

Social-emotional conditions of children during the reopening of kindergarten and schools after the Covid-19 lockdown

Data report - kindergarten

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Background and data

The risk of spread of COVID 19 during spring and summer 2020 put kindergarten and primary school, teachers and children, under pressure. In the beginning of March 2020, parents were ordered to keep their children at home, and shortly hereafter (March 19th 2020) the 'Ny lov og bekendtgørelse om nødundervisning' (BEK nr 242 af 19/03/2020) was enacted. In a first phase, all school activities had to be conducted using online resources, away from school premises, in the setting of the children's individual homes. In a second phase, the kindergartens/schools were ordered to undertake a controlled reopening in other settings that met certain criteria in regard to physical and social restrictions in line with health and hygiene restrictions. These circumstances forced teachers to be creative: e.g. facilitating outdoor learning environments, smaller groups of pupils/children, blended learning activities, combining physical presence with computer-supported learning activities.

This two-phase transformation of the kindergarten setting disrupted the traditional ways of organizing activities in kindergarten and school and, presumably, the roles of teachers and children and the conditions for and impact of learning through play. Furthermore, the two-phase transformation of the kindergarten setting may have had a number of consequences for the socio-emotional conditions of the children. A survey of school parents' and children' experiences during the lockdown (Qvortrup et al 2020) that was completed in the middle of the first phase, showed that on the one hand both parents as well as children expressed a feeling of being well taken care of. On the other hand, the children were severely challenged in regard to their wellbeing, mental health, self-efficacy, etc. These challenges seemed to be related to a number of conditions, like fear of illness, stress from the closure, academic stress, and lack of perceived coping, etc. However, differences across the participating municipalities and schools also indicated that the different strategies applied to ensure reassuring and playful learning environments were of great importance.

To provide empirical knowledge of the situation after the reopening and the effect of different strategies applied to ensure reassuring and playful learning environments on children's socio-emotional conditions, and to provide a knowledge base for addressing the challenges posed by the situation, professor Ane Qvortrup, assistant professor Thomas Enemark Lundtofte, assistant professor Vibeke Christensen, research assistant Rune Lomholt and research assistant Anni Nielsen conducted a study in June and July 2020, funded by the LEGO foundation.

The purpose of the study has been to investigate the socio-emotional experiences of children, as they were re-entering their learning environments during the controlled reopening (phase 2), and the way different settings or conditions in the children's learning environments affected their socio-emotional experiences. Furthermore, the project mapped the strategies and resources employed by kindergartens and pedagogical staff members during the phase of re-opening in which the children's learning environments had to be reworked, in order to explore the importance of different strategies and resources.

The research questions were:

- 1) What are the socio-emotional experiences of the children, who were challenged from the experiences during the lockdown and have been socially isolated, as they are re-entering the learning environment?
- 2) What characterizes children's learning environments in light of the new conditions for organizing playful learning, and how are these environments affecting children's experiences, positively or negatively?
- 3) Which strategies and resources have supported the teachers' reinvention of the learning environments during the controlled reopening of schools and kindergartens?

Methodologically, the project was based on a mixed method study with:

- 1) pre-interviews for survey development purposes with 1-2 school leaders, 2 kindergarten leaders and 2-3 teachers/pedagogical staff members in each of 4 municipalities: Jammerbugt, Tønder, Odense and Gladsaxe.
- 2) survey among school and pedagogical staff members in 4 municipalities: Jammerbugt, Tønder, Odense and Gladsaxe
- 3) survey among children from 3rd to 9th grade of schools in 4 municipalities: Jammerbugt, Tønder, Odense and Gladsaxe
- 4) observations on children in kindergarten and 1st grade of schools in 1 kindergarten and 1 school (two days each place) in 3 municipalities: Jammerbugt, Odense and Gladsaxe

Due to great time pressure, the selection of municipalities was based on who would participate. Even so, it was an important criterion that the total group of municipalities should represent a good variety of municipalities, schools and kindergartens in terms of size, geography and demographics.

In early June 2020, interviews were conducted, and questionnaires were developed and pilot tested. The surveys were distributed to all schools and kindergartens on Monday, June 22nd and a reminder was sent on Wednesday, June 24th. The children survey was closed on Friday, June 26nd, and to teachers in schools and kindergartens on Wednesday, July 1st.

This report conveys the data from surveys to pedagogical staff members in kindergartens. Later analyses will help elucidate more complex relationships and contexts. Altogether, this provides a solid basis for understanding the situation from the perspective of pedagogical staff members.

University of Southern Denmark is responsible for all data processing. Regarding data storage and data management, agreements have been made with the university's legal department, which ensures the anonymity and integrity of the informants. For the sake of participants' privacy, results from units with fewer than 10 responses are not disseminated.

Our primary target group is children, teachers and leaders in the participating kindergartens. This report and other publications should be seen as a way of thanking participants for taking the time to engage in interviews, to distribute and answer the survey and for providing access to collections of observational data.

Our secondary target group is the entire sector and all kindergarten stakeholders who get a solid picture of the situation. The sector deserves the most robust possible feedback possible considering the immense task they have undertaken during the two phases of closure and reopening.

On behalf of the project team at University of Southern Denmark,

Professor and project leader
Ane Qvortrup

Part 1: Rules and restrictions after reopening

A group of questions in the study examines the rules and guidelines in kindergartens after reopening and how these rules and guidelines have been handled and experienced by pedagogical staff members.

In a first series of questions, pedagogical staff members are asked about the prevalence of new rules and restrictions after the reopening. They respond to the questions based on dichotomous yes/no scales.

The pedagogical staff members' responses show that all kindergartens have had rules regarding hand hygiene (table 1). In the vast majority of kindergartens, in- and/or outdoor facilities have been divided into zones (96,3%, cf. table 2). Another common feature is that parents have been prohibited from accessing the institution (83,2%, cf. table 3).

	Respondents	Percentage
Yes	161	### #
	0	0,0%
Total	161	### #

Table 1: Pedagogical staff members' responses to the question "There have been rules on extra hand hygiene (hand washing, use of hand sanitizer, etc)"

	Respondents	Percentage
Yes	155	96,3%
No	6	3,7%
Total	161	### #

Table 2: Pedagogical staff members' responses to the question "The indoor and/or outdoor areas have been divided into zones"

	Respondents	Percentage
Yes	141	87,6%
No	20	12,4%
Total	161	### #

Table 3: Pedagogical staff members' responses to the question "Parents have been prohibited to access to the institution"

After the questions about the prevalence of new rules and restrictions, the pedagogical staff members are asked if they think the new rules and restrictions affect childrens' daily lives and their mental resources. They do this by expressing the extent to which they agree with a number of statements on a 4-point scale ranging from 'To a great extent' and 'To a moderate extent' to 'Neither to a high or low degree' and 'To a lesser extent' and 'Not at all'.

The teachers' responses are shown in table 4-6, where they relate to the following statements: “The children have had a hard time complying with the new hygiene rules” (table 4), “The children have adhered to the permitted zones/areas without any problems” (table 5) and “The children understand why the new rules and restrictions are necessary” (table 6). The number of respondents in each table does not fully correspond with the total number of pedagogical staff respondents, as they have only been asked a given question if they had previously indicated that the rule or restriction has been introduced in their institution.

	Respondents	Percentage
To a great extent	3	1,9%
To a moderate extent	40	24,8%
To a lesser extent	82	50,9%
Not at all	36	22,4%
Total	161	####

Table 4: Pedagogical staff members' responses to the statement “The children have had a hard time complying with the new hygiene rules”

	Respondents	Percentage
To a great extent	63	40,6%
To a moderate extent	78	50,3%
To a lesser extent	13	8,4%
Not at all	1	0,6%
Total	155	####

Table 5: Pedagogical staff members' responses to the statement “The children have adhered to the permitted zones/areas without any problems”

	Respondents	Percentage
To a great extent	36	22,4%
To a moderate extent	67	41,6%
To a lesser extent	31	19,3%
Not at all	27	16,8%
Total	161	####

Table 6: Pedagogical staff members' responses to the statement “The children understand why the new rules and restrictions are necessary”

As can be seen from tables 4-6, according to the pedagogical staff members, most of the kindergarten children have either ‘To a moderate extent’ or ‘To a great extent’ been able to handle the new rules and restrictions. 22,4% have chosen ‘Not at all’ and 50,9% ‘To a lesser extent’ to the statement that their children have had difficulty complying with the new hygiene rules. However, there are also nearly 24,8%, who have chosen ‘To a moderate extent’, and 1.9%, who have chosen ‘To a great extent’.

Apparently, it has been even easier for children to adhere to the zoning of the outdoor and indoor areas. 40,6% of the pedagogical staff members have chosen ‘To a great extent’ and 50,3% ‘To a moderate extent’, while only 8,4% and 0,6% have chosen ‘To a lesser extent’ and ‘Not at all’ to the statement “The children have adhered to the permitted zones/areas without any problems”.

Perhaps even more importantly, according to the pedagogical staff members a large group of the children understand why the new rules and restrictions are necessary. Here, 22,4% and 41,6%, respectively, have chosen 'To a great extent' and 'To a moderate extent'. 36,1% of the pedagogical staff members have chosen 'To a lesser extent' and 'Not at all'.

Part 2: Conditions for playful learning after reopening

A key term in this project is playful learning environments. A playful learning environment is where children experience learning as something joyful, meaningful, actively engaging, iterative, and socially interactive (Parker & Thomsen 2019). We will return to these five characteristics below in part 4 on the experiences of playful learning after reopening. In this section, we address the question of whether key conditions for playful learning appear to have been present in kindergartens after reopening. When we talk about conditions for playful learning, we refer to the ways in which the kindergarten day has been organized as well as various physical and social circumstances. Our assumption is that a critical requirement for playful learning is that children must have agency in the form of adults (e.g. teachers) validating their capabilities (Daniels & Shumow, 2003). Agency is about the balance of initiative in the child-adult relationship, and it is about the kindergarten teacher supporting rather than directing the child (Zosh, Hopkins, Jensen, Liu, Neale, Hirsh-Pasek, Solis & Whitebread 2017). Furthermore, it is central to consider which opportunities children have been offered towards exerting their thinking and actions. Previously, in part one, we considered the rules and restrictions and the way they affected the children. Here, it became clear that a group of children found it difficult to handle the rules and restrictions, and that a group not really understood why the rules were important. One must assume that these students have fewer mental resources for exerting their thinking and actions.

In what follows, we delve into the way days in kindergartens have been organized, and the physical and social circumstances. Two dimensions have guided our focus: social networks/relations and flow of activities. Consequently, we have been interested in how the contexts establish and provide good frameworks for social networks and relationships, and for establishing and maintaining a ‘flow’ of activities (Sinclair, 2004; Cheng, Reunamo, Cooper, Liu, & Vong, 2015).

Initially, we have asked about the number of pedagogical staff members during the reopening, which is assumed to have had a significant impact on the pedagogical opportunities. On a dichotomous yes/no scale, the pedagogical staff members are asked to respond to the statement "There has been more staff than usual (e.g. extra use of temporary staff)". The distribution of responses is shown in table 7.

	Respondents	Percentage
Yes	136	84,5%
No	25	15,5%
Total	161	####

Table 7: Pedagogical staff members' responses to the question "There has been more staff than usual (eg use of temporary staff members)"

Yes-respondents are asked to assess whether they perceive the extra resources as having had a positive influence on the pedagogical opportunities. They respond on a degree scale from 'To a great extent' and 'To a moderate extent' to 'To a lesser extent' and 'Not at all'. As can be seen in table 8, almost everyone experience it to have had a positive impact.

	Respondents	Percentage
To a great extent	92	62,6%
To a moderate extent	41	27,9%
To a lesser extent	8	5,4%
Not at all	6	4,1%
I alt	147	####

Table 8: Pedagogical staff members' responses to the statement "The extra resources due to fewer children/extra staff have had a positive impact on the pedagogical opportunities"

Regarding the organization of kindergarten days, we ask the pedagogical staff members to react to the statement: "A large proportion of children have had shorter days than usual". Again, we use a dichotomous yes/no scale and the yes-respondents are asked to assess whether the shorter days have had a positive or negative impact on the children.

	Respondents	Percentage
Yes	129	80,1%
No	32	19,9%
Total	161	####

Table 9: Pedagogical staff members' responses to the question "A large proportion of children have had shorter days than usual"

As table 9 shows, regarding the length of the kindergarten days, 80,1% indicate that the days have been shorter than usual, while 19,9% indicate the opposite.

The teachers' experiences of the impact of these changes on the pupils are very positive. As shown in table 10, according to pedagogical staff members, the shorter days have had a positive impact on childrens' mental resources and daily lives

	Respondents	Percentage
To a great extent	100	77,5%
To a moderate extent	28	21,7%
To a lesser extent	1	0,8%
Not at all	0	0,0%
Total	129	####

Table 10: Pedagogical staff members' responses to the statement "The shorter days have had a decisive impact on the childrens' mental resources"

Regarding the physical circumstances, the pedagogical staff members have been asked about the balance between indoor and outdoor activities and the use of different locations. Our assumption is that when learning occurs in new and different settings and contexts, for example outdoors, on a field trip, or as a group activity or experiment, it can foster curiosity and commitment, but also expand social networks and dissolve barriers between individuals and groups that are sometimes created in traditional settings.

We asked the pedagogical staff members about the use of different settings outside the traditional institutional settings. At first, we ask them about the use of buildings outside the institution such as sports facilities, gyms, local halls etc.

A small group of pedagogical staff members indicates that activities have been moved to buildings outside the institution, but many also state that this has not been the case (see table 11).

	Respondents	Percentage
To a great extent	4	2,5%
To a moderate extent	20	12,4%
To a lesser extent	27	16,8%
Not at all	110	68,3%
Total	161	####

Table 11: Pedagogical staff members' responses to the statement "We have had more activities in buildings outside the institution than usual (sport facilities, gyms, local halls etc.)"

More pedagogical staff members agree that activities have taken place outdoors (see table 12) and/or included trips outside the school area (see table 13).

	Respondents	Percentage
To a great extent	116	72,0%
To a moderate extent	38	23,6%
To a lesser extent	3	1,9%
Not at all	4	2,5%
Total	161	####

Table 12: Pedagogical staff members' responses to the statement "There are more outdoor activities than usual"

	Respondents	Percentage
To a great extent	55	34,2%
To a moderate extent	57	35,4%
To a lesser extent	26	16,1%
Not at all	23	14,3%
Total	161	####

Table 13: Pedagogical staff members' responses to the statement "We have been on more trips outside the school than usual"

One would expect the changed physical contexts in the form of outdoor teaching and the new hygiene rules could challenge the use of digital media. We ask the pedagogical staff members if tablets or other digital media have been used less than usual. As shown in table 14, a large group of pedagogical staff members agree.

	Respondents	Percentage
To a great extent	52	32,3%
To a moderate extent	51	31,7%
To a lesser extent	29	18,0%
Not at all	29	18,0%
Total	161	####

Table 14: Pedagogical staff members' responses to the statement "We use tablets or other digital media less than usual"

Regarding social circumstances, the pedagogical staff members have been asked about social relationships during a day in kindergarten. They are asked about the amount of time that children play in smaller groups. In addition, they are asked about the amount of time the childrens' play is organized around individual activities. The tables 15 and 16 show the distribution of responses.

	Respondents	Percentage
To a great extent	93	57,8%
To a moderate extent	56	34,8%
To a lesser extent	10	6,2%
Not at all	2	1,2%
Total	161	####

Table 15: Pedagogical staff members' responses to the statement "Children spend more time in small groups of children than usual"

	Respondents	Percentage
To a great extent	93	57,8%
To a moderate extent	56	34,8%
To a lesser extent	10	6,2%
Not at all	2	1,2%
Total	161	####

Table 16: Pedagogical staff members' responses to the statement "Children spend more time with individual activities than usual"

It is interesting to ask how these changing social contexts affect relationships and class communities. One could say that relationships and communities constitute more essential conditions than the contexts themselves. Thus, pedagogical staff members have been asked to assess the influence of the new contexts on relationships and group communities. The pedagogical staff members consider six statements thematizing different kinds of relationships and communities in kindergarten. They are asked how the changed contexts after reopening have influenced: "...my work with strengthening friendships in the group of children" (table 17), "... my work with establishing a good child community" (table 18), "...my sense of the group of children as a whole" (table 19), "...my sense of the individual child" (table 20)," ...my opportunity to support the individual child's personal development" (table 21) and " ...my opportunity to support the individual child's social development " (table 22):

	Respondents	Percentage
To a great extent	74	46,3%
To a moderate extent	62	38,8%
To a lesser extent	17	10,6%
Not at all	7	4,4%
Total	160	####

Table 17: Pedagogical staff members' responses to the question if the changed contexts after reopening have influenced "... my work with strengthening friendships in the group of children"

	Respondents	Percentage
To a great extent	73	45,6%
To a moderate extent	63	39,4%
To a lesser extent	17	10,6%
Not at all	7	4,4%
Total	160	####

Table 18: Pedagogical staff members' responses to the question if the changed contexts after reopening have influenced "... my work with establishing a good child community"

	Respondents	Percentage
To a great extent	75	46,9%
To a moderate extent	57	35,6%
To a lesser extent	21	13,1%
Not at all	7	4,4%
Total	160	####

Table 19: Pedagogical staff members' responses to the question if the changed contexts after reopening have influenced "...my sense of the group of children as a whole"

	Respondents	Percentage
To a great extent	76	47,5%
To a moderate extent	60	37,5%
To a lesser extent	16	10,0%
Not at all	8	5,0%
I alt	160	####

Table 20: Pedagogical staff members' responses to the question if the changed contexts after reopening have influenced "...my sense of the individual child"

	Respondents	Percentage
To a great extent	75	46,9%
To a moderate extent	58	36,3%
To a lesser extent	19	11,9%
Not at all	8	5,0%
Total	160	####

Table 21: Pedagogical staff members' responses to the question if the changed contexts after reopening have influenced "...my opportunity to support the individual child's personal development"

	Respondents	Percentage
To a great extent	72	45,0%
To a moderate extent	61	38,1%
To a lesser extent	20	12,5%
Not at all	7	4,4%
Total	160	####

Table 22: Pedagogical staff members' responses to the question if the changed contexts after reopening have influenced "...my opportunity to support the individual child's social development"

Part 3: Learning through play after reopening

Inspired by Parker & Thomsen (2019), we differentiate between six types of activities that are aligned with the ideas of Playful Learning environments: cooperative and collaborative learning, practical/project-based learning, experiential learning, guided discovery learning, inquiry-based learning, and problem-based learning.

In this part of the data report, we first examine the extent to which the environments can be characterized by aligning with the ideas of active learning, and then we examine the presence of the six types of activities.

Active learning

Active learning occurs when pedagogical staff members guide children to formulate understandings and develop new skills through prompting and questioning rather than solely through explicit instruction.

When examining the extent to which the kindergarten environments can be characterized by aligning with the ideas of active learning, we employ a principal components analysis (PCA) to transform a set of variables measuring pedagogical staff members experience of the use of active and passive activities into a substantially smaller set of uncorrelated variables (or principal components) that represents most of the information in the original set of variables (Abdi & Williams, 2010; Dunteman, 1989). We do this to be able to do univariate analyses on the components' distribution in our sample population.

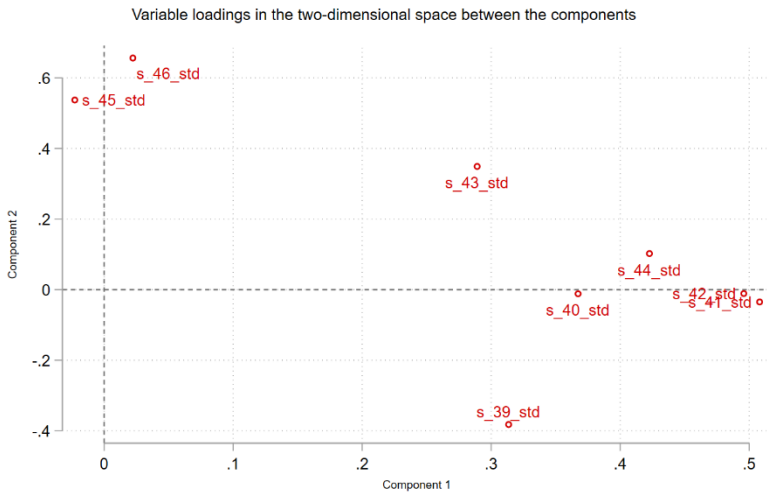
The following table shows variables included in the analysis. The variables are standardized before entering the analysis model:

Scale	Question text	Item text	Response scale
Passiv learning	Think about the last 14 days. To what extent has the following pedagogical activities or actions been a part of the childrens day?	I have read a story, shown a video or something similar for one or more children / I have trained one of more childrens ability to sit still and listen / I have trained one or more childrens ability to follow instructions with multiple steps / I have trained one or more childrens ability to wait for their turn	1 not at all / 2 to a low extent / 3 to some extent / 4 to a large extent
Active learning		The children play with self-selected activities / The children have an influence on the games or activities we do together / I have decided the activity for one or more children / I have asked one or more children questions, so they could contribute with their ideas or knowledge	1 not at all / 2 to a low extent / 3 to some extent / 4 to a large extent

The analysis showed to reasonably stable components (the components were cross validated). The first was identified as pedagogical activities and actions in the domain of passive learning, and component two was identified as the pedagogical activities and practices in the domain of active learning. Component one explains 28% of the variance and component two 21% of the variance in the standardized original set of variables, leaving approximately 50% of the variance unexplained. This could indicate, that operationalization of new indicators of the use of pedagogical practices in the active and passive learning domains should be incorporated into future empirical research on this subject field, with the

aim of forming more reliable components and thus better explanation of these domains of pedagogical and learning activities. The first principal component is the strongest.

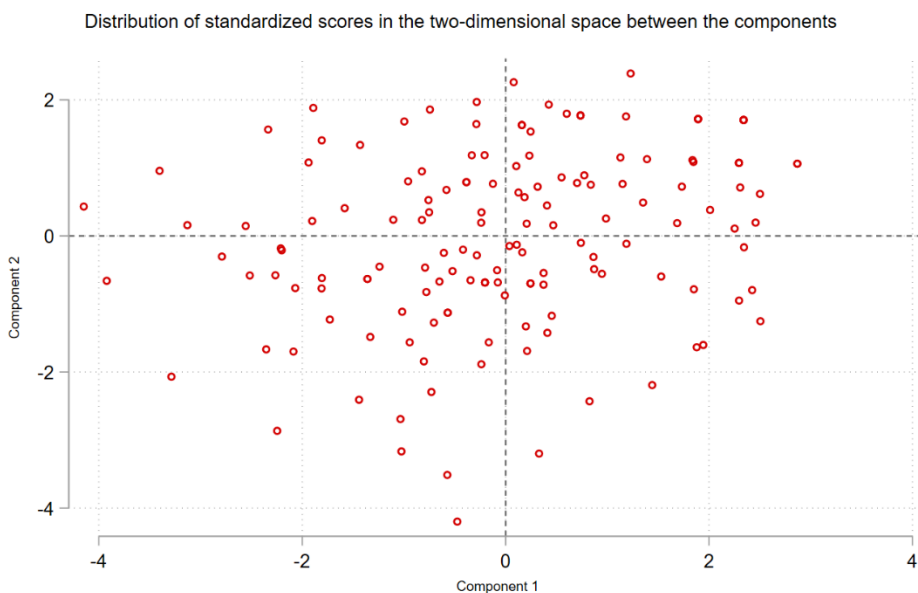
A first plot (figure 1) show which variables differentiate the two principal components.



*Loadings are based on a PCA-analysis with orthogonal varimax rotation

Figure 1

The plot shows that variables as indicators of children’s degree of influence on activities, differentiate the first component and that variables as indicators of pedagogical guided training differentiates the second component. The next plot shows the distribution of standardized scores generated from the PCA in the two-dimensional space between the principal components, representing each individuals standing according to their generalized perception of how much passive and active pedagogical activities and actions are part of practices in kindergartens, that can be explained by the principal components:



*Standardized scores are generated from PCA-analysis with orthogonal varimax rotation

Figure 2

This clearly shows that four different groups of pedagogical staff members. Some loading negatively on both components or a mix of positive and negative loadings. The characteristics of these four groups of

staff member is something that future examination of the relationship and correlation between the different domains of playful learning and group membership identified by the standardized scores derived from PCA analysis, could be interesting.

In the remainder of this part of the report, we examine the presence of each of the 6 types of activities.

Cooperative and collaborative learning

	Respondents	Percentage
To a great extent	35	22,9%
To a moderate extent	45	29,4%
To a lesser extent	56	36,6%
Not at all	17	11,1%
Total	153	####

Table 23: Pedagogical staff members' responses to the statement "We have involved one or more children in practical tasks"

	Respondents	Percent
Much more	17	11,1%
Slightly more	27	17,6%
No difference	34	22,2%
Slightly less	26	17,0%
Much less	46	30,1%
I don't know	3	2,0%
Total	153	####

Table 24: Pedagogical staff members' responses to the statement "We have involved one or more children in practical tasks"

	Respondents	Percentage
To a great extent	69	45,1%
To a moderate extent	57	37,3%
To a lesser extent	22	14,4%
Not at all	5	3,3%
Total	153	####

Table 25: Pedagogical staff members' responses to the statement "I have talked to or more kids about sharing toys with each other"

	Respondents	Percentage
Much more	19	12,4%
Slightly more	25	16,3%
No difference	87	56,9%
Slightly less	8	5,2%
Much less	11	7,2%
I don't know	3	2,0%
Total	153	####

Table 26: Pedagogical staff members' responses to the statement "I have talked to or more kids about sharing toys with each other"

	Respondents	Percentage
To a great extent	57	37,3%
To a moderate extent	66	43,1%
To a lesser extent	20	13,1%
Not at all	10	6,5%
Total	153	####

Table 27: Pedagogical staff members' responses to the statement "Children and adults have been immersed in an activity for a long period of time (more than half an hour)"

	Respondents	Percentage
Much more	27	17,6%
Slightly more	37	24,2%
No difference	64	41,8%
Slightly less	13	8,5%
Much less	7	4,6%
I don't know	5	3,3%
Total	153	####

Table 28: Pedagogical staff members' responses to the statement "Children and adults have been immersed in an activity for a long period of time (more than half an hour)"

Practical/project-based learning

	Respondents	Percentage
To a great extent	34	22,7%
To a moderate extent	53	35,3%
To a lesser extent	43	28,7%
Not at all	20	13,3%
Total	150	####

Table 29: Pedagogical staff members' responses to the statement "We have worked with producing creative products (drawings, cut-paste, products of natural materials, etc.)"

	Respondents	Percentage
Much more	10	6,7%
Slightly more	22	14,7%
No difference	58	38,7%
Slightly less	31	20,7%
Much less	27	18,0%
I don't know	2	1,3%
Total	150	####

Table 30: Pedagogical staff members' responses to the statement "We have worked with producing creative products (drawings, cut-paste, products of natural materials, etc.)"

	Respondents	Percentage
To a great extent	55	36,7%
To a moderate extent	64	42,7%
To a lesser extent	23	15,3%
Not at all	8	5,3%
Total	150	####

Table 31: Pedagogical staff members' responses to the statement "We have had activities focusing on the body's functions or movement with one or more children"

	Respondents	Percentage
Much more	10	6,7%
Slightly more	39	26,0%
No difference	72	48,0%
Slightly less	17	11,3%
Much less	9	6,0%
I don't know	3	2,0%
Total	150	####

Table 32: Pedagogical staff members' responses to the statement "We have had activities focusing on the body's functions or movement with one or more children"

	Respondents	Percentage
To a great extent	37	24,7%
To a moderate extent	65	43,3%
To a lesser extent	24	16,0%
Not at all	24	16,0%
Total	150	100,0%

Table 33: Pedagogical staff members' responses to the statement "We have had practical experiences with the surrounding community through visits in the local community"

	Respondents	Percentage
Much more	18	12,0%
Slightly more	41	27,3%
No difference	57	38,0%
Slightly less	17	11,3%
Much less	11	7,3%
I don't know	6	4,0%
Total	150	100,0%

Table 34: Pedagogical staff members' responses to the statement "We have had practical experiences with the surrounding community through visits in the local community"

Guided discovery learning

	Respondents	Percentage
To a great extent	62	40,3%
To a moderate extent	83	53,9%
To a lesser extent	9	5,8%
Not at all	0	0,0%
Total	154	100,0%

Table 35: Pedagogical staff members' responses to the statement "I have supported one or more children to try something new"

	Respondents	Percentage
Much more	14	9,1%
Slightly more	43	27,9%
No difference	81	52,6%
Slightly less	10	6,5%
Much less	4	2,6%
I don't know	2	1,3%
Total	154	100,0%

Table 36: Pedagogical staff members' responses to the statement "I have supported one or more children to try something new"

	Respondents	Percentage
To a great extent	77	50,0%
To a moderate extent	65	42,2%
To a lesser extent	10	6,5%
Not at all	2	1,3%
Total	154	100,0%

Table 37: Pedagogical staff members' responses to the statement "I have supported one or more children in engaging in dialogue with other children or adults"

	Respondents	Percentage
Much more	16	10,4%
Slightly more	38	24,7%
No difference	86	55,8%
Slightly less	7	4,5%
Much less	2	1,3%
I don't know	5	3,2%
Total	154	100,0%

Table 38: Pedagogical staff members' responses to the statement "I have supported one or more children in engaging in dialogue with other children or adults"

	Respondents	Percentage
To a great extent	93	60,4%
To a moderate extent	52	33,8%
To a lesser extent	6	3,9%
Not at all	3	1,9%
Total	154	100,0%

Table 39: Pedagogical staff members' responses to the statement "I have supported one or more children in expressing their feelings"

	Respondents	Percentage
Much more	19	12,3%
Slightly more	34	22,1%
No difference	94	61,0%
Slightly less	4	2,6%
Much less	1	0,6%
I don't know	2	1,3%
Total	154	100,0%

Table 40: Pedagogical staff members' responses to the statement "I have supported one or more children in expressing their feelings"

Inquiry-based learning

	Respondents	Percentage
To a great extent	13	8,5%
To a moderate extent	63	41,2%
To a lesser extent	50	32,7%
Not at all	27	17,6%
Total	153	100,0%

Table 41: Pedagogical staff members' responses to the statement "We have investigated different cultural expressions and values and the way one can relate to the world differently"

	Respondents	Percentage
Much more	3	2,0%
Slightly more	23	15,0%
No difference	80	52,3%
Slightly less	25	16,3%
Much less	9	5,9%
I don't know	13	8,5%
Total	153	100,0%

Table 42: Pedagogical staff members' responses to the statement "We have investigated different cultural expressions and values and the way one can relate to the world differently"

	Respondents	Percentage
To a great extent	73	47,7%
To a moderate extent	57	37,3%
To a lesser extent	17	11,1%
Not at all	6	3,9%
Total	153	100,0%

Table 43: Pedagogical staff members' responses to the statement "We have talked about or investigated phenomena with one or more children (eg natural phenomena such as changing seasons, animal life, plant life and the like)"

	Respondents	Percentage
Much more	22	14,4%
Slightly more	46	30,1%
No difference	66	43,1%
Slightly less	8	5,2%
Much less	8	5,2%
I don't know	3	2,0%
Total	153	100,0%

Table 44: Pedagogical staff members' responses to the statement "We have talked about or investigated phenomena with one or more children (eg natural phenomena such as changing seasons, animal life, plant life and the like)"

	Respondents	Percentage
To a great extent	54	35,3%
To a moderate extent	76	49,7%
To a lesser extent	15	9,8%
Not at all	8	5,2%
Total	153	100,0%

Table 45: Pedagogical staff members' responses to the statement "We have investigated children's perceptions of and experiences with the world"

	Respondents	Percentage
Much more	11	7,2%
Slightly more	43	28,1%
No difference	77	50,3%
Slightly less	8	5,2%
Much less	6	3,9%
I don't know	8	5,2%
Total	153	100,0%

Table 46: Pedagogical staff members' responses to the statement "We have investigated children's perceptions of and experiences with the world"

Problem-based learning

	Respondents	Percentage
To a great extent	100	66,7%
To a moderate extent	39	26,0%
To a lesser extent	9	6,0%
Not at all	2	1,3%
Total	150	100,0%

Table 47: Pedagogical staff members' responses to the statement "I have helped one or more children resolve a conflict"

	Respondents	Percentage
Much more	11	7,3%
Slightly more	21	14,0%
No difference	94	62,7%
Slightly less	16	10,7%
Much less	7	4,7%
I don't know	1	0,7%
Total	150	100,0%

Table 48: Pedagogical staff members' responses to the statement "I have helped one or more children resolve a conflict"

	Respondents	Percentage
To a great extent	42	28,0%
To a moderate extent	84	56,0%
To a lesser extent	19	12,7%
Not at all	5	3,3%
Total	150	100,0%

Table 49: Pedagogical staff members' responses to the statement "Children and adults have been together about the common third (e.g., toys or other things) with a focus on discovering that things can be perceived or experienced differently by different people"

	Respondents	Percentage
Much more	11	7,3%
Slightly more	37	24,7%
No difference	74	49,3%
Slightly less	15	10,0%
Much less	5	3,3%
I don't know	8	5,3%
Total	150	100,0%

Table 50: Pedagogical staff members' responses to the statement "Children and adults have been together about the common third (e.g., toys or other things) with a focus on discovering that things can be perceived or experienced differently by different people"

	Respondents	Percentage
To a great extent	10	6,7%
To a moderate extent	64	42,7%
To a lesser extent	39	26,0%
Not at all	37	24,7%
Total	150	100,0%

Table 51: Pedagogical staff members' responses to the statement "The children have been given a practical task, which they themselves must find strategies for solving"

	Respondents	Percentage
Much more	1	0,7%
Slightly more	23	15,3%
No difference	77	51,3%
Slightly less	26	17,3%
Much less	9	6,0%
I don't know	14	9,3%
Total	150	100,0%

Table 52: Pedagogical staff members' responses to the statement "The children have been given a practical task, which they themselves must find strategies for solving"

Game-based learning

	Respondents	Percentage
To a great extent	72	48,3%
To a moderate extent	57	38,3%
To a lesser extent	18	12,1%
Not at all	2	1,3%
Total	149	100,0%

Table 53: Pedagogical staff members' responses to the statement "We have played with rhymes and strips or been singing with one or more children"

	Respondents	Percentage
Much more	8	5,4%
Slightly more	26	17,4%
No difference	77	51,7%
Slightly less	27	18,1%
Much less	10	6,7%
I don't know	1	0,7%
Total	149	100,0%

Table 54: Pedagogical staff members' responses to the statement "We have played with rhymes and strips or been singing with one or more children"

	Respondents	Percentage
To a great extent	0	0,0%
To a moderate extent	10	6,7%
To a lesser extent	27	18,1%
Not at all	112	75,2%
Total	149	100,0%

Table 55: Pedagogical staff members' responses to the statement "The kids have been playing games on tablet"

	Respondents	Percentage
Much more	3	2,0%
Slightly more	3	2,0%
No difference	91	61,1%
Slightly less	23	15,4%
Much less	24	16,1%
I don't know	5	3,4%
Total	149	100,0%

Table 56: Pedagogical staff members' responses to the statement "The kids have been playing games on tablet"

	Respondents	Percentage
To a great extent	5	3,4%
To a moderate extent	25	16,8%
To a lesser extent	41	27,5%
Not at all	78	52,3%
Total	149	100,0%

Table 57: Pedagogical staff members' responses to the statement "We have played board games, card games or the like"

	Respondents	Percentage
Much more	5	3,4%
Slightly more	9	6,0%
No difference	47	31,5%
Slightly less	29	19,5%
Much less	55	36,9%
I don't know	4	2,7%
Total	149	100,0%

Table 58: Pedagogical staff members' responses to the statement "We have played board games, card games or the like"

Part 4: Experiences of playful learning after reopening

In this section, we investigate whether activities during reopening meets the five characteristics of playful learning mentioned in part two. All five characteristics are not necessary at all times, but over time children should experience moments of joy and surprise, a meaningful connection, be active and absorbed, iterate and engage with others. We thus investigate whether learning as a whole during the reopening has been joyful, meaningful, actively engaging, iterative, and socially interactive. When we talk about a joyful environment, we talk about an environment where children have positive peer and teacher interactions and positive learning experiences. We use the concept of joy in a broad sense, where it covers pleasure, enjoyment, motivation, thrill, and positive emotions. In addition, it entails an aspect of being confident about oneself. In other words, joy is seen as both enjoying a task for its own sake and the momentary thrill of surprise, insight, or success after overcoming challenges (Parker & Thomsen 2019).

When we talk about meaningfulness, we refer to the children finding meaning in an experience by connecting it to something he/she already knows. A meaningful environment gives a voice to childrens' experiences and backgrounds and makes learning and playing culturally relevant to them (ibid.). Ausubel (1968) talks about moving past rote learning to more meaningful understanding. As such, a meaningful environment helps children tap into their existing knowledge and inspires them to make connections, see relationships, and gain a deeper understanding of the complex world around them (Parker & Thomsen 2019).

When we talk about being actively engaged, we mean that children have choices – big or small – to make about the content or processes involved in their activities (ibid.). It is important to say that in the idea of active engagement, there is no requirement for physical or bodily activity. Hirsh-Pasek, Zosh, et al., (2015) make the distinction that active learning requires children to be “minds on”, whether or not their bodies are active. Children are immersed in the act of self-directed effort and persist in spite of distractions (Parker & Thomsen 2019).

The iterative aspect of the playful learning environment refers to the childrens' opportunity to explore and investigate new concepts; to try, and fail, and try again (ibid.). It is crucial that the environment is experienced as a safe space to experiment without risk.

The environment is socially interactive when it affords learners working together in groups (ibid.). Although play and learning can happen on one's own, a powerful catalyst for both learning and play is engaging children in social interaction. Through the processes of sharing thoughts, understanding others through direct interaction, and communicating ideas, children are not only able to enjoy being with others, but also build deeper understandings and more powerful relationships (ibid.).

We explore the possibility of creating playful learning environments through questions to teachers. First, they are asked about their possibility of supporting the childrens' versatile and social development, communication and language, body, senses and movement, nature, outdoor life and science, culture, aesthetics and community. We ask them to think about the past 14 days.

	Respondents	Percentage
To a great extent	67	45,3%
To a moderate extent	76	51,4%
To a lesser extent	5	3,4%
Not at all	0	0,0%
Total	148	####

Table 59: Pedagogical staff members' responses to the statement "To what degree have pedagogical practices provided opportunities to support children's versatile development (their desire to participate and learn, participation patterns, self-image or understanding of other children and adults, general education, priorities between choices, personal values, etc.)?"

	Respondents	Percentage
To a great extent	72	48,6%
To a moderate extent	67	45,3%
To a lesser extent	9	6,1%
Not at all	0	0,0%
Total	148	####

Table 60: Pedagogical staff members' responses to the statement "To what degree have pedagogical practices provided opportunities to support children's social development (co-influence on decisions, affiliation/ownership, understanding of other perspectives or intentions, negotiation and conflict resolution through play and conversation, etc.)"

	Respondents	Percentage
To a great extent	83	56,1%
To a moderate extent	59	39,9%
To a lesser extent	6	4,1%
Not at all	0	0,0%
Total	148	####

Table 61: Pedagogical staff members' responses to the statement "To what degree have pedagogical practices provided opportunities to support children's development of communication and language (strategies for conversation and choice of words, dialogue and conversation with children and adults, storytelling, role-play and the like)"

	Respondents	Percentage
To a great extent	78	52,7%
To a moderate extent	63	42,6%
To a lesser extent	7	4,7%
Not at all	0	0,0%
Total	148	####

Table 62: Pedagogical staff members' responses to the statement "To what degree have pedagogical practices provided opportunities to support children's development of body, senses and movement (Play with the body, body identity, play with focus on movement, focus on senses and impressions, work on motor development, exploration of the world through movement and the like)"

	Respondents	Percentage
To a great extent	87	58,8%
To a moderate extent	48	32,4%
To a lesser extent	11	7,4%
Not at all	2	1,4%
Total	148	####

Table 63: Pedagogical staff members' responses to the statement "To what degree have pedagogical practices provided opportunities to support children's understanding of nature, outdoor life and natural sciences (understanding of phenomena in nature, sustainability, studies of nature and outdoor life, work with natural materials, nature experiences, use of technological tools and the like)

	Respondents	Percentage
To a great extent	21	14,2%
To a moderate extent	66	44,6%
To a lesser extent	52	35,1%
Not at all	9	6,1%
Total	148	####

Table 64: Pedagogical staff members' responses to the statement "To what degree have pedagogical practices provided opportunities to support children's understanding of culture, aesthetics and community (cultural impressions, aesthetic experiences of films, music arts, cultural expressions in play, focus on differences in cultural backgrounds, etc.)"

We then ask them to relate to the five characteristics, here with the intro: "How do you experience the pedagogical practices to have influenced..."

	Respondents	Percentage
Very positive	51	34,7%
Positive	55	37,4%
No change	19	12,9%
Negative	16	10,9%
Very negative	6	4,1%
Total	147	####

Table 65: Pedagogical staff members' responses to the statement "How do you experience the pedagogical practices to have influenced the childrens' enthusiasm for kindergarten (they enjoy activities and experience surprises, insight or success)"

	Respondents	Percentage
Very positive	38	25,9%
Positive	69	46,9%
No change	17	11,6%
Negative	18	12,2%
Very negative	5	3,4%
Total	147	####

Table 66: Pedagogical staff members' responses to the statement "How do you experience the pedagogical practices to have influenced the childrens' social involvement and interaction (exchange of ideas and thoughts and development of common understanding)"

	Respondents	Percentage
Very positive	37	25,2%
Positive	60	40,8%
No change	21	14,3%
Negative	23	15,6%
Very negative	6	4,1%
Total	147	####

Table 67: Pedagogical staff members' responses to the statement "How do you experience the pedagogical practices to have influenced the opportunity to experiment with the children (try out opportunities, discover questions, etc.)"

	Respondents	Percentage
Very positive	30	20,4%
Positive	69	46,9%
No change	23	15,6%
Negative	19	12,9%
Very negative	6	4,1%
Total	147	####

Table 68: Pedagogical staff members' responses to the statement "How do you experience the pedagogical practices to have influenced the opportunity to make activities meaningful to the children (they link experiences to something already known)"

	Respondents	Percentage
Very positive	29	19,7%
Positive	69	46,9%
No change	20	13,6%
Negative	22	15,0%
Very negative	7	4,8%
Total	147	####

Table 69: Pedagogical staff members' responses to the statement "How do you experience the pedagogical practices to have influenced the opportunity to keep the children in flow with their focus and commitment to activities?"

Part 5: Strategies and resources supporting pedagogical staff members

During the first parts of the report, we have discussed a number of the strategies that have been used in kindergartens during the reopening. In part one we described the strategies employed in regard to hygiene and distance requirements, and in part two we described the use of contexts outside the institution, outdoor environments and digital media as well as the strategies for social divisions. Furthermore, in part three, we described the balance in relation to various types of active learning. All of the above are important aspects of what we define as strategies for creating playful learning environments.

In this final section, we address the resources that, according to the pedagogical staff members themselves, have been crucial to their ability to do pedagogical activities during reopening. When we talk about resources supporting pedagogical staff members, we take a broad look at materials, training, space and time, but also aspects such as emotional support, reduction of academic pressure, and the like.

At first, we investigate pedagogical staff members experience of the situation and the way it is experienced or feared to affect their physical and mental health and their work situation are elucidated through their responses to five statements:

	Respondents	Percentage
Totally agree	20	13,7%
Agree	46	31,5%
Disagree	52	35,6%
Totally disagree	28	19,2%
Total	146	####

Table 70: Pedagogical staff members' responses to the statement "I have felt or are feeling nervous or anxious about the COVID-19 outbreaks"

	Respondents	Percentage
Totally agree	18	12,3%
Agree	37	25,3%
Disagree	65	44,5%
Totally disagree	26	17,8%
Total	146	####

Table 71: Pedagogical staff members' responses to the statement "I'm worried about how the outbreak of COVID-19 affects my physical health"

	Respondents	Percentage
Totally agree	13	8,9%
Agree	34	23,3%
Disagree	72	49,3%
Totally disagree	27	18,5%
Total	146	####

Table 72: Pedagogical staff members' responses to the statement "I'm worried about how the outbreak of COVID-19 affects my mental health"

	Respondents	Percentage
Totally agree	10	6,8%
Agree	49	33,6%
Disagree	67	45,9%
Totally disagree	20	13,7%
Total	146	####

Table 73: Pedagogical staff members' responses to the statement "I'm worried about how the outbreak of COVID-19 affects my future"

	Respondents	Percentage
Totally agree	9	6,2%
Agree	58	39,7%
Disagree	67	45,9%
Totally disagree	12	8,2%
Total	146	####

Table 74: Pedagogical staff members' responses to the statement "The COVID-19 outbreak has made it difficult to prioritize my various responsibilities"

Regarding resources that, according to the pedagogical staff members themselves, have been crucial to their ability to complete activities during reopening after Covid-19, based on the introductory question "To what extent has your opportunity to do your work been contingent on ..." the pedagogical staff members are asked to relate to their use of 11 different types of resources. Their assessment of how important each type of resource has been to them is shown in Tables 75-85.

	Respondents	Percentage
To a great extent	54	37,0%
To a moderate extent	66	45,2%
To a lesser extent	19	13,0%
Not at all	7	4,8%
Total	146	####

Table 75: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on goodwill and extraordinary commitment from the children and their parents"

	Respondents	Percentage
To a great extent	1	0,7%
To a moderate extent	8	5,5%
To a lesser extent	38	26,0%
Not at all	99	67,8%
Total	146	####

Table 76: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on courses (online or physical) provided by my institution?"

	Respondents	Percentage
To a great extent	13	8,9%
To a moderate extent	34	23,3%
To a lesser extent	55	37,7%
Not at all	44	30,1%
Total	146	####

Table 77: Pedagogical staff members' responses to the statement To which extent has your ability to do your work depended on access to articles, books or material online?"

	Respondents	Percentage
To a great extent	8	5,5%
To a moderate extent	25	17,1%
To a lesser extent	46	31,5%
Not at all	67	45,9%
Total	146	####

Table 78: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on inspiration from professional groups on social media?"

	Respondents	Percentage
To a great extent	54	37,0%
To a moderate extent	55	37,7%
To a lesser extent	28	19,2%
Not at all	9	6,2%
I alt	146	####

Table 79: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on sparring or collaboration with colleagues in the kindergarten?"

	Respondens	Percentage
To a great extent	13	8,9%
To a moderate extent	37	25,3%
To a lesser extent	52	35,6%
Not at all	44	30,1%
Total	146	####

Table 80: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on access to observation of colleagues' work?"

	Respondents	Percentage
To a great extent	39	26,7%
To a moderate extent	62	42,5%
To a lesser extent	32	21,9%
Not at all	13	8,9%
Total	146	####

Table 81: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on sparring with the kindergarten leader?"

	Respondents	Percentage
To a great extent	22	15,2%
To a moderate extent	48	33,1%
To a lesser extent	37	25,5%
Not at all	38	26,2%
Total	145	####

Table 82: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on less academic pressure (due to eg cancellation of meetings, rescheduling of work hours, etc.)"

	Respondents	Percentage
To a great extent	11	7,5%
To a moderate extent	41	28,1%
To a lesser extent	44	30,1%
Not at all	50	34,2%
Total	146	####

Table 83: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on pedagogical resources that I do not normally have access to?"

	Respondents	Percentage
To a great extent	59	40,4%
To a moderate extent	48	32,9%
To a lesser extent	18	12,3%
Not at all	21	14,4%
Total	146	####

Table 84: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on more staff resources than usual (eg use of temporary staff members)?"

	Respondents	Percentage
To a great extent	15	10,3%
To a moderate extent	40	27,6%
To a lesser extent	37	25,5%
Not at all	53	36,6%
Total	145	####

Table 85: Pedagogical staff members' responses to the statement "To which extent has your ability to do your work depended on more preparation time (eg due to canceled meetings or reallocation of hours)?"

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