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Collaborative research between academics and practitioners to enhance play engagement in the free play of two- and three-year olds

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**ABSTRACT**
This paper discusses collaborative research between academics and practitioners to enhance the level of play engagement in nine groups of toddlers in The Netherlands. Researchers and pedagogic counsellors designed a structured experiment to test the effects of four pedagogical strategies: confronting the children with a rearranged activity corner; free play, with the teacher available at a distance; entrance of the teacher into the rearranged corner; free play, with the teacher nearby. Videos of the experiments were quantitatively and qualitatively analysed by the researchers. The level of play engagement was high with the teacher at a distance and with the teacher nearby. When the teacher was nearby, the role of onlooker enhanced play engagement. The role of player and play leader only enhanced play engagement when there were two-sided interactions. The counsellors and teachers discussed results and continued to experiment. They presented their results at a symposium for teachers, counsellors, managers and academics. The counsellors produced manuals to integrate practitioner research into their coaching of teachers.

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**KEYWORDS**
Collaborative research; play engagement; young children; teacher roles; quality of interaction; learning community

**Introduction**

Most curricula designed for young children aged 0–5 years are ‘play curricula’ (Lemay, Bigras, and Bouchard 2016). Play and active learning are core pedagogical principles in early childhood education. But studies in diverse countries have shown that the teacher’s support of children’s play is often found to be lacking; teachers tend either not to be involved in children’s play or are overly instructive (Trawick-Smith and Dziurgot 2011; Helmerhorst et al. 2015; Hall-Kenyon and Rosborough 2016; Lemay, Bigras, and Bouchard 2016). In a recent study in Dutch childcare centres, we found that many children are restless during free play instead of being highly involved (Singer et al. 2014). According to Laevers (2005), deep learning experiences only occur with a high level of engagement. A highly involved child is one who concentrates, is immersed in the play activity, is involved for a long time and takes pleasure from it. During high engagement children operate at their full capacity, which is
an important factor for both language and cognitive development and for social skills (Ruff and Capozzoli 2003; Martlew, Stephen, and Ellis 2011; Ebbeck et al. 2012).

In an earlier study, we found out that two conditions had a strong positive impact on play engagement: (1) continuous proximity of the teacher; (2) continuous playing with peers at a distance from the teacher. Lower levels of play engagement were strongly associated with situations in which teachers were walking around and only had brief interaction with the children (Singer et al. 2014). Both our quantitative and qualitative analyses showed a strong co-variation of variables. When the teacher was walking around, she had only brief interactions with the children; peers also walked in and out of the play situation; there was a greater likelihood of one-sided teacher–child interactions; and the environment was noisy, with play objects scattered around. When the teacher was continuously nearby or at a distance from the children as they played, we observed the opposite.

The findings of the previous study were discussed at a meeting of Dutch pedagogical counsellors from seven childcare provider organisations. The size of these organisations varied from providing two to more than 100 childcare centres. In the Netherlands, counsellors are responsible for guidance, in-service training, supervision and pedagogical innovation and policy. During that meeting the researchers and counsellors decided to set up collaborative research to enhance children’s engagement in play. Collaborative research is defined as research in which practitioners are viewed as equal partners with expert knowledge of the context within which they work (Jones et al. 2017; Singer and Wong 2018). Researchers and counsellors agreed that they would design a structured pedagogical experiment based on the expectation of enhancing play engagement. Within the framework of the agreed format the teachers were free to adapt the procedure to their specific situation. The teachers were informed about the expectations and were asked to explore the effects of pedagogical measures on the children. In the study, a multimethod approach was used: quantitative and qualitative assessment according to academic standards by the researchers; assessment and evaluation of experiences by the teachers and counsellors. The project was low budget. The counsellors and teachers did the research as part of their regular work. The academic research was done by the project leader and Master students in developmental psychology and education. One junior researcher was employed for this study for a period of six months to analyse the videos according to academic standards. The project started soon after the plans were made without constraints from funders.

**The structured pedagogical experiment and expectations**

The earlier study showed that the factor that was associated with the most disturbance in children’s play was if the teacher and peers walked in and out of the space where the children were playing. Therefore, the researchers and counsellors looked for pedagogical measures to minimise the walking around by the teacher and the children. Based on earlier research and the experience of the counsellors, the following experimental procedure was designed (Table 1).

- **Episode 1: Rearrangement of one activity corner.** We expected that a more structured and refurbished activity corner would attract the children, diminish the urge to walk around and enhance their engagement in play (Campos-de-Carvalho and Rossetti-Ferreira 1993; Legendre 1999, 2003; Musatti and Mayer 2011; Singer et al. 2014). We therefore asked
Table 1. Structured pedagogical experiment.

<table>
<thead>
<tr>
<th>Episode</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Episode 1: Children choose a corner</td>
<td>The teachers have rearranged one activity corner on their own way (no guidelines). The children are free to choose the rearranged activity corner or regular corner.</td>
</tr>
<tr>
<td>Episode 2: teacher at distance (10 min)</td>
<td>Children can play in the rearranged corner with teacher at distance, but available for eye contact.</td>
</tr>
<tr>
<td>Episode 3: entrance of teacher</td>
<td>The teacher enters the rearranged corner.</td>
</tr>
<tr>
<td>Episode 4: teacher nearby (10 min)</td>
<td>The teacher sits in the rearranged corner and is free to choose her role in the children’s play: onlooker, player, leader. She is also free to engage in two-sided or one-sided interactions with the children.</td>
</tr>
</tbody>
</table>

The teachers to choose and rearrange one activity corner. No further guidance was offered with this request. The rearrangement of the activity corner was done the day before the experiment. In episode 1, the children start free play and are free to choose the rearranged activity corner or a regular corner. A videorecorder was focused at the rearranged corner to capture children’s reactions.

- **Episode 2 (10 min):** The teacher at a distance from the children. We expected that the availability of peers without teachers in the immediate environment would enhance the play engagement. The children could play with peers without the immediate proximity of teachers that might distract children’s attention (Rossetti-Ferreira et al. 2010; Legendre and Munchenbach 2011; Singer et al. 2014). We asked the teacher to stay outside the rearranged corner, but to be available for eye contact so the children did not have to walk around looking for the teacher. This episode lasted for 10 min.

- **Episode 3:** Entrance of the teacher into the rearranged corner. We expected that the entrance of the teacher would distract the children and decrease their level of play engagement (Legendre and Munchenbach 2011; Singer et al. 2014).

- **Episode 4 (10 min):** Teacher nearby in the rearranged corner. We expected that if the teacher was nearby, without moving in and out of the activity corner, this would enhance play engagement because she would then be able to stimulate and enrich the children’s play (Legendre and Munchenbach 2011; Musatti and Mayer 2011; Singer et al. 2014). We asked the teacher to stay in the corner for 10 minutes. No further guidance was given. The teacher could choose the role of onlooker, playmate or leader and make the kind of interactions with the children that she thought to be appropriate (Trawick-Smith and Dziurgo 2011; Ivrendi 2017).

**Method**

**Participants**

Eighteen structured experiments were conducted, that is twice with an interval of two weeks in the nine groups recruited by the counsellors. The groups were mainly children of parents with higher vocational or university education. There were three mixed-age groups (0- to 4-year olds) and 6 same-age groups (2- to 4-year olds). The number of children in the groups varied from 5 to 12 (average: 9.55, SD: 4.11). The children filmed in the rearranged corner were between 16 and 48 months old (average: 34.44); the number of boys and girls was approximately equal. On average the children attended the centre for 2.5 days a week. In
Training of the teachers

In the centres of the nine groups, the researcher and counsellor organised a two-hour training session, not only for the teachers who were filmed, but the whole team was invited to participate. With the help of video clips produced by Laevens et al. (2005), the teachers were trained to distinguish the different levels of play engagement. They were invited to share their ideas about what factors could have an effect on the play engagement of the children. This discussion was aimed at increasing the awareness of the effects of the pedagogical measures on the play engagement of the children. The aim and the method of the research were explained and the teachers were asked to participate. During the interval of two weeks between the first and second filmed experiments, the teachers tried out and discussed the pedagogical measures with the counsellors and colleagues.

Assessment of the level of engagement by the researchers

Two trained researchers measured the level of play engagement in episode 2 with the teacher at a distance and in episode 4 with the teacher nearby in the rearranged corner. We used the same revised method of Laevens et al. (2005) that was used in the earlier study (Singer et al. 2014). For each child, his or her play engagement was determined for the period during which the child was in the corner. When a child came into the corner more than once during an episode, the interval with the highest level of engagement was scored. If a child stayed in the corner for less than two minutes, the level of engagement in play was not scored, as Laevens’ method is based on a minimum of two minutes’ observation.

For episode 2 (teacher at a distance) and episode 4 (teacher nearby), we counted the number of children in the corner and scored their level of play engagement. Subsequently, we calculated the percentages of these children whose play engagement was rated poor, moderate, good or high; see Table 2. We compared the level of play involvement during episodes 2 (teacher at a distance) and 4 (teacher nearby) for the whole group and for the 18 experiments separately. The reliability was calculated: two researchers scored in total five film recordings independently of each other and the Cohen’s Kappa and percentage agreement were calculated. For play engagement their percentage agreement was 85% (Cohen’s Kappa .742); for the number of changes 66% agreement (Cohen’s Kappa .763).
Table 3. Coding system of teacher roles and quality of interactions.

<table>
<thead>
<tr>
<th>Role of the teacher in children’s play</th>
<th>Two-sided interaction: joint attention, Open questions; both teacher and child take and respond to initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One-sided interaction: teacher-initiated interaction; teacher does not respond to the signals or initiatives of the child. Closed questions</td>
</tr>
<tr>
<td>Onlooker: The teacher sits nearby the children, observes, shows her interest and confirms the children with a smile, eye contact or short word.</td>
<td></td>
</tr>
<tr>
<td>Playmate: The teacher plays with the children, takes initiatives and follows the lead of the child.</td>
<td></td>
</tr>
<tr>
<td>Playleader: The teacher offers a play frame or activity and regulates the child’s behaviour to participate in the activity</td>
<td></td>
</tr>
</tbody>
</table>

Qualitative analyses of the episodes by the researchers

To gain deeper insight into the processes that might influence the level of play engagement, we used qualitative methods. We explored the impact of the environment by describing the children’s reactions to the rearranged corner: how many children noticed that something had been changed; did they enter and explore the corner; did they show positive or negative emotions? Were they playing alone or with peers? We explored the effects of the teacher’s entrance into the rearranged corner through qualitative descriptions. Did the teacher draw the children’s attention away from their ongoing play? Was collaborative peer play disrupted? Did the children try to get the attention of the teacher?

The researchers tried to get deeper insight into the influence of the teacher at distance and nearby in two steps. First, the researchers analysed whether the play engagement was higher or lower in episode 2 (teacher at a distance) compared with episode 4 (teacher nearby) using the quantitative assessment of play engagement in the 18 experiments. Then the interactions between the teacher and children in episode 4 (teacher nearby) were analysed. Based on Ivrendi (2017) and Kontos (1999) three roles of the teacher were distinguished: onlooker, player and leader. The quality of the teacher–child interactions was assessed as one-sided or two-sided interactions (see Table 3).

Practitioner research and learning communities

All the teachers who were filmed were interviewed for 15 min about their experience with the children immediately after the structured experiments. Later, the teachers and counsellors discussed the videos of structured experiments and whether the expectations were confirmed in their group. Teams or subgroups of teachers made plans for the continuation of the experiments to enhance play engagement that fitted into the needs, opportunities and interests of the teachers and their group. The teachers were free to choose this continuation.

After the structured experiments the researchers and counsellors came together once every three or four months over a period of two years to discuss the development of the project in the different teams and organisations. The counsellors reflected on their new role towards the teachers. Formerly, the counsellors initiated the innovations; now the innovations were also initiated and explored by the teachers. The group of researchers, counsellors and teachers functioned as a learning community, framed by the original format of the structured experiment and developed in diverse ways by teachers and counsellors. The collaborative research was concluded with a symposium during which the teachers and
researchers presented the results for a wider group of teachers, counsellors and managers and researchers.

**Ethical issues**

The parents of the children were informed about the aim and the background of the study, either individually or during a parents’ meeting. They were asked permission to film and to use the results for training and research purposes. The children whose parents declined to give permission were placed in another familiar group during filming. The teachers were actively involved in the research. They knew the aim and expectations and their curiosity was aroused during the training on play engagement. During the structured experiments, the children were free to move around and to enter the rearranged corner (the focus of the experiment). All participants – children, teachers, parents, counsellors and researchers – profited from this project. The experiences and the results with regard to the children's play engagement were discussed at team level and at the symposium. Teachers were asked to present the videos and the findings to the parents. Some teachers chose to show the video to each parent privately and elucidate. Other teachers organised a presentation for all parents with which they explained the findings and what these findings indicate for their pedagogical practice.

**Results**

**Children's responses to the rearranged activity corner and teacher at a distance (episodes 1 and 2)**

The teachers had cleared one activity corner and provided it with materials from another group or objects that had not been used for a long time. Materials included Duplo, a car-track, balls and materials for imaginative or constructive play. Most children noticed the changes right away and 125 children (73%) played in the rearranged corner for shorter or longer periods when the teacher was at a distance. The response of the children to the rearranged corner confirmed the expectation that an attractive and stimulating environment enhances play engagement.

Most children began by exploring the play objects and playing alone or in parallel. After first contacts amongst themselves, they thought up new variations in their play. They imitated each other in increasingly exaggerated fashions and challenged and invented new things. Sometimes a series of interactions led to a climax and then the children screamed with pleasure. The older children, the three-year-olds, began to play associatively, sometimes by talking. More stories intersected – about princes, villains, marriage or holidays. They jumped from one thing to another. In one group, cooperative play was observed; a railway with bridges was constructed. The children assisted each other and sang songs together.

Fenna (3;9) has taken a piece of the bridge. Mark (3;4) who has the bottom piece in his hand, says: ‘I have it already, Fenna’. Whilst building, the children talk about where a piece should go. Victor (3;10) lays several pieces at the other end. He looks up and says to the others: ‘Hey, it’s going well!’ They continue to build and sing as they play: ‘Bob the Builder! Can we fix it? Yes we can!’

From time to time, the children made eye contact with the teacher who was sitting or quietly walking around near to the corner. They looked in her direction, indicating, for example,
Table 4. Levels of play engagement of children in the structured experiments in which play engagement increases (10 experiments) and decreases (8 experiments) in episode 4 (nearby) compared with episode 2 (at a distance).

<table>
<thead>
<tr>
<th>Play engagement increases (10 experiments)</th>
<th>Teacher at a distance</th>
<th>Teacher nearby</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2 min</td>
<td>39%</td>
<td>17%</td>
</tr>
<tr>
<td>Poor</td>
<td>11%</td>
<td>Low 3%</td>
</tr>
<tr>
<td>Moderate</td>
<td>6%</td>
<td>Moderate 6%</td>
</tr>
<tr>
<td>Good</td>
<td>18%</td>
<td>Good 9%</td>
</tr>
<tr>
<td>High</td>
<td>26%</td>
<td>High 65%</td>
</tr>
<tr>
<td>&lt;2 min</td>
<td>17%</td>
<td>&lt;2 min 29%</td>
</tr>
<tr>
<td>Poor</td>
<td>9%</td>
<td>Low 22%</td>
</tr>
<tr>
<td>Moderate</td>
<td>0%</td>
<td>Moderate 15%</td>
</tr>
<tr>
<td>Good</td>
<td>10%</td>
<td>Good 15%</td>
</tr>
<tr>
<td>High</td>
<td>64%</td>
<td>High 19%</td>
</tr>
</tbody>
</table>

their construction and saying: ’Look, I’ve made a tower!’ And after the teacher replied: ’I can see it’, they went on with their play.

The assessment of engagement in episode 2, with the teacher at a distance, showed that 45% of the children manifested a high level of play engagement; that is three minutes or longer focused on a particular activity.

Children’s responses to the entrance of the teacher (episode 3)

After 10 min, the teacher entered into the rearranged corner (episode 3). In all groups, the children looked up from their play; most of them stopped playing. Some children walked out of the corner while others came in afresh. They went and sat or stood by the teacher and asked for her attention: ’Look what I made!’ The teacher tried to make contact with them with questions such as: ’What are you doing?’ That also disturbed the children’s play. The social structure and the balance of the group were changed by the teacher’s entrance. Playing together stopped. In the groups where a child had taken leadership in joint play, he or she lost that leadership. The children now turned to the teacher. Often a new balance of power returned to the group after some time. These observations of the teacher walking into the corner show the negative impact on engagement. The teacher’s entrance changed the group dynamics, which tended to disturb the children’s engagement in play. This is in line with what we expected.

Comparison of play engagement with the teacher at a distance and nearby

In episode 4 with the teacher nearby, 150 children (87%) played for shorter or longer periods in the rearranged corner. That was somewhat more compared with the teacher at a distance (75%). When we looked at the whole group the average level of play engagement remained the same in episodes 2 and 4. However, when we analysed the 18 experiments separately, a different picture emerged. In 10 experiments, the level of play engagement was higher when the teacher was nearby (episode 4) than with the teacher at a distance (episode 2). In eight experiments, we found the opposite: the level was lower in episode 4 compared with episode 2 (see Table 4).

The researchers tried to understand the processes that might lead to an increase or decrease of play engagement in episode 4 with the teacher nearby by analysing the role of
Table 5. Teachers’ role in episode 4 (nearby) and groups with an increase or decrease of engagement compared with episode 2 (at a distance). (n = 18).

<table>
<thead>
<tr>
<th>Role</th>
<th>Increased</th>
<th>Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onlooker</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Playmate</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Play leader</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

The teacher and the quality of the teacher–child interactions. The videos of the teacher nearby were also discussed with the counsellors and teachers.

The teacher’s role in children’s play

Onlooker

In 6 of the 10 experiments with increased engagement in episode 4 (nearby) compared with episode 2, the teacher took on the role of onlooker. In the eight experiments with decreased engagement in episode 4, no teacher took on the onlooker role (see Table 5). Teachers with the onlooker role were mostly just calmly present. They expressed their interest and attention through small gestures. Communication was two-sided. The teacher was relaxed, responded to children’s initiatives, confirmed the child’s comments by repeating what the child had said and asked open-ended questions. Attention was shared. When there was disruptive behaviour by a child, she regulated that behaviour with a small gesture. Her voice was soft and quiet so that she did not disturb the play of the other children.


Playmate

In 3 of the 10 experiments with increased engagement in episode 4 (nearby), the teacher took on the role of playmate. The teachers who took on the role of playmate asked open-ended questions. They often left room for the children to elaborate the play activity for themselves after the teacher’s initiative. Communication was mostly two-sided, but at certain times also one-sided. The teachers adapted the way they used their voice according to the situation, at one moment speaking enthusiastically and loudly to gain the children’s attention, then modulating to softly spoken speech in order to give the children room.

Nikki (3;7) has made something and holds it up in front of the teacher’s face. Teacher: ‘Another tart. Oh what a feast ... Whose birthday is it?’ Nikki points to Bob. Teacher: ‘Bob, is it your birthday? Because I have a tart.’ Bob nods. Teacher: ‘And what do we do when it’s someone’s birthday?’ Bob: ‘You must sing Happy Birthday!’ Teacher responds: ‘Yes, and that’s what we’ll do.’

The role of playmate seemed to lead to a decrease in engagement in episode 4 (nearby) compared with episode 2 (at a distance) in four groups. The play initiatives of the teacher were more often directive, with one-sided communication, and they gave fewer opportunities for the children to take the initiative. In one experiment, the teacher was so enthusiastic in her responses that she raised her voice and distracted the other children from their play.

Lara (3;2) and Aimee (3;1) are building towers beside the teacher, who is carrying on a conversation about building. Lara goes to look for more blocks. Aimee then knocks Lara’s tower down.
The teacher shouts rather loudly: ‘Lara, Lara, your tower has fallen down!’ All the children playing in the corner stop and look up.

When the play initiatives of the teacher did not connect with the initiatives of the children, this could lead to a decrease in engagement. The children seemed to be bored by the play objects or responded sluggishly to the teacher’s suggestions.

**Play leader**

In five experiments, the teachers took the lead in the play activity. They took the initiative and communication was mainly one-sided. In one experiment this led to an increase of engagement. In episode 2 (teacher at a distance), the children were running around in the whole room and were throwing soft blocks. When the teacher entered the corner, she immediately took a grip of the situation:

‘sIt’s time to clear up. Collect all the blocks. Well done Sjoerd, and there,’ pointing to blocks in the corner. The children all obey and pick up the blocks. Teacher: ‘Look, we are going to build a track. It will go through the zoo.’ The children start to build.

She then introduced another game with the same material. She gave each child clear tasks and proposed an imaginary room. The result was that they played well together and with a good level of engagement.

In four experiments, the role of leader seems to have led to a lower level of engagement in episode 4 (nearby) compared with episode 2 (at a distance). In these groups, the teacher gave, for example, directions that did not connect to what the children were doing.

The children stand with their backs to the teacher and drive cars into the garage. The teacher says: ‘Are there dolls in the front of the train? Can the dolls go on a trip?’ The children turn round and look at her. Teacher: ‘Look …. Can I just for a moment Mark? Look. Then we can make the track so that we can all drive round it.’ Fenno (3;9) has to stand aside to allow the teacher to shift the track.

By usurping the initiative the teacher undermined and stopped the children’s play.

**One-sided and two-sided interactions**

In all experiments, one-sided interactions were associated with a decrease in play engagement and two-sided interactions with an increase in engagement. In 6 of the 8 experiments where the play engagement decreased when the teacher was nearby, the interaction was mostly one-sided. In 9 of the 10 experiments where the play engagement increased, the interaction was characterised as two-sided (Table 6).

<table>
<thead>
<tr>
<th></th>
<th>Increased</th>
<th>Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-sided</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Two-sided</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>8</td>
</tr>
</tbody>
</table>

The teacher-initiated experiments and the experiences of teachers and counsellors

According to the teachers, the training before the filming was stimulating (Otto 2013). The concept of ‘play engagement’ appealed to them. Almost all of them had noticed the positive
effect that the rearranged corner had on the children. Because they sat with the children, the teachers could estimate better what was going on. And, most important, there was more intimacy and authentic communication between teacher and children. The teachers could understand why a child was ‘naughty’ or restless, and the children could sit for a while on the teacher’s lap if they wanted to. Some teachers explained that ‘just being and sitting’ with the children were the ‘golden moments’ of the day. But some teachers found it difficult to remain seated because they were used to walking around and regulating children’s behaviour. They also wondered what they should do with the children when they sat in the activity corner: just observe and ‘do nothing’; intervene or not; play with them or lead their play? Besides, they had many other tasks to complete: administration, washing up, preparing fruit. A few had the feeling that if they sat with the children, they were not actually working. But they all found that this approach enriched their work. Besides that, they appreciated their active role in the research in testing the pedagogical measures by being at a distance or nearby the playing children. Also, they appreciated that their experiences and observations of the children were valued.

After the structured experiments that had a fixed format, most teachers started new experiments that related to their interests and the specific needs of their group (Tussenverslag [interim report] 2012). To give a few examples: some teachers had noticed that there was restlessness at the start of the day. Therefore, they experimented with sitting on the floor in an activity corner or on the couch with children when the parents came in to bring their child. The teachers explained to the parents why they were doing that. Sometimes the parents also sat down and left when their child had found an activity or peer to play with. Other teachers had problems with one or two children with disruptive behaviour in the group. They decided to experiment with one teacher taking these children to a separate activity corner, so that they were totally available for them; during that period the other teacher supervised the remaining children. Teachers from after school care also showed interest in the approach of sitting nearby the children and giving them full attention without interfering. Some teachers experimented with walking in and out to get a better understanding of the psychological dynamics. For instance, they filmed what happened when they walked away from the sand pit after being there for a while. Videos were discussed with colleagues and used in presentations by teachers about their research projects – with permission from the parents – at the symposium.

The counsellors produced manuals to implement teacher research to enhance play engagement in all child centres that belonged to their organisation. Researchers and counsellors cooperated to design a website on playful learning [www.speelstereen.nl]. In several organisations, this way of working became part of regular counselling work. The project even resulted in a new Dutch word: sitting nearby became known as ‘Singeren’, which is a verb made of the family name of the project leader.

**Conclusions and discussion**

**Theoretical implications**

The researchers showed that the play engagement of children during the structured pedagogical experiment was much higher than in the earlier study of regular free play in Dutch child centres (Singer et al. 2014). In the structured experiment, 57% of the children scored
'good' or 'high' for engagement, whereas in the earlier study of regular free play, 27% of the children scored 'good' for engagement; high engagement of more than 3 min was not observed in the study of regular play.

In the meetings of the counsellors and researchers, the results were discussed and interpreted. We are aware that in collaborative research like this, it is impossible to disentangle the relative impact of the diverse pedagogical measures: training of the teachers, rearrangement of the activity corner, being available at a distance or nearby, involvement and motivation of the whole group to enhance play engagement. Nevertheless, the discussions about the results and research literature led to some conclusions and to more awareness of the processes that enhance or hinder engagement.

First, the study made us painfully aware of the complexity of group settings for children under 4 years of age. We realised the deep truth of the huge impact of social and physical structure for the well-being and emotional security of the children (Campos-de-Carvalho and Rossetti-Ferreira 1993; Legendre 2003; Musatti and Mayer 2011). Young children need the teacher as a secure base, who is available and can be easily found when needed (Dolby 2007). Teachers who walk around are hard to find and therefore not available from the perspective of the child. This finding is in line with a meta-analysis of studies of emotional security of children who are cared for in homelike settings and group settings (Ahnert, Pinquart, and Lamb 2006). In homelike settings, the security of children was associated with the caregiver’s sensitivity in caregiver–child interactions. But in group settings the security of the children was associated with the group sensitivity of the caregivers, that is, how well caregivers managed the group and the amount of time they spent in positive proximate interactions with children. Both the structured experiment and the teacher-initiated research projects confirmed our expectation that the level of engagement is associated with a social structure that sustains the availability of the teacher. When the teacher is available, nearby or at a distance, she supports the children’s emotional security so that they can play quietly together, also at a distance from the teacher (Kontos et al. 2002; Gosselin and Forman 2012; Singer et al. 2014).

Second, we concluded that the play environment in a child centre is never perfect and needs to be rearranged now and then. The children spend many hours on several days per week in the centre; two- and three-year-olds get used to the opportunities that are offered. The high number of children who choose to play in the rearranged activity corner, also when the teacher was at a distance, shows that changes and ‘refreshment’ make an activity corner more attractive, and motivate the children to explore the new play opportunities.

Third, we realised how important it is for young children to be seen and confirmed, to have eye contact and to share experiences. Of course, the availability of the teacher and the role of onlooker are closely related. The teacher who is available and near to the children can take on the role of onlooker. The teacher’s role of onlooker was associated in all groups with an increase in play engagement. Sitting nearby the children and onlooker behaviour gives the teacher the opportunity for sensitive response to children’s initiatives. As Smith (1999) states: ‘One essential ingredient of sensitive environments is a close and nurturing adult–child relationship. This is necessary for intersubjectivity, which allows the caregiver to judge how much the child already knows and understands, so that she can provide appropriate scaffolding to extend development. In order to achieve intersubjectivity, adults need to establish a shared context of meaning and experience with children’ (86/87).
Fourth, we discussed why the more active roles of playmate and play leader were found to be variably successful. That finding is in line with the conflicting reports from previous research, for instance: positive effects of active involvement of teachers in children’s play are reported by Sylva et al. (2004); and negative effects are reported by McWilliam, Scarborough, and Kim (2003), Test and Cornelius-White (2013) and Wilcox-Herzog and Kontos (1998); mixed effects are reported by Legendre and Munchenbach (2011).

The qualitative analyses of the teacher–child interactions gave a clue to why the active involvement of the teacher might increase or decrease engagement. When teachers are actively involved in children’s play they tend towards one-sided interactions, especially when they take on the role of leader. When the teacher takes the initiative, the children turn to her and lose control over their play. When teachers take over they run the risk that their initiatives are not tuned to the children’s initiatives (Test and Cornelius-White 2013). According to Kontos (1999), higher quality (i.e. more developmentally enhancing) play resulted when teachers matched their roles or play styles to children’s ‘play agendas.’ We concluded that the issue is not whether the teacher takes an active role or not. We observed situations in which the children needed directives and one-sided communications. As Trawick-Smith and Dziurgo (2011) have noted, ‘what is critical is not the specific type of interaction that is selected, but whether there is a good fit between this interaction and the amount and type of support children need’ (p. 108). But when the teacher takes the lead, she must make sure that she gives the children time and space to understand her. One-sided communications often go hand in hand with the absence of shared attention between teacher and child (Tomasello et al. 2005). In her role as playmate and leader, the teacher should integrate moments of two-sided interactions to prevent overpowering the children. When children lose control, they lose their engagement.

The fifth conclusion was that we have to understand the difference in power balance in peer relations and in the teacher–child relationship (Gönçü and Weber 2000). Our experiments confirm the findings of Legendre and Munchenbach (2011). When peers were nearby and the teacher at a distance, children spend substantially more time addressing social overtures to peers and interacting with them. But when the teacher enters into the children’s space she takes over and peer play is disturbed. The teacher as playmate and leader might be more attractive or have the power to attract young children’s attention more than age mates. Probably this is also a reason why the role of onlooker will be most effective to enhance play engagement: the child is in control.

Implications for professional development

The whole project was characterised by the enthusiasm and deep interest of the teachers in children’s play because of this research. The teachers easily understood the concept of ‘play engagement’ after a single, brief training session. They were motivated to observe the children and to discuss videos to assess the level of play engagement. Testing the expectations, or ‘hypotheses’ as they were called in this project, in daily pedagogical practice also evoked creativity and enthusiasm in teachers. That creativity became especially clear in the teacher-initiated research projects subsequently carried out within their own group.

At the meetings of counsellors and researchers, the counsellors expressed their positive amazement. They explained that the project drew from previously unrecognized sources of creativity in the teachers. In their regular job, the counsellors relied less on the initiatives of
the teachers; they were the ones who introduced interaction skills or new methods that teachers had to acquire. In this project, a format is offered within which the teachers can explore whether the expectations of the counsellors and researchers are appropriate for their group. The counsellors concluded that it makes a difference whether scientific findings are transmitted as ‘the truth’ or as ‘hypotheses’ whose value has to be validated by teachers in the specific context of their group of children. Teachers are faced with conditions and opportunities that cannot possibly be foreseen by scientists. Because of the freedom within the format of the experiment, the teachers could find solutions for obstacles and problems they met during the project. The counsellors reported that they had learnt from this project to trust the expertise and creativity of the teachers.

However, it would be a mistake to think that this way of working is always easily implemented. Dutch teachers are often trained to show sensitive responsiveness towards individual children, which entails walking around the room (Singer et al. 2014). Teachers reported in the interviews and at the symposium that sometimes they felt uneasy and lazy. But because they were reflective practitioners and in control to design their own research within the project format, they were able to solve problems like that by dividing tasks between colleagues and through careful planning; also parents had to be informed about this new practice. Such a change in the pedagogical approach of teachers requires a powerful and enthusiastic management, willing to work with the teachers and willing to reflect and experiment in order to improve the quality of pedagogy (Vandenbroeck, Urban, and Peeters 2016). In this respect, this collaborative research is most significant: the active involvement of the teachers in testing our hypotheses evoked creativity and enthusiasm. In this project, we were happy to function as a learning community.

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