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Practitioner involvement and support in children's learning during free play in two Norwegian kindergartens

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This research focuses on how practitioners in two Norwegian kindergartens interact with children during free play. The purpose of the study is to draw attention to the way the practitioners supported children's learning through their interactions with children during free play. Through naturalistic observations of 17 practitioners, results revealed that while more than half of the day in both settings consisted of free play activities (60%), practitioners spent a significant amount of this time completely away from play situations (45,5% of free play). Of the remaining time, practitioners spent 34% of free play time supporting children's learning through joining in, commenting, instructing or helping.

Keywords: free play; Norway; kindergarten; ZPD

Introduction

The Norwegian kindergarten

Currently, 91% of children between the ages of one and six in Norway attend kindergarten (Statistics Norway, 2018). Norwegian kindergartens consider play to be a foundation for learning (Ministry of Education (MoE), 2012-2013), placing it at the center of their early childcare framework plan (Taguma et al., 2013). Norway does not have a prescribed curriculum but, instead, kindergartens are given 'pedagogical freedom' to adapt their own educational activities to the framework plan (OECD, 2015: s.9.2.1). The framework plan outlines several aspects of Norwegian kindergartens including kindergarten roles and responsibilities, values, and learning areas. These learning areas are: Communication, language and text; Body, movement, food and health; Art, culture and creativity; Nature, environment and technology; Quantities, spaces and shapes; Ethics, religion and philosophy; and Local community and society (MoE, 2017). Within this framework plan (MoE, 2017), as well as several other Norwegian education documents, play is discussed together with learning and

development (see, for example, Department for children and families, 2004-2005; MoE, 2015-2016; 2012-2013). At least 30% of kindergarten staff should be trained early childhood education and care (ECEC) teachers (with a 3-year university college degree) and there should be a leader with ECEC teacher education in each centre. Adult to child ratios should be 1:3 for those younger than three years and 1:6 for older children.

Explained briefly, the adults' role is described in the framework plan as being proactive and present, supporting, challenging and engaging with children. Practitioners are encouraged to draw upon children's experiences and interests, be open to improvisation and the children's own contributions, as well as alternate between spontaneous and planned activities. The Ministry of Education urges kindergarten staff to promote varied play, and to ' [...] support, participate in and enrich play on the children's terms' (MoE, 2017: 20). Generally, Norwegian kindergartens value free play. So much so, that they prioritize it over adult-led activities. This is something Synodi (2010) reports in her analysis of the Norwegian kindergarten framework plan. Similarly, a more recent large-scale Norwegian study found that nearly all kindergarten practitioners put greater emphasis on free play, often skipping planned, adult-directed activities (Lekhal et al., 2013).

Attention around free play is not new and certainly not unique to Norway. In fact, across the western world, play in general is seen as an integral part of children's lives (Fromberg and Bergen, 2006; Greve, 2013; Hakkarainen, 2006). Although several researchers have found free play to be an excellent foundation for learning (Fisher, 2013; Greve, 2013; Hakkarainen, 2006; Smilansky, 1968; Vygotsky, 1978), it is well known that children learn best through support from others (i.e. peers, adults or siblings) (Siraj-Blatchford et al., 2002; Vygotsky, 1978). In other words, children also need support from adults during free play. This support should not take away the 'child-

centeredness' of free play, but rather provide opportunities to enrich the activity by extending children's thinking (Sylva et al., 2004).

However, as part of his investigation into staff-child interactions among one- to three-year-olds during risky play in Norwegian kindergartens, Kleppe (2017) found that on occasions where staff were present, they did not interact with children for 41% of these occasions. Based on this, the current research aims to supplement Kleppe's findings. Kleppe defined risky play as 'thrilling and exciting forms of physical play [involving] uncertainty and a risk of physical injury' (Sandseter, 2010; cited in Kleppe, 2017: 2). Because free play is so highly-valued in the Norwegian kindergarten, it is important to investigate not only risky play but the wider context of free play. Limited empirical research currently exists on the type of interactions and support for learning children receive during free play in Norway. These interactions will therefore be the focus of this study. The initial aim is to investigate how childcare practitioners support children's learning during free play. As part of this investigation, through naturalistic observations, we examine how much time is spent on free play, how practitioners (n= 17) interact with children during these times and what evidence of support there is in the kindergartens during free play.

Free play and adult involvement

Play can be divided into several categories; including parallel, fantasy and risky play (Fromberg and Bergen, 2006). The focus of the current research, however, will be on the broad category of free play, which encompasses these and many other categories of play. During free play children guide the direction of the activity, while practitioners do not directly interfere or overshadow the child's involvement (Einarsdottir, 1998).

Although there should not be interference from practitioners, *support* is crucial. This support should occur through a combination of guidance and active involvement from

the practitioner, noticeable by back-and-forth interactions, a genuine interest from both parties, and sensitive responses from the adult (Pianta et al., 2005; Sylva et al., 2004; O'Connell and Bretherton, 1984). Pianta et al. (2008) underscores the importance of adult involvement in children's learning and sheds light on what support rather than interference looks like in practice. Here, extending children's thinking through feedback, active involvement and frequent, long interactions is emphasized.

While previous researchers have found free play to teach children important skills, this should not be misunderstood as absence from practitioners. This is because, for learning to take place, children need stimulating environments, which include, among other things, quality interactions with childcare professionals (Bjørnstad and Os, 2018; Degotardi, 2010; Goble and Pianta, 2017). Highlighting this point, in their large-scale longitudinal study of childcare in England, Sylva et al. (2004) found that settings described as 'excellent' showed evidence of free play for a substantial portion of the day, as well as practitioners helping to extend children's thinking through quality interactions. Other researchers using kindergarten quality rating systems have come to similar conclusions. Hamre (2014), for example, points out that kindergarten quality hinges upon frequent and meaningful interactions with practitioners. Each of these studies focus on the concept of the zone of proximal development, whereby meaningful and supportive interactions are emphasised in order to encourage children's learning and development without taking away the child-centeredness of play.

The Zone of Proximal Development (ZPD)

According to the concept of ZPD, children perform better when guided by a more able other (Vygotsky, 1978). Marked by quality interactions, this guidance is often known as scaffolding and entails sustained shared thinking, regularly building on existing abilities (Bruner, 1983; Siraj-Blatchford et al., 2002; Wall et al., 2015). Most importantly, the

result of this support, in the form of social interaction, shows improvements to the child's performance (Bodrova & Leong, 2007). In other words, the interaction leads to learning on the child's part. Adults may scaffold learning during play by helping children to use and understand concepts just beyond their current capabilities, showing an awareness for individual children's needs and offering individualized support (Early et al., 2010). Some examples of these behaviors include helping children to expand their thoughts, or linking activities to real world experiences. The idea of 'active engagement' is crucial here since both participants should be actively involved, sharing their mental processing, for the task to be beneficial (Siraj-Blatchford et al., 2002; Wall et al., 2015).

These ideas are fundamental to the current research and something previous studies focusing on scaffolding during play have emphasized. Sylva et al. (2004), for example, report that children made the most progress in settings where sustained shared thinking was observed, which included open-ended questioning, modeling and formative feedback from adults participating in play. In other words, dialogue and co-construction should be facilitated during free play, helping to extend the child's thinking (Wall et al., 2015).

Evidence from previous studies on adult involvement and children's learning during play

It is widely known that staff-child interactions form the basis of quality in early childhood education and care (Bjørnstad and Os, 2018; Jamison et al., 2014; Williamson and La Paro, 2009) Research into adult-child interaction and adult involvement in play has taken place for many years. As Kleppe (2017) points out, historically there have been two approaches to adult-child interactions; namely caregiving and learning. For the purpose of this research, learning will be the focus.

Several early childhood researchers have found the incorporation of adult participation into free play to be particularly beneficial for young children's learning, especially if core aspects of ZPD, such as active engagement, are realized. Smilansky's (1968) seminal findings, for example, revealed that adult involvement in dramatic play helps 'unfold [the play] and assist children in expressing their inner world' (p.94). Galyer and Evans' (2001) study of pretend play and emotion regulation among 47 four- and five-year-olds in New Zealand, revealed that children who regularly engaged in pretend play with a more experienced partner (i.e. adult), demonstrated more 'adaptive affect [...] empathy and emotional self-awareness in everyday interactions' (p.103). Similarly, Engvik et al.'s (2014) large-scale study, focusing on language development, learning outcomes of five-year old children and the quality of Norwegian kindergartens, found a strong positive relationship between quality adult-child interactions in kindergarten and children's behavior.

Evidence on the importance of interactions is not new. During the 1980s for example, research emphasised the importance of interactions during play. Slade's (1987) observational study of 16 mother-toddler dyads in free play, showed that play progressed to a higher level when mothers actively interacted with their child during play. In addition, O'Connell and Bretherton's (1984) analysis, based on a previous longitudinal study of toddler play, revealed that the presence of an adult alone was not adequate in supporting play or learning. Such thinking is also supported by more recent evidence such as Siraj-Blatchford et al.'s (2002) longitudinal study which found interactions between practitioners and children to be fundamental to early development. Their study, analyzing quality in the early years in England, specifically includes high-quality verbal interactions, such as showing a genuine interest, listening, and helping to extend children's thoughts. These studies highlight the fact that adult involvement does

not necessarily mean that the adult is leading the play, but rather joining in and following the children's lead.

Chien et al.'s (2010) study, involving 2 751 four-year-olds in the United States, revealed that children part of instructional and scaffolded learning groups performed better on language and mathematics tasks compared with children in free play groups without adult involvement. They therefore conclude that children should receive more 'quality instructional time', and that less free play time should be spent without teacher guidance. Likewise, Fuligni et al.'s (2012) investigation into 125 center-based and family childcare settings, showed that three- and four-year-old children in structured, adult-directed classrooms participated in more language and mathematics activities than those in free-choice settings. This led to higher language scores among these children. We argue, however, that despite their advocacy for more adult-led activities, the key findings of these two studies indicate that children need high quality interactions *during* free play. That is to say, a combination of adult- and child-led activities, rich in interaction. This is supported by Goble and Pianta's (2017) conclusion following their investigation into school readiness and practitioner interactions during adult- and child-directed activities. Here they conclude that focusing on the types of interactions children experience with adults has far greater impact than assessing the value of the types of activities (i.e. adult- or child-directed) they are involved in.

Looking at the evidence from previous studies, as well as the concept of ZPD, in relation to the fact that a significant amount of time is spent on free play in the Norwegian kindergarten, an investigation into support during free play is imperative to ensure that children's learning is supported as much as possible.

The present study

The aim of this study was, through observational data collection, to investigate how childcare practitioners support children's learning during free play in two Norwegian kindergartens. More specifically, we examined 1) the amount of time spent on free play and 2) how practitioners interacted with and supported children during free play.

Methods

Sample

Data was collected in two kindergartens in Oslo. These settings were chosen based on their accessibility as well as previous substitute work at the kindergartens. The target classrooms were those available to us during data collection. Both kindergartens are publicly owned and cater to children between the ages of one and six. The first classroom consisted of 15 children (between one and six years of age) and seven practitioners (six female, one male). The second classroom consisted of 33 children (between two and six years of age), with 10 practitioners (seven female, three male).

Table 1 about here

Data collection

Data was collected by one of the researchers involved in the study. Before data collection, all staff received a research brief, explaining the research to them.

Practitioners working in the target classrooms were the participants and therefore also received a consent form. Ethical approval to carry out this research was gained from the Norwegian center for research data (NSD).

To begin with, unstructured interviews with childcare practitioners took place. These were only used to identify basic details about the classrooms. After interviews, data was collected through naturalistic observations. Data was collected between 9:00 and 16:00 during all observation days. One less day of data collection was offered by kindergarten B, resulting in less observations at this kindergarten. However, no new information was obtained during the extra day in kindergarten A. Using an observation schedule and field notes, practitioners were observed during free-play times. The observation schedule, recording practitioner behaviors and the duration of activities, was confirmed following a pilot observation day at an additional kindergarten in the area, with an additional researcher. The purpose of having an additional researcher at this time was to test inter-observer reliability of the observation schedule.

The following categories, based loosely on Rubin's (2001) Play Observation Scale, were used for data collection: *Play* was defined as an activity whereby children explored objects and ideas through imaginary scenarios and/or interaction with tools and objects or physical movement and experimentation with language. On the other hand, *non-play* activities were identified as structured activities with clear goals, such as washing one's hands, or conversations between children and/or practitioners that had no relation to play. Within play, two types of activities were distinguished, *adult-directed activities* and *free play*. *Free play* was described as periods where all children chose what and who they participated with. Although children were not always playing per se during free play – they may have been wandering around, talking or crying – these were times dedicated to child-led play. In contrast, *adult-directed activities* were seen as activities organized by practitioners, taking the form of play and non-play activities, involving the whole class. Examples included meals and gym time.

Categories used in the observation schedule were defined before data collection and contained the following four, mutually exclusive, practitioner action categories for free play: *not present*, *present*, *playing*, and *other*. *Not present* was defined as unoccupied behavior (Rubin, 2001), whereby the participant was not involved in play in any way. *Present*, on the other hand, was seen as onlooker behavior (Rubin, 2001), whereby the participant was near a play situation but not directly involved. Subtle signs of support such as nodding or encouragement may have been evident at these times (Christie, 1998). Commenting was also included in the *present* category. This consisted of the participant describing or explaining a play activity, or talking to a child about the play, such as the colors they were using, or the characters they were playing. Questioning the child about the play and commenting on past play activities was also included. When practitioners played together with a child, joining in or playing parallel to a child, *playing* was coded. Finally, other behaviors such as problem-solving and managing play were coded as *other*. This primarily involved solving conflicts and stopping inappropriate play.

In addition to the observation schedule, field notes were used, describing the observations in more detail through short descriptions of situations observed as they occurred. Some examples included the practitioner's position in relation to the children, and conversations that occurred.

Data collection tools were used for five-minute intervals, with a three-minute break where no data was collected. In total, 130 five-minute observations (80 at kindergarten A, 50 at kindergarten B) were completed. The disparity in the amount of observations was due to one less observation day in kindergarten B. In both kindergartens, each participating practitioner was observed for one five-minute observation at a time. No data was collected during meal times and major transitions,

such as dressing for outdoor activities. However, data pertaining to the length and content of all activities between 9:00 and 16:00 were recorded.

Analytic criteria

Our data was analyzed on three levels. The first level was divided into adult-directed activities and free play, to establish how the day in each kindergarten was organized. The second level focused only on free play, looking at what practitioners did during this time (i.e. not present, present, playing or other). These codes were determined during pilot observations. The third level was dedicated to adult presence during free play, focusing on the type of support practitioners provided to children during free play. In order to investigate support, following data collection, supportive behaviors were identified. These behaviors consisted of *joining in*, *commenting*, *helping* and *instructing*. Each of these codes were developed based on previous research on support for learning in ECEC (see, for example, Early et al., 2010; Pianta et al., 2008; Williamson and La Paro, 2009) and were determined based on whether the actions observed fit the descriptions presented in *table 2*.

Table 2 about here

Findings

The daily structure

In our first step, we investigate how the day in the kindergartens was structured. This was divided into free play and adult-directed activities. Adult-directed activities consisted of meals, circle time, quiet time and gym, all of which primarily involved routines rather than learning-centered activities in both kindergartens. During free play, children played freely in- and outdoors, with their peers and practitioners. *Table 3*

represents the amount of time spent on these activities during data collection as a percentage of the day.

Table 3 about here

As *table 3* indicates, both kindergartens organized their days in comparable ways. Both spent more than half of the day on free-play activities (60%). These times were explicitly labelled by childcare practitioners as ‘free play’ in their own description of the schedule.

Free play

In our next step, we investigate what practitioners did during free play. This was divided into two levels of analysis. First we looked at what practitioners did during the 60% of the day spent on free play, and then at how much support they provided during this time.

Practitioner actions during free play

As *table 4* shows, practitioners in both kindergartens spent the most amount of time completely away from play situations during free play (i.e. *not present*). This involved practitioners talking to each other or engaging in tasks outside of play, such as preparing meals or cleaning up. On some occasions this involved practitioners still being with a child. The most frequently observed activities of this kind were changing clothes or helping children to use the toilet. However, in total, practitioners spent very little ‘not present’ time with a child. Kindergarten B stood out significantly in this regard, where practitioners spent just 4% of free-play time absent (i.e. not present) but with a child during observations.

Overall, practitioners in both kindergartens spent the least amount of time actively taking part in play situations (18 and 13%), with a combined total of 15,5% of free-play time spent on playing together with children.

Table 4 about here

Supportive behavior during free play

Our next step was to investigate the type of support provided to children during the 60% of the day spent on free play by looking at practitioners' interactions with children during these times. These interactions were broken down into four categories of supportive behavior as shown in *table 5*.

Table 5 about here

As *Table 5* indicates, practitioners spent a small amount of free-play time supporting children's learning. By combining all supportive behaviors observed during free play in kindergarten A (40%) with those observed in kindergarten B (28%) we come to a total of 34% of free-play time spent on supportive behaviors in both kindergartens.

Of the supportive behaviors observed, practitioners spent the most time joining in with play, a behavior distributed similarly across both settings. However, as *Table 5* shows, this was a very small portion of free-play time. During these times, practitioners most commonly joined in with already existing play after a request from a child. Time spent on joining-in behaviors ranged between one and five minutes. However, overall practitioners did not join in for long periods of time, and regularly left the play before children moved to a new activity.

Commenting was the second most common supportive behavior observed, and was distributed almost identically across both settings. Comments included questions about the play, which made up 52% of the commenting interactions (such as *'Are you pretending to be a princess?'*), encouraging words, which made up 24% of the commenting interactions (such as *'Good job'*), or responses to a child's attention seeking, which took up 18% of the commenting interactions (such as *'Oh, look at that!'*). The remaining 6% of commenting interactions were the longest commenting interactions, involving discussions about what the child was doing and relating the activity to the real world. For example, on one occasion, a practitioner asked a child if they had ever seen a real shark and how they knew which colors to use when drawing one.

Despite it being one of the most frequently occurring behaviors, no comments or conversations lasted longer than two minutes in either of the settings including the 6% of 'long' commenting interactions. Overall, these interactions did not appear to involve complex communication. Although some conversations contained slightly more concept development or real world experiences than others, such as the example above, the content mostly consisted of rote interactions (such as recalling colours and names of things while drawing). In other words, the conversation was still at a somewhat low level. Practitioners did not often ask open-ended questions, encourage children to expand on their answers, or model language or concept development during these interactions.

Helping behaviors were not common in either kindergarten during data collection with a combined total of 7% (11% in kindergarten A, 3% in kindergarten B). During this kind of support, practitioners were most frequently observed fetching resources for play, either independently or by request from a child. They were also often

seen pushing children on swings or helping them down from climbing frames. This support did not often involve any further interaction such as a conversation or expansion on the play.

Supportive behavior in the form of instructing was the least frequently observed behavior. To highlight this finding further, this behavior was completely absent in kindergarten A. When instructing was observed in kindergarten B, it occurred for just one observation, on an occasion when the children were playing a game with rules.

Discussion

This study aimed to investigate how childcare practitioners supported children's learning during free play in two Norwegian kindergartens using naturalistic observations of 17 practitioners. Below, the most significant findings are discussed.

As expected, following our review of the literature (see, for example, Lekhal et al., 2013; MoE, 2017; Synodi, 2010), compared to adult-directed activities, free play was most prominent in both kindergartens, taking up more than half of the day (60%). During free play, children were given the opportunity to engage in play the way they wanted to, without practitioners altering the play agenda. This was not unexpected since the Norwegian framework plan for kindergartens explicitly states that play should occur on the children's terms, as well as the fact that previous researchers have had similar findings (see, for example, Lekhal et al., 2013; Synodi, 2010).

A second finding was that, during free play, practitioners in both settings spent a considerable amount of observation time away from play. Although this may reflect the Norwegian ethos of free play, this should not mean that practitioners ought to be absent when play is occurring. In addition, we observed limited evidence of supportive interactions (measured as joining in, commenting, helping and instructing) between

practitioners and children during free play when practitioners were present. Together, these findings indicate low-quality childcare when looking at previous research on quality in kindergartens (Bjørnstad and Os, 2018; Hamre, 2014; Harms et al., 2003; Goble and Pianta, 2017; Pianta et al., 2008; Sylva et al., 2004) – all highlighting the importance of interaction and adult involvement. This is also something Kleppe (2017) draws attention to in his research on the characteristics of staff–child interactions during risky play. Here, Kleppe found that 41% of his observations involved no interaction between practitioners and children. On the one hand, the lack of presence or interaction observed in both studies indicates an inclination to let children play on their own, creating their own learning opportunities. However, at such a high frequency, this may be counterproductive in supporting children’s learning, especially when thinking about the potential support that can be offered when adults are present during play times as shown in the literature review. The Norwegian framework plan explicitly states that practitioners should allow children to play on their own terms. However, it also states that practitioners should *support* and *enrich* this activity. This cannot be effectively achieved if practitioners are not spending time interacting with children, or spending large portions of play time away from children. As international studies such as those of Engvik et al. (2014), Goble and Pianta (2017) and Sylva et al. (2004) have shown, adult-child interactions are crucial to high-quality settings.

Our observations reveal that even when practitioners were available to support and enrich play, the support they provided in most instances was not of a high quality. This conclusion was drawn from the fact that limited open-ended questioning, concept development or long periods of genuine support were observed across both settings. Each of these behaviors have been noted by previous researchers as imperative to high-quality support, and thus, high-quality settings (see, for example, Early et al., 2010;

Engvik et al., 2014; Goble and Pianta, 2017; Hamre, 2014; Pianta et al., 2008; Sylva et al., 2004). Thinking about ZPD in particular, limited evidence of practitioners helping to unfold children's play, by extending their thinking, was observed – a recognized indicator of quality in ECEC (Pianta et al., 2008; Siraj-Blatchford et al., 2002) .

Although it was not something we measured directly, there was very little evidence of an increase in children's performance following interactions with practitioners. Despite their possible intention, interactions between practitioners and children did not provide or encourage long back-and-forth interactions. These missing interactions are particularly important when thinking about ZPD, as well as communication and social skills development. Without long enough interactions with 'more able others', children may miss out on scaffolded learning opportunities and the ability to move beyond their current capabilities. With short, shallow interactions, it seems unlikely that meaningful dialogue and co-construction will take place. Linked closely to this, the length and frequency of interactions plays an important part in assessing the quality of the interaction (Pianta et al., 2008). The fact that practitioners did not take part in play for long periods, leaving before it was over, therefore indicates that potentially beneficial learning sequences were terminated. This is especially worrying if there was no reason for the practitioner to leave the play. Although practitioners did interact with children outside of free play and during other play situations, these conversations were also rather closed and short. This indicates that practitioners were not using other opportunities to support the children to a large extent either, although this data is not presented in the current paper.

As several previous authors have argued, even if it is not immediately apparent that the play requires support, there are numerous benefits to adult support during free play (Kleppe, 2017). Adults' active participation helps to support the developmental

advances that come with play, as well as preventing anti-social behaviors such as subtle bullying. Other benefits, such as sharing experiences, perspective taking and getting to know individual children, have also been identified as consequences of adult support and participation during play (Corsaro, 2003; Degotardi, 2010).

Limitations

Despite its strengths, it is important to consider the shortcomings of this research. To begin with, there is a risk of misinterpretation during data collection. Intentions and ideas are not easily observed or interpreted fairly by an outsider, which may lead to meaning being lost or misinterpreted (Bell, 2010). As Morgenthaler (1988) points out, ‘there are almost always internal processes involved in play...’ (p.363), something that we had no insight into during data collection. The idea of internal processes and intentions was, however, considered throughout data collection. Through the use of field notes, close attention was paid to participants and the context of their actions, to limit misunderstanding as much as possible. Closely linked to this is the question of reliability. Although pilot observations were carried out with an additional researcher, no statistical analyses of reliability were performed. This is something to consider with potential follow-up studies.

Secondly, collecting data for a total of five days may not accurately indicate how these settings operate or how often practitioners support and interact with children. However, previous observational studies investigating kindergarten quality recommend a maximum of one day (ECERS) or two to three hours (C-COS, CLASS) of observation per setting. Similarly, despite their differences, both kindergartens produced very similar findings over the five-day period. This indicates a trend in the way practitioners interact with children during free play, despite, for example, adult–child ratios. This finding is further supported by researchers such as Kleppe (2017), increasing the

generalizability of our findings, as well as highlighting the need to look at free play in kindergartens more closely in larger scales studies.

Finally, the categories used for this research were somewhat broad. While this highlights the limited time practitioners spent interacting with children, the breadth of the categories may have limited our ability to gain a nuanced view of what practitioners did during these interactions. This leaves room for follow-up studies, focusing on more nuanced aspects of practice. Other possibilities for further study include an analysis of the frequency of interactions based on the children's age.

Overarching conclusion

Despite its limitations, this study still points to significant findings. Children attending Norwegian kindergartens spend a great amount of time in free play. If practitioners are not supporting children's learning during these times, this is a large amount of time children spend unsupported. Although evidence of support during free play was observed, the frequent observation that children were playing without practitioners observing nearby, interacting or encouraging play, indicates a need to take a closer look at how children's learning is supported in the Norwegian kindergarten. It is imperative that a strong foundation for learning and development is laid early on. It is even more important for some vulnerable children, such as those not receiving optimal stimulation at home, to receive this extra support from the kindergarten (Dearing et al., 2009).

Children are highly dependent on kindergarten to compensate for what they may be missing in their home environments since this will help build the foundation for learning needed for formal schooling. Achievement gaps between learning and development of at-risk children and their more advantaged peers are evident as early as nine months and increase by 24 months (Halle et al., 2009). However, high-quality kindergartens have the potential to reduce this gap before formal schooling. Overall, our

findings, together with recent previous research (see, for example, Bjørnstad and Os, 2018; Kleppe, 2017; Lekhal et al., 2013), may indicate that there is still untapped potential in Norwegian kindergartens.

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Tables

Table 1: Summary of the settings used for data collection

	Kindergarten A	Kindergarten B
No. of participants (childcare practitioners)	7	10
No. of children at the kindergarten	35	130
No. of children in the classroom	15	33
Age of children in the classroom (years)	1-6	2-6
Observation days	3	2

Table 2: Type and definition of support offered by practitioners when 'present' during free play

<i>Joining in</i>	Coded when practitioners played together with a child; joining in or playing parallel.
<i>Commenting</i>	Coded when participants described, explained, questioned, discussed or commented on the play activity outside of being involved in the play.

<i>Helping</i>	Coded when the participant gave children resources for their play, or helped fulfill the play (for example, lifting them into a swing).
<i>Instructing</i>	Coded when the participant gave explicit instructions regarding how to use resources in the play.

Table 3: Activities in the kindergartens shown as a percentage of the day

	Kindergarten A	Kindergarten B	Combined*
Free play	63%	57%	60%
Adult-directed activities	37%	43%	40%

*average time in kindergarten A+B

Table 4: Practitioner actions during free play, as a percentage of free-play time

	Kindergarten A	Kindergarten B	Combined*
Not present	36%	53%	44,5%
Not present, with child	10%	4%	7%
Present	30%	23%	26,5%
Playing	18%	13%	15,5%
Other	16%	11%	13,5%

*average time in kindergarten A+B

Table 5: Supportive behavior during free play

	Kindergarten A	Kindergarten B	Combined*
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Joining	18%	13%	15,5%
Commenting	11%	10%	10,5%
Helping	11%	3%	7%
Instructing	-	2%	1%
Total	40%	28%	34%

*average time in kindergarten A+B

Observation schedule:

Date <i>01.01.2019</i>	Activity no. <i>1</i>	
	Outdoors <i>x</i>	Fantasy
	Table	Construction
	Active	other
	Practitioner no. <i>1</i>	
	Time	Field notes
Not present	<i>09:00 – 09:02</i>	<i>talking to another practitioner</i>
Present		
Stopping an activity		
Problem solving		
Managing a conflict		
Teaching		
Reading		
Talking to a child		
Joining play	<i>09:02-09:05</i>	<i>Joins group of 3 children in sandbox. Building sandcastle. Discuss size and who lives there.</i>
Assisting in play		
Playing parallel		