

# The Belief in Outdoor Play and Learning

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## Abstract

Norwegian kindergartens traditionally use outdoor environments for play and learning also for the youngest children regardless of the season. This research examines the assumptions and priorities underlying teachers' work with movement and sensory experiences in Norwegian kindergarten and how parents value children's outdoor play. We also investigate the subject-specific background of the teachers. Findings indicate that a high priority is placed on outdoor play and learning in Norwegian kindergartens. Assumptions of children's well-being outdoors may seem like a hidden curriculum, and learning possibilities may not be recognized or fully used by kindergarten teachers.

*Key words:* Outdoor learning, toddlers, science, physical education, early childhood education

## Introduction

The purpose of the study is to contribute to increased awareness and quality in pedagogical work in kindergartens with children under the age of three years. The basis of the study is the work within the subject areas 'Body, movement and health' (BMH) and 'Nature, environment and technology' (NET) from the Framework Plan for Content and Tasks of kindergarten (Ministry of Education and Research (MER), 2011).

Little research has been conducted on how these subject areas are being undertaken pedagogically, specifically with regard to providing the youngest children with experiences within movement and senses by making discoveries and learning in nature. More than 80% of all children under the age of three attend kindergarten. We would like to find some answers or identify trends in how pedagogy and didactics are linked to the subject areas mentioned and how they are facilitated for children under the age of three.

### *Outdoor time in Norwegian kindergartens*

Norway has a long tradition of allowing children to spend a lot of time outdoors (Borge, Nordhagen & Lie, 2003). Starting in the 1920s, playgrounds were built for children in the growing cities. Children could meet and play together, usually for four hours during the summer and three hours during the winter. Children was supervised by a caretaker. These early kindergartens only had a small shed for shelter that children could use while they ate their packed lunch (Staude, 2015). With the extension and development of kindergartens, outdoor time has kept a relatively important place in the daily life of Norwegian children. In addition, at the vast majority of the kindergartens it is common that the youngest children nap outdoors, also during the winter. Three Norwegian studies have investigated the amount of time that children spend outdoors at kindergartens (Lysklett, 2004; Sando & Lysklett, 2012; Moser & Martinsen, 2010). Moser & Martinsen (2010) found that children played outside 70

% of the time during the summer and 30 % during the winter. Their study was based upon responses from 278 pedagogical leaders from 117 different kindergartens. Lysklett's (2004) study investigated kindergartens specializing in nature and outdoor activities. In these kindergartens children spend even more time outdoors: more than four hours during the winter at 79 % of the kindergartens, and more than six hours during the summer at 87 %. None of the studies had categories based on age, and thus specifics are not available regarding time spent outside for children under the age of three years. Sando & Lysklett (2012) found a more nuanced picture. They investigated, in nine different departments, the time kindergarteners aged one to three years old spend outdoors in winter time by monitoring time spent on different activities. They found that children are outdoors 1.6 hours every day on average, but the range is substantial, from 0.5 to 3.4 hours. The kindergartens that spent the smallest amount of time outdoors were also the kindergartens that stayed inside some days. Four of the nine kindergartens stayed outdoors every day during the two-week period when the observations took place.

The practice of spending much of the time playing outdoors is characteristic of the Nordic countries. Norwegian kindergartens also have large outdoor areas (Moser & Martinsen, 2010; OECD 2011, p.50) The relatively large outdoor spaces as well as the time children spend outside imply that playing outdoors has historically, culturally, and pedagogically had an important role for Norwegian kindergartens. Lysklett (2004) and Moser & Martinsen (2010) ask what the children do while they are outside. Their studies indicate that the activities are for the most part free play on the playground. Moser & Martinsen (2010, p. 469) point out that 'being outdoors in itself may not be a sufficient pedagogical value and provides learning and development in accordance with the national values'. They thus argue that simply being outside does not have sufficient value to ensure the objectives of the Framework Plan for the Content and Tasks of Kindergarten (MER, 2011) regarding play and learning. Furthermore, they see a danger regarding the strong focus on being outside, which may imply a form of hidden curriculum, requiring the staff to critically reflect upon their outdoor practice (Moser & Martinsen, 2010). According to Kemmis & Grootenboer (2008, p. 38) 'the educator's practices are also a product of other practices'. The staff in the kindergartens are shaped and conditioned by their earlier experiences and their community of practice. It may be possible to understand this type of outdoor practice as a cultural practice.

### ***Development of the pedagogical content in kindergarten***

The first Framework Plan for Kindergarten (Ministry of Children and Family Affairs (MCFA), 1996) collates the pedagogical work with children into different content components. The subjects NET and BMH are scientific subject areas with defined goals in the context of pedagogical work with children. The second edition of the plan, the Framework Plan for the Content and Tasks of Kindergarten (Ministry of education, 2006), placed a stronger emphasis on learning about the different subject areas in kindergarten (Østrem et al., 2009). Among the subjects, NET and BMH, a common objective within the pedagogical work was linked to children's outdoor activities in kindergarten.

An evaluation report after the introduction of the Framework Plan (Østrem et al., 2009) identified the subjects and subject areas in the Framework Plan that have been emphasized and systematically incorporated as well as the subject areas that the staff have implemented measures on and worked with. 'Children's participation' and 'Communication, language and text' stand out as areas where a great deal of work has been done. For the subject areas BMH and NET a division seems to exist in how staff work with these subjects in the kindergartens.

Little to no distinction exists between the two subject areas regarding the measures that the staff, have participated in (Østrem et al. 2009, p. 25). However, evidence clearly shows that kindergartens have worked systematically with BMH separate from NET. As reported by Østrem et al. (2009, p. 26), 49% of the teachers worked significantly with 'BMH', while only 38% gave the same response regarding NET. BMH together with the subject 'Communication, language and text' was the subject areas that teachers found the least challenging to put into practice. More than half of the head teachers (51%) had trouble putting subjects within NET into practice. The proportion with the same difficulty for BMH was only 28%. One may ask if this tendency persists.

The numbers from Østrem et al. (2009) are based on reports and do not necessarily identify how different kindergartens work with the different subject areas. In short, the content and the quality of the pedagogical work are not identified.

Responses from kindergarten staff matched the impression that parents had of which subject areas are worked with (Østrem et al., 2009). Respectively 54% and 55% of the parents had the impression that the subject areas 'Communication, language and text' and BMH are undertaken significantly, while only 43% had the same impression for NET. Thus, a clear perception existed among the parents that BMH is more worked with in the kindergartens than NET (Østrem et al., 2009, p. 58).

Søbstad (2002; 2004) conducted a study of the quality of Norwegian kindergartens. Data were collected through questionnaires and interviews of children, parents, and staff members between 2002 and 2003 at five different kindergartens in Sør-Trøndelag in Norway. Søbstad (2004) highlighted recognizable quality features of the Norwegian kindergarten, including 'good social environment with great well-being for all, large emphasis on play and varied activities and emphasis on being in nature and gaining experience from there' (Søbstad, 2004, p. 68). More than half of the parents thought that it is important for children to experience nature, and several parents would encourage more walks to the forest (Søbstad, 2002, p. 40). These findings implied that being out is valued by staff members, children and parents.

### ***Outdoor activities in kindergartens***

In the 1980s kindergartens started reporting positive experiences linked to play and learning when taking groups of children out in nature (Braute & Bang, 1994; Klepsvik, 1995). The Framework Plan from 1996 also contained a set of targets regarding outdoor activities: 'To develop a positive attitude to walks and outdoor play and activities, develop an enjoyment of nature through exploration and physical challenges as well as developing an understanding of preserving nature' (MCFA, 1996).

Osnes & Skaug (2015) investigated children's physical play. Their investigation was based on students' observations of 211 children from one to six years. One focus was adults' involvement in children's play. In 75% of the observation time there were no contact between children and adults on the playground. In addition, the same amount of contact occurred between the adults and the youngest children as between the adults and the older children. Osnes & Skaug (2015) found the lack of adult involvement with the youngest children on the playground surprising, considering the higher ratio of adults to children at toddler departments.

Despite an increased focus on learning and outdoor activities, questions regarding how time outdoors is being spent in kindergartens and how kindergartens work with the different subject areas are still to be put under critical reflection.

### ***Research questions***

Our main question is how kindergartens facilitate the youngest children getting the experience of being outside and in the midst of nature.

The underlying questions are the following:

- How long (minimum) are the youngest children outside while at kindergarten?
- Which perceptions, understanding, and priorities provide the framework for the youngest children's movement and sense experiences outside and in nature?
- How do staff members value knowledge regarding being outside and in nature?
- To what degree are parents pleased with kindergartens' work within the scientific subject areas BMH and NET?

### **Method**

The empirical data for this study, conducted in 2014. The data were collected by the Norwegian Social Science Data Services (NSD) for the research project 'Searching for qualities' financed by the Research Council of Norway. The overall goal for the project is to collect qualitative and quantitative data about the everyday life among the youngest children in the kindergarten. The questionnaire had a total of 163 questions, both open ended and closed, and was divided into several different sections. This study focuses on the section pertaining to how kindergartens work with the subjects BMH and NET among the youngest children. We developed 28 subject specific questions (Haraldsen, 1999), 11 to BMH, 10 to NET and seven questions that were common for the two subject areas. The questions were mainly based on the process-oriented aims used in the Framework plan (MER, 2011). The process-oriented questions can only give indications to what degree the aims are operationalized among the respondents. The parents' questionnaire had four questions relevant to this study.

### ***Ethical considerations***

This project is in accordance with the generally accepted values of Norwegian law and other research ethical regulations. NSD approved the "Searching for qualities" project as a whole.

### ***Sample and measure***

The two electronic questionnaires were given to 1134 kindergartens and 1988 parents. Many of the respondents did not full-field the questionnaire, and questions connected to our study were placed at the end of the questionnaire.

The sample in the current study includes the answers on subject-specific questions from approximately 400 pedagogues. The number varies from question to question and lies between 470 and 400 pedagogues, see results for exact number. The parent group data were collected by the TNS-Gallup and the data for kindergarten teachers were collected by NSD. The response rates were 59.5% for the parents and only 43.1% teachers full-field the questionnaire.

The distribution was representative, meaning rural, suburban and urban areas were represented. With respect to Norwegian day care centers overall, the public centers were overrepresented.

### ***Analysis***

Although collecting answers and scores from a questionnaire can be considered a quantitative research tool, the analyses presented in this article are both quantitative *and* qualitative. As mentioned the questions were mainly process-oriented aims that only can give indications on to what degree the phrases/terms are being operationalized among the respondents. We believe that qualitative meaning and qualitative judgment processes underlie all quantitative measurements and knowledge (Campbell 1978, Tschudi 1989).

The various questions in the surveys have different answering categories. Consequently, we cannot compare all questions equally, yet we can obtain a more nuanced understanding of the answers to those questions.

Our data were first presented and analyzed in SPSS (Statistical Package for the Social Sciences). The data was organized in Norwegian counties, meaning that it's difficult to compare for example rural to suburban areas.

Focusing on the subjects NET and BMH, we continued the analysis and result development, carrying out a curriculum and content analysis of the data and documents involved (MER, 2011).

### ***Reliability and validity***

The reliability of this study is difficult to assess. As mentioned it is based on self-reports. Validity is also difficult to assess, but the data gives us indications that we further discuss in this article, and our data correlated with literature on the topic.

## **Results**

In this section, we present results from the questionnaires' concerning the amount of time children spent outdoors, and how the pedagogues work and value their time spent outdoors. We will also present the parents' evaluation of how the kindergartens worked with the two subject areas and their child's outdoor time. Our results are compared with the studies we mention in the introduction.

### ***Time spent outdoors***

In the survey, kindergarten teachers were asked how long children under three years were outdoors. It was specified that designated sleeping time did not count toward the total time. Table one summarizes the information.

Table 1.

*Time spent outdoor*

Duration (minutes)	Autumn (N=471)	Winter (N=470)	Spring (N=470)	Summer (N=470)
<60	5.9 %	38.1%	9%	0%
60–90	47.3%	51.3%	24.0%	6.6 %
>90	45.2%	9.1%	72.3%	91.7%
Don't know	1.5%	1.5%	1.7%	1.7%

Table one shows that children spent a substantial amount of time outdoors. A weakness in the data is the delimited time intervals set in this question. The seasonal variation in weather and temperature clearly influenced the everyday outdoor time in the kindergartens. In late autumn and winter when rain and snow melt and freeze, the playgrounds could be more like skating areas. Still, more than 50% said that they are outdoors for more than 60 minutes with children aged from one to three years old. Our data do not separate the one-year-old children from the three-year-old, so we do not know which age group the teacher had in mind when answering the questions. The younger the children, the more their winter clothes restrict their motor skills and their ability to be active outdoor.

Since the data were self-reported, they may reveal an objective to be outdoors frequently even in cold parts of the year. Teachers were also asked the extent to which they were satisfied with the amount of time children spent outdoor. 46% of the respondent are very satisfied and 44 % are quite satisfied. Moser & Martinsen (2010) looked at the duration of time that children, regardless of age, are outdoors while at kindergarten. The time intervals used in obtaining these results cannot be compared directly with our data. They support the idea that Norwegian children spend a lot of time outdoors and kindergarten teachers are satisfied with the time children spend outdoor.

### ***Important factors in the work of BMH and NET***

The teachers were asked to identify factors they considered important for working with BMH and NET in kindergartens.

Table 2.

*How important do you consider the factors below to be for working systematically with BMH and NET?*

	Enough staff (N= 403)	Employees expertise in the area (N= 404)	with Available materials (N= 400)	Possibility of outdoor (N= 404)	Time (N= 401)
Very important	76.2%	30.2%	33%	77.5%	70.3%
Quite important	21.3%	50.7%	45.5%	19.8%	23.7%
Of some importance	2.0%	17.1%	19%	2.5%	4.0%
Not important	0.2%	1.7%	2.3%	0.0%	1.5%

Do not know	0.2%	0.2%	0.3%	0.2%	0.5%
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The question required teachers to consider the significance of five factors of importance for everyday work within the two subjects. The factors were different in nature and sought to uncover different aspects. Three of the factors were related to structure and organization, for example, whether there are enough staff, whether the opportunity exists to visit a suitable outdoor area, and what are the time constraints. All three of these factors were considered to be very important by around three quarters of the respondents. The last two factors dealt with subject knowledge and the availability of materials. The proportion who considered these to be very important was only one third. One possible interpretation of this findings is that purely structural and organizational factors were perceived as more important in the work with the subjects than knowledge and appropriate material. Around half of the respondents considered knowledge and appropriate material as being quite important, which can therefore still indicate an awareness of the importance of having knowledge in the subjects.

The teachers were also asked to add other important factors in an open-ended question. Commitment, interest and motivation are the most common answers.

***Kindergarten teachers’ conceptions of how and how often they work with the subjects***

The teachers were also asked how often they worked with selected parts of subjects BMH and NET.

Table 3.

*How often do you work with selected parts of subjects BMH and NET*

How often do you work with the following tasks	Give children experiences with varied movements outdoors (N=411)	Give children experiences with varied movements in nature (N=412)	Give children experiences being in nature (N=405)	Facilitate activities that stimulate discovery and articulation of phenomena in nature (N=408)
Very often	46.7%	46.4%	44.4%	20.2%
Quite often	41.1%	38.3%	42.2%	53.0%
Random	11.4%	14.3%	11.6 %	24.6%
Rarely	0.7%	0.5%	1.2%	2.0%
Never	0.0%	0.0%	0.2%	0.2%

Table three shows that up to 90% of the teachers responded that they very often and quite often work to give children experiences with varied movements outdoors, in nature or being in nature. The category ‘facilitating activities that stimulate discovery and discussion of the phenomena in nature is clearly done by a smaller proportion of kindergarten teachers very often.

In light of Osnes & Skaug’s (2015) observations, we think it is paradoxical that 90% of the teachers in our data said that they very often and quite often give children experiences with varied movements.

Nevertheless, it is worth noting the difference between the four themes mentioned. Giving children experiences can be thought of as being the same as just taking the children outdoors

and allowing them to experience the outdoor environment as they like. The last category requires more expertise and active planning, and fewer teachers do this very often.

### ***Kindergarten teachers' educational background***

The Norwegian kindergarten teacher education gives students the opportunity to specialize in topics related to BMH and NET beyond the minimum number of credits that all students must achieve. We asked the kindergarten teachers if they felt they have knowledge that supports them in their work with the youngest children.

Table 4.

*To what extent do you have knowledge that supports you in the following tasks*

	Give the youngest children sensory and movement experiences (N=408)	Give the youngest children varied experiences in nature (N= 406)
Large extent	55.2%	40.9%
Some extent	42.6%	56.2%
Small extent	2.2%	2.7%
Not at all	0%	0.2%

Table four shows that almost all respondents had either a large or to some extent knowledge that supports them in the work within the two subject areas. The gradation of the scale will naturally give a preponderance of responses from 'large extent' and 'some extent'. Yet teachers clearly tend to have more knowledge to support them in dealing with movement and sensory experiences than with varied experiences with nature. Among the teachers, 55.2% largely felt that they have knowledge that supports them in their efforts to provide the youngest children sensory and movement experiences, while the corresponding percentage for varied experiences in nature was only 40.9%. Østrem et al. (2009) found a distinction both in how kindergartens worked with the two subject areas and in how difficult it was to translate them into practice. Distinctions thus appear to remain stable over time.

Overall, 4.5% of our respondents reported having further study associated with one or both subject areas. A pertinent question might then be what qualifications and skills do teachers believe they need for working with the youngest children.

### ***Parents' point of view***

Parents were asked how they regarded the kindergartens work with the subject areas, outdoor play-time and walks in the neighborhood. Table five shows the extent to which the parents think the kindergarten is working with BMH and NET

Table 5.

*The extent to which do you think the kindergarten is working with BMH and NET*

	BMH (N=1187)	NET(N =1187)
Largely	46.8%	38.8%
To some degree	40.4%	44.1%
Small degree	5.4%	9.2%

Don't know	7.3%	7.5%
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Table five shows that parents considered there to be more focus on BMH than NET. This result corresponds with Østrem et al. (2009).

Parents customarily evaluate the kindergartens one to two times per year in Norway, and they are generally satisfied. It is therefore interesting to see in table five that over 9% stated that they were not satisfied with the focus on the subject NET.

Parents were also asked the extent to which they were satisfied with outdoor play-time and walks in the neighborhood.

Table 6.

*The extent to which parents are satisfied with outdoor time and neighborhood walks.*

	Outdoor play-time	Walks in the neighborhood
Very satisfied	72.5%	58.6%
Partially satisfied	21.8%	30%
Not satisfied	3.6%	9.1%
Don't know	1.9%	2.4%

The table shows that nearly three quarters of the parents were very satisfied with the amount of time their children played outdoors and more than half were very satisfied with the walks in the neighborhood. The way in which these questions were asked provides little information regarding what parents are partially satisfied with and what parents are not satisfied with. However, these findings correspond with Søbstad (2004), who reported that parents have a clear desire for several walks and more time spent outdoors for children in kindergarten.

## **Discussion**

Our main aim was to explore how kindergartens facilitate experiences outdoors and in nature for the youngest children. We believe our data provide several inputs to discuss this topic, and we point out some attitudes and common practices we assume are relevant.

### ***Being outdoors a lot provides opportunities for experiences***

The teachers reported that they are outdoors throughout the year, and over half of them are outdoors every day for 60–90 minutes with the youngest children in the winter. Sando and Lysklett (2012) found in their study a large variation in the amount of time that the youngest children spent outdoors during the winter. The researchers found a pattern where kindergarteners that spent the most time outdoors stayed outdoor every day, while kindergarteners that were out for shorter periods also had several days they stayed indoor. Our data, based on self-reports, do not show a similar spread, though we do recognize the patterns they found from our experience. We question whether an unspoken collective understanding of the value of being outdoor lay behind our respondents' answers and there are no questions about this value. This comprehension is normative and applies to large parts of the Norwegian society. Even two White Papers states that higher quality of life and better health are

connected to outdoors (St. meld. nr 39 (2000-2001), 2001; St. meld. nr.18 (2015-2016), 2016). One of the goals in the Framework Plan is that children are to experience all types of weather conditions and different seasons (MER 2011).

### ***Objectives for play and learning in the Framework Plan***

Brostrøm (2016) stated that a kindergarten teacher must be able to use meaningful here-and-now situations; that is, the teacher must interpret the situation and use their know-how to improvise in here-and-now situations with the children. For kindergarten teachers to be able to take advantage of these situations, they must be actively present. Brostrøm also relies on Østrem (2007), when she emphasized the importance of the 'third', as something children and teacher are engaged in. That might be understood as the pedagogical content of the current period. As a result, children must be given items, materials, and narratives that enable them to reconstruct and interpret the experience in new ways. Hansson, Löfgren, & Pendrill (2014) described the diversity of science questions that children ask and wonder about and outlined the experience and learning potential of these situations if they are seen and utilized. Our data show a tendency for kindergarten teachers to facilitate learning activities outdoors to a lower extent. The question arises of whether a culture or practices exist among employees that lead them to believe that being outdoor gives children these experiences, without adults getting involved or arranging a play or an investigation.

Bjørnestad and Os (Forthcoming) shows that verbal interaction between the child and staff is low 3.4 out of 7, where 7 is excellent. The same study also shows that the developmental stimulation was inadequate, meaning 3.1 out of 7, (Bjørnestad & Os, Forthcoming).

Kemmis & Groothoer (2008) suggested that a person's practice not only relies on experiences and intentions but also the individual's actions. Practice is also shaped and contingent on arrangements, dispositions, circumstances, and conditions beyond each individual (Kemmis & Groothoer, 2008 p. 37). If we understand kindergarten as a community of practice, there will be values, attitudes, perceptions, and behaviors that are prevalent and that shape the individual. In our study we saw tendencies in the community of practice that indicated that spending a lot of time outdoors is a correct and good practice, and that many of the objectives in the Framework Plan can be achieved by children being outdoors. The practical aspects, like time and enough staff, were regarded as being more important than subject-specific knowledge.

On the basis of such communities of practice, one possible explanation why our informants spend so much time outdoors is the strong Norwegian tradition of outdoor play throughout the year. Likewise, outdoors is strongly embedded in Norwegian outdoor traditions, and this discourse appears to be prevalent concerning taking children outdoors. The walk or being outdoor is in itself the goal, but it might as well be the child's opportunity to meet, experience, systematize, and learn about themselves and their mobility, nature, and their surroundings along with a present and knowledgeable adult.

### ***What is quality time outdoors?***

Bjørnestad et al. (2012) summarized key factors that go into high-quality toddler care. The most important factors are sensitive interactions and good relationships between staff and children and between children within a given group. High-quality kindergartens are described as settings with high staff-to-child ratios, staff stability, small group sizes, and well-trained

staff members. For infant and toddler groups, 1:3 is regarded as the optimal staff-to-child ratio. Our studies support the wish for more staff, but a well-trained staff does not seem to mean staff with subject-specific education or knowledge. Professional and didactic reasoning should lay behind different choices teachers make every day in their work with the youngest children. Only 4.5% of the informants in this study had more science/physical education than was required for their bachelor's degree. This might be a reason for not acknowledging more subject specific play and learning experiences.

### ***Implications for the kindergarten teachers' education***

Based on the equal division of labor in the Norwegian kindergarten between qualified and unqualified personnel, Steinnes (2014) asked questions about kindergarten culture being dominated by 'common sense' and more general perceptions of upbringing rather than teachers' formal qualifications. She concluded that professional knowledge can be difficult to identify because the activities that take place are largely similar to much of what goes on in a typical home. This may also be something that justifies the equal division of labor in a Norwegian kindergarten. Steinnes (2014) noted that the professional knowledge base is seldom spoken. This situation presents a problem in the sense that it is fundamental for any profession to have a professional knowledge base along with a language that can express this knowledge (Steinnes, 2014). In addition, a professional language contributes to creating a common cultural knowledge through creating a common meaning.

We see that the existing practice, norms and values it sets, greatly influence adults' attitudes about how they should behave outdoors with children and what children should be doing outdoors. These attitudes are strikingly similar throughout the country, in contrast to Norway becoming increasingly multicultural and centralized. Education must show students the variety of possibilities that exist with outdoor activities, and take advantage of the opportunity to promote experiences and further learning for the youngest children. Future kindergarten teachers will probably work in kindergartens where they will need to lead others employed professionally, and thus they must be able to communicate both with a professional language but also with the individual subjects' terminology. Thulin (2010) gives several examples of how children's issues and curiosity are not being met and answered on a professional level. Sageidet (2016) also shows that there is an interest in science and science-related subjects among kindergarten teachers, but that they rarely do science-related activities. This situation might be due to a need for special equipment, but still we think that many activities can be done without very specialized equipment or a very well-equipped playground. These activities must be a part of the education of the next generation of kindergarten teachers.

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