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'The playing-exploring child': Reconceptualizing the relationship between play and learning in early childhood education

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Abstract

In this article, the authors problematize the dichotomization of play and learning that often shapes the agenda of early childhood education research and practice. This dichotomization is driven in part by the tendency to define learning in terms of formal learning (i.e. learning as an outcome of direct instruction and school-based approaches that focus on teacher-led, goal-directed activities and declarative knowledge). The authors argue for a reconceptualization of early childhood education that understands learning and development not as an outcome, primarily, of instruction and teaching, but as an outcome of play and exploration. They develop this argument by drawing on Vygotsky's theories of play, imagination, realistic thinking and creativity. These theories challenge another dichotomy – that between imagination and reality – by arguing that imagination is implicated in the meaning-making of both play and exploration. Instead of relating play to learning where play is characterized by imagination and learning by reality, the authors' reconceptualization relates play to exploration and proposes that learning, defined as leading to human development, is an outcome of both of these activities. The authors further develop their argument by presenting ethnographic material from a qualitative research project implemented in three Swedish preschools whose practices are influenced by the Reggio Emilia pedagogical approach. The research conducted in this study contributes to new perspectives on the relationship between play and learning by introducing exploration as a counterpart to play,

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and this new perspective has implications for the design and practice of early childhood education, as well as for early childhood education research.

Keywords
exploration, imagination, learning, play, realistic thinking

Introduction

Play and learning are often paired in early childhood education (ECE) practice and research. At times, the pairing of learning and play is framed in a way that suggests a dichotomy in which learning is something that happens when teachers teach (engage in direct instruction) and play is something that happens outside the classroom (e.g. during recess) when children are free from adult control and participation (Johansson and Pramling Samuelsson, 2006). Implicit in this pairing is the idea of play as a subordinate activity to formal learning. From this perspective, play – viewed as an activity that children inherently enjoy and are therefore attracted to – is seen as something to be leveraged in the service of helping children learn skills and knowledge deemed valuable by someone other than the child – typically a teacher (e.g. 'teaching through play'; Bennett et al., 1997). We will call this approach play-*for*-learning, where learning is understood specifically as formal learning (i.e. teacher-led and goal-directed) and *cognitively* oriented (i.e. school-based learning). This approach prioritizes a single-minded focus on learning as the product of teaching (i.e. of directed instruction) to the exclusion of the kinds of learning experienced through activities that are self-initiated and children spontaneously engage in.

In this article, we argue for a reorientation back to an understanding of play-*as*-learning, where learning is not just understood in the narrow cognitive sense described above, but is also understood more broadly as transformations driven by different kinds of experiences that lead to sustained change. This reorientation is motivated by an understanding that, in early childhood, children's engagement with the world is predominantly focused on play and exploration, not instructional adult–child interactions. Consequently, we argue that if the field is to further develop its understanding of how learning unfolds in early childhood, then it is play and exploration that should be prioritized as objects of research and pedagogy. Specifically, we propose that rather than focus on play-for-learning, research and practice should focus on the organization of preschool activities that provide affordances for play and exploration in ways that promote collaborative adult–child engagement around shared goals – engagement that, as we show in this article, has the potential to promote not just cognitive development, but also holistic development.

We begin this article by situating the idea of play-for-learning in the contemporary ECE research literature. Next, we examine how assumptions undergirding the play-for-learning agenda are rooted in problematic interpretations of Vygotsky's theories of play, imagination, creativity and realistic thinking. When Vygotsky (1978) formulated a rebuttal to theories of play that position imagination and realistic thinking in opposition to one another, his theory was hailed as overcoming naturalistic and psychoanalytic theories of children's play (Elkonin, 2005). Yet Vygotsky's theories of children's play continue to be cited to argue that play and learning are the two central activities taking place in early childhood classrooms; that play and learning are two separate leading activities which occur consecutively; and that learning refers to school learning of academic subject matter.

In the next section of the article, we discuss examples of the play-for-learning approach. These examples illustrate how the dichotomization of play and learning from a play-as-learning approach is rooted in problematic interpretations of Vygotsky's theories of play and creativity – interpretations that link play with fantasy and formal learning with reality. In contrast to these understandings, we

present an approach that does not dichotomize play/fantasy and learning/reality. Instead, we argue that learning, as we have defined it above, is also an outcome of play. Furthermore, we seek to critique this emphasis on the centrality of play-for-learning in early childhood by arguing for a reorientation in research and pedagogy that also accounts for the importance of children's exploration in early childhood learning. We point to the expanding literature on early childhood exploration and learning in order to develop this stance.

Our argument is based on a reading of Vygotsky's work in which fantasy and reality are dialectically related (two parts of the same process) and inherent in both play and exploration, and thus also in learning. We make our case by presenting an example of preschool activity that was based on an approach that combined two early childhood pedagogies – one focused on adult–child joint pretend play (playworlds; Lindqvist, 1995) and the other focused on arranging preschool activities that afford exploration of natural phenomena (pedagogy of listening; Rinaldi, 2006). We conclude with our argument, in response to the play-for-learning approach, that preschools should organize for play and exploration in which learning is an inevitable result. We state that there is a need for reconceptualizing the play–learning pair based on play and exploration.

Play and learning in current ECE research, policy and practice

According to Johansson and Pramling Samuelsson (2006), play and learning are dichotomized. They describe a conventional distinction between play and learning where play, for example, happens at recess and learning occurs through participation in formal teacher-led activities. They write that '[p]reschool teachers' role in children's play has been to "support but not disturb". Learning, on the other hand, has often been connected to teachers' planning and goal-directed impact (Johansson and Pramling Samuelsson, 2006: 12; our translation). Johansson and Pramling Samuelsson set out to overcome this dichotomy and contribute to the discussion on the relationship between play and learning:

> With this project, we want to challenge and test the dichotomy between play and learning that has often prevailed in pedagogical research and praxis. Although play and learning are integrated for small children, this idea is not self-evident or problem-free for teachers and researchers. Therefore, with this monograph we want to develop knowledge and contribute to a discussion on relationships between play and learning – and their significance for children and teachers in preschool and school. (13; our translation)

Johansson and Pramling Samuelsson characterize play and learning as related, highlighting that '[f]antasy, creativity and children's meaning-making and control are central aspects in play and learning'. They suggest that 'a fruitful way for developing educational and pedagogical activities would therefore be to analyse how these aspects can permeate the entire pedagogical practice' (197; our translation).

Johansson and Pramling Samuelsson draw on a specific example of teacher–child interaction in a preschool – in their terms, a 'narrative interplay' – in order to exemplify what they mean by an activity in which the dichotomy between play and learning is overcome, and where the relations between, as they put it, 'pretend' and 'real' are distinct and 'the narrative is driven largely by the children'. The teacher, the authors claim, contributes to a 'narrative interplay' by bringing the '"real world" into play' (62; our translation). The following is excerpted from this example:

> Karin, the teacher, … invites the children into the theme of animals – animals that are named and described and related to 'reality' by the teacher and children. Gradually, the teacher expands the context [of what they are talking about] and creates a fence, so that the animals do not escape. The children participate eagerly …

> ‘Should we build a small fence so that they can’t escape?’ asks Karin. The children sit down and engage in building a pasture for cows. The teacher takes up a sheep and says she has two sheep, and they are named Bullen and Kringlan. Several children laugh. Karin picks up a monkey and asks what it is. Someone responds and she continues: ‘But I do not have one like this!’
>
> The children say: ‘Nooo!’
>
> ‘He eats bananas, but he can be here!’ says Karin …
>
> ‘And you have this one,’ says Dimitro and holds up an animal.
>
> ‘What is it?’ asks Karin.
>
> ‘A rabbit,’ said someone, but Karin asks again what it is.
>
> ‘A rooster,’ shouts Victor.
>
> ‘A hen, I think it is,’ says Karin.
>
> Karin works with contrasts and absurdities, such as including a monkey who eats bananas and having the goat think that he is a horse. (62–63; our translation)

To our understanding, Karin is separating imagination and reality, and play and learning, and using the children’s play for teaching purposes. For instance, she is intent on pointing out that the ‘hen’ is not a rabbit or even a rooster, and this distinction is not relevant to the play but is relevant to the content that Karin is teaching. Such efforts to embed teaching in play, as with efforts to create ‘playful learning’, begin from and also enforce, despite any opposite intention, an understanding that play and learning are different. Thus, despite their intention to overcome the dichotomy between play and learning, Johansson and Pramling Samuelsson propose leveraging play-for-learning, which, in turn, has the opposite effect of reinforcing the dichotomy.

The intention of integrating play and learning (i.e. play-for-learning), from our perspective, comes at a time when there is considerable pressure on preschool educators to focus on quantifiable learning outcomes (Howes, 2012; Olfman, 2003). This framing of play as instrumental to learning is unambiguously represented in the Swedish preschool curriculum, a document that is seen internationally as embodying excellence in early ECE: ‘Play is important for the child’s development and learning. Conscious *use* of play to promote each child’s development and learning should characterise the preschool activity’ (Skolverket, 2010: 6; our emphasis). The kind of learning being advocated here is disciplinary, school-based learning (Öksnes and Sundsdal, 2016). Tellingly, a more recent steering document published by the Swedish government directs preschool teachers to engage in ‘teaching’ (*undervisning*) defined as a teacher-led, goal-directed process for promoting learning and development through the acquisition of knowledge and values (SFS, 2010: 800). Thus, with the increasing pressure internationally on preschool educators to focus on learning outcomes – that is, to prepare children for school (Bennett, 2005; Brooker and Whitehead, 2013; Organisation for Economic Co-operation and Development, 2006) – play has become a focus of instrumental interest as an activity that can be leveraged in the service of formal learning.

The reasons for the association, separation and dichotomization of play/fantasy and learning/reality can be traced to deeply rooted pedagogical traditions as well as recent policy proposals advanced by various stakeholders. At times, Vygotsky’s theories of play, imagination, creativity and realistic thinking are cited to support this contrasting conception of play/fantasy and learning/reality. In the following section, we revisit Vygotsky’s theories in order to argue for a conception that sees play, learning, imagination and creativity as integrated.

Vygotsky's theories of play, imagination, creativity and realistic thinking

Vygotsky's play theory highlights the importance of understanding imagination as an aspect of the process of creating and experiencing reality, rather than as something 'other' than reality. Fantasy and reality or, as Vygotsky put it, imagination and realistic thinking are not two independent processes, but are integrated:

> There is no essential independence of the two developmental processes. Moreover, by observing the forms of imagination that are linked with creativity, that is, the forms of imagination that are directed toward reality, we find that the boundary between realistic thinking and imagination is erased. Imagination is an integral aspect of realistic thinking. (Vygotsky, 1987: 349)

Imagination is a necessary and integral part of realistic thinking – that is, no thinking is possible without imagination. As Pelaprat and Cole (2011) explain, human conscious experience is a process that requires not just our phylogenetically constrained abilities and our culturally organized experience, but also our active reconciliation or 'filling-in', our imagining, as we try to make sense of our world. Imagination and creativity are, according to Vygotsky, closely linked to reality:

> No accurate cognition of reality is possible without a certain element of imagination, a certain flight from the immediate, concrete, solitary impressions in which this reality is presented in the elementary acts of consciousness. The processes of invention or artistic creativity demand a substantial participation by both realistic thinking and imagination. The two act as a unity. (Vygotsky, 1987: 349)

Vygotsky describes the creative developmental process by sketching four basic ways that fantasy is associated with reality: (1) anything created by the imagination is always based on elements from reality – from past experiences; (2) experience is also based in imagination – for instance, through imagining/remembering one's own or others' experiences through stories; (3) emotions that arise in reality affect the imagination, but imagination also affects emotions; and (4) imagination can become reality when a given material form is crystallized imagination coming back to reality, but as a new, active force with the potential to change reality. Vygotsky (2004: 12) writes that 'it is this probability to combine elements to produce a structure, to combine the old in new ways, that is the basis of creativity'.

Imagination and creativity are therefore both necessary for human thinking and development. The interrelation of imagination and creativity is therefore a process that can be seen in all people, including young children. Vygotsky argued that this interrelation could be seen especially clearly in the play of young children. He writes that play is imagination embodied in the material world. A child's play is not just a reproduction of what she experienced, but is a creative revision of her impressions. Vygotsky (2004) argued that the child combines impressions and uses them to construct a new, imaginary reality to suit her own needs and desires. The creation of an imaginary situation is the first step in the child's emancipation from the constraints of the situation, a step which is made possible by the process of play dominating objects and actions. Prior to the emergence of pretend play, children's experiences of objects are constrained by the object itself: the object dominates meaning. When pretend play emerges, the relationship is reversed: in play, meaning dominates over the object, such that, for example, pretend play about animals turns a wooden stick into a horse. The stick is a pivot or carrier, a bridge between the here and now and the possible.

Abstract thinking is a prerequisite for play but also develops in play. In the process of giving things and acts meanings other than those attributed to them outside of play, the child develops

symbolic language and abstract thinking. Vygotsky (1978: 103) writes that: 'From the point of view of development, creating an imaginary situation can be regarded as a means of developing abstract thought'. Furthermore:

> Action in the imaginary sphere, in an imaginary situation, the creation of voluntary intentions, and the formation of real-life plans and volitional motives – all appear in play and make it the highest level of preschool development. The child moves forward essentially through play activities. Only in this sense can play be considered a leading activity that determines the child's development. (102–103)

To reiterate, Vygotsky's conclusion is that imagination and realistic thinking are both necessary components in play. Experience of the 'real world' enables creativity or imagination *and* the creation of possible or fantasy worlds. This is counter to the argument that we see developed in the play-for-learning approach, as in the example above drawn from Johansson and Pramling Samuelsson (2006). The play-for-learning argument frames play and learning as separate in the sense that learning is associated with 'the real' and is thus prioritized over play. We disagree with this framing.

Visualizing play-for-learning

As we pointed out above, internationally there is increased pressure, felt particularly in preschools, to treat play instrumentally, as something that can be leveraged in the service of producing greater learning or academic and cognitive outcomes in ECE (e.g. see Jansen and Harvard, 2009; Pramling Samuelsson and Asplund Carlsson, 2008; Pramling Samuelsson and Fleer, 2009). Fleer (2011), for example, states that imagination is a *bridge* between play and learning in everyday preschool practice. In particular, Fleer draws on Vygotsky's observations about how objects are given new meaning by children to support her argument that imagination fulfils this 'bridging' function in preschool activities.

Figure 1 illustrates how this understanding of imagination as a bridge reinforces the separation between play and learning. For instance, reality, which Fleer (2011) refers to as the material world, is represented in her work by insects that the children find while they play and insects that the children find in fiction. Fleer shows how the children move between actively investigating and fantasizing about the insects.

Fleer (2011) also describes how fantasy and reality are evident when children play with ideas – for example, in a statement that the insects' pincers can bite your head off. She claims that it is this combination of activities based on play and learning/reality that allows the children to use imagination to create conceptual understandings of their world. Fleer supports her argument concerning how imagination is developed in play by referring to the work of Kratsov and Kratsova (2009), which stresses the movement of stepping into and out of reality:

> Through making conscious the distinction between imagination and reality in play, children are conceptually primed to work with real objects and imagined (or abstract) ideas which represent reality. Importantly, this kind of contradiction between imagination and reality creates the dynamic force which allows for theoretical knowledge to be contemplated by young children. (Fleer, 2011: 254)

Fleer goes on to argue for the interdependence between imaginary situations and the investigation of concepts. She claims that imagination is a central dimension of concept formation for preschool children, citing observations from her study of children using imagination to understand reality. She concludes: 'Children could easily move between imagination and real-world experiences and back again' (Fleer, 2011: 256). The visualization in Figure 1 illustrates this argument.

Play	Bridge between the two is imagination	**Learning**
Fantasy as pretend	Curriculum goals – specific learning objectives set up by teachers Concept formation	Reality as the material world and authenticity/for real Engaging with abstract ideas and making generalizations

Figure 1. Play and learning.
The left box of Figure 1 shows play as fantasy, and thus as pretend. The right box shows learning as the appropriation of facts and concepts representing reality, and thus as the material world and what is authentic/for real. The left and right boxes also show that fantasy and reality are distinct from each other. The middle box shows what is learned in the interplay between play and learning, indicated by the two arrows, and particularly through imagination as a bridge between play and learning.

Vygotsky described imagination as a part of a creative process of which both play and the type of 'investigation' that Fleer describes are examples. Imagination is not a bridge between two activities, such as play and learning, nor is it something to be supported by teachers through didactic practice. Furthermore, by focusing her research on the relationship between play and learning in preschool activity, as Johansson and Pramling Samuelsson (2006) do, Fleer may be supporting preschool teachers in their use of play to meet the demands that are now being placed on these teachers to increase cognitive/school learning outcomes. Fleer does not succeed in challenging these demands, although she states that she is working to bring play back as a central focus of preschool activity.

We turn now to another example that illustrates the contrast between play and learning represented in Figure 1, by returning to the work by Johansson and Pramling Samuelsson (2006). For Johansson and Pramling Samuelsson, learning is differentiated from play by linking play to fantasy, which is 'pretend', and learning to reality or, as the authors call it, 'authenticity', which is 'for real'. These authors argue that children have the right to 'know how things are or receive information which they can use in their play', and further that 'facts and knowledge must also work/appear together with fantasy and imagination' (Johansson and Pramling Samuelsson, 2006: 8).

We have now presented two examples of scholarship based on the play–learning contrast represented in Figure 1. In the research we have discussed above, there is a key distinction made between fantasy and reality, where reality/the material world exists, is true and real, and is represented through concepts, while fantasy is not 'real' and is something that is not 'true'. For these scholars, it is through imagination and play that children can learn about reality.

Again, our own starting point is, instead, that imagination is a creative (productive), gap-filling process which is essential to all meaning-making (of fantastical *and* real worlds), and is thus essential to all learning, both formal and informal. This means that imagination is central to adults' as well as children's meaning-making activities, and so is central to both art and science. Imagination is central to early forms of these activities – that is, play and exploration.

Learning as an outcome of children's participation in play and exploration

Based on the above reading of Vygotsky's theories, our stance is that play is creativity in action and that there is no goal or aim in play outside play itself. This understanding of play approximates

descriptions proposed by Steinsholt (2000) and Hangaard Rasmussen (2014), based on the work of Gadamer (1975), whose ontology is linked to experiencing, understanding and *Bildung*. For Gadamer (1975), play has a value in itself. From this perspective, the idea/concept of learning is replaced with insight or understanding.

We take a non-instrumental approach to play without rejecting the idea that learning in social, cognitive and aesthetic domains happens in play. Moreover, we argue that children's play can and should be supported in preschool by arranging activities that are challenging and engaging for children, including joint adult–child pretend play in shared imaginary worlds (e.g. Vygotsky-inspired *playworlds* activity; Lindqvist, 1995; Nilsson and Ferholt, 2015).

The fact that formal learning is not the primary driver of developmental change in early childhood is evident not just in the important role of pretend play in this learning, but also in the increasing predominance of pedagogies of exploration in Sweden. These pedagogies of exploration conceive of children as culture- and knowledge-creators who advance theories and hypotheses (Dahlberg and Lenz Taguchi, 1994) that can be investigated collaboratively in collective, exploratory projects using a variety of expressive modes (e.g. see Alnervik et al., 2012; De Freitas and Palmer, 2016; Elfström, 2013; Olsson, 2009). In these exploratory projects, children and teachers create meaning together in learning processes where the goal is not set beforehand. Instead, these processes are open-ended and *rhizomatic* (e.g. see De Freitas and Palmer, 2016; Lenz Taguchi, 2009; Olsson, 2009).

We will now argue that there can be pedagogies that create learning environments which take into account the play and exploration orientation of children in early childhood. Below we present a narrative description of events that unfolded as part of a project which examined how teachers combine *playworlds* and pedagogies that emphasize exploration. We make the case that this description provides an important illustration of the potential pedagogical implications of combining play and exploration in ECE.

What might a play-exploration pedagogy look like?

We illustrate our argument that learning is inherent in play and exploration by drawing on an example from an ethnographic formative-intervention research study (Engeström, 2011) based on cultural historical activity theory (Engeström, 1987). The study was designed to characterize if and how teachers in a network of three preschools, all of which had followed a *pedagogy of listening* approach (Rinaldi, 2006), would integrate into their own practices the Vygotsky-inspired *playworlds* play pedagogy (Lindqvist, 1995). The study documented the teachers' pedagogical practices over the course of a year by way of interviews, field observations, and the collection and analysis of participant-produced media – in particular, pedagogical documentation.

The rationale and findings of this study are not the focus of our discussion here (see instead Ferholt et al., 2015a, 2015b, forthcoming; Ferholt and Nilsson, forthcoming). Rather, we are drawing on the ethnographic material from this study to present a narrative description of a series of events that, we argue, illustrates the potential of a pedagogy of play and exploration which is respectful of children's self-initiated activities. The narrative description that follows is based on interview data and analyses of teachers' pedagogical documentation which was produced by a team of three preschool teachers. The documentation, realized through the aggregation of text, pictures and video in a single digital PowerPoint file, illustrates one thread of the teachers' work with a group of 15 preschoolers aged one to three over the course of several months.

'It looks as if I am flying!'

The project begins with the children and their three teachers looking at pictures of a walk they had all taken. During this walk, they had happened on some ducks. While looking at these pictures, the children comment:

> Look, they have feet.
>
> They have not put on their winter boots.
>
> They are looking for sandwiches.
>
> The ducks play.
>
> They are running around, playing, making noise and looking for food.
>
> Check if you can see if someone is flying.

The teachers then think of what would challenge and inspire the children's interest in flying. One teacher thinks that it would be stimulating for the children to show a video about a hot-air balloon. The teachers are not sure whether the children will be interested in the video, but the children sit 'as still as lighted candles' (a Swedish expression) while they watch the video. They are very excited when, in the video, a young girl going up in the balloon yells goodbye to her mother.

Next, the children note a problem: How can a balloon carry so many people? When discussing this problem, one child says: 'The air is strong'. In response, the teachers offer the children several opportunities to explore materials that make the air visible, palpable and contrastable with materials other than air.

In a subsequent activity, the children try filling balloons with air, sand and water. One teacher asks the children what is in one of the balloons that two of the children, Pelle and Susanna[1], have filled with air. 'A lot of children', says one child, Liam, with a subtle smile, which the teachers understand to be indicating the 'craziness' of this statement. Susanna conducts experiments with feathers and a hairdryer. She blows the feathers from above and Pelle blows them from the side. Pelle feels the hairdryer both at the place where the air comes in and where it comes out. 'Hot!' he exclaims.

Andrea, another of the children, then asks: 'How do you know that something flies? How do you make the [hot-air] balloon lift [from the ground]?' The teachers and the children decide to conduct some experiments in the school's backyard in order to find out how this is done. They do this together with preschool children of other ages. The children had been reminded by the hot-air-balloon video that air is strong and that a balloon can lift many people. Their outdoor experiments lead the children to propose new theories, which, in turn, motivate new experiments and even more theories.

The following are some examples of the theories that the children generate during their work in the backyard:

> A closed balloon drops down to the ground.
>
> An open balloon flies away with a sound.
>
> A balloon can lift a child … no, she's too heavy.
>
> A balloon can lift a small child … no, she is three years old.
>
> A balloon can lift a child who is two years old.

> You have to have a box to sit in.
>
> Two children with two balloons can lift the box.
>
> Two children with four balloons can lift the box.

A few days after the children have proposed these theories, the children and the teachers are outdoors observing the feet of children who are standing on a box. The children are replicating a hot-air balloon in flight, and the audience wants to be sure not to miss the event, in case anyone is lifted into the air by their balloon. One teacher asks the children who are observing if the children on the box have been lifted up. A child named Oscar says: 'It lifted a little!' The teacher asks: 'Wow, was it measurable?' Oscar says: 'It lifted a little, again!'

In the section of the pedagogical documentation that corresponded to this 'box' event, the teachers write the following questions:

> When have you flown and how do you know if you have flown?
>
> Can you be sure about what you have experienced?
>
> Is this play or exploration?

The teachers include a paraphrased statement by Václav Havel, the former Czech president, in the PowerPoint in which they document and reflect on these activities: 'Hope is definitely not the same thing as optimism. It is not the conviction that something will turn out well, but the certainty that something makes sense, regardless of how it turns out'.

The teachers are particularly excited by Oscar's contributions, as he started to question whether or not he had been flying. 'How do reality and imagination come together?' the teachers ask themselves. One of the teachers asks the children: 'What must one do in order to fly?' The children respond with the following explanations:

> This is how you can do it.
>
> You need wings.
>
> Perhaps it works if you run!
>
> It looks as if I am flying!

Discussion

The teachers in the project described above are not separating play and learning. Instead, imagination and realistic thinking constitute many different aspects of the children's and teachers' activity – both those events that we might more readily think of as imaginary (e.g. seeing the children on the box be lifted up and seeing their feet leave the ground without them jumping) and those events that we might more readily think of as real (e.g. remembering that the ducks may have flown or blowing the feathers from different directions to observe the consequences). Learning, to these teachers in this preschool activity, is an aspect of the children's development as they make sense of their world through exploration, experimentation, theorizing and play.

This view of learning as an outcome of play *and* exploration, and as the indistinguishable interplay between imagination and realistic thinking, is shown particularly well through the teachers' citation of Havel and by the response to the question 'What must one do in order to fly?': 'It looks as if I am flying!' If we have hope, meaning that we imagine that things make sense and so try to

make sense of them, then we may create a world in which such an approach (hope) makes sense. Perhaps if we look as if we are flying, then we are doing what we need to do in order to fly.

As discussed above, ECE pedagogies which focus on organizing environments that afford children's exploration have been gaining prominence among practitioners and researchers in the Nordic countries. This increased attention to exploration in the Nordic countries is in part rooted in the increased influence in these countries of the Reggio Emilia approach (Richter, 2011), which itself emphasizes exploration (Rinaldi, 2006). Several studies of these pedagogies offer narrative descriptions of what constitutes exploration (e.g. see De Freitas and Palmer, 2016; Elfström, 2013; Lenz Taguchi, 2009; Olsson, 2009). However, there is no consensus on a single definition of exploration in early childhood. Murray (2012) argues that exploration is a kind of research conducted spontaneously by children and organized through projects by children and adults working together. In these projects, investigation, experimentation, reflection, theorizing, aesthetical performances and expression are central components.

Recent ECE research examines the relationship between play and exploration/experimentation. For example, Volden et al. (2014) discuss in a study based on the work of Sutton-Smith (1986) and Hutt (1966), how experimentation is distinguished from play when children play and explore mathematics using a digital tablet. Hutt et al. (1989: 11) characterize the difference between play and exploration succinctly: 'Implicit in the behaviors we termed "exploration" was the query: What does this *object* do? whilst implicit in the behaviors we termed "play" was the query: What can *I* do with this object?' Although Hutt et al. distinguish between play and exploration, they call both of these behaviours 'play' – the former 'epistemic play' and the latter 'ludic play'.

Bird et al. (2014) draw on Hutt et al.'s distinction between epistemic play and ludic play in combination with Vygotsky's concept of tool mediation to show that children master new technologies (cameras) through epistemic play for later use in ludic play. This suggests a kind of linear process in which exploration lays the groundwork for pretence (epistemic to ludic). We believe this conclusion needs to be further examined because its implied focus on cognitive development - that is, from object bound through exploration to symbolic/abstract thinking through play - is problematic. As mentioned above, we need to think about children's learning and development, or becoming, in more holistic terms, and particularly in terms that take into account the mutual interdependence of social, emotional, cultural, embodied and cognitive processes (Ferholt, 2015).

What if, instead of pairing learning and play in terms of play-for-learning, we think of a play–exploration pairing with learning inherent in both play and exploration? This idea is depicted in Figure 2. This model challenges the play-*for*-learning approach by conceiving of learning as something broader than school learning/teaching, and by contesting the dichotomy of imagination and reality.

For instance, the children described in the narrative example from the previous section often put on feathers to fly. In this kind of play, the meaning of flying dominates over the feathers or the children's actual suspension in the air, and the children's sense that they are flying dictates their actions. It is this play that leads the teachers to focus on the children's interest in flying. But the bulk of the activity presented above shows the children's exploration, during which they are creating hypotheses to explain the object, the flying balloon and, originally, the flying ducks (as well as their flying selves when they flew in play).

From these play and exploration activities we see that learning is an integral part of both play and exploration. Learning in preschool is not led by participation in academically oriented schooling. As Figure 2 illustrates, in play, meaning is made by attributing meaning to objects and actions, and, in exploration, meaning is made by formulating, debating, and testing hypotheses and theories. Learning is the outcome of meaning-making processes in both play and exploration. It is this which leads to human development (Vygotsky, 1978).

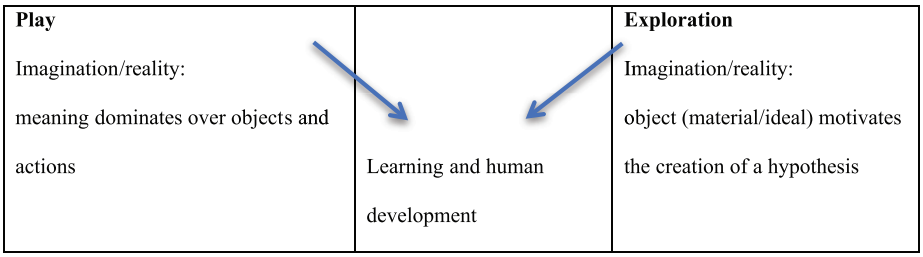

Figure 2. Play, exploration and learning.
The left box of Figure 2 shows play as imagination and reality intertwined and not distinct from each other, where meaning dominates over objects and actions. The right box shows exploration as imagination and reality intertwined and not distinct from each other, where objects motivate hypothesizing and theorizing. The middle box represents learning as an aspect/outcome of play and exploration, indicated by the two arrows.

We believe the visualization in Figure 2 to be a useful tool for researchers and teachers who are engaged in projects of resisting the 'child labor, domestic work or *increasing educational demands* [that] serve to reduce the time available for the enjoyment of [the child's] rights [to play]' (United Nations Committee, 1989: 3; our emphasis). We stipulate that the reconceptualization we offer can support teachers in providing ECE that values children as competent and capable, and can help researchers better understand such ECE. We hope that this reconceptualization invites teachers and researchers to develop richer and more useful understandings of the relationships between play, exploration and learning.

Conclusions

Although the concept of teaching, defined as a teacher-led, goal-directed process, is used to describe preschool practices in many nations, in Sweden this has not been the case until recently. The implications of this change for ECE in Sweden are still unclear. There is a risk that the transmission model of teaching will become the norm even in Swedish preschools, and it is within this Nordic and global context that we need to problematize the concepts of play, learning and exploration.

In this article, we have suggested that the notion of the *playing-exploring child* should replace the notion of the playing-learning child (Pramling Samuelsson and Asplund Carlsson, 2008) as a focus of ECE. We have also argued that learning is inherent in play and exploration, and thus can be understood as an outcome of both play and exploration. This second argument brings us to the topic of teaching:

> Learning is not the same as teaching. Teaching can be planned through curricula and documents; it can be organized in different ways and implemented more or less successfully. One can provide more or less good conditions for learning; you can organize for learning, but teaching does not cause learning in the causal sense, as Wenger (1998) pointed out. (Säljö, 2014: 23; our translation)

What teaching in preschool might mean in the preschool of the playing-exploring child, and how such preschool teaching might be developed and practised, has yet to be determined. Therefore, there needs to be further study of how the concept of teaching is deployed in preschool, particularly considering the evidence that teaching can constrain learning (Gopnik, 2016).

Teaching is often associated with learning abstract, formal concepts. For instance, in the Swedish ECE curriculum, such concepts are considered to be the province of mathematics,

science, language and technology. When, how and where the teaching of scientific concepts will happen in concrete preschool practices will be of tremendous importance for all children attending preschool. Whether or not we can trust the processes taking place in play and exploration to ensure that children will create and acquire the cultural tools and values necessary for living in the world, including those of science, is a pressing topic for further investigation.

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References

Alnervik K, Göthson H and Kennedy B (eds) (2012) *Ljuspunkten: Barns relation till fenomenet och begreppet ljus*. Stockholm: Stockholms Universitets Förlag.

Bennett J (2005) Curriculum issues in national policy-making. *European Early Childhood Education Research Journal* 13(2): 5–23.

Bennett N, Wood E and Rogers S (1997) *Teaching through Play*. Buckingham: Open University Press.

Bird J, Colliver Y and Edwards S (2014) The camera is not a methodology: Towards a framework for understanding young children's use of video cameras. *Early Childhood Development and Care* 184(11): 1741–1756.

Brooker L and Whitehead M (eds) (2013) *The Right to Play: Early Childhood in Focus #9*. Milton Keynes, UK: The Open University.

Dahlberg G and Lenz Taguchi H (1994) *Förskola och skola: Om två skilda traditioner och om visionen om en mötesplats*. Stockholm: HLS.

De Freitas E and Palmer A (2016) How scientific concepts come to matter in early childhood curriculum: Rethinking the concept of force. *Cultural Studies of Science Education* 11(4): 1201–1222.

Elfström I (2013) *Uppföljning och utvärdering för förändring: Pedagogisk dokumentation som grund för kontinuerlig verksamhetsutveckling och systematiskt kvalitetsarbete i förskolan*. PhD Thesis, Stockholm University, Stockholm.

Elkonin BD (2005) The psychology of play. *Journal of Russian and East European Psychology* 43(1): 11–21.

Engeström Y (1987) *Learning by Expanding: An Activity-Theoretical Approach to Developmental Research*. Helsinki: Orienta-Konsultit.

Engeström Y (2011) From design experiments to formative interventions. *Theory and Psychology* 21(5): 598–628.

Ferholt B (2015) Perezhivanie in researching playworlds: Applying the concept of perezhivanie in the study of play. In: Davis S, Ferholt B, Grainger Clemson H, et al. (eds) *Dramatic Interactions in Education: Vygotskian and Sociocultural Approaches to Drama, Education and Research*. London: Bloomsbury, pp. 57–75.

Ferholt B, Lecusay R and Nilsson M (forthcoming) Adult and child learning in playworlds. In: Smith P (ed.) *The Cambridge Handbook of Play: Developmental and Disciplinary Perspectives*. Cambridge: Cambridge University Press.

Ferholt B and Nilsson M (forthcoming) Playworlds and the pedagogy of listening. In: Bruce T, Bredikyte M and Hakkarainen P (eds) *Handbook of Play*. London: Routledge.

Ferholt B, Nilsson M, Jansson A, et al. (2015a) Creative educational practices: Play, imagination and exploratory learning. In: Hansson T (ed.) *Contemporary Approaches to Activity Theory: Interdisciplinary Perspectives on Human Behavior*. Hershey, PA: IGI Global, pp. 264–284.

Ferholt B, Nilsson M, Jansson A, et al. (2015b) Current playworld research in Sweden: Rethinking the role of young children and their teachers in the design and execution of early childhood research. In: Parnell W

and Iorio JM (eds) *Disrupting Early Childhood Education Research: Imagining New Possibilities*. New York: Routledge, pp. 117–138.

Fleer M (2011) Kindergarten in cognitive times: Imagination as a dialectical relationship between play and learning. *International Journal of Early Childhood* 43(3): 245–259.

Gadamer H-G (1975) *Truth and Method*. New York: Seabury Press.

Gopnik A (2016) *The Gardener and the Carpenter: What the New Science of Child Development Tells Us about the Relationship between Parents and Children*. New York: Farrar, Straus and Giroux.

Hangaard Rasmussen T (2014) Det är väl bara på låtsas? In: Hangaard Rasmussen T (ed.) *Lek på rätt väg? På spaning efter leken*. Lund: Studentlitteratur, pp. 67–84.

Howes C (2012) Social play of children with adults and peers. In: Nathan P and Pellegrini AD (eds) *The Oxford Handbook of the Development of Play*. Oxford: Oxford University Press, pp. 231–244.

Hutt C (1966) Exploration and play in children. *Symposium of the Zoological Society of London* 18: 61–81.

Hutt J, Tyler S, Hutt C, et al. (1989) *Play, Exploration and Learning*. London: Routledge.

Jansen M and Harvard Å (2009) *Leka för att lära*. Lund: Studentlitteratur.

Johansson E and Pramling Samuelsson I (2006) *Lek och läroplan: Möten mellan barn och lärare i förskolan och skolan*. Gothenburg: Acta Universitatis Göteburgenis.

Kratsov G and Kratsova E (2009) Cultural-historical psychology in the practice of education. In: Fleer M, Hedegaard M and Tudge J (eds) *Childhood Studies and the Impact of Globalization: Politics and Practices at Global and Local Levels*. New York: Routledge, pp. 199–210.

Lenz Taguchi H (2009) *Going beyond the Theory/Practice Divide in Early Childhood Education: Introducing an Intra-Active Pedagogy*. London: Routledge.

Lindqvist G (1995) *Aesthetics of play: A didactic study of play and culture in preschools*. Stockholm, Sweden: Gotab.

Murray J (2012) Young children's explorations: Young children's research? *Early Child Development and Care* 182(9): 1209–1225.

Nilsson M and Ferholt B (2015) Vygotsky's theories of play, imagination and creativity in current practice: Gunilla Lindqvist's 'creative pedagogy of play' in US kindergartens and Swedish Reggio-Emilia inspired preschools. *Perspectiva* 32(3): 919–950.

Öksnes M and Sundsdal E (2016) Lek: Det som gör livet värt att leva! In: Hangaard Rasmussen T (ed.) *Lek på rätt väg*? *På spaning efter leken*. Lund: Studentlitteratur, pp. 45–65.

Olfman S (2003) *All Work and No Play: How Educational Reforms Are Harming Our Preschoolers*. Westport, CT: Praeger.

Olsson LM (2009) *Movement and Experimentation in Young Children's Learning: Deleuze and Guattari in Early Childhood Education*. London: Routledge.

Organisation for Economic Co-operation and Development (OECD) (2006) *Starting Strong II: Early Childhood Education and Care*. Paris: OECD.

Pelaprat E and Cole M (2011) 'Minding the gap': Imagination, creativity and human cognition. *Integrative Psychological and Behavioral Science* 45(4): 397–418.

Pramling Samuelsson I and Asplund Carlsson M (2008) The playing learning child: Towards a pedagogy of early childhood. *Scandinavian Journal of Educational Research* 52(6): 623–641.

Pramling Samuelsson I and Fleer M (2009) *Play and Learning in Early Childhood Settings: International Perspectives*. New York: Springer.

Richter E (2011) Reggio stort i Sverige. *Förskolan*, 11 April. Available at: http://www.lararnasnyheter.se/forskolan/2011/04/11/reggio-stort-sverige

Rinaldi C (2006) *In Dialogue with Reggio Emilia: Listening, Researching and Learning*. New York: Routledge.

SFS (2010) *Skollagen*. Stockholm: Utbildningsdepartementet.

Skolverket (2010) *Läroplan för förskolan, Lpfö 98*. Stockholm: Skolverket.

Steinsholt K (2000) *Lett som en lek*. Trondheim: Tapir Akademisk Forlag.

Sutton-Smith B (1986) *Toys as Culture*. New York: Gardner Press.

Säljö R (2014) *Lärande – en introduktion till perspektiv och metaforer*. Malmö: Gleerups förlag.

United Nations General Assembly (1989) *The Convention on the Rights of the Child*. New York: United Nations.

Volden M, Pettersen GO and Eriksen Ödegård E (2014) Ida och kuben: Att utforska matematik och surfplatta på lekfullt sätt. In: Hangaard Rasmussen T (ed.) *Lek på rätt väg? På spaning efter leken*. Lund: Studentlitteratur, pp. 199–225.

Vygotsky LS (1978) *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.

Vygotsky LS (1987) Imagination and its development in childhood. In: *The Collected Works of L. S. Vygotsky*. New York: Plenum Press, pp. 339–350.

Vygotsky LS (2004) Imagination and creativity in childhood. *Journal of Russian and East European Psychology* 42(1): 7–97.

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