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HOW PLAY CREATES THE ZONE OF PROXIMAL DEVELOPMENT

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In play children develop and master the structures of their own thinking. They lay the foundations of the inner forms of basic human notions. Play provides the channel of expression of children’s emotional experiences and releases their spiritual potential.

(Brèdikytê, 2011, p. 203)

Introduction

In this chapter we describe the problems that may arise in the interpretation of the Zone of Proximal Development (ZPD) particularly concerning children’s play activity. We then give our interpretation of the term and provide examples of critical episodes of children’s play. We conclude the chapter with a discussion and implications for practice.

Our supposition is that Vygotsky had as a goal the development of a comprehensive framework which could unite the idea of the ZPD in different contexts (e.g. play, learning and work). But he wrote about the ZPD in only two concrete contexts, play and learning (Hakkarainen and Brèdikytê 2008). His goal is clearly stated in the text:

The relationship of play to development should be compared with that of teaching-learning to development. Changes of needs and consciousness of a more general kind lie behind the play.

(Vygotsky, 1933/1966, p. 70)

It seems to us that Vygotsky was referring to two different units of analysis of development in two contexts of the ZPD. In problem-solving he was writing about new mental functions. In our opinion, ‘more general kind of changes’ in a play context
refers to changes of psychological systems consisting of several functions. Vygotsky described the ZPD in the context of play:

> Play is the source of development and creates the zone of proximal development. Action in the imaginary sphere, in an imagined situation, the creation of voluntary intentions and the formation of real-life plans and volitional motives – all appear in play and makes it the highest level of preschool development. (Vygotsky, 1977, p. 96)

Chaiklin (2003) reminds us that an essential key to an understanding of the Vygotskian concept of the ZPD is an understanding of what he meant by ‘development’: Chaiklin’s conclusion from the reading of Vygotsky’s texts on child development was that the activity of the child does not reveal development directly, but it is the system of psychological functions carried out in realizing the actions that underlies development.

**ZPD and developmental transitions during the play age**

If we follow Chaiklin’s reading, we should ask how the system of higher mental functions develops during the ‘play age’, between Vygotsky’s two crisis periods – the crisis of three years and the crisis at seven. The only analysis of the relation between play and development Vygotsky focused on is in pretend play, which is possible after the crisis at three and fades after the crisis at seven. The criterion for this choice is separation of the sense field and visual field from each other (Vygotsky, 1977). Vygotsky uses the same criterion in separating stages in play development in general. His classification is: infant – clean field (no play); early childhood – merger of visual and sense fields (Ernstspiel); preschooler – separation of the external sense field and the visual field (pretend play); school child – development of internal independent sense field coordinated with the external (athletic play); adolescent – ‘Ernstspiel’ develops in consciousness (Vygotsky, 2005, p. 92).

The creation of imaginary situations, in which the ‘realization of unrealizable tendencies and desires’ is possible, is the central structural element of pretend play in Vygotsky’s approach. He argues that an imaginary situation is the main characteristic of play. The creation of the imaginary situation is based on the separation of visual and sense fields. Imagination is the neo-formation of the crisis of the third year and makes illusory realization of desires possible. Vygotsky defined children’s play as imagination in actions (adolescents’ imagination is play without actions!). He emphasized that play is the realization of wishes – not isolated ones, but generalized affects. This means that the child does not understand his own motives. He plays, but is not aware of the motives of his play. A paradox of play for Vygotsky is connected with the rules and joy of play. Acting on immediate impulses is usually the route to maximum pleasure and subjugation to the rules eliminates the joy of action. But play rules and actions bring a change. Vygotsky (2005, p. 91) claims that ‘play gives the child a new form of desire, that is, teaches him to want, relating the desire to the fictional ego’ (i.e. to his role in play and its rules). In play Vygotsky found Spinoza’s ideal
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of will and freedom. His conclusion was the paradox: the child subjugates himself to the rules of his role and in spite of that gets maximum pleasure out of play.

Vygotsky writes about the ‘main genetic contradiction’ of play and describes it as follows:

An action replaces another action as a thing replaces another thing. How does the child transform one thing into another, one action into another? Through movement in the sense field not connected to visual, real things, which subordinates to itself all the real things and real actions. This movement in the sense field is the main thing in play: on the one hand it is movement in an abstract field (the field of sense arises earlier than voluntary operations with meanings), but the method of movement in the sense field is situational, concrete (i.e. not logical, but effective movement). The development of the sense field, but with movement taking place in it as if it were real, is the main genetic contradiction of play.

(Vygotsky, 2005, p. 97)

The developmental results of make-believe play are something different from the correct solving of a problem, or imitation of adult mental functions. Make-believe play requires child initiative and creativity, which is needed in a range of practical life situations, and not only in specific problem-solving situations. Zuckerman (2007) emphasized the role of adult help as different from that originally proposed in the definition of the ZPD. For her, the adult is not just a person who helps the child to solve problems, but the most important factor in adult help is the support for children’s initiative. This radical proposal introduces non-linearity to the old concept of ZPD and opens up the possibility of children’s creativity because children’s initiatives may lead to unexpected results of make-believe play or problem solving.

Zuckerman (2007) denied a linear model of development describing movement from point A to point B, and instead proposed a multidimensional model of possible development (Figure 3.1). In this model children make choices between alternative lines of development and adults may support or not support children’s choices. The change of ZPD depends more on the type of adult help (interaction) than the content of tasks jointly solved.

Vygotsky states that ‘from the point of view of development, play is not the predominant form of activity, but is, in a certain sense, the leading source of development in preschool years’ (Vygotsky, 1977, p. 76). Vygotsky (2005) proposed two transitions of play during the ‘play age’: (1) from Ernstplay (object play) to pretend play, which can be seen as differentiation of visual and external sense fields, and (2) from pretend play to athletic play (having in mind all types of games with explicit rules) when the internal independent sense field is coordinated with the external visual field.

Vygotsky’s brief sketch does not reveal the direct relation of these play transitions to the crisis periods. The main problem in transitions from one age to another in Vygotsky’s analysis is the changes between the main line of development and the
sidelines of development. In other words, at transition the main line of development from a previous age becomes a sideline, and a new main line of development arises. This is the problem of the dynamics of the appearance of psychological functions. Vygotsky tried to explain this by emphasizing the relationship between the child’s personality and the social environment. This relation was called ‘the social situation of development’, which is specific for each age of the child (Vygotsky, 1998). A classic example is the crisis of the third year. The child thinks that he is ‘big’ already and does not accept any more help from adults because ‘big boys’ manage independently. His social environment should accept this and demonstrate the proper relationship towards ‘independent big boys’.

Unfortunately the general theoretical concept of the ‘social situation of development’ does not show the developmental impact of play. Critical questions at the beginning of the play age are why children start to play and can we explain play development on the basis of differentiation of visual and sense fields? An answer to the first question should be found from the analysis of the crisis of the third year. What is the new psychological formation of this crisis? Vygotsky refers to a new type of motivation, which arises when mutual social relations between

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**Figure 3.1** Multidimensional model of ZPD proposed by Zuckerman (2007, p. 53).
the child’s personality and people around the child are reorganized. The child’s relation to joint activity becomes less important and he gives precedence to relations with the people who are inviting him to joint activity. The child starts to motivate his actions not by referring to the situation, but to his relations with other people.

Vygotsky (1998) argues that the essence of all crises is the change of perezhivanie (emotionally living through). The substance of perezhivanie is different at each crisis, as is the content of the social situation of development. Vygotsky suggests that the crisis at 7 years (today the crisis often starts at 5–6 years) brings three main qualitative changes: (1) disappearance of the child’s immediacy, (2) appearance of intelligent (rational) emotions, and (3) the change of generalizations. But what are new psychological formations resulting in mature pretend role-play?

We can deduce the following essential qualitative changes by juxtaposing Vygotsky’s sketch of the main developmental line of play and epochs (crisis periods) of psychological age:

• The crisis of the third year produces the child’s orientation to human relations, and role-play offers an appropriate and safe space for experimenting and field-testing experiences of these relations.

• A mature form of social pretend role-play develops the creative imagination and symbolic function, but at the same time reveals the limitations of acting in imaginary situations. Advanced play creates the need for real mastery of the environment.

• The mode of perezhivanie and the main line of development are changed at crisis periods. New needs and new motivational structures are born, and future developmental steps require a new social situation of development.

The ideal and real subject of the ZPD in play

Vygotsky’s definition of the ZPD in play refers to the development of psychological characteristics (worldview, own will, motivation), which can be associated with personality traits. We interpret these traits as results of the whole play age, i.e. new functions of preschool age. There are several mechanisms supporting subject development in make-believe play.

Vygotsky noted the difference between real and ideal forms (of behavior). El’konin (2005) continued his work. Simplified we can say that culture is the world of ideal objects (images, patterns, ideas, symbols, signs, etc.) and actions. The world in front of the child is not only concrete, but is a world of ideas, understandings, and human deeds. An illustrative example might be a child going on all fours and adults around him going on two legs. Going on all fours (crawling) is the real form of the child and walking is the higher, ideal form. In other words, ideal forms exist at the same time as the real form of the child’s behavior. Ideal forms invite the child to adopt walking as no adults go on all fours any more.
The first point Vygotsky (2005) paid attention to in his analysis was rule-dominated forms of play – make-believe play (hidden rules) and rule-play (open rules). In these forms the relation between the visual field (what is seen) and the sense field (idea, thought) is interesting. In make-believe play children operate with real objects, but they do not use them according to their normal use. Children’s pretend actions are not the result of visual errors, but are made on purpose. Ideas direct actions, not objects. The same happens with roles and positions. Children adopt make-believe roles and act as if other persons (or imaginary beings) are following the hidden rules of the role.

A child in role is aware of the fact that the role is an ‘as if’ role. In other words, there is a tension between the real subject and the ideal ‘as if’ subject. The tension between real and ideal may be the reason behind Vygotsky’s argument that the child can create his ZPD in play situations without the help of others.

Cases of creating joint ZPDs in play

The authors of this chapter had a unique opportunity to construct an experimental play laboratory at a remote teacher education unit in Finland, between 2002 and 2008. Children came to our laboratory on a voluntary basis and some of them spent one to three years there, one day per week during semesters. Creative activities for children were organized as a part of the obligatory university courses for the students of early childhood and primary education (future kindergarten and elementary school teachers).

There were several goals in our play laboratory: one of them was to provide courses on play and child development, to develop research abilities in our students and to carry out our own research projects exploring different aspects of child development through play. More specifically, the main purpose of our research activities was to examine how shared play activity creates the zones of proximal development of children and adults.

Our hypothesis was that all types and forms of play are not equally effective in promoting general child development and the ZPD. We believe that play promotes child development only if the child moves from elementary to mature forms of joint play. Children’s play starts from object-oriented actions, then moves to short everyday life episodes. Later children move to role-oriented play. In parallel they become involved in construction play and simple games with rules. At the end of the preschool age, play activity is developed in a group of children through the construction of the plot; roles became secondary, subordinate to it. Children develop complex plots based not only on everyday life experiences but also on favorite tales, stories, TV programs, etc.

The students’ role was not only to observe children’s play, but also to intervene, actively play, and to construct play together. For the students this is a complicated task. The students have to be inside the activity, to act only when needed and do only what is really needed. The students’ main task is to support the development of joint play activity. Besides that the students have to give appropriate individual support to participating children.
The main task of the adults is to find a common idea for play that satisfies every participant and to construct a play narrative that will motivate children to participate. Why is it important that children play together? We believe that play skills are acquired only from play interactions through active participation.

In our play interventions, joint creativity and dialogic improvisation is the central focus. We aim at more mature forms of play and children’s play initiatives.

The following excerpts demonstrate three aspects of the development of children’s joint play.

**Beginning play participation**

Three children and three students participate in a long-lasting role-play. They are sailors sailing in a ship. Robbers attack the ship in a port and now they are chasing them. Two children and students are in role. Urho, a 5-year-old boy, is participating as himself. Quite unexpectedly, Urho comes up with a spontaneous solution and takes on the role of a tracker dog. He has never before taken on a role and has previously been more of an observer of other children playing than an active participant. In the middle of the activity when everybody is searching for the robbers, Urho drops down on all fours and starts sniffing the carpet like a dog. ‘Do you smell robber?’ asks the Captain (a student in role). ‘Yes, I do,’ answers Urho also in role. Everybody appreciates the idea and agrees to include the dog. Urho becomes an active player in the group.

In this episode the child became comfortable taking on a role, which, from his point of view, was necessary in order to perform a successful search operation. Nobody told him to do so; we might say that play events required a dog and Urho performed a necessary action.

It is important to mention that this was the seventh time that Urho had participated in a joint play session with students and children. In fact, he came to play during the first play session but did not join in the play activity. He spent quite a lot of time sitting on the slide in the middle of a play ‘ship’ just observing play, sometimes making comments. Students invited him to join the play but he refused every time with a shy smile. Yet, he was physically already in the play ship as the slide was a part of ship construction. It is possible that the theme and dangerous events interested him a lot as he had participated in six play sessions before he finally became an active participant in the activity. Such persistence allows us to speculate that he became emotionally involved in the play once he took on the tracker dog’s role.

**Dramatic collision of story line (princess play)**

Two 5-year-old girls are princesses and two students are their maids of honor. Little princesses have a picnic in the garden and return to the castle, celebrate birthdays, dance and so on. At the same time three boys aged 4–5 are playing knights and from time to time come to see the princesses, but there is no play interaction with the girls. Spontaneously one student dresses as a prince and comes to visit the party in the castle. At the moment when he is about to enter the castle, a big and angry bear (an adult in a mask) attacks him. The prince is shouting for help. The princesses
are excited, but do not come to help the prince. Paula, a young 3-year-old, hears the noise and comes running from the other room. In a glance she realizes what is happening, takes a plastic sword and with a broad movement ‘kills’ the bear. Her movement of killing is very expressive and symbolical; the bear ‘falls dead’ at once. In fact the girl does not touch the bear with a sword but it is clear that she is very much aware of the frame ‘this is play’. Everybody bursts into a loud shout: ‘hurray!’ and praises a young and brave prince (a tiny 3-year-old girl).

In general, the young girl is not on the level of constructing dramatic play events when playing by herself and in this episode she also performed a play action but the action was crucial to move the activity forward. This example demonstrates how the play structure is ‘guiding’ participants. They follow the structure of the activity and perform the required steps, which are above their individual abilities. Here we can speak about the ZPD in play. In this episode adults (a student and a teacher) created a dramatic event, which required creative steps from the players: it was clear for all participants (children and adults) that somebody should help the prince and the small girl was courageous enough to perform the action.

The adults were participating in this play together with children. When princess play became boring the adults made an intervention: a ‘bear’ attacked the prince. The student’s aim was to move play events further. Usually, when adults are not involved in play, children themselves take such steps. If this does not happen, play stops and children move to other activities. They might come back to the same play theme again and again until they manage to move it forward.

**Understanding the essence of structure in play**

At the end of the day three girls are involved in a short play episode (eight minutes). The activity takes place in a big meeting room on the couch. Three girls are trying to play together. No adults are supervising them; one adult is filming. At the beginning Liisa (3.10) is sitting on the couch, and Lucy (6.2) on the floor.

Lucy has a transformer Little Red Riding Hood puppet and Liisa has a ‘Flower Princess’ puppet with a long red skirt under which there is a stick. Noora (3.5) has a stick puppet ‘bear’ in her hand and tries to join the play using it as a role character.

Liisa’s puppet lies on the couch; Lucy is just turning her puppet from grandmother to Little Red Riding Hood. Liisa tries to get the transformer puppet, but Lucy does not give it to her, shouting that she is Little Red Riding Hood. Liisa disagrees, shouting that she is the real one in spite of the fact that Lucy has the real Red Riding Hood puppet! She suggests that Lucy could be a ‘Red man’. But Lucy does not agree. The girls begin to compare their puppets. When Lucy does not succeed in getting the role she wants, she moves aside. Lucy seems disappointed and not interested in playing any more. With the ‘bear’ in her hand, Noora tries to get into the play. When Lucy moves aside, Liisa and Noora follow her, showing that they still want to play together.

After a few minutes Lucy transforms her puppet into grandmother and proposes a journey to England on the ship. When Lucy transforms her puppet into grandmother the joint play starts.
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Often such role conflicts stop the play and children leave for other activities. Most conflicts arise from a ‘central’ role, which several participants want to have. When Lucy introduced ‘grandmother’ to the joint play it was possible to integrate Noora’s ‘bear’ to joint play. The physical positions of the girls and emerging plot made sense when ‘grandmother’ rushed between the growling ‘bear’ and Little Red Riding Hood, and shouted, ‘Bear, stop immediately intimidating my granddaughter!’ Lucy thus demonstrated her relation (protection) towards Little Red Riding Hood.

It seems that the wish to play together is stronger than the ambition to play a particular role. The turning point in this situation is Lucy’s decision to take grandmother’s role. This is how children, by trial and error, begin to realize that in order to move the play forward there have to be mutually interrelated roles. Proper play is about events and relationships between the characters. The next step is finding a common theme and building a story line through constant negotiations.

Discussion: creation of the ZPD is a reciprocal process

Using all three examples we would like to move to some more general ideas about how the zone of proximal development is created.

In the first episode the play events provoked the child, Urho, to take a role and to act above his usual behavior in play. Of course, those play events were constructed by all participants together. Nevertheless, the students’ role and the strategy they used in this particular case is very important. The students tried indirectly and directly to invite him to play. Every time in their reports they described how his behavior changed, what comments he made about play and they were sure that sooner or later he would start playing. At the same time they were very surprised when Urho joined the play as a tracker dog but not as a policeman. ’Most children want to be policemen,’ they commented. We think that Urho made a very clever decision, because a policeman cannot smell the pirates, only a dog can!

Without the adults constructing dramatic collision between the bear and the prince in the second episode it is probable that the play would have stopped and the young girl Paula would have had no opportunity to carry out an action that saved the play and moved it forward. At the same time she made a significant step in her own development, because her action was part of a play activity that was above her individual abilities. We might say that she was acting in the zone of her proximal development.

In the third play episode Lucy would not have performed her creative step and started joint play without two young girls – Noora and Liisa – ‘pushing’ her all the time.

Here we can also refer to El’konin (1999), who said that ‘human relations’ and ‘social roles’ are the main purposes of role-play. We might say that role-play allows children to experiment and to test their personal attitudes and ‘adjust’ them to their experiences. In Urho’s case, policemen are chasing pirates and the dog helps to track them down. In Paula’s case we can see that she performed the role of a hero – the saver. Probably she was not very conscious of the role but she is already aware that some brave people are the savers of those who are in trouble.
Taking roles and constructing play narratives together children can explore different aspects of human relations trying to understand 'the universal meanings of human activity', as El'konin (1999) put it.

In all the examples we have tried to reveal how the players create and develop their play spontaneously and collaboratively improvising, as Sawyer (1997) describes. Play activity develops through creative steps carried out by individual players but those steps are possible only in concrete play activity and because of very concrete play situation. They are collective products of play activity and at the same time the vehicles through which the activity develops. As a result, developing activity develops the participants. So the creation of the ZPD is a reciprocal process: participants start developing play activity and the evolving activity demands that participants act in the zones of their proximal development.

We think that individual children and their ideas cause the development of the activity. In fact all participants (even the most passive and shy) are important. When children start playing, the activity itself creates tension and demands creative steps from the players. We claim that this might be the situation which Vygotsky (1977, p. 96) refers to when he describes play as 'creating' the zone of proximal development' of the child. The players are demanding creative steps from each other because otherwise the activity may fall apart! When a decisive step is finally made and the whole play activity moves forward all the participants witness the creative step and the ownership of it is also collective.

Another very important feature of play is that it has many levels. Because of this feature of play, the players participating in the same activity, each develops on their own level. Collaborative make-believe play is enormously spacious; it can accommodate all possible experiences of the young child and provide the space to explore those experiences and enact them with other children. When we observe children playing we can follow the visible events, the external narrative. In fact, each individual child participating in the same play activity constructs her own version of the play narrative. Often children incorporate their own play themes into a larger play. When we observe children's play for a longer time we realize that there are many different levels of play and many small themes in one big play activity.

A good example could be a group of children of different ages playing being in a restaurant. A 5-year-old girl as a ‘mother’ came to the restaurant with a ‘child’ and a ‘dog’ – two 4-year-old girls. ‘Mother’ asked for the menu. The ‘owner’ of the restaurant, a 6-year-old girl, took a piece of paper and with the help of two other children wrote the names of the dishes. It took some time before they wrote ‘pizza’, ‘apple juice’, ‘water’ and brought the menu to the ‘mother’. The ‘mother’ started ‘reading’ the menu and ordering. At that time the ‘child’ and the ‘dog’ went to play in the ‘yard’. When the food was ready, they returned to eat.

This is an example of how play provides a space for the different needs of the children. For a while the ‘mother’ and the ‘owner’ of the restaurant were busy writing and reading the menu, while the younger girls developed their own play narrative. Older children often become involved in activities of real learning, exploration or work. They often need to write a letter, to make ‘tickets’ or ‘money’,
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to build and to make their play props. Advanced forms of play often ‘move’ children to real learning and exploration. This is the moment when adult help is needed.

Our observations and research findings prove that advanced play does not appear in the classroom ‘naturally’: it requires efforts from children and adults. At this stage of development of role and narrative play, direct adult guidance is almost impossible, but the role of the adult is very important.

Adult guidance and help in play should proceed in two main directions: (1) to develop joint activity of children, and (2) to support individual children participating in the activity. Adult help may be needed to keep children in the play frame (inexperienced children constantly ‘fall out’ of it), or to highlight children’s ideas and use them for play construction. Adults should support the whole structure of play when it is starting to fall apart. In practice this means that they have to help individual children to participate in the activity but they also have to take an active role and move the activity one step forward when it is needed. We believe that the direct impact of the adult on development or learning is a fiction. An adult should create the experiences through the activities (not just separate tasks), participation in which would demand the child to act on their highest level, which in turn, sooner or later, will move their development.

Shared play activity is always an ‘unknown’ situation for the participants (children) but even more so for the adult. Supporting higher forms of play is a very challenging task for the teacher. We might say that this situation creates the ZPD for the adult. Adults can prepare and support the development, but not ‘produce’ it. They meet the challenge of their own ZPD in interventions because each child is a new unique individual person demanding specific interaction.

Notes

1 Vygotsky separated from early childhood crisis periods of development e.g. crisis of birth, first, third and seventh year. Needs, motives and dynamics of development changes at crisis he supposed. He wrote: ‘The essence of every crisis is a reconstruction of the internal experience, a reconstruction that is rooted in the change of the basic factor that determines the relation of the child to the environment, specifically, in the change in needs and motives that control the behavior of the child’ (Vygotsky, 1998: 296).

2 In the translations into English usually ‘the meaning-field’ is used, but we think the Russian term ‘smyslovoe pole’ has a broader meaning: it means a broader field of meanings and ideas, including personal and cultural meanings.

3 Play rules refer to approved ways of constructing a role, not to more strict rules of adult life. These rules are often negotiated among children.

4 It is a puppet [Red Riding Hood] that has several characters [a grandmother and a wolf] under her dress, and can be transformed into each of the characters.

References


