

STEER-YOUR-PLAY: Improving the quality of make-believe play and the role of the teacher in self-regulation

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ABSTRACT

Research states that make-believe play is an excellent context for children to practice self-regulation (Berk and Meyers, 2013; Leong and Bodrova, 2012). It helps them develop good executive functions, which plays a key-role both in (lifelong) learning and in quality of life (Diamond, 2013).

However, there seems to be a wide variety in the quality of make-believe play in preschool classrooms. Moreover, teachers don't always have a clear view on the quality of the play in their classroom and on how to improve the quality of play. This is worrisome as teachers' interaction quality is decisive for the quality of play (Singer e.a., 2015).

'Steer-your-play' is research project in which 18 teachers participated in a two-year professionalization trajectory focused on improving the self-regulation during make-believe-play in preschoolers. This project combines insights from experiential education (Laevers, 1995), developmental psychology (Leong and Bodrova, 2012) and cognitive neuroscience (Diamond, 2013; Blair and Raver, 2014). The professionalization trajectory consisted of several input moments, (video)coaching, and (individual and group) supervision. These teachers were stimulated to explore their own learning questions concerning self-regulation and were continuously challenged to put them into practice in their classrooms. In this article, we reflect on the teachers' learning about self-regulation within young children's make-believe play and their struggles with stimulating them.

INTRODUCTION

One of the most charming features of working with young children, is the observation of children engaging in make-believe play. Mature make-believe play is often called the summum of play because during the pretend, children are challenged in a very rich and profound way. Research provides more and more evidence of the positive effects that play has on child development. It has a positive effect on different developmental areas, for example social and emotional skills, mathematic ability and early literacy, and self-regulation (Singer, Golinkoff & Hirsh-Pasek 2006).

On the other hand, children who don't engage in play, are a topic of concern for a lot of teachers. Their play often remains limited to manipulating things or playing a very stereotypical and primitive scenarios even though the learning environment offers many opportunities for a richer play. Teachers rapport they need extra support to stimulate these children in their play and in their development.

Research points to self-regulation as a key-concept in the (play) development of children. In this article the term "self-regulation" is used, although the literature uses different names for (different aspects of) this concept (e.g., self-management, self-organisation, executive functions). This study combines insights of cognitive neuroscience about the development of executive functions and insights of educational science focussing on the role of (make-believe-) play.

The importance of self-regulation in young children

The concept of self-regulation goes back to Vygotsky (1987). He stressed that children who lack the ability to regulate themselves tend to become slaves to their environment. They only learn in reaction to the impulses in their environment but they don't take the initiative to learn. This lack of self-regulation is of great concern to many teachers even today.

In cognitive neurosciences, the concept of 'executive functions' (EF) is used to describe the underlying elements of self-regulated behaviour.

Diamond (2013) defines executive functions as a collection of top-down control processes that we use when we cannot fall back on automatisms, instinct of intuition, because these latter are inadequate or impossible.

These executive functions play an important role in learning and in the socio-emotional development of children (Diamond, 2013).

The development of those functions is related to the development of networks in a specific area in the brain, more specific the prefrontal cortex. This development is a

long process that starts shortly after birth and continues throughout adolescence and early adulthood. (Zalazo, 2013).

The major increase in executive functions between the ages of 3 to 5 is very impressive. This appears to be a very important period to stimulate the EF. Moffitt (2011) found, after using observations of 3- to 5-year-old children, even a long-term impact of well-developed self-regulation on health, welfare and crime in young adolescence. Although the socio-economic background has an important impact on the development, strong EF appear to compensate for low socio-economic status. Zalazo & Carlson (2012) also emphasize that there is an emerging evidence that indicates that executive functions are malleable.

The three main executive functions (EF) are working memory, cognitive flexibility (or shifting) and inhibitory control. Working memory refers to the ability to hold information, manipulate it and recall it when necessary. Working memory is necessary for executing complex cognitive tasks and cognitive flexibility is the ability to change and adjust mental effort. We need it to be able to adapt our behavior and to think in constantly changing situations. Inhibitory control is the ability to resist distraction and control impulses, often in the face of tempting rewards or distraction. Together, these dimensions ensure that children are able to develop sustained attention.

Research on self-regulation and make-believe play

Tijtgat, Van Camp & Vloeberghs (2015) describe educational neuroscience as a promising young science, but also point to the risks of for example neuromyths. There is a difference between measuring executive functions in a research setting and stimulating executive functions in an educational context. Therefore, they suggest starting from neuro-pedagogy in which they look for an ecological valid setting to measure and practice self-regulation in education.

Berk and Meyers (2013) called up for research on the relationship between EF-skills and make-believe play, both theoretically and practically, as well. They warned against focusing too rigidly on training executive functions in an educational context.

For young children, self-regulation becomes most visible in daily life during free play. *“Because play continually requires children to overcome impulse in favor of rule-governed behavior _ to wait, share, cooperate, and abide by social conventions_ the child, achieves her ‘maximum display of willpower; her greatest self-control during pretense’.”* (Vygotsky, 1978)

Especially make-believe play is rife with opportunities to sustain attention, to inhibit impulses, to follow social rules, to plan in the service of attaining child chosen goals and to flexibly redirect thinking and behavior. Leong and Bodrova (2012) even claim

that mature make-believe play is an important and unique context, providing opportunities to learn not afforded by other classroom activities.

“Practicing other regulation and self-regulation in play prepares the foundation for more advanced intentional behaviors, including such metacognitive actions as the planning and monitoring of mental processes.” (Leong & Bodrova, 2015)

On the other hand, Leong & Bodrova (2012) marked that not all make-believe play is of equal quality, the role of the teacher can be important. However, *“adult involvement in play can either support or impede both play and EF-skill acquisition, depending on the quality of adult-child interactions.”*

The research of Singer, Tajik and Otto (2015) points to teacher interaction style and timing as important challenges in stimulating make-believe play. *“The difference in position between the child and the teachers makes it difficult for the teacher to participate in the child’s play: all attention will automatically go to the teacher. The teacher must be careful not to disturb the play or take it over unintentionally.”*

Ivrendi (2017) points out that exposing children to many adult-led play activities may remove them from a natural source of learning through play. So she continues *‘the process of determining when and how teacher involvement is appropriate can be challenging.’*

Research on the impact of make-believe play on the development of children is hard to conduct with tightly controlled experimental studies.

Bergen (2013) points out two important reasons: *“(1) substantial child control over the direction of play appears essential for complex, sustained pretense; (2) adult direction had been found to reduce the quantity and complexity of young children’s make-believe.”*

In our project we wanted to contribute to this challenge by professionalizing teachers in observing, evaluating and improving preschooler self-regulation in make-believe play.

Research Questions

The project “Steer-your-play” aimed to improve preschooler self-regulation during make-believe play. Therefore 18 teachers in seven schools participated in a two-year professionalization trajectory focused on:

- Improving the teacher’s knowledge of neuro-pedagogy concerning preschooler self-regulation and make-believe play (Van Camp, T.)
- Improving the teacher’s skills on creating a stimulating play-learning-environment with qualitative teacher-child interactions (Laevers F., De Haan, D.)

- Improving the teacher's growth mindset (Dweck C.) concerning preschooler self-regulation

Research Design: Educational Design Research

Plomp and Nieveen (2013) described the concept of Design Research:

“To design and develop an intervention (such as programs, teaching-learning strategies and materials, products and systems) as a solution to a complex educational problem as well as to advance our knowledge about the characteristics of these interventions and the processes to design and develop them, or alternatively to design and develop educational interventions (about for example, learning processes, learning environments and the like) with the purpose of developing or validating theories...”

In our project, we aimed to design a professionalization trajectory for teachers on stimulating self-regulation for young children in educational settings. This professionalization trajectory consisted of several input moments, (video)coaching, and (individual and group) supervision. Teachers were stimulated to explore their own learning questions concerning self-regulation and were continuously challenged to put them to practice in their classrooms. A mix of quantitative (e.g., questionnaires) and qualitative data (e.g., observations, videos, reflection questions...) was collected. The focus of data-analysis was qualitative (thematic) analysis, complemented with documenting changes in teacher growth mindset. Some insights of the teachers' self-understanding were derived, showing different accents and struggles between teachers.

RESEARCH PROCESS AND RESULTS

During the ‘Steer-your-play’ project, the teachers who participated in our professionalization trajectory received two types of tools: (1) observation tools aimed at understanding self-regulation of children during free time (make-believe) play and (2) reflection tools to critically question their own actions on improving self-regulation and the quality of make-believe play. These tools were intended to stimulate meaningful conversations between teachers and to enhance deeper exploration of the meaning of what they saw in their classes. Moreover, these tools aimed to enhance awareness of the teachers' role in promoting self-regulation within young children.

We stimulated the teachers to explore their own learning questions and challenged them to put those into classroom practice. By closely monitoring these reflections, we

tried to grasp and strengthen their own mindset and their own self-regulation. This became our main focus as researchers during the implementation.

Observing the quality of self-regulation during role-play

To observe the self-regulation of the children during free play, we started with the concept of self-management and entrepreneurship of F. Laevers.

”This domain is about the disposition to organize oneself effectively by making adequate use of opportunities available in the surroundings and in oneself. This rests on: (1) will-power (engage and persevere), (2) the ability to make choices and set goals, (3) to come up with scenarios for actions and to put them into practice and (4) to step back and learn from experiences. Self-organisation combined with creativity produces ‘entrepreneurship’: the sense of initiative leading to innovative actions. In essence this is all about the ‘art of living’ (Laevers, Declercq & Moons, 2012).”

We made an observation tool using the four mentioned components, added the social component and linked it to the extent to which teachers were satisfied with the play and the progress they wanted to see amongst the children.

The results indicated that the teachers knew very well which child seemed to be able to choose and which didn't. On the other hand, they became aware that after choosing, they didn't always know for sure if the child could make a fitting play scenario. They had to look closer to see if the child was able to plan, to overcome problems and to adapt their planning to these problems. Questions about keeping distance and reflection about play, were really hard to evaluate. During this reflection, the teachers acknowledged that they didn't know this was all part of self-regulation.

	Satisfied (34/50, 68%)	Not satisfied (16/50, 32%)	What progress do you want to see ?
Choice/ goal	Knows what he wants		Learns how to choose
	Shows initiative, starts role play by himself	Does not dare to contribute much, follows the others	Takes the initiative More contribution
Scenarios	Fantasies, comes up with new ideas		
	Seeks depth (material, extents, variates...)	Does not come to mature play, always the same scenario	More depth (more, longer, broadening, other combinations)

	Performance with a lot of empathy, completely involved	Limited empathy	
Percistance	Highly involved (concentrated)	Chang a lot	More involved
Keepi ng distan ce	Not mentioned !		
Playi ng togeth er	<i>Contributes to the idea of others, Inspires other children with his ideas A lot of interaction, playing together well</i>	<i>Alone Dominant when playing in pairs</i>	<i>Play with (other) children Submit more if it goes to another direction</i>
Other	<i>Languag e Sticks to the agreemen ts Responsible tasks in play Little or no need for role play – and that is allowed</i>	<i>Needs control or escalates Does not do role play</i>	<i>Controlling emotions More role play</i>

We used the PRoPELS (Leong & Bodrova, 2012) complementary. This instrument shows five stages in child's make believe play and explicitly links it to the elements that can be assessed and scaffolded by the adults, namely: the plan, the roles, the props, the extended time frame, the language and the scenario.

In the first stage, the child is mostly engaged in exploring objects. He copies the teacher or another child in a very simple and often repetitive script.

In the second stage, the objects become props. It is only during the action that the meaning of the roles becomes clear. Modelled roles and actions are incorporated.

In the next stage, the roles and rules become more meaningful. The children start to plan more.

The fourth stage is recognized by the planning that becomes more advanced and by the growing complexity of the roles. Scenarios are discussed and changed in reaction to each other and last for 60 minutes or longer.

In the last stage, the dramatization, the planning can finally take more time than acting out the play. The play can take several days, can be interrupted and it can be restarted.

The reflections on this instrument focused on the growth in play and the link to the age of the children. Yet, some children of 3 years already played very rich make-believe play (to stage 4) while on the other hand, some 5 years olds didn't exceed the second stage yet. To stimulate these children, teachers realised that, most of the time, they steered children immediately to the fourth or fifth level and that they seemed to forget the levels in between. We discussed the challenge of understanding what the children were actually engaged in and what their play meant for them. This is important help for teachers to know how to react and stimulate the children in their play.

Improving the quality of self-regulation during role-play

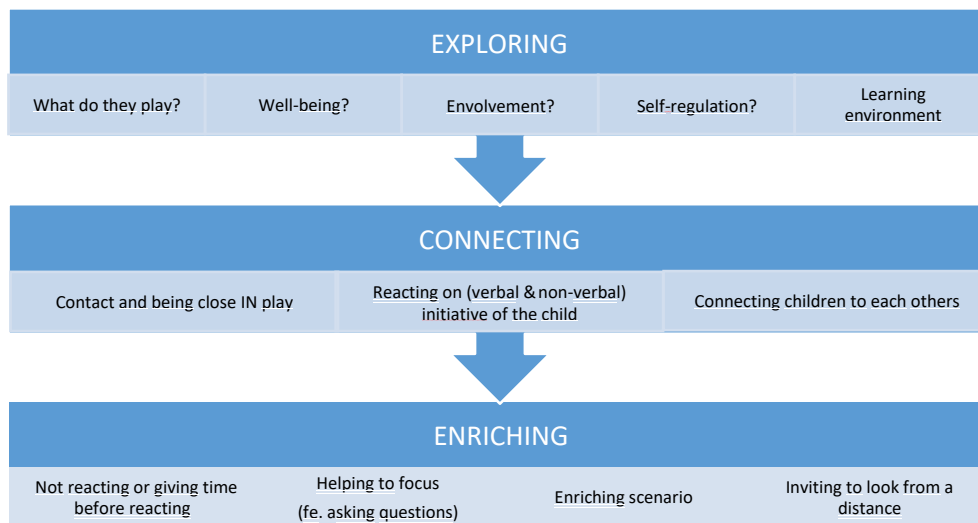
We also used some tools that focus more on the actions teachers can take to stimulate the self-regulation of children.

The first instrument is the POMS, an observation scale for self-organisation and entrepreneurship of Laevers. They integrated five topics:

- A positive class- and group climate
- An organisation that supports child initiative
- A rich and challenging offer of activities & material
- A stimulating and supportive teacher style
- The theme of entrepreneurship is continuously placed on the agenda

This tool was very important as a stimulus to not keep questioning if the children are able to self-regulate or not, but to focus on the opportunities teachers give in their classrooms to develop the ability of self-regulation. They scaled their own learning environment, reflected on the choices they made during class management and chose aspects they thought were meaningful to optimize.

Because powerful interactions during play are an important aspect of the stimulation, we also developed our own instrument on stimulating self-regulation by playing along. To do so, we were inspired by the three-fold model for sensitive interaction of De Haan, e.a. (2008): exploring – connecting – enriching.



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We used this tool for video-coaching and peer tutoring. Therefore, the teachers videotaped their interactions with some children during free-play. They talked about what they were doing well and also discussed other possible options to take in this sort of situations. This was a very challenging, yet powerful learning tool for the teachers.

Analysing the learning process of the teachers

The use of the reflection tools, the meetings, the class-visits and the coaching delivered a lot of information about the professional self-understanding of the teachers and their learning process. We collected and discussed it with the teachers, so they themselves could give us feedback about our data.

Here are some conclusions they made during these evaluations:

Teacher 1

- *I used to help more... I wanted them to feel safe. But it's better not to help, to let them do it themselves!*
- *I look at free play differently: not just saying 'go and play along...' but I see my role to support, for example by asking thinking questions.*
- *It's still hard to let go: it feels like they have to do it all alone without me. Giving time is hard...*

Teacher 2

- *Self-regulation is more than self-help or independency, also for toddlers of 2,5 years.*

- *When I look at my class and see the amount of material, now I think: less is more! And it works!*
- *I learned to observe differently... especially when children walk around all the time. I'm aware of the need of impulses, but yet, it can be too much... For example I learned not to talk all the time.*

Teacher 3

- *I offer a lot of structure, but I know that it's often too much. I'm a person who always wants to fix it... like I want it.*
- *It's hard. I always want it to be the best quality...*
- *I need to practice. I need feedback.*

Teacher 4

- *It's getting easier when you encourage self-regulation and play along.*
- *I think more about the tools and materials in the corners in my class, what to combine... I was afraid they would make a mess.*
- *I try to steer less... I think it works. I've become more at ease. But I still need to grow. I can't change it all at one.*

A cross-case analysis of the data shows five learning themes for teachers about stimulating self-regulation of young children:

- (1) Teachers express the need to reassess the way they look at play in the classroom and at self-regulation.

The concept of self-regulation needed to be broadened. Some teachers realised they only focused on stimulating children to do things on their own. They didn't realise that free play in their classroom was such a challenging and stimulating situation for young children's brains. To really understand it, they had to observe the play in class more profoundly. They learned to look differently, more systematically and more accurately at play. Play, and especially make-believe play, became more valuable to them.

- (2) The learning environment is important to improve pre-schoolers' self-regulation.

The teachers marked that the changes they did in their learning environment had an impact on the self-regulation of their toddlers. For some, it meant reorganizing an area in the room and bringing in flexible boxes with new material. For other teachers it meant taking away some of the toys, because there were simply too many. Some even organized an 'empty area', so the children could fill it themselves with own goals and plans. So, both enriching and impoverishing the learning environment can be helpful.

(3) It is difficult to interact and not to interfere during make-believe play. Not only did teachers learn they underestimated their role in the free play of children, they also learned how being too intrusive as a teacher is not helping the child in taking steps themselves. They discovered the power of open-ended questions and the power of waiting for the right moment to intervene. This way, they really learned to understand the principle of scaffolding: going step by step to a bigger goal.

(4) Teachers struggle with ‘letting go’ to give pre-schoolers more opportunities for developing self-regulation. Stimulating self-regulation is a process that takes a lot of time in the beginning. The teachers discovered that they struggle with taking time and ‘letting go’. Very often, they take over a task or fill in an idea for the child, just to make it all go a little bit faster. They also realised they like to have control. Developing self-regulation is not a learning content, but a process. Now they realise that, by giving it time and investigating in the own initiatives of children, they regain the seemingly ‘lost time’ because the children become more and more self-regulated.

(5) Teachers struggle to give themselves time to learn. On the one hand, teachers realise the importance of self-regulation and want to stimulate it. On the other hand, they became insecure and noticed they need practice. They need time to adapt their teaching. It was very challenging for them to deal with this process. To make stimulating self-regulation part of their daily practice, they have to choose it as an explicit and systematic goal in their own teaching.

CONCLUSIONS AND DISCUSSION

Researchers found that most practitioners stayed out of children’s play (for example Fleer, 2015). They are afraid to interrupt it or they just think it wouldn’t be appropriate. Especially, when talking about make-believe play. For some practitioners, their attention goes more to the adult-led activities, the ‘real work’. Whereas during free play time, they think it is important to let children play freely, without an adult looking over their shoulder.

On the other hand, some practitioners find it very important to stimulate children during make-believe play. Sometimes they acknowledge a problem during free play, whereas they are disappointed about the quality of the make-believe play. They refer to the power of play for learning and so they want to intervene. Very often however, this is translated as inviting the children to count the cups on the kitchen table, to discuss the colour of the napkins, to explore what ‘behind’ or ‘next to’ the glass means, or to explain how to use a microwave. These practitioners utilise play to teach (academic) skills to the children. Nevertheless, such questions may lead children to

stop playing. They are waiting for the next question, and when the teacher leaves, they even seem to have forgotten what they could play. The ‘logic’ of the children’s play seems to be lost. Researchers report findings where teachers disrupt the play of children, because of their often very directive interventions. Pressure about academic readiness can be one reason for this attitude. Understanding the logic of the children’s play, on the other hand seems an important issue to intervene on a more facilitating way.

During this study, we found that focussing on self-regulation in play can be an helpful way of dealing with these dilemmas, because cognitive neuroscience has pointed out the importance of self-regulation, both for academic learning and for the broad development of children. It is clear that teachers acknowledge the importance, but don’t realise that it also means giving children time to play freely and scaffolding their play on an non-intrusive way. To do so, self-regulation must become an explicit and systematic goal in their daily practice. Teachers need to get the chance to revalue the power of play and their role in it. By investigating in playing along during (make-believe) play, they will be more cognisant of children’s play needs. By following the principle of ‘exploring, connecting and enriching’, the children’s ‘logic of play’ will become clear. They will realise that it is not the amount of interactions that matter, but ‘how’ they interact with the children that stimulates them most.

Finally, we want to conclude with some implications for teacher-training.

Teacher professionalization concerning improvement of self-regulation in make-believe-play needs to be

- (a) tailored to teacher’s needs
- (b) focused on in-depth reflection close to the teacher’s practice
- (c) have a long trajectory with frequent contact moments to ensure in-depth

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