

Emotional support constructing high quality scaffolding in day care

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ABSTRACT: In this article, the quality of scaffolding is studied from the perspective of emotional support, because it is crucial for the children's learning and well-being. Our aim was to develop a systematical observation method to deepen understanding of emotional support during interaction. Videos from four day care professionals were used to develop the emotional support categories based on multidimensional Classroom Assessment Scoring System. With categories developed, we observed the emotional support of two day care professionals across a dialogic reading intervention, variation of emotional support during single reading sessions and typical expressions of emotional support. Three videos from both cases were analyzed by two observers. Results show that day care professionals provided mainly positive or neutral emotional support and seldom negative emotional support. One of the cases provided more and longer consistent, learning supportive emotional support than the other. Also non-consistent emotional support and consistent variation between negative and neutral emotional support were observed. Positive emotional support was typically shown by engaged reading, positive feedback and encouraging facial expressions. Negative emotional support was typically shown by inflexibility to children's perspectives. The results emphasize the need to pay increasing attention to the emotional support to construct high quality scaffolding.

Keywords: *emotional support, quality of scaffolding, dialogic reading, early childhood education*

TIIVISTELMÄ: Tässä artikkelissa ohjausvuorovaikutuksen laatua tarkastellaan tunnetuen näkökulmasta, koska tunnetuki on lapsen oppimisen ja hyvinvoinnin

kannalta keskeistä. Tavoitteenamme oli kehittää systemaattinen havainnointimenetelmä syventämään ymmärrystä tunnetuesta vuorovaikutusprosesseissa. Tunnetukiluokittelu kehitettiin moniulotteisen Classroom Assessment Scoring System-menetelmän pohjalta käyttäen videoaineistoja neljän varhaiskasvattajan lukuhetkistä. Valmiin tunnetukiluokittelun avulla havainnoimme kahden varhaiskasvattajan tunnetukea keskustelemaan lukemisen periaatteita noudattavan Jänistarinat-intervention aikana, tunnetuen vaihtelua yksittäisissä lukuhetkissä sekä tunnetuen tyypillisiä ilmenemismuotoja. Tutkimusaineistoksi valittiin molemmilta varhaiskasvattajilta kolme videota, jotka analysoitiin rinnakkaishavainnointina. Tulosten mukaan varhaiskasvattajat tarjosivat pääosin myönteistä tai neutraalia tunnetukea, kielteisen tunnetuen jäädessä vähäiseksi. Toisella varhaiskasvattajalla johdonmukaiset, oppimista tukevat ohjausjaksot olivat pidempiä ja niitä oli enemmän kuin toisella. Lukuhetkissä ilmeni myös epäjohdonmukaisuutta eli jatkuvaa vaihtelua myönteisen, neutraalin ja kielteisen tunnetuen välillä sekä ei-tavoiteltavaa johdonmukaisuutta, jolloin tunnetuki jumiutui kielteisen ja neutraalin vaihteluksi. Myönteinen tunnetuki ilmeni tyypillisesti eläytyvänä lukemisena, myönteisenä palautteena ja kannustavana ilmeinä. Kielteinen tunnetuki ilmeni tyypillisesti joustamattomuutena lasten näkökulmille. Tulokset korostavat keskeisiä tunnetukeen liittyviä ilmiöitä, joiden aikaisempaa vahvempi huomioiminen rakentaa laadukasta ohjausvuorovaikutusta.

Asiasanat: *tunnetuki, ohjausvuorovaikutuksen laatu, keskusteleva lukeminen, varhaiskasvatus*

Introduction

High quality scaffolding, which typically means carefully calibrated adult's support, is vital for the children's learning and well-being, since it creates opportunities for the children to achieve goals beyond their unsupported efforts (Muhonen, Rasku-Puttonen, Pakarinen, Poikkeus, & Lerkkanen, 2016; Van de Pol, Volman, & Beishuizen, 2010; Vauras, Kinnunen, Kajamies, & Lehtinen, 2013). In this article the quality of the scaffolding will be investigated from the perspective of the emotional support, because it is a central factor for quality (Broekhuizena, Mokrovab, Burchinalb, Garrett-Petersb, & The Family Life Project Key Investigators, 2016; Curby, Brock, & Hamre, 2013; Gregory & Korth, 2016; Howes et al., 2008; Roorda, Koomen, Spilt, & Oort, 2011). To understand deeply the emotional support requires a method for observing emotional support systematically during interaction processes. Our aim is to develop a method concentrating on a detailed observation of emotional support, based on the holistic Classroom Assessment Scoring System (CLASS) (Pianta, La Paro, & Hamre, 2008). With the aid of our observation method we will produce new, developmental knowledge about emotional support and its

variation during the interaction processes. With this kind of process oriented focus we will provide evidence-based ways to improve the quality of scaffolding by developing the emotional support (Pennings & Mainhard, 2016).

Theoretical foundations of emotional support

The research on emotional support is based on theories of attachment and self-determination. According to *attachment theories*, positive emotional support creates a predictable, consistent, and safe environment increasing the child's self-confidence and courage to explore the world (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1970; Silvén, Mattinen, Lepola, & Husu, 2013). Through an attachment relationship the adult may form a deep understanding of the child's interests to efficiently scaffold learning, also emotionally (Colmer, Rutherford, & Murphy, 2011). According to *self-determination theories*, learning is better motivated and deeper when the psychological basic needs of competence, relatedness, and autonomy are supported, but the development may be jeopardized in controlling, critical and depreciative environments where the basic needs are subdued. Adults can emotionally support children's perceptions of competence, relatedness and autonomy for example by showing confidence that the children will achieve the learning objectives, by creating mutual respect, enthusiasm and collaboration, and by taking up children's initiations. (Fulmer, & Turner, 2014; Perry & Rahim, 2011; Roeser, Eccles, & Sameroff, 2000; Turner, Christensen, Kackar-Cam, Trucano, & Fulmer, 2014; Vansteenkiste & Ryan, 2013; Whitebread, 2014.)

On the basis of attachment and self-determination theories at the heart of emotional support are sensitivity and responsiveness. *Sensitivity* emphasizes skillfulness in noticing the child's needs and *responsiveness* emphasizes flexible adaptation to these needs. To be responsive, teachers should be flexible in adapting their teaching plans, explanations and feedback based on the children's initiations, misunderstandings and unexpected responses, since emotional support is expressed for instance in manners to give feedback, to grasp a child's initiative or deal with mistakes. (Berliner, 2001; Hamre & Pianta, 2007; Muhonen et al., 2016; Salonen, Lepola & Vauras, 2007; Vauras et al., 2013.) Teachers providing responsive positive emotional support are encouraging, warm, and friendly, and pay attention to each child. They uphold the positive climate by encouraging children to be friendly and care about each other. Sometimes teachers struggle in their roles as sensitive and flexible facilitators and face challenges in providing positive emotional support to create a safe, inspiring and warm learning environment. These challenges can be observed as negative emotional support including expressions of anger, hostility or aggression. (La Paro, Pianta, & Stuhlman, 2004; Pianta et al., 2008; Pianta & Hamre, 2009.)

Importance of emotional support

A positive emotional support has been observed to have a positive link to the child's favorable development and learning (Curby et al., 2013; Howes et al., 2008; Roorda et al., 2011). In addition, a positive emotional support helps to construct a warm interactive relationship, which promotes positive emotions and deep engagement in learning (Howes & Smith, 1995; Ruzek et al., 2016; Stroet, Opdenakker, & Minnaert, 2013; Turner et al., 2014). Children who have received positive emotional support are more self-regulated than the ones who have not received positive emotional support (Hamre & Pianta, 2007; Merritt, Wanless, Rimm-Kaufmann, Cameron, & Peugh, 2012; Whitebread, 2014). Respectively, the forms of negative emotional support such as insensitivity, inflexibility, intrusiveness and austerity prevent the development of learning skills (Aunola & Nurmi, 2004; Junttila, Vauras, & Laakkonen, 2006; Pianta, La Paro, Payne, Cox, & Bradley, 2002; Salonen et al., 2007). Negative emotional support complicates development and well-being the more the stronger it is expressed (Vansteenkiste & Ryan, 2013).

Consistent positive emotional support has been demonstrated to promote social competence (Broekhuizen et al., 2016; Brock & Curby, 2014; Webster-Stratton, Reid & Hammond, 2004; Wilson, Pianta, & Stuhlman 2007). Teachers offering consistent positive emotional support assess the children in their group to be socially skillful and experience their relationship to the children to be close. Respectively, teachers who do not offer positive emotional support assess the children in their group to be socially clumsy and experience their relationship to the children to have conflicts. (Brock & Curby, 2014; Hamre & Pianta, 2007.) The emotional support is crucial for the interaction of the whole group as well, emphasizing the complex systemic nature of emotional interactions (Pennings & Mainhard, 2016). The teacher's emotional support to an individual child may increase the positive attitude of the whole group toward the child in question. Respectively, the children's positive attitude toward an individual child may influence how the teacher relates to the child in question. (Kiuru et al., 2015.)

A positive emotional support may also develop the children's self-restraint and a negative emotional support respectively leads to low self-restraint (Vansteenkiste & Ryan, 2013). A positive emotional support decreases and a negative emotional support increases behavioral problems (Brock & Curby, 2014; Broekhuizen et al., 2016; Bru, Stephens, & Torsheim, 2002; Hamre & Pianta, 2007; McCormick, Capella, O'Connor, & McClowry, 2013; Merritt et al., 2012; Webster-Stratton et al., 2004). A teacher inconsistently providing emotional support provides a weak model for emotional regulation and may cause children to behave defiantly and disruptively or self-effacingly and anxiously (Brock & Curby, 2014; Vansteenkiste & Ryan, 2013). It is crucial that teachers develop their

emotion regulation strategies (Jiang, Vauras, Volet & Wang, 2016) to limit negative emotions and inconsistency of their emotional support.

Positive emotional support provides *a good starting point for the scaffolding of motivation and learning* (Fulmer, & Turner, 2014; Jennings & Greenberg, 2009; Merritt et al., 2012; Pakarinen, Lerkkanen, Poikkeus & Rasku-Puttonen, 2013; Roorda et al., 2011; Ruzek et al., 2016). Positive emotional support may function as *a protecting factor* especially for children at risk as it prevents learning difficulties and exclusion (Buyse, Verschueren, Doumen, Van Damme, & Maes, 2008; Roorda et. al., 2011). Paying attention to emotional support as early as possible is of high importance, because early support is useful and lasting (Heckman, 2006; Karoly, Kilburn, & Cannon, 2005) and positive emotional support is strongly linked to high quality scaffolding in early childhood education (Salminen et al., 2012).

Research questions

This study scrutinizes emotional support by means of a method for systematic online observation. The method will be applied to deepen understanding of the emotional support provided by day care professionals at three levels. The first level aims at providing *a general developmental view* of day care professionals' emotional support across the intervention. The second level examines *in detail the variation* of emotional support during interaction processes in single reading sessions. The third level provides *examples* of how day care professionals' emotional support was typically expressed in reading sessions.

Method

Emotional support during dialogic reading

The empirical data for this study are the reading sessions in day care centers following the dialogic reading principles of the Bunny Stories -program (Mattinen, Kajamies, Räsänen, Hannula-Sormunen, & Lehtinen, 2014), because these sessions create excellent opportunities for high quality scaffolding where the child is encouraged to participate actively in the discussion of stories and to practice listening comprehension skills (Dickinson, Griffith, Golinkoff, & Hirsh-Pasek, 2012; John, 2009; Mol, Bus, De Jong, & Smeets, 2008; Whitehurst & Lonigan, 1998). The Bunny Stories -program contains detailed instructions for the carrying out of reading sessions in such a manner that the different dimensions of scaffolding (instructional support, classroom organization and emotional support, Pianta et al, 2008) would be realized as well as possible in order to support the child's listening comprehension skills. In addition, the day care professionals were provided professional development sessions where they were supported in carrying out the program, made familiar with the principles of the program, and discussed best practice scaffolding situations by means of video examples (Pehmer, Gröschner, & Seidel, 2015). Our studies indicate that across the Bunny Stories -intervention children's task-orientation (Laitinen, Mattinen, Kajamies, Vauras, & Lepola, 2013) and the listening comprehension skills improved (Kajamies, Mattinen, Räsänen, Hannula-Sormunen, & Lehtinen, 2014; Mattinen, Kajamies, Räsänen, Hannula-Sormunen, & Lehtinen, 2013).

In the Bunny Stories-program the day care professionals are exhorted to provide versatile positive emotional support. The day care professionals are prompted for instance to read a story expressively. They are also guided to notice children's initiatives and to continue interaction based on these. The children are expected to receive positive feedback and personal experiences from the story for instance through playing with story themes. In addition, the day care professionals are encouraged to discuss with the children about the emotional states elicited by the story and how the children experience these states. (Mattinen et al., 2014.)

Classification to observe emotional support systematically

Methodologically an important foundation for this study is the CLASS-method, which is widely used to observe instructional support, classroom organization and emotional support. CLASS-observation is divided to an observation period followed by an evaluation period when the observations are scored. The sub-domain of emotional support is

composed of four dimensions: positive and negative climate, the teacher sensitivity, and the regard for children's perspectives. (Pianta et al., 2008.) Our classification of emotional support was developed based on these dimensions. The sensitivity was not dealt with as a dimension of its own, but it was viewed as belonging to other dimensions. The method we have developed enables a ***continuous, systematic, detailed and exact*** observation of positive, neutral and negative emotional support.

The composition of the emotional support classification was initiated by watching videos filmed during Bunny Stories -sessions of four day care professionals and discussing observations of positive, negative and neutral emotional support. Before embarking upon the analysis itself the writers 3 and 4 analyzed videos of these four day care professionals independently after which the results of the analyses were discussed. This was followed by addition of specifications to the classification by summarizing subcategories and adding examples from the videos. The videos from these four day care professionals were only used for composing classification, not as data for the study itself. A complete classification of emotional support will be found in Table 1 (see details from Kaurila, & Lehtonen, 2015).

TABLE 1 The main categories and subcategories of emotional support with examples

| POSITIVE EMOTIONAL SUPPORT | |
|---|---|
| <i>Positive climate</i> | <i>Regard for children's perspective in a supportive or encouraging manner</i> |
| Speaking in a soft, encouraging or inspiring manner | Listening and genuine attention |
| Positive facial expression and gestures | Admiring and gratifying feedback |
| Directing the situation through positive feedback back to participation in accordance with the aims of learning | Encouraging in challenging situations |
| | Flexibility |
| | Enthusiastic attitude as children link events in the story to personal experience |
| NEUTRAL EMOTIONAL SUPPORT | |
| <i>Neutral climate</i> | <i>Regard for children's perspective in a low key or neutral manner</i> |
| Speaking matter of fact | Listening and restrained expression |
| Neutral facial expressions and gestures | Restrainedly matter of fact feedback |
| Directing the situation neutrally | Questions of fact without encouragement in challenging situations |
| | Limited flexibility |
| | Restrained attitude as children link events in the story to personal experience |
| NEGATIVE EMOTIONAL SUPPORT | |
| <i>Negative climate</i> | <i>Negative regard for children's perspective and emphasis on day care professional's perspective</i> |
| Speaking with denigration, irritation or arrogance | Evasion of communication and failure to pay attention |
| Negative facial expressions and gestures | Denigrating or rejecting feedback |
| Directing of situation with limits and prohibitions | Obstruction of endeavor in challenging situations |
| | Inflexibility |
| | Rejecting attitude as children link events in the story to personal experiences |

According to the classification **positive emotional support** is typically expressed when the day care professionals sensitively notice children's emotions and mental states and engage with them by flexibly expressing encouragement, gratitude, enthusiasm or

empathy. According to the examples from the four day care professionals' videos they offered positive feedback by smiling, nodding or turning toward the children with a display of interest. They touched the children in a positive way by caressing, hugging, patting or cuddling for instance in order to comfort them. They commented positively to support relatedness: *"Nice we can read an exciting story together again"* or *"Really nice to be together again"*. They also showed respect for the competences of the children: *"How clever you are!"* In challenging situations they encouraged children to try: *"Just go on, you know how to do it"*. They also encouraged children to listen to the story *"Now comes an exciting passage. Take Bunny in your lap so it does not get scared."*

Neutral emotional support is typically expressed when day care professionals' participate without any clear emotional message. In such circumstances their participations are not directed at the children's emotions and mental states. They participate with minimum expression without showing encouragement, admiration, empathy, denigration or irritation toward the children. The examples picked from the videos from the four day care professionals showed that they did not make the story interesting and presented the questions related to the story in a neutrally matter of fact fashion. The reading of the story was clear but not empathic. The tone of the voice when reading did not vary much and the eyes were mainly fixed on the paper. Neutral emotional support also revealed itself as brevity in commentary to the needs of support, topics and opinions of the children. They let the child say what s/he has to say but reacted to it by retorting in a neutral tone of voice e.g. *"Yes"*, *"Mm-m"*, *"OK"*. They put out children's inappropriate activity neutrally, for instance by saying: *"Let's listen to the story again."*

Negative emotional support is typically expressed when day care professionals' neglect the child and the child's learning. They display a negative attitude toward the child's emotions and mental states revealing irritation or commenting sarcastically or dismissively. The examples picked from the four day care professionals' videos showed negative facial expressions and gestures in the form of grandiloquent shaking of the head, shaking index finger, frowning, or rolling eyes. The day care professionals touched the child in a negative way, for instance by pulling the child back to sit down. They spoke or read in a bored fashion or seem bored by for instance tapping the table with a paper. They ridiculed verbally or humiliated the child or controlled the reading session in a negative way: *"Now you have to sit still. Don't disturb!"* The emphasis on the perspective of the day care professionals and a negative regard for the children's perspectives became obvious for instance when a day care professional inquired: *"Are you at all on the same planet as I?"* They also showed anger, for instance by raising their voices. They faced challenges in supporting children's needs of autonomy when they did not respond or

denied the children's initiatives by saying for instance: *"It cannot be like that", "We don't do things like that now", or "No! We do it this way now"*.

Applying classification to analyze case examples

The classification of emotional support was applied to the analysis of two day care professionals who were selected among 21 day care professionals participating in the Bunny Stories -study. The selection was made through discrete sampling on the basis of differences in scaffolding noted during intervention. Both cases, called here Leena and Petra, had worked in day care for many years and were enthusiastic about developing their scaffolding through reflection. In the reading sessions one day care professional and two children in day care age with difficulties in listening comprehension participated. The program contains 20 reading sessions that were carried out once a week and video-recorded. Both cases were picked out for analysis for three reading sessions: in the beginning, in the middle and in the end of the intervention (sessions 2, 9 and 19, for the duration of 24-35 minutes).

The observers (the writers 3 and 4 of the present article) had no prior knowledge of Leena and Petra. The observers carried out a video analysis with the ELAN-program (Lausberg & Sloetjes, 2009). The day care professional's participation was given the codes positive, neutral or negative according to the strongest emotional support observed. One emotional support category was coded until it changed into another. When the observers had analyzed the videos independently, the analyses were compared. The agreement percentage in positive emotional support was 68, in neutral 72 and in negative 73. The disagreements were discussed and the justified corrections were made to the analysis. The reliability of the study was enhanced in addition to independent observations by composing results only based on observations where the observers reached agreement. Table 2 describes percentages of final disagreement left out from the results.

TABLE 2 Percentages of final disagreement left out from the results.

| Session | Petra | Leena |
|-----------|-------|-------|
| Beginning | 10 | 5 |
| Middle | 9 | 6 |
| End | 3 | 4 |

Day care professionals' emotional support

Emotional support across the intervention

With the help of the systematic observation method developed, it became possible to create *a general developmental view* of two day care professionals' emotional support across the intervention (see Figure 1). Petra's emotional support was mainly neutral. Positive and negative emotional support occurred the whole time scantily in relation to neutral emotional support. In the end, neutral emotional support even increased and positive support decreased. Leena's emotional support on the other hand was mainly positive in the beginning of the intervention. In the middle, positive emotional support decreased and neutral emotional support increased. In the end, neutral emotional support decreased and positive emotional support increased back to become the main category, but did not return to that of the beginning. Leena's negative emotional support remained very seldom across the intervention and even decreased in the end.

Interestingly, the middle session was Petra's best and Leena's worst session emphasizing differences in emotional support between the cases. Petra and Leena also showed *different kind of developmental profiles*. From beginning to middle session Petra's emotional support developed optimally and Leena's emotional support developed non-optimally, but from middle to end session Petra's emotional support developed non-optimally and Leena's emotional support developed optimally. From beginning to end session the only optimal development was the decrease in Leena's negative emotional support.

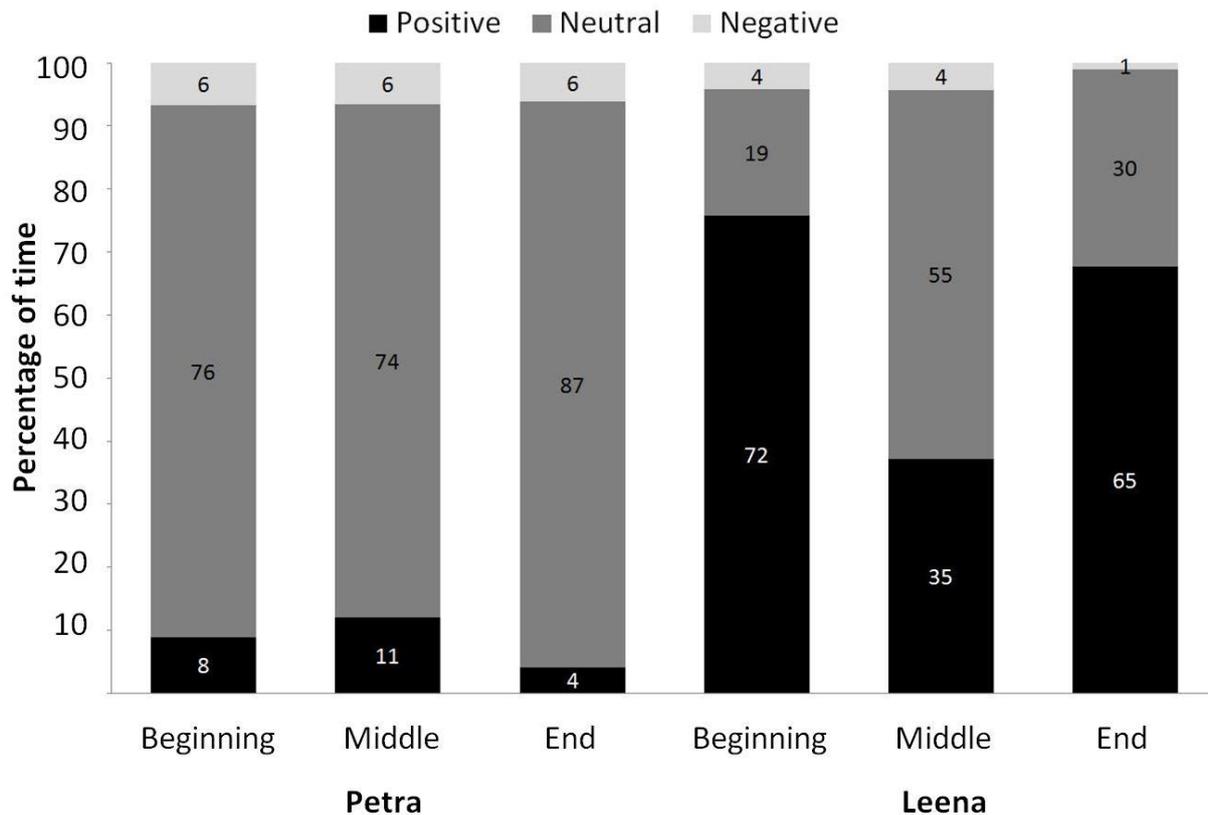


Figure 1 Day care professionals' emotional support across the intervention

Variation in emotional support during reading sessions

As we scrutinized variation of emotional support during the interaction processes, we noticed both *consistent* and *inconsistent* emotional support. Consecutive observations belonging to consistent phases are connected with black lines in Figures 2 and 3. Consistent emotional support is regarded to *support learning* when the scaffolding phase contained at least four positive observations alternating with neutral observations and *harm learning* when the scaffolding phase contained at least four negative observations alternating with neutral observations.

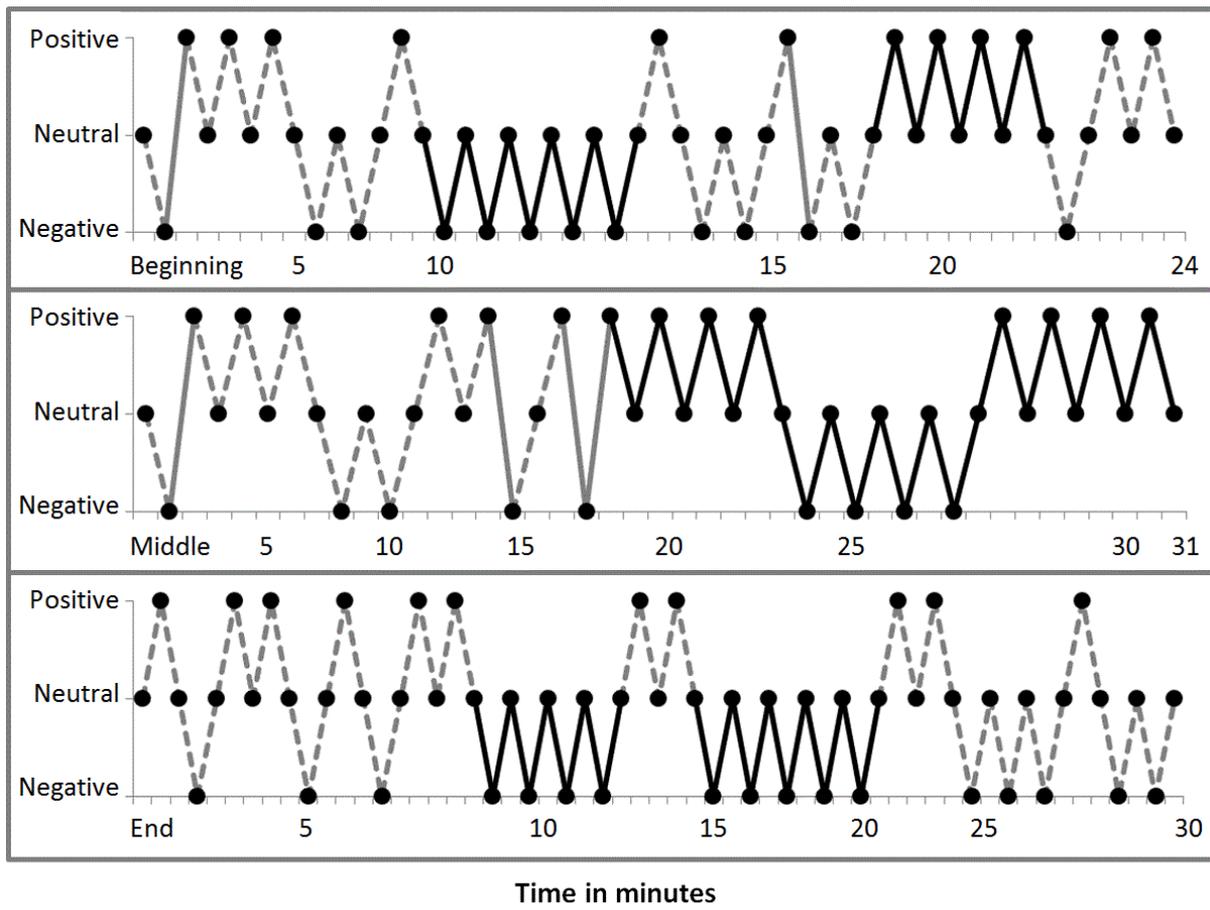


Figure 2 The variation of Petra’s emotional support during the intervention

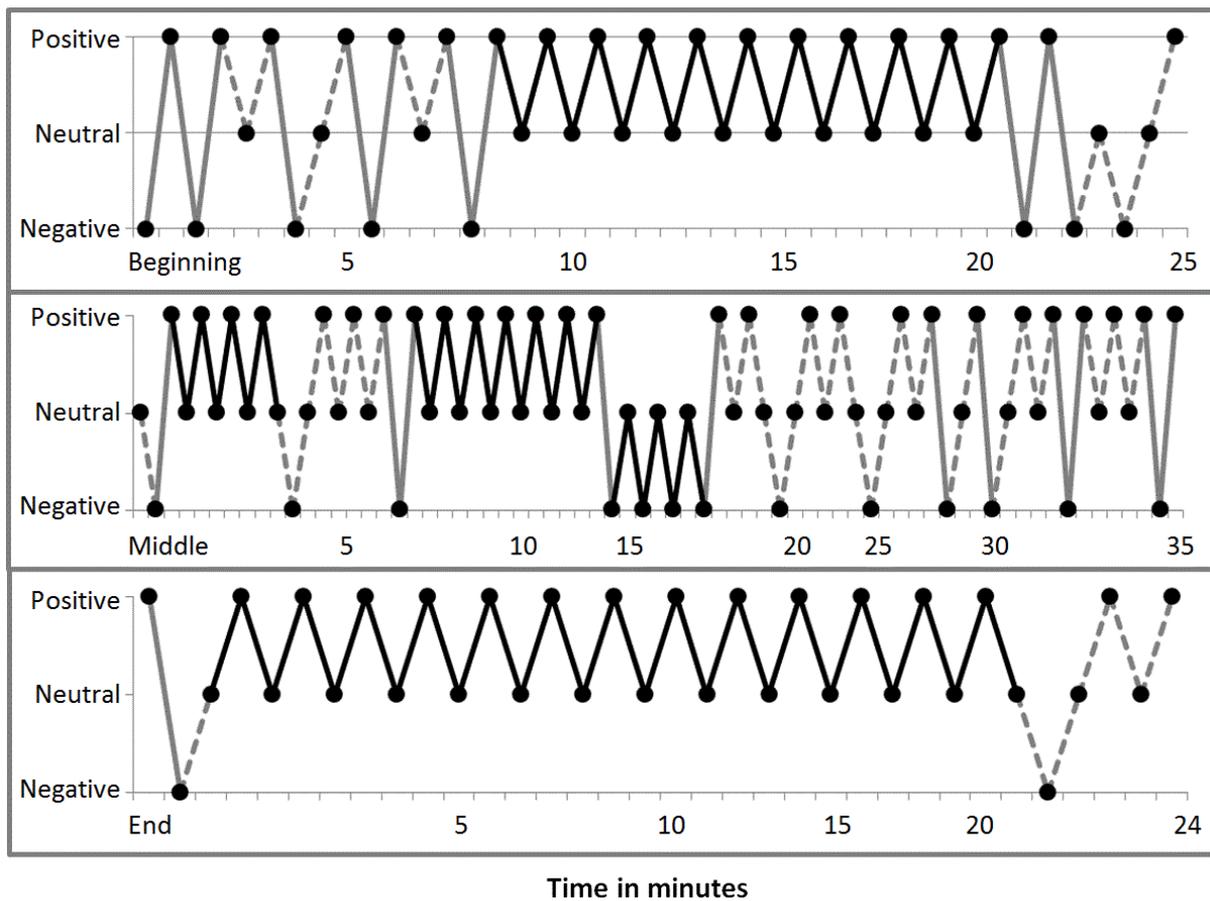


Figure 3 The variation of Leena's emotional support during the intervention

For Petra **consistent, supportive of learning phases**, occurred in the beginning and middle sessions and they were short (3-4 minutes). Leena's all sessions contained such phases and in the beginning and end sessions they were lengthy (12 and 20 minutes). **Consistent, harmful to learning phases**, occurred for Petra in each session and for Leena in the middle session. Particularly in the end session Petra faced challenges to consistently provide positive emotional support, since no phases supportive of learning were found and two quite long (4-6 minutes) phases of harmful to learning were found. In the middle session both Petra and Leena provided consistently positive emotional support during two phases. Interestingly, Petra's phases were observed before the midpoint and Leena's after the midpoint of the session.

In **inconsistent** emotional support there occurs continuous variation between positive, neutral and negative emotional support. Consecutive observations showing inconsistency are connected with grey dotted lines in Figures 2 and 3. Inconsistency occurred in all sessions, but it especially dominated Petra's sessions and Leena's middle session.

Inconsistency sometimes included single *transitions* on the scale of emotional support from one extreme to the other (observations connected with grey lines). In particular Leena's beginning and middle sessions included transitions from one extreme to the other, 11 times in both (from positive to negative 6 and from negative to positive 5 times). In Petra's sessions there were fewer transitions from one extreme to the other than in Leena's. In the beginning session such transitions occurred twice (once from positive to negative and once from negative to positive) and in the middle session four times (from positive to negative and from negative to positive twice). Leena's end session included only one transition from one extreme to the other and Petra's end session included no transition from one extreme to the other showing that variation from one extreme to another decreased for both cases.

Typical observations of emotional support

The following examples illustrate how emotional support was expressed in Petra's and Leena's reading sessions.

Positive emotional support was typically expressed through speaking in an encouraging and enthusiastic manner and engaging reading. The day care professionals made the story interesting for the children for instance through whispering *"This seems to become a really exciting letter."* They also spoke gently, expressed the emotions of the story with force and gave positive feedback to the children for their answers to support their needs for competence, for instance thus: *"Oh, just so! You knew that excellently. That was exactly why."*, *"Of course, because he went to the mountain as you said. Well done!"* or *"Good, then it removed it with its beak. Snap and away. Good!"* They also expressed that they listened to the children by looking their way, agreed with them through expressions and gestures and expressed genuine interest in the initiations of the children to support their needs for autonomy, as in the following excerpt.

Child: *This one whispers to me.*

The day care professional leans forward in order to hear the whisper.

Child: *The Bunny said that now it remembered.*

The day care professional (enthusiastically): *So, what did it say?*

Child: *It says that...*

The day care professional listens and looks interested in the direction of the child.

Sometimes the day care professionals used the soft toy Bunny as aid when giving feedback. They for instance clapped Bunny's paws together to honor the child's correct answer and praised the child: *"Good, Bunny is very pleased. That was fine!"* The following

example is from a situation where the child explained for a long time about a picture connected to the story. The day care professional listened attentively, looked toward the child and agreed with the explanation the child told by nodding. When the child had finished the narrative, the day care professional praised the child repeatedly:

Day care professional: *That's true! Just like this!*

Child 1: *It was a long explanation.*

Day care professional: *It was and it was really so clearly explained that I'm of the same view. It must have been like this. Do you agree?* (asks another child)

Child 2: *And I, too, agree.*

Day care professional (fondly): *Yes. Good! You explained long, but just so. It came from the forest. Good! Now Bunny also understood. You explained it so well!*

Neutral emotional support was typically expressed through low key expression in reading and speech, becoming manifest for instance in the day care professionals' comments to the children's replies using a neutral tone of voice: "Ah" or "Well, it could be so". When asking questions related to the story the day care professionals inquired in a neutral tone of voice: "Why do you think so?", without asking additional questions or seeming interested to hear the children's answers. They let the children tell their opinions, but kept a neutral attitude and did not give any feedback, as in the excerpt below.

The day care professional (in a neutral voice): *So what do you think?*

Child: *Because I wouldn't want that ... that it goes away ...*

Day care professional (in a neutral voice and glancing simultaneously at another child): *Let's continue the story.*

Another example of a situation like this is a discussion emerging from the story about nightmares and the children's experiences of them. A child narrated a long and detailed nightmare. The day care professional did not engage in the child's narrative, instead commenting "Mm-m", "Oh, well" and "Nightmares are like that with scary stuff". She looked most of the time at the child when the child told about the nightmare, but from time to time glanced at a paper. Furthermore, when the attention of the children was attracted by matters irrelevant from the point of view of the story, the day care professionals returned them to the world of the story in a neutral fashion. For instance when a child grabbed the necklace of the day care professional, saying "You have a thing like this", the day care professional loosened the child's hand from the necklace saying "Yes. Now let's listen to the story."

Negative emotional support was only seldom observed and revealed itself mainly as inflexibility to children's perspectives and negative facial expressions or gestures in situations where the child's attention had drifted away from the story. Inflexibility was shown for instance in situations where a child asked a relevant question from the point of view of listening comprehension, but the day care professional just continued reading of the story. At the beginning of one session a child tried to communicate about a string in his trousers which was too tight and annoyed him, but the day care professional ignored the child and started telling the story. Sometimes the day care professionals directed the situations by emphasizing adult control. They for instance snatched something rapidly away from the child or limited the child's movements even when they did not disturb the situation. For example when a child tried to look into a cupboard nearby, the day care professional pulled the child back on its chair by grabbing him/her by the shoulder and stating "*We don't look there!*". Children's needs for competence were threatened when day care professionals repeated the child's answer in a negative tone of voice.

Conclusions

Methodological illustrations highlighted both stability and variability of emotional support

With the help of the systematic observation method developed in this study, it became possible to create illustrations of the emotional support provided by two day care professionals. On the basis of general developmental view the day care professionals offered in each reading session mainly **positive** or **neutral** emotional support while **negative** emotional support remained limited. A limited amount of negative emotional support is favorable, as previous studies have revealed that negative emotional support may endanger development and learning (Roeser et al., 2000; Roorda et al., 2011; Vansteenkiste & Ryan, 2013). A systematic developmental observation also highlighted interesting differences between the cases. Petra's emotional support in each session was predominantly neutral while the positive support remained limited. Leena's emotional support on the other hand was mainly positive, but in the middle neutral emotional support dominated showing interesting variation in Leena's emotional support. Leena's negative emotional support decreased showing favorable development. A positive emotional support is favorable as previous studies have demonstrated it supports development and learning (Broekhuizen et al., 2016; Curby et al., 2013; Gregory & Korth, 2016; Howes et al., 2008; Roorda et al., 2011; Stroet et al., 2013; Turner et al., 2014). From the point of view of the quality of scaffolding it is ultimately of the highest priority that

the emotional support given by the day care professional is predominantly positive and consequently that there is an strong effort to halt negative emotional support. Furthermore, the dominance of neutral emotional support or the development of positive emotional support into neutral should be recognized and replaced by an increase of positive emotional support.

Our study demonstrated that, in addition to a developmental general view, it is essential to view the scaffolding in detail in order to observe what kind of variation in quality is hidden behind the general view (cf. Pennings & Mainhard, 2016; Turner et al., 2014; Vauras et al., 2013). As the variation in emotional support was viewed during reading sessions, both consistent and inconsistent emotional support was detected. **Consistent phases supporting learning** (continuous fluctuation between neutral and positive emotional support) conducted by Petra, whose general profile of emotional support was neutral, were less frequent and shorter than those by Leena, whose general profile of emotional support was positive. Phases with consistent emotional support are favorable because previous studies have revealed that they create safety, strengthen self-esteem and encourage participation (Ainsworth et al., 1978; Bowlby, 1970; Curby et al., 2013; Ruzek et al., 2016; Silvén et al., 2013). An exact systematic observation also highlighted unfavorable consistency, where the emotional support got stuck into a continuous variation between negative and neutral. Such **consistent phases harmful for learning** occurred more frequently in Petra's case than in Leena's. Consistency is viewed as favorable from the point of view of scaffolding (Broekhuizen et al., 2016; Gregory & Curby et al., 2013; Howes et al., 2008; Korth, 2016; Roorda et al., 2011), but our study emphasizes that consistency may also be problematic if the emotional support consistently varies between negative and neutral. From the point of view of the quality of scaffolding it is crucial to pay attention to what category of emotional support is repeatedly observed and to strive for an increase in consistency which actually supports learning.

Inconsistent phases (continuous variation between positive, neutral, and negative emotional support) were detected especially in Petra's sessions and in Leena's middle session. **Transitions** between extremes of emotional support were detected especially in Leena's sessions. Variation of emotional support from one extreme to another decreased for both cases in the end session showing favorable signs of the development of emotional support regulation (cf. Jiang et al, 2016). Because earlier studies have shown that inconsistent emotional support may cause defiance or withdrawal and tension in the child (Brock & Curby, 2014; Vansteenkiste & Ryan, 2013), it is essential to study in detail the scaffolding processes to detect inconsistent emotional support. To vouch for the quality

of scaffolding the day care professionals should aim at regulating the inconsistency of their emotional support by lowering it so that the children could predict the support and confidently concentrate on their practicing during maximally sustained consistent sessions with support of learning.

Increasing consistent positive emotional support to develop the scaffolding quality

Systematic observation of emotional support revealed that the child care professional's emotional support consists of small matters which they ought to be aware of in order to support learning optimally. Positive emotional support indeed typically was exhibited as encouraging speak, expressive reading and positive feedback. Positive emotional support also occurred when the day care professionals with gestures and facial expressions demonstrated that they were genuinely interested in matters related to the child. Neutral emotional support typically occurred when the day care professional spoke or read without empathy and did not follow up the children's initiatives. Negative emotional support revealed itself as arrogance and negative gestures and facial expressions which block the construction of interaction. The results place, in similarity with previous studies (Hamre & Pianta, 2007; Pakarinen et al., 2013; Salonen et al., 2007), into focus that the day care professional should *sensitively and responsively follow up initiatives of the children*. In order to secure the quality of scaffolding the day care professionals should intentionally sensitize themselves into listening to the initiatives of the children to flexibly join them to the interaction directed towards the learning objectives (Muhonen et al., 2016; Vauras et al., 2013).

A careful preparation before the scaffolding sessions for example by familiarizing oneself with the learning objectives and materials increase the resources at the day care professionals' disposal to *throw themselves with enthusiasm* into interaction with the children to support children's deep engagement in learning. Engaged reading and playing the events in the story together with the children are excellent means to excite and maintain the children's enthusiasm for the story. By means of *positive feedback* a trust in the development of the child's skills may be transmitted and the child's psychological basic needs supported. Of especial importance would be the provision of positive emotional support *when the tasks for the child involve challenges* and their attention is threatened by being directed away from the task (Fulmer & Turner, 2014). Even though the children's participation was not systematically analyzed in this study, the impressions created during analysis of the emotional support emphasize the *complex systemic nature of emotional interactions* (Pennings & Mainhard, 2016). The drop in Leena's emotional support in the middle of the intervention may have been caused by the fact that

her questions were difficult and the children's attention started to drift away from the task. At this point Leena withdrew to a more neutral emotional support than in her beginning and end sessions where she offered generously positive emotional support and the children participated more enthusiastically and with more accomplishment.

Because positive emotional support is a pedagogical resource too little utilized (Kemppainen, Pietiläinen, & Vehkakoski, 2015), there is a demand for means to increase positive emotional support (Kiuru et al., 2015). **Small group activities** offer excellent opportunities for encountering the children individually (Blatchford, Bassett, & Brown, 2011) and for positive emotional support. Because an emotional support is especially important for children at risk (Buyse et al., 2008; Roorda et al., 2011) resources should be devoted to it **from a preventive perspective already at early childhood** (Heckman, 2006; Karoly et al., 2005; Salminen et al., 2012). When considering the quality of scaffolding it is necessary to understand that a child's learning is most optimally scaffolded when **instructional support is combined with positive emotional support** (Fulmer, & Turner, 2014; Gregory & Korth, 2016; Hamre & Pianta, 2007; La Paro et al., 2004). If scaffolding can be provided in small groups, particular attention must be devoted so the child's learning is strongly scaffolded by consistent positive emotional support. In this case it is important that the day care professionals with all means at their disposal make an effort to create a climate which is as positive as possible so the children are encouraged to actively participate in the interaction.

Benefits of observing emotional support systematically

The results emphasize matters related to emotional support which in all interactions must be given more attention than previously. The emotional support classification developed on the basis of the CLASS offers a systematic and exact method for observation and development of scaffolding. In such case the day care professionals may recognize the **strengths and weaknesses** of their emotional support and develop it into a more positive and consistent direction than previously in order to support learning. The classification of emotional support enables an exactly allocated and broad discussion about emotional support, which may be followed by a deepening of the understanding of emotional support in such a way that **all members of the educational community** will be capable of setting as their objective the creation and maintenance of a positive climate. Because it is important to avoid negative emotional support, the members of the educational community would benefit also from considering how they can **regulate their negative emotions** (Jiang et al, 2016) in such a way that they do not block the children's learning.

More attention than previously should be given to emotional support in both pre-service and in-service education. Day care professionals and teachers should be encouraged to observe systematically their scaffolding sessions from the point of view of emotional support. As a tool for self-reflection, videos could be used the way they were used for this study as well, to analyze elements of positive, neutral and negative emotional support and to find consistent and inconsistent phases. The *videos enable a reliable analysis in detail of authentic interaction* because they enable repeated reviewing of situations to ensure interpretations are certified (Derry et al., 2010). With the help of videos it becomes possible to *increase awareness of interaction practices and to develop scaffolding skills* (Kemppainen et al. 2015; Pehmer et al., 2015). The common discussion between the day care professionals/teachers and the researchers on the typical patterns and critical incidents observed on the videos is an excellent way of deepening both parties' understanding of emotional support.

Future research and collaboration

It would be interesting in the future to utilize classification of emotional support widely by observing several day care professionals from the Bunny Stories-study or adults, such as teachers or parents, participating in different interactions. Applying to other kind of interactions, skill levels and age groups would increase understanding of typical expressions of emotional support in different contexts. Studying emotional support also in natural day care or classroom contexts would help to understand to role of the support provided for the day care professionals during the intervention. It would also be important to investigate in detail several interaction situations by the same adult to deeply understand intra-individual development and variation of emotional support. By these means it would become possible to find out the nature of scaffolding which typically supports learning and which blocks learning so it would become possible to improve conditions for positive emotional support. Interviewing adults about their thinking about emotional support would further deepen our understanding of their perspectives. Since in this study, these kind of interviews were not conducted, we can only speculate about the possible reasons behind the differences between Petra's and Leena's emotional support. Maybe it was less natural and important for Petra than for Leena to throw herself enthusiastically into this kind of new interactive learning environment.

In the future emotional interaction could be investigated from videos also from the perspective of the children to deepen understanding of the complex systemic nature of emotional interactions by showing how children's participation is related to the emotional support. It would be interesting to scrutinize how children participate during consistent and inconsistent scaffolding phases. When children are older, combining

observations with children's reports on emotional support observed typically used in classroom studies (Ruzek et al., 2016), would also deepen understanding of the perspective of the children to emotional support.

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