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Pedagogical intentions or practical considerations when facilitating children's play? Teachers' beliefs about the availability of play materials in the indoor ECEC environment

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Abstract

This qualitative study investigated teachers' beliefs about the availability of play materials in the physical indoor environment of early childhood education and care (ECEC). The empirical data were gathered from fieldwork in eight child groups in ECEC institutions across Norway and comprised 13 semistructured interviews with teachers. The findings indicate a common ideological understanding among teachers that play materials should be available in children's play, enhancing play, learning, and development possibilities. However, many teachers described putting play materials out of children's reach during times of play. There are variations, but practical considerations often override pedagogical intentions when teachers plan and facilitate children's play. This study aims to enhance the indoor ECEC environment's quality by stimulating teachers' consciousness about play materials' availability, ensuring equal possibilities for children's play in ECEC. Implications for policy and practice are discussed.

Keywords: Play materials, Teachers' beliefs, Availability, Physical indoor environment, Pedagogical intentions, Practical considerations, Policy, Teacher consciousness, Quality in ECEC

Introduction

According to Norwegian policy, early childhood education and care (ECEC) institutions are defined as the first step in the national education system and welfare service. Today, 83.1% of children aged 1–2 years and 97.1% of children aged 3–5 years attend ECEC, with the majority enrolled full-time. Thus, Norway is one of the countries with the highest levels of participation in ECEC across all age groups (StatisticsNorway 2020). Given the amount of time children spend in ECEC, it is assumable that these settings impact shaping many aspects of children's lives.

The Nordic model of ECEC has a reputation for providing high-quality care to children (OECD 2006), often described as a social pedagogic approach, with a child-directed perspective emphasizing children's play, social development, active participation, and exploration (Bennett 2005; OECD 2015; Ringsmoose and Kragh-Muller 2017). Quality

in ECEC is a complex phenomenon subject to different opinions, but there is a general consent that quality is connected to structural and processual characteristics (Slot 2018). The physical environment and availability of play materials are examples of how structural aspects may influence processual aspects and child development through children's interactions with peers, teachers, and the activities made available (Phillips et al. 2000). Layzer and Goodson (2006) described quality in ECEC as aspects of the environment and children's nurturing child development experiences.

In recent years, there has been growing interest in the role of the physical environment in ECEC (Berti et al. 2019). And the indoor environment is recognized as essential aspects through which ECEC quality could be implemented and improved (Harms et al. 2005; Melhuish 2016). In the Nordic countries, research related to the indoor environment, activities, and materiality has increased cf. (Evenstad and Becher 2015; Hangaard Rasmussen 1992; Korsvold 2011, 2015; Krogstad 2012; Martinsen 2015; Nordin-Hultman 2004; Nordtømme 2016; Odegard 2015; Sando 2019; Sandseter and Storli 2020; Wolf 2014). Studies show how the physical ECEC environment, including the interior and accessible play materials, may meet children's play initiative and enhance their play opportunities (Martinsen 2015; Nordin-Hultman 2004; Nordtømme 2016; Olofsson 1992; Wolf 2014).

In Norway, findings from the research project BePro made us aware of challenges concerning quality in children's potential activities in the indoor physical environment. Findings showed that many children had minimal access to play materials during the day. The child groups might have play materials, but they were stored out of children's reach (Bjørnestad and Os 2018). The multimethod study BePro uses quantitative assessment tool Early Childhood Environment Rating Scale-Revised [ECERS-R] (Harms et al. 2005) to assess quality in 205 child groups with children aged 2.5–5 years. Within the subscale of activities, BePro reported an overall score of 3.3. This is considered at the minimum level on the scale ranging from 1 to 7, with 7 indicating the highest quality. Except for art materials (4,2) and tv/video/computer (5), the findings show scores at the minimum level in items such as fine motor materials (3,8), music/movements (2,6), blocks (2,3), dramatic play (3,7), nature/science (3), math/number (2,6), and materials promoting acceptance of diversity (3.6) (Bjørnestad 2019). BePro demonstrates how unavailable play materials restrict children's play opportunities, limiting the score concerning free play to 4,2.

Within ECEC, the teachers have the professional responsibility to plan and facilitate children's play and activities (MER 2018). Thus teachers' beliefs are of interest when exploring this topic. In the last 20 years, there has been an increase in research on teachers' beliefs (Ashton 2014). And teachers' beliefs about children's play, development and learning are becoming a well-explored topic, cf. (Baustad et al. 2018; Biesta et al. 2015; Fang 1996; Fives and Buehl 2012; Kagan 1992; Pajares 1992; Wilcox-Herzog 2002). Studies are found concerning beliefs and the physical environment cf. (Cevher-Kalburan and Yurt 2011; Harvey et al. 1968; Leggett and Newman 2017; McClintic and Petty 2015), but to the researchers' knowledge, no studies focus mainly on ECEC teachers' beliefs about the availability of play materials in ECEC.

This current qualitative study is affiliated with the multimethod study BePro, initiated to gain a deeper insight into teachers' beliefs about the availability of play materials

when facilitating children's play. The following research question is addressed: *what are teachers' beliefs about the availability of play materials when facilitating children's play in the indoor physical ECEC environment*? With an emphasis on (a) *teachers beliefs concerning the* concept of availability, and (b) *understanding factors that influence teachers' beliefs when facilitating children's play with play materials.* Heightened consciousness among teachers about the importance of available play materials may ensure equal possibilities for children's play in ECEC as well as enhance policymaker's awareness about the importance of a sound and professional teacher practice with play materials. The selection of play materials is relevant, but this is a topic for further research.

The Norwegian context

The policy document The Framework Plan for Kindergartens (FWP), regulates the content and tasks to be manifested in every aspect of pedagogical practices in Norwegian ECEC (FWP 2017). It imposes a holistic understanding of children's well-being, play, and learning and gives direction for teachers' work. Concerning play materials, The FWP provides the following regulations: "staff shall design the physical environment so that all children are given the opportunity to actively participate in play and other activities and so that toys and equipment are accessible to the children" (FWP 2017, p. 19). To ensure a holistic pedagogy, the FWP encourages teachers and staff to plan activities in collaboration (FWP 2017, p. 16) and children should be able to explore creativity, sense of wonder, and inquisitiveness in play and when working with different learning areas (FWP 2017, p. 47). However, implementing the FWP, the teachers base their decisions on professional judgment (Bjørnestad et al. 2019).

Fröbel's educational thinking significantly impacted Norwegian ECEC, emphasizing free play as children's main activity (Fröbel 2005/1898; Sundsdal and Øksnes 2015). But lately, there is a growing concern that the basic ideas of play have been altered, with more focus on formal and informal learning situations in ECEC (Sundsdal and Øksnes 2015; Tuastad et al. 2019). Competing concepts of quality have caused controversies over the core elements of ECEC, where tension has formed two positions in a professional dispute over what best serves children's interests (Tuastad et al. 2019). A public discourse amplifies an image of ECEC pedagogy as a binary choice between more learning and between free child-initiated play with no adult intrusion (Bubikova-Moan et al. 2019).

Children's play and play materials

Play is essential in children's lives, and children's right to play is a human right stated in the United Nations child convention, article 31 (UNCRC 1989). According to Sutton-Smith (2009), play involves activities that children perform for the sake of enjoyment. When children experience nourishment and encouragement from the environment, interior, materiality, and teachers, their play may be deeper and last longer (Martinsen 2015; Olofsson 1992; Wolf 2014). This is in line with Eccles and Templeton (2002) that find how children play longer when allowed to choose what to play and what materials to use. Several studies also link play materials directly to children's play, learning, and development. Oncu and Unluer (2010) describe how play materials have a considerable role in children's play. Mwatha et al. (2017) defines play materials as a catalyst for play

and identify a strong positive correlation between the availability of play materials and children's social and emotional development, this is in line with Nwankwo (2015) that identified a positive relationship between play materials and children's social skills. Bell and Wolfe (2004) observe that play contributes directly to children's social and emotional development, where a broad assortment of play materials stimulates and prolongs play and enables children to discover their abilities and interests. Bergen and Mauer (2000) show how children's access to play materials, such as books, enhances literacy skills, whereas Cook (2000) address that children's access to math materials enhances their numeracy skills. Further, Ekanem et al. (2011) demonstrates how children's use of play materials stimulates their communication skills as they negotiate, share, and help each other understand and use the materials.

Teachers as facilitators of the indoor environment

Teachers' pedagogical intentions, often described as their purpose, aims, and objectives, are prominent when planning for practice. Working in a complex pedagogical field, professionalism requires mitigating dilemmas concerning play, learning, care, and children's development (MER 2018). From the pedagogical perspective of quality, children's learning and development occur in the interplay between the individual and the environment via staff members' facilitation (Bjørnestad et al. 2019; Sheridan 2001, 2009). Children's play and how to facilitate it are topics of endless debate among teachers and researchers. Martinsen (2015) describes how the child–staff ratio, staff educational levels, play areas, group sizes, economy, availability of play materials, etc., may promote or inhibit teachers' abilities to facilitate, plan and engage children in activities. If play materials are defined for use within limited physical spaces and set times, the organization may limit the play's scope (Wolf 2014). Following Nordin-Hultman (2004), there is a tendency to individualize children's behavior (e.g., characterizing children as unengaged) and recommends drawing attention to the fact that environments can be uninspiring. A well-designed and equipped physical environment can support explorations, initiatives, and autonomy among children (Botsoglou et al. 2019). Björklund and Barendregt (2016) observed that when teachers recognize emerging possibilities to learn in the child's immediate environment, they may motivate and contribute to a challenging and rich environment, where children can explore objects in playful ways.

Lately, the tradition of play-based learning and guided play has received more attention worldwide (Sylva et al. 2015). In this tradition, teachers fill the role of a facilitator, creating and stimulating play, and learning (Williams and Sheridan 2018). Fisher et al. (2011) exemplified how the teacher can enrich the environment with equipment and play materials that promote children's exploration and provide exciting play opportunities. The teacher may comment on the child's discoveries by playing with the children or making children aware of the various uses of the play materials.

Teachers' beliefs

To understand what happens when teachers facilitate children's play with play materials, we can investigate their beliefs. Teachers' beliefs are often described with terms such as values, perceptions, perspectives, images, conceptions, views, thoughts, judgments, and personal practical knowledge (Baustad et al. 2018; Fives and Buehl 2012; Pajares 1992).

Beliefs are viewed as individuals' mental constructions based on experiences (Baustad et al. 2018; Fives and Buehl 2012; Pajares 1992; Watt and Richardson 2015). Kagan (1992) broadly defined teachers' beliefs as tacit, often unconsciously held assumptions about students, classrooms, and their content. Teachers beliefs about people, objects, and events affect their planning, interactions, and how they make educational decisions (Fang 1996; Fives and Gill 2015), and beliefs may be a determinant of teacher behavior in the classroom (Fang 1996; Kagan 1992; Pajares 1992). However, daily ECEC life can be hectic, and teachers often have to make intuitive choices based on immediate reactions and judgments (Fang 1996). Thus, Kagan (1992) states that beliefs cannot be directly understood using teachers' behavior because teachers may follow similar practices for different reasons. Often, teachers are not fully aware of their beliefs, as they seldom reflect actively upon them unless challenged (Watt and Richardson 2015).

Wood (2014) points out that children's play is always to some extent controlled by teacher beliefs and the value and meaning teachers attribute to play, curriculum, policy, and classroom order goals and regulations. A recent study by McClintic and Petty (2015) found that teachers believed in free, adventures, and creative play, but their behavior prohibited children's play due to a lack of awareness about the environment's potential for play.

Method

Study context

This study was designed with reference to findings from the broader multimethod study BePro. Investigating 205 child groups from Norwegian ECEC with ECERS-R, BePro identified scores at the minimum level within the subscale of activities (3.2). These scores indicated that many children had minimal access to play materials during the day. Findings from BePro provided background information that stimulated this current qualitative study.

Study design

This is an in-depth qualitative study with an exploratory design, aiming to gain more detailed insight into teachers' beliefs concerning the availability of play materials in ECEC. The topic is explored by triangulating methods cf. (Denzin and Lincoln 2018). The triangulation of methods aligns multiple perspectives, where the study explores availability of play materials by combining qualitative fieldwork with observations in the indoor ECEC environment and semistructured interviews with teachers. A pilot study demonstrated the importance of knowing the premises prior to the interviews, enabling the researcher to understand the teachers' explanations and descriptions in a better way. However, in this paper, the focus is on teachers' beliefs, and the empirical data of interest comprise 13 semistructured interviews with ECEC teachers.

Participants

Out of the 205 child groups measured with the ECERS-R in BePro, eight child groups were recruited to participate in the in-depth qualitative study. With BePro, the child groups were selected with variations in: location, size, number of staff, age of children, organization, and ownership (Bjørnestad et al. 2013). In the qualitative study, a strategic

sample was made to encapture some of the same variations in a smaller scale. The eight child groups were from ECEC centers located in four different counties across Norway. They varied in size and had between 28 to 220 children enrolled. The smallest child group within the sample had 18 children, whereas the most extensive group had 40 children. The majority of the children with the groups were aged between 3 and 5 years. The child groups were strategically chosen from groups with a minimum (the lowest represented score was 3,2) to high-quality scores (the highest defined score was 5,09) in the subscale of activities in ECERS-R. These criteria were made to ensure variation in the sample and not for comparison reasons.

The number of employees working with the groups varied from three to above six, and each child group had one or two teachers available for interviews. A total of 13 teachers participated in the study. The participants' criteria were to hold a position as a teacher since it is the teachers' responsibility to implement the FWP, using their professional judgment when facilitating children's play. Except for one on dispensation, all teachers had the equivalent of a bachelor's (teachers) degree (minimum) in ECEC. The exempted teacher had a master's degree in a related subject and took classes to become an ECEC teacher. The teachers' experience ranged from newly educated to above 20 years of post-graduation work. When presenting the results, the participating teachers are anonymized with numbers. Teachers 1.1 and 1.2 worked with child group 1, whereas teachers 2.1 and 2.2 worked with child group 2, etc.

Data collection and procedures

To gain insight into teachers' beliefs, semistructured interviews with open-ended questions were considered the most prominent method in this regard cf. (Creswell 2014). The purpose of semistructured interviews was to obtain a description of the teachers' lifeworld and explore teachers' beliefs in a way where they may recall specific events and decisions cf (Kagan 1992; Kvale and Brinkmann 2015). Lincoln and Guba (1985) purported that qualitative research is dependent on the researcher's subjective understanding of the context. A 3-day observation of the indoor ECEC environment was carried out before the interviews to align multiple perspectives. Also, drawn sketches/blueprints of the physical environment functioned to provide the researcher with valuable context information to avoid misunderstandings when talking about specific rooms or play materials. The interviews were individual and face-to-face. They lasted 1–1.5 h each and were conducted in the location of the centers.

The interview guide was designed to explore teachers' beliefs, with themes based on inspiration from earlier research, results from BePro, and FWP concepts. The themes were (a) teachers' experience, (b) selection and availability of play materials, (c) facilitating play with play materials, (d) structural factors, (e) teachers' professionalism and reflection, and (f) policy. The interviews were enacted like conversations, and the topics were presented if the teachers did not touch upon them. Examples of questions asked were, *"How would you describe the children's access to play materials?"* "*Do you discuss the availability of play materials with colleagues?"* or "*how do you read the FWP concerning play materials and children's play?".* The teachers were asked to elaborate on their beliefs when answering the questions, and they were free to raise issues or follow trajectories during the interview. Attempts

were made to increase the study's reliability and validity (Kvale and Brinkmann 2015), by ensuring the interview questions were open and not leading. Also, asking follow-up questions such as "*do I understand you correctly when you say..."* aided to understand the teachers' sayings. Other measures in this regard were transparency in describing the procedures, knowing the premises' context by triangulating methods and recording and transcribing the interviews in their entirety.

Before data collection, the required approvals were obtained from the Norwegian Social Science Data Service. All parents and staff received information letters describing the study, ensuring no specific child was in focus. Interview respondents signed an informed consent form. Recordings and transcribed data were kept confidential and anonymous, and safe data retention was ensured.

Data analysis

To perceive and make meaning of the empirical text data, a thematic analysis was used cf. (Denzin and Lincoln 2018; Kvale and Brinkmann 2015). The subjective interpretations of data were systematically processed through a reduction technique, producing codes and categories. The qualitative analysis software NVIVO aided when identifying codes. Each code is a short word or phrase that captures the essence of the meaning, theme, or pattern found within the text. The research question and prior knowledge guided a deductive coding process. The analysis process was interactive, where the text was taken apart and then reassembled to understand and get a more holistic view and make meaning of the data, like in a hermeneutic circle (Alvesson and Sköldberg 2017). Interpretations were made with reference to the context, moving back and forth between the researcher's preconception, theory, and the *empirical data*. The coding process was repeated multiple times by the researcher to discover possible bias. Later the codes were viewed and discussed with other researchers connected with the project. Below is an example demonstrating the coding and categorization process:

Codes	Categories
Concept of knowledge. View of the child. Beliefs about play. Beliefs about learning. Beliefs about child development. Understanding the FWP	Teacher's Ideology
Structural limitations. Planning for play. Economy to purchase materials. Staffing. Rotation of play materials. Chaos. Order	Teacher's Pedagogical Intentions
Teacher's collaboration. Teacher's role in play. Experience. Stability in staff. Changes. Consciousness about availability. Consciousness about facilitation	Teacher's Consciousness

The codes were themed into broader categories. The first category relates to *teacher's ideology,* capturing teachers' common opinions or beliefs about the availability of play materials, their view of children's play, learning, and development, as well as understanding concepts from the FWP. The second category refers to the teacher's pedagogical intentions, capturing the teachers' limitations and possibilities within the physical environment to plan and facilitate play materials activities. The third category relates to *teachers' consciousness*, containing teachers' collaborations, consciousness, and confidence about the choices made with play materials' availability. When presenting the

study results, the in-text quotes are supplied as representative examples of how different aspects of the categories were expressed throughout the interviews.

Results

Teachers ideologies, a common understanding

When analyzing the interviews, it became clear that teachers acknowledged play as an essential activity for children in ECEC. Teacher 1.1 explained: *"We are very concerned with play and think it's important. It is the most important thing we do. I think—it's the root of everything."* When the conversations turned to the topic of learning, some teachers hesitated and chose their words carefully. They did not talk about learning in formal terms but reflected on how learning and child development occur through play in planned and spontaneous activities.

Seeing play as a priority, teachers described how they organize the day accordingly, setting aside time for child-initiated activities, where the children choose what and with whom to play. It was apparent that the teachers shared a *common ideological understanding* that play materials should be available for children, believing this to be aligned with the FWP ideologies. The FWP was highly valued by the teachers, who reported using a considerable amount of time implementing it into practice. Concerning the availability of play materials, the teachers explained how they believe available play materials may enrich children's play, creating possibilities for play, learning, and development. Teachers specifically highlighted the importance of having play materials to stimulate dramatic play because they thought it might enhance children's social competence. All 13 teachers reported satisfaction with their premise's play materials selection. Some wished for more modern or lush equipment, but overall, they expressed content with the variation and quantity of play materials. The teachers described how play materials encourage the children's agency. Teacher 5.1 said, *"I think it is important that play materials are available, and in a way, they stimulate creativity."* Teacher 1.1 explained, *"Play materials should be available. They [the children] should have the possibility themselves to figure out what they want to do."* Teacher 2.1 noted, *"We try to place all play materials the children could play with so that they can reach it themselves."*

Teachers' pedagogical intentions—practical considerations override pedagogical intentions

All teachers expressed a pedagogical intention of having available play materials. However, in the teachers' descriptions, different practices were revealed. Some teachers described having play materials stored at children's eye height, easily accessible, and within children's reach during free play. Other teachers reported having many materials in storage or on high shelves. Interestingly, 10 of the 13 teachers presented several reasons why play materials could not be available. As a result, children must ask an adult to access these play materials. Teacher 3.1 described: *"Of course, one could wish that the play materials were in the children's height so that they always could access it... But the children are good at asking for it."*.

Teachers expressed a sense of shortcoming, where they dwelled on structural factors inhibiting possibilities for planning and executing activities. They described a daily life

consisting of hectic moment-to-moment situations with little time to play with the children. They also talked about a staff shortage, which inhibited using all available rooms or dividing children into smaller units. This was an issue in the mornings and afternoons when they were not fully staffed, and some places were closed due to security issues. Some teachers mentioned the economy as a factor for keeping play materials on high shelves or in storage, given the lack of resources to buy new play materials if they broke.

Furthermore, teachers reported chaos and how they lose control if children have too many play materials available. These results indicate that practical considerations override and inhibit teachers' pedagogical intentions. Trying to avoid misplaced materials or lost instructional time due to cleaning issues, teachers sometimes kept play materials out of reach or unavailable for children. Teacher 1.1 explained: *"We cannot keep up with everything, so we have some materials high or hidden. That is the way it must be."* However, the same teacher described that initially, she thought otherwise: *"When I first came here, I thought everything should be available, but then you start working, and then you see. No, not everything must be available! Some materials they could ask for."* Teacher 2.2 is newly educated, recently started working with the child group, and had similar thoughts: *"I was surprised that much of the play materials were stored on high shelves and so few items on the lower shelves."* However, after working there a while, the teacher changed her mind, though she admitted that the way they organized material was not optimal: *"I understand why they [the other teachers] do it, but we have all these shelves, but we do not use them. Nevertheless, I do not want it to be too much play materials available either because it gets messy."* The quotes from teachers 1.1 and 2.2 demonstrate how the newly educated teachers initially believed that play materials should be available. Still, after a while, they accepted the prevailing culture of the center. Seemingly, their understanding of the concept of availability was altered.

When teachers described practice, it was apparent how the concept of availability was understood and interpreted differently. Teacher 2.1 demonstrates this by explaining how the teachers and staff take down materials from high shelves when children ask for them, *"and then they are free to choose what to play with."* This quote indicates that the teachers still thought of materials as available. Only 6 of the 13 teachers reported conscious praxis with the availability of play materials, meaning that they knew where the materials were located and had thoughts about how the children could reach and use them during play. Surprisingly, it was some of the teachers with the most extensive work experience who had though the least about availability and reflected on the concept. The teachers who described the necessity of keeping play materials in storage and only displaying a selection due to practical considerations often referred to a practice of rotating play materials. Teacher 1.2 said: *"Sometimes, they [the children] get tired of the play materials and get 'blind' on their possibilities for play, and then we must rotate."* Thus, teachers believe that rotating play materials stimulates good play among the children and creates excitement about the materials.

Even though all teachers reported hectic daily life in ECEC, not all of them experienced it as limiting their practice with play materials. Teachers in two of the eight child groups expressed that they managed to keep varied play materials available for children's play. They explained how they created a culture for it over time. One of the teachers enthusiastically described what is called the Reggio-Emilia philosophy cf.(Thornton and

Brunton 2015) and describes the room as a "third teacher," which stimulates children's possibilities for play and learning. They facilitated play with reusable items, nature items, art materials, and other open-ended and not-defined play materials. All materials were made available for children's use without asking, and they expressed that available play materials stimulate children's creativity, especially in child-initiated play. Further, they explained how having many play materials available within children's reach demands that the teachers and staff are present, teaching children how and when to use the materials, how to care for them, and how to clean up afterward. Teacher 7.1 noted, *"It does not happen overnight. We used years, changing the play environment step by step, finding out what works or not."* Furthermore, the teachers did not believe they experienced any more chaos or noise due to having many play materials within children's reach but the opposite.

Teachers with child groups with many available play materials emphasized teachers' roles in children's play. Teacher 5.1 described that they keep play materials available. However, they teach children that the play materials cannot necessarily be used*: "The youngest children cannot have immediate access to materials such as scissors, or the football cannot be kicked around at all times. Nevertheless, the children can see the materials, and when there is sufficient staff to divide the children into smaller groups, they can play with it."* Teacher 5.1 also stressed, *"Because if it is out of sight, out of mind, right? We had them in storage this other time, and then they were forgotten, both by adults and children."* The teachers described the teachers' role as actively involved when children play, preferably sitting down, attentive, listening, and participating in children's play when needed. It is also worth mentioning that two of these groups' teachers discussed how children's play and access to play materials were beneficial to children's learning and development more often than teachers in the other groups.

Teachers consciousness—through teacher's collaboration

Teachers described time for reflection and collaboration with other staff as essential when facilitating children's play. All teachers reported having meetings with other teachers and staff where they planned for play and playful activities. However, discussing play materials in these meetings did not happen often. Seven out of the 13 teachers reported regular meetings where they discussed play materials. These results indicate that even though teachers view play as an essential activity for children, the actual objects children use for play are sometimes neglected. When teachers discuss play materials, it often concerns practical issues, such as replacing or repairing or deciding who should buy new materials. Furthermore, teachers' attentiveness concerning the availability of play materials varied greatly. Only 3 of 13 teachers expressed having a high interest in the availability of play materials, while others were more concerned about the selection and other practical considerations.

Interestingly, the results showed how teachers who reported having fruitful collaboration expressed higher confidence when discussing the play materials choices. Teachers who experienced these kinds of collaborations seemed to be more conscious about the physical indoor environment and reflected a greater extent about their practice with play materials' availability. They described how they collaborated, shared ideas, and explored their beliefs, such as teacher 8.2, who noted: *"we [teachers in the group] need*

to cooperate; if not, it will be chaos." The teachers that experienced good collaboration also expressed eagerness for new knowledge. They reported taking classes to learn more or visiting neighboring centers for observation and inspiration about facilitating the indoor environment for play. Teacher 7.1 said, *"What play materials we make available is essential, how the rooms are furnished and decorated. We are not perfect. We're not, but that you think and reflect. We try to make conscious choices. We want to stimulate good play."* Teacher 7.1 was the only teacher in her child group. Nevertheless, she continuously talked about *"we"* and *"us,"* demonstrating how the decisions were not just hers but a collaboration with the entire staff to find reasonable solutions. Several teachers described how they valued the staff as a whole, including assistants and child and youth workers, when planning for and facilitating play. Many teachers also reported that the most crucial factor for good collaboration is stability in the staff. Teacher 5.2 noted: *"We [the staff] have been working together for many years, and sometimes, we do not communicate verbally. We look at each other, and we know."*

In contrast, teachers without collaborations or meetings to discuss play materials expressed uncertainty more often concerning the choices made when facilitating play. They saw play materials as an essential part of children's play but spoke of little time for reflections and collaboration, which inhibited their activities planning. The same teachers expressed a lack of surplus to get started and experienced insufficiency when they could not find the time to facilitate as they hoped. However, they stated that they did use much time redecorating the indoor environment. Often, these changes were made without discussion in advance, reflection, or observation of what works or not. These changes were commonly reported as spontaneous to stimulate play when they experienced that the children were not playing as calmly as before. However, the teachers admitted that they could observe what works or make more conscious choices.

Discussion

This qualitative study investigated teachers' beliefs about the availability of play materials when facilitating children's play in the indoor ECEC environment. The results showed how teachers' beliefs vary, often due to different views, experiences, personal practical knowledge, and professional judgment. These findings align with how other researchers describe teachers' beliefs (Baustad et al. 2018; Fives and Buehl 2012; Pajares 1992).

A shared ideology among teachers is apparent when they express beliefs about the importance of having available play materials for children`s play. Participating teachers valued the FWP and used considerable time implementing it in practice; thus, it is not unreasonable to think that the plan's ideologies influenced teachers' beliefs, creating commonalities across their ideologies. According to Bjørnestad et al. (2019), when implementing the FWP into practice, teachers use professional judgment, which is based on reflections; therefore, when teachers in this study reported a lack of time for reflection and collaboration with other staff, it could indicate that their professional judgment was inhibited. When teachers describe translating the FWP and its concepts into practice, the study reveals surprising differences in how the teachers reflect on availability. Some teachers described play materials as available if they could fetch it from storage, whereas other described available play materials as within children`s immediate reach. Interestingly, these findings indicate that even though teachers express a shared ideology

of having available play materials, the concept of availability is understood differently. This illustrates how the concepts of the FWP could be subject to various interpretations depending on the teacher`s professional judgment and time for reflection.

According to Williams and Sheridan (2018), teachers play an important role as facilitators in creating and stimulating children's play and learning. Several studies have shown that having play materials available may encourage children to engage in play, which, again, influences learning and child development (Bell and Wolfe 2004; Bergen and Mauer 2000; Cook 2000; Ekanem et al. 2011; Nwankwo 2015; Oncu and Unluer 2010). As Layzer and Goodson (2006) mention, aspects of the environment that stimulate children's possibilities to experience child development may influence the quality of ECEC. However, as mentioned in the introduction, quality in ECEC is a complex phenomenon where the physical environment and availability of play materials may be viewed as structural aspects influencing processual aspects such as children's interaction with peers, teachers, and the possibilities for activities. This links the availability of play materials directly to the overall quality of ECEC and demonstrates the importance of having play materials available for children's play.

Further, the results indicate that teachers' pedagogical intent is to encourage playful activities. However, simultaneously, teachers' practical considerations often override their pedagogical intentions. Teachers who described storing play materials out of children's reach justified their decision with practical considerations. Structural aspects, such as time, sufficient staff, etc., prevented them from having play materials available because they experienced it, leading to chaos. In accordance with the kindergarten teaching profession report (MER 2018) teachers described daily ECEC life as hectic, and following Fang (1996), this implicates that teachers have to make choices based on immediate reactions and hasty judgments. It is reasonable to believe that the hectic daily life limits the teacher's possibilities to facilitate their pedagogical intent. Structural aspects limit the children's access to play materials since the teachers don't have the resources to replace missing materials or are not sufficient staff to prevent chaos or play with them. However, it is important to remember that two of the child groups demonstrated that they did not experience any more disorder or noise or missing pieces when having many play materials within children's immediate access. However, these teachers described the importance of teaching children how to use the materials, care for them, and clean up afterward.

Furthermore, Fisher et al. (2011) exemplified how teachers can enrich the environment through play materials that promote children's exploration and play opportunities. Creating a lush and exciting play and learning environment presupposes teachers who are conscious of play materials' importance. McClintic and Petty (2015) found similar results showing that teachers believed in free and creative play, but that their behavior often prohibited children's play since they were not fully aware of the environment's potential for play. Even though some teachers had not thought much about the play materials, they still reported making changes. Therefore, it is possible that a higher quality indoor environment could be assured if these teachers made conscious choices to a greater extent than before, observing what works or not, or by collaborating with other teachers and staff.

Many of the teachers expressed uncertainty about facilitating children's play, learning, and development. The discourse and lack of consensus about play and learning within ECEC in Norway are possibly influencing teachers' beliefs and confidence. These results are similar to the results from the kindergarten teaching profession report, who identified how Norwegian teachers often experience difficulties mitigating play and learning as a basis for child development (MER 2018), which correlates with Bubikova-Moan et al. (2019) findings in reviewing the literature about play-based learning.

When the public debate amplifies ECEC pedagogy as a binary choice between learning and free child-initiated play with no adult intrusion, teachers may take a less active role in facilitating children's play. Several studies have shown that teachers are essential in creating play opportunities, ensuring learning and development (Fisher et al. 2011; Martinsen 2015; Nordin-Hultman 2004; Nordtømme 2016; Olofsson 1992; Williams and Sheridan 2018; Wolf 2014). If teachers promote free play, the environment must invite the children with accessible, varied, exciting, and explorative play opportunities (Wolf 2014, 2017). In this study, the same teachers who expressed confidence in maneuvering within a holistic view of children's play, learning, and development reported facilitating the environment with available play materials and taking an active role in children's play. Teachers who are less confident or conscious about their beliefs more often let children play on their own and frequently store play materials out of children's reach to prevent chaos. This may lead to considerable differences between centers and increased variation in ECEC quality.

Moreover, in this study, teachers who reported experiencing fruitful collaboration expressed higher confidence when discussing their beliefs and their play materials choices. According to Watt and Richardson (2015), it could be that the teachers are not fully aware of their beliefs if they seldom reflect actively upon them. In collaboration, teachers may share and explore different views, which is favorable for reflection and consciousness and probably also beneficial for teachers' professional judgment when interpreting and implementing the FWP concepts in practice. As Wood (2014) pointed out, children's play is always controlled by teacher beliefs and the value and meaning they attribute to play, curriculum, policy, and classroom order goals and regulations. Thus, awareness of teachers' ideologies, intentions, and practical considerations that promote or inhibit their practice with play materials is essential for improving the indoor physical environment's quality.

Limitations

This study has some limitations, one being the relatively small sample size. Also, this qualitative study arose to understand the results from the affiliated and broader study, BePro. It is possible that this influenced the focus of the study, limiting its scope. In this study, attention is drawn towards the availability of play materials. However, equally important for children's play, learning and development are the selection of play materials and the teacher's role in play. This is a topic for further research.

Conclusion and recommendations

This study indicates that teachers' beliefs—their ideologies, intentions, and consciousness—influence how teachers facilitate the indoor physical ECEC environment using play materials. There is reason to believe that structural and practical considerations alter teachers' professional judgment when implementing FWP concepts. Teachers keeping play materials in storage to avoid chaos is unfortunate and may create ECEC quality variations. Increased focus on play materials in teacher training could help attain a higher consciousness about the importance of play materials for creating play opportunities for children. Stakeholders for education and policymakers should consider this when revising the ECEC teachers' training curriculum content.

It is also essential to notice how the ongoing discourse about play and learning makes the teachers question their beliefs, creating uncertainties in their professional judgment. More resources and time for reflection and collaboration with other teachers and staff could help attain a sound and professional instructional practice with available play materials. Implications for ECEC-owners are to enable teachers' visits to neighboring ECEC centers. Teachers may explore other teachers' beliefs, which could be beneficial for motivation or ideas to develop their practice further. A conscious and reflective teacher practice with play materials could increase the quality of the indoor ECEC environment.

Still, more research is needed to understand how play materials influence children's play opportunities. Recommendations for further studies include exploring the selection of play materials, such as how play materials' diversity influences children's play, understanding the teachers' role in play, or how play materials may create and stimulate positive interactions between children and staff. Quantitative measures such as the ECERS-R may be used as background for multiple qualitative studies or other quantitative studies. A suggestion could be to perform an effect study, aiming to explore the effect of available play materials and children's later development and learning. Using ECERS-R to compare results concerning play materials internationally, activities, and the overall ECEC quality could also be exciting.

Abbreviations

OECD: Organisation for Economic Co-operation and Development; ECEC: Early Childhood Education and Care; MER: Ministry of Education and Research in Norway; FWP: National Framework Plan for Kindergartens; ECERS-R: Early Childhood Environment Rating Scale: Revised Edition; BEPRO: Better Provision for Norway's Children in ECEC.

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Authors' contributions

TRN read and approved the final manuscript.

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Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The author declares no competing interest.

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