools such as the types of proximal processes and support provisions are likely. Even though differences between the settings were to be expected due to the Swedish decentralised education system, they were in a sense larger than we foresaw.

The differences in support provisions between comprehensive and specialised preschool units, which emerged in the preschools investigated, can be viewed as a reason of concern in the sense that it could mean that the preschools in Sweden do not provide children with equally good opportunities for learning. In this study, the comprehensive preschool units do not offer all the support provisions that are available in the specialised units.

#### *A comparison to international preschool provision models*

In line with the models of support and recommendations in previous research (Sandall et al., 2008; Sandall, Schwartz & Joseph, 2001; Soukakou, 2012), there were several types and levels of support provisions provided in the preschools to enable participation, learning and inclusive education for children with special educational needs. This circumstance can be seen as a token of the staff's commitment to the concept and practice of inclusive education, their skills in provisions of support and their care of children who are struggling in preschool. The extended timeframes identified in the two

specialised preschools may be a provision that is ‘unique’ for the Swedish preschool system, since it does not seem to be included in other international preschool provision models and recommendations (Sandall et al., 2008; Sandall, Schwartz & Joseph, 2001; Soukakou, 2012).

#### *Extended timeframe*

The concept of extended timeframe does not refer to preschool retention in the sense that the last year of preschool should be repeated. Instead, the concept of extended timeframe is referring to an opportunity to continue training and therapy in a preschool. In this study, the staff did not express that the children during the extended timeframe should repeat the last year of preschool. Instead, they described that the on-on-one training had just started, that therapy was ongoing and that the desired effects of these trainings and therapies had not yet been achieved.

For the reason that extended timeframe in preschool is adopted, it is possible to hypothesise that the preschool-class is considered unprepared to adequately meet the children’s needs, for example, to carry on training and therapy. In this case, it would be a circumstance related to the mesosystem, that is to the lack of adequate cooperation between preschool and preschool-class staff. This serves as a reminder of the importance of providing support early in preschool and planning for collaborations between settings and transitions as soon as possible, since necessary modifications and adaptations to preschool-classes may take time.

There could be potential benefits with the extended timeframe, such as the possibility to get more speech and language therapy, but possible negative consequences could also occur. The children who stay an extra year and do not follow peers and friends to preschool-class may feel left behind and perhaps feel less skilled than the classmates. They may also miss out on the relationship with them.

#### *Peer support*

One interesting result of this study is that it is not just the staff that initiates and provides support but the peers as well. More capable peers help the children with special educational needs in activities, routines and in play, and may function as intermediaries between children and teachers. In this study, they seem engaged in the children with special educational needs and competent with regard to support provisions. They play an important role in the inclusive preschools. This means that children in specialised settings are likely to get more one-on-one training and speech therapy from staff, but risk missing out on valuable opportunities for relationships, support, activities and play with peers, since they may have fewer meetings and connections with typically developing children and fewer peers in their settings.

#### *Research limitations and suggestions for future research*

Since the number of preschools enrolled in this study is limited and the preschools are not necessarily representative of other Swedish preschools, the findings of this study should be regarded as examples of special educational needs and provisions that may

occur in preschools in the Swedish context. It is possible to hypothesise that other needs and support typologies could be identified in additional case studies, for instance in other municipalities of Sweden. The validation or broadening of support typologies described in this study could be a task for future research.

With support from the bioecological model (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 1998) we could assume that the support provisions and the related proximal processes would influence the children's development. However, in this study we did not measure or identify the effects of these processes and provisions. A task for future research could be an evaluation of the effects and efficacy of the special educational support provided in comprehensive preschools compared to those provided in specialised settings.

Throughout the discussion, we have provided some possible explanations concerning the differences in provisions between comprehensive and specialised units, but we cannot determine their causes. This could also be a task for future research on comprehensive and specialised preschool units in order to understand why certain support is provided, or not provided.

#### *Relevance and implications*

The study describes how some children with special educational needs were offered preschool education and support provisions in the Swedish context, a description that has not been provided previously. The study thus contributes with empirical data about current practices in the under-researched field of special educational support provisions in Swedish preschools. It, for example, can be regarded as a complement to previous national research on teachers' views and attitudes about support provisions and inclusion (Engstrand Zakirova & Roll-Pettersson, 2012; Sandberg, Norling & Lillvist, 200).

The study shows that the application of a fully inclusive comprehensive preschool education of children with some, high and very high need of support provisions seems possible to realise by means of integrated support provisions. This study gives examples of forms of support provisions that can be used in practice and shows what roles staff and peers of children with special educational needs may play in inclusive preschool educational settings. An implication is that attention should be paid to the role of peers when inclusion is being organised and to how the relations between peers and the children with special educational needs occur, are maintained and developed. The impressions from the observations made in the preschools suggest that an increased application of peer support would impact positively the children's sense of belonging and experience of enjoyment. Another implication is that attention should be paid to peer-support, peer-tutoring and peer-mediated intervention strategies in preschool teacher trainings and special education teacher trainings.

#### *Ethical considerations*

Guidelines and recommendations from the Swedish Research Council (2011) and the UN CRPD (2006) have been followed. The study was approved in 2012 by the Regional Ethical Review Board at Karolinska Institute in Stockholm (2012/421-31/5).

#### Acknowledgments

The authors are very grateful to the head teachers, staff, parents and children in the eight preschools.

#### Competing interests

The authors declare that they have no competing interests.

#### Authors' contributions

JL conceptualised the study, gathered the data and wrote-up the article. MAW and ES conceptualised the study and contributed to the write-up of the article and to the revision of the final manuscript.

#### References

- Allodi Westling, M. (2007). Child care and pre-schools in Sweden: an overview of practice, tendencies and research. *Ricerche di Pedagogia e Didattica*, (2), 1-10.
- Bailey Jr., D. B., Simeonsson, R. J., Buysse, V., & Smith, T. (1993). Reliability of an index of child characteristics. *Developmental Medicine and Child Neurology*, 35(9), 806-815.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Bronfenbrenner, U. (1979). *The ecology of human development: experiments by nature and design*. Cambridge, Mass.: Harvard Univ. Press.
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental process. In W. Damon (Series Ed.) & R. M. Lerner (Vol. Ed.), *Handbook of child psychology: Vol. 1. Theoretical models for human development* (5th ed., pp. 993-1028). New York: John Wiley.
- Education Act*. (2010:800). Stockholm: Swedish Code of Statutes.
- Emanuelsson, I., Persson, B., & Rosenqvist, J. (2001). Forskning inom det specialpedagogiska området: en kunskapsöversikt [*Research in the field of special education: a review*]. Skolverkets monografiserie. Stockholm: Liber.
- Engstrand Zakirova, R., & Roll-Pettersson, L. (2012). Inclusion of preschool children with autism in Sweden: Attitudes and perceived efficacy of preschool teachers. *Journal of Research in Special Educational Needs*.
- European Commission. (2013). *Support for children with special educational needs (SEN)*. Retrieved from: [http://europa.eu/epic/studies-reports/docs/eaf\\_policy\\_brief\\_-\\_support\\_for\\_sen\\_children\\_final\\_version.pdf](http://europa.eu/epic/studies-reports/docs/eaf_policy_brief_-_support_for_sen_children_final_version.pdf)
- Granlund, M., & Roll-Pettersson, L. (2001). The perceived needs of support of parents and classroom teachers - A comparison of needs in two microsystems. *European Journal of Special Needs Education*, 16(3), 225-244.
- Guralnick, M. J., Neville, B., Hammond, M. A., & Connor, R. T. (2008). Continuity and

- change from full-inclusion early childhood programs through the early elementary period. *Journal of Early Intervention*, 30(3), 237-250.
- Hanson, M. J., Horn, E., Sandall, S., Beckman, P., Morgan, M., Marquart, J., Barnwell, D., & Chou, H.-Y. (2001). After preschool inclusion: Children's educational pathways over the early school years. *Exceptional Children*, 68(1), 65-83.
- Johnson, R. B., Onwuegbuzie, A. J., & Tumer, L. (2007). Toward a definition of mixed-methods research. *Journal of Mixed-methods Research*, 1(1), 112-133.
- Leyser, Y., & Kirk, R. (2004). Evaluating inclusion: An examination of parent views and factors influencing their perspectives. *International Journal of Disability, Development and Education*, 51(3), 271-285. 1.
- Lundqvist, J. (2015). Transition patterns after inclusive preschool: The educational pathways of children with and without special educational needs in Sweden. In F. Dovigo, C. Favella, F. Gasparini, A. Pietrocarlo, V. Rocco & E. Zappella (Eds.), *Special Education Needs and Inclusive Practices. An International Perspective* (pp. 98-102). Bergamo, Italy: University of Bergamo. Retrieved from: [http://media.wix.com/ugd/2426da\\_a912a43c635a418693d7a9a3e7fc3374.pdf](http://media.wix.com/ugd/2426da_a912a43c635a418693d7a9a3e7fc3374.pdf)
- Lundqvist, J., Allodi Westling, M., & Siljehag, E. (in press). Characteristics of Swedish preschools that provide education and care to children with special educational needs. *European Journal of Special Needs Education*.
- Lutz, K. (2009). *Kategoriseringar av barn i förskoleåldern: styrning & administrativa processer*. PhD diss., Lund University.
- Mertens, D. M. (2010). *Research and evaluation in education and psychology: integrating diversity with quantitative, qualitative, and mixed methods*. (3rd ed.). Los Angeles: Sage.
- Nilholm, C., Almqvist, L., Göransson, K., & Lindqvist, G. (2013). Is it possible to get away from disability classifications in education? An empirical investigation of the Swedish system. *Scandinavian Journal of Disability Research*, 15(4), 379-391.
- Odom, L. S., Vitztum, J., Wolery, R., Lieber, J., Sandall, S., Hanson, M. J., Beckman, P., Schwartz, I., & Horn, E. (2004). Preschool inclusion in the United States: a review of research from an ecological systems perspective. *Journal of Research in Special Educational Needs*, 4(1), 17-59.
- Roll-Pettersson, L., Granlund, M., & Stenson, A.-L. (1999). Föräldrars och lärares uppfattningar om behov. [Parents' and Teachers' perceptions of needs'. In M. Grandlund, A.-L. Stenson, L. Roll-Pettersson, E. Björk-Åkesson, M. Sundin, & A. Kylen (eds.), *Elever med flera funktionsnedsättningar i särskolan : Utbildningens effekter och effektivitet* [Pupils with Several Disabilities in the Special Education School – Education and Effects]. Stockholm: ALA Research Foundation, pp. 123–179.
- Sandall, S., Schwartz, I., & Joseph, G. (2001). A Building Blocks Model for Effective Instruction in Inclusive Early Childhood Settings. *Young Exceptional Children*, 4(3), 3-9.
- Sandall, S. R., Schwartz, I. S., Chou, H.-Y., Horn, E., Joseph, G., Lieber, J., Odom, S., Wolery, R., & Hemmeter, M. (2008). *Building Blocks for Teaching Preschoolers with Special Needs*. (2nd ed.). Paul H. Brookes Publishing Co.

- Sandberg, A., Norling, M., & Lillvist, A. (2009). Teachers' view of educational support to children in need of special support. *International Journal of Early Childhood Special Education*, 1(2), 102-116.
- Sandberg, A., Lillvist, A., Eriksson, L., Björck-Åkesson, E., & Granlund, M. (2010). "Special support" in preschools in Sweden: Preschool staff's definition of the construct. *International Journal of Disability, Development and Education*, 57(1), 43-57.
- Schwartz, I. S., Sandall, S. R., Garfinkle, A. N., & Bauer, J. (1998). Outcome for children with autism: Three case studies. *Topics in Early Childhood Special Education*, 18(3), 132-143
- Siljehag, E. (2007). *Igenkännande och motkraft: Förskole- och fritidspedagogikens betydelse för specialpedagogiken – En deltagarorienterad studie* [Recognition and Counter power]. PhD diss., Stockholm University.
- Simeonsson, R. J., & Bailey, D. B. (1991). *The ABILITIES Index*. Chapel Hill, NC: Frank Porter Graham Development Center, University of North Carolina. Retrieved from: [http://fpg.unc.edu/sites/fpg.unc.edu/files/resources/assessments-and-instruments/FPG\\_AbilitiesIndex.pdf](http://fpg.unc.edu/sites/fpg.unc.edu/files/resources/assessments-and-instruments/FPG_AbilitiesIndex.pdf)
- Simeonsson, R.J., Chen, J., & Hu, Y. (1995). Functional assessment of Chinese children with the ABILITIES index. *Disability and Rehabilitation*, 17(7), 400-410.
- Simeonsson, R.J. (Personal communication, May 28, 2014). *ABILITIES Index: Research Composite Score*. Chapel Hill, NC: Frank Porter Graham Development Center, University of North Carolina.
- Skogman, E. (2004). *Funktionshindrade barns lek och aktivitet : En studie av struktur och utförande i förskolan* [Disabled children's play and activity: A study of structure and performance in preschool]. PhD diss., Stockholm University.
- Soukakou, E.P. (2012). Measuring quality in inclusive preschool classrooms: Development and validation of the inclusive Classroom Profile (ICP). *Early childhood Research Quarterly*, 27(3), 478-488.
- Swedish National Agency for Education. (2011). *Curriculum for the Preschool Lpfö 1998 Revised 2010*. Stockholm: Skolverket. Sweden.
- Swedish National Agency for Education. (2014). *Barn och personal i förskolan hösten 2014*. [Public national statistics from the Swedish National Agency for Education, 2014]. Stockholm: Skolverket. Sweden.
- Swedish Research Council. (2011). *God forskningssed* [Research ethics]. Stockholm: Vetenskapsrådet.
- Teddlie, C., & Tashakkori, A. (2010). Overview of Contemporary Issues in Mixed Methods Research. In A. Tashakkori, & C. Teddlie (Eds.), *Sage handbook of mixed methods in social & behavioural research* (pp.1-44). Thousand Oaks: SAGE Publications.
- United Nations. (2006). *Convention on the Rights of Persons with Disabilities*. Retrieved from: <http://www.un.org/disabilities/convention/conventionfull.shtml>
- United Nations Educational Scientific and Cultural Organization (2009). *Policy Guidelines on Inclusion in Education*. Paris: UNESCO.
- World Conference on special needs education: access and quality. 1994. *The Salamanca statement and framework for action on special needs education: World*

*Conference on special needs education: access and quality*: Salamanca, Spain, 7-10 June 1994. Paris: Unesco, Special Education, Division of Basic Education.  
Yin, R.K. (2014). *Case Study Research: design and methods* (5th ed.). London: SAGE.