Chapter 9
Play to Learn, Learn to Play: Boundary Crossing Within Zones of Proximal Development

Lars Hennig Rossen

During recent years a handful of educational–pedagogical research programmes within the traditions of cultural–historical activity theory (CHAT) and cultural psychology have explored alternative paths to teaching, knowledge transfer and peer-to-peer learning by creating and exploring socially constituted contexts for learning which emphasizes cultural plurality, critical reflection and expansive, non-linear forms of learning (Cole 1996, 2007; Lindqvist 1995, 2001; Rossen 2005, 2006). Learning, in other words, that takes place within carefully constructed *zones of proximal development* instantiated in select institutions, offering the attendees a space for crucial knowledge acquisition and personal growth. Examples of these interventions are Michael Cole's 5th Dimension Project (Cole 1996; Cole and The Distributed Literacy Consortium 2006), the studies of Play Pedagogy (Lindqvist 1995, 1996), narrative learning (Hakkarainen 1999, 2004; Hakkarainen and Bredikyte 2004) and Hedegaard's cultural–historical classroom studies (2002). These combined research sites and spaces for learning have been providing the immersed researchers primarily with qualitative data which oftentimes point to the evaluated organizations as excelling in academic accomplishment as well as bettering the subjective experiences of the learning practice among the participating children (Brown and Campione 1994, 1996; Cole 1996, 2007; Hakkarainen 1999, 2004; Hedegaard 2002, 2005; Palinscar and Brown 1984). Within the cultural–historical tradition, scholars have worked with both children and adults by actively creating and participating in the functional systems they study, ultimately aiming towards inducing actual change. When constituting the system that is analyzed, the researchers place themselves in a privileged relationship to the object of analysis, making it possible to adopt an *ecologically situated view within the actual developing contexts* and accomplishing an institutional perspective that integrates traditions and practice

L.H. Rossen (✉)
The Secure Facility Soenderbro, Cand. Psych. Aut., Copenhagen, Denmark
e-mail: TN34@sof.kk.dk

in the institutions where children live their everyday life (Cole 1996; Hedegaard 2002; Rossen 2005, 2006). What separates the Play World project from other related interventions, however, is an initially non-complete and open-ended structure that allows for the participants to engage in designing the content of the intervention with guidance from and in collaboration with the researchers.

The intervention took place in a primary school situated in the *Camp Pendleton Military Base* north of San Diego and had a primary focus on integrating academically challenged pupils into the classroom while at the same time promoting basic literacies based on a narrative pedagogy which, like the traditional cultural–historical interventions, merges play and education to a meaningful whole. The Play World project was thus aimed at supporting 5- to 7-year-olds in their social and academic development mainly through engaging them in a radical reconstruction of their learning space, their existing social hierarchies as well as their personal narratives.

Culture, Ethnicity and Demography; School Numbers; and More

At this point an object-historical delineation of the activity system in question will be in place in order to formulate a basic understanding of the socio-economic conditions in the community in which the experiment took place. Select demographic data from the state of California as well as from the school population will serve the purpose. In 2005, the poverty threshold was set to an income of US$19.157 per annum for a family of two adults and two children under the age of 18 and US$15.219 for a single parent with two children under the age of 18.

The experimental class and the control class came from the same elementary public school in Southern California. The school is located on a large military base, and only 20 % of the student population comes from non-military families.

The majority of military parents are low-ranking marines, and 50 % of the students qualify for free or reduced-cost lunch – a rather high number when compared to the general poverty levels in the state, 20.4 % for people with Hispanic background vs. 8.7 % for people of European descent, comparable to the overall poverty numbers for the United States, 20.8 % of the Hispanic vs. 7.2 % of the European American population.

Although the military families whose children qualify for free lunch do *not per definition* live off incomes which are below the poverty line, it is a fact that the bottom feeder of the military personnel is characterized by low levels of education and a majority of the diploid soldiers are youth from families which are "financially strapped, with nearly half coming from lower-middle-class to poor households, according to new Pentagon data based on Zip codes and census estimates of mean household income" (npp.org). In effect, a family with two or more children living on a single military low-rank service income *does* live strikingly close to this economic baseline.

The fact that the school is situated within a military encampment has other implications for the intervention: The mobility rate of the pupils at the school is exceedingly high (46 % for the 2004–2005 school year) as the marines are often transferred to other military bases.

The ethnic make-up of the school is rather diverse with 42 % European American, 20 % African American, 31 % Latino, 2 % American or Alaska Native, 2 % Filipino, 1 % Pacific Islander and 1 % Asian students.

This constellation differs somewhat from that of the general population of the state of California, where the ethnic make-up is 44 % European American, 6 % African American, 37 % Latino, 0.3 % American or Alaska Native, 0.3 % Filipino, 0.5 % Pacific Islander and 12 % Asian.

The participants in the experimental group included the entire class, 20 children, 13 girls and 7 boys: 12 kindergarteners and 8 first graders (Mage = 5.7, age range 5.3–7.2 at the time of pretest). The ethnic make-up of this classroom was not representative of the overall make-up of the school, as there were no African American children and as the majority of the children were Latino: 12 Latino (60 %), 5 European American (25 %), 2 mixed ethnicity (10 %) and 1 Pacific Islander (5 %). The teacher, a 30-year-old male, had been teaching for 7 consecutive years.

The participants in the control group also included an entire class, 18 children, 9 girls and 9 boys: 8 kindergarteners and 10 first graders (Mage = 5.9, age range 5.1–7.3 at the time of pretest). The ethnic make-up of the classroom was more representative of the overall make-up of the school than the experimental group. 10 European American, 5 African American and 3 Latino children. The teacher, a 43-year-old female, had been teaching for over 10 years. Because of high mobility in the school, posttest measures for 3 of the 20 children in the experimental group (15 %) and 6 of the 18 children in the control group (33 %) were not obtained. Thus, these children were dropped from the analyses, resulting in 17 children for the experimental class and 12 children for the control class. The mean ages of the remaining children were comparable: M = 5.5 (age range 5.3–7.2 at the time of pretest) for the experimental group and M = 5.6 (age range 5.1–7.1) for the control group.

Concerning Research Design

As the CHAT approach represents a turn away from the traditional forms of experimental psychology, the researcher is faced with a problem; analysing intellectual tasks outside of a carefully constructed and constrained confine of a laboratory or formal psychometric test setting is nontrivial. There exists no set of rules or accepted procedures in the social sciences for evaluating the similarity of cognitive tasks unless the analyst has constructed the task in the first place, in which case the task as constructed provides the basis for claims about task similarity. It follows, then, that there is no accepted method of specifying whether an individual's behaviour is, except for topography, the same or different when it occurs in different contexts (Scribner and Cole 1981). This has far reaching consequences for work in the field

of social, cultural as well as cognitive psychology when attempting to characterize and understand the roots of human cognitive functioning. Experiments, the contexts constructed to make behaviour analysable, must thus be viewed as contexts that *discourage* the expression of active, adaptive behaviour (Vygotsky 1978), necessitating a more situated form of analysis.

When addressing the problem of integrating societal and institutional change with child development, one understands that cultural practice and meaning systems are not only acquired by the child, the child is also cocreator or co-producer of practice and systems of meaning (Hedegaard 2002: 19). The Play World project has thus served as an exemplary research environment; it seeks to address the interactional foundation of cognitive development in real-life settings, as well as it constructs and examines the learning context itself by applying a pragmatic, interventionist perspective to the social collective as well as the micro-genesis of the participants (Baumer et al. 2005; Cole and The Distributed Literacy Consortium 2006; Rossen 2006).

Research Design: Ethnographic Data Sampling

The study was designed as a pre- and post-quasi-experimental intervention in combination with weekly ethnographic observations – a method which was thought to circumvent the often forced construction of research questions around immediate demands for "hard data" while at the same time allowing for softer, longitudinal analysis of the cognitive changes and differentiated forms of participation which unfolded in the classroom as well as providing an opportunity for deep understanding of what brought (or failed to bring) about the quantitatively measurable changes.

Ethnographic observations were recorded on the basis of the principles of distributed cognition (Hutchins 1995) which sees cognition as the process of information that occurs from interaction with symbols in the world. The method prescribes the sampling cognitive ethnographies and considers and labels all phenomena responsible for this processing as ecological elements of a cognitive ecosystem, in the case the Play World. The ecosystem is the environment in which ecological elements assemble and interact in respect to a specific cognitive process. Cognition is then shaped by the transduction of information across extended and embodied modalities, the representations formed as a result of their interactions and the attentive distribution of those representations towards a cognitive goal. The overarching concept of distributed cognition enhances the understanding of interactions between humans, artefacts and environments, in order to document the implementation of each intervention. This allows the researchers to conduct a microanalysis of the cognitive process. In the case of the control intervention, only enough ethnographic data was collected to make sure that it was being implemented as designed. Three types of ethnographic data were collected.

First, detailed field notes from each of the four participating researchers and from the external observer were obtained. An external observer documented both

the experimental intervention and the control intervention; a graduate student's task was to provide an outsider's perspective on the activity in the classrooms through regular field notes.

Second, separate audio recordings and video/audio footage were obtained of all classroom activities and the children's artwork. All activities, including rehearsals and research team meetings, as well as sessions in both classrooms, were video- and audio-taped. Often one of the researchers videotaped using one camera and a second camera remained on a tripod, but frequently more than one video camera was passed between all of the researchers. At times the children also videotaped the proceedings.

Third, interviews with the children were conducted, both under systematized conditions where all children were briefly interviewed over a period of a week and unsystematically when children addressed an adult and proclaimed they had something to share. This included theories regarding the progression of the narrative, retelling dreams that took place in the Play World, etc. The following field note stems from a day of interviews, shedding light on the process:

> The interviews began with the question, *"What was your favorite part of the play?"* and *"What do you think is going to happen next?"* – From there we picked out anything of inter-est and had them go in depth. Many kids believed the witch would be coming the next day. Elizabeth said she liked the part when Mr. Tumnus and Lucas parted ways after the tea party. She believed the witch would be coming next and that they would have to run away from her in order to avoid being turned into stone. Then she said something along the lines of everyone would be turned into stone except her (Elizabeth), and that she would tell the witch to stop, and the witch would do just that, and the book would be back to normal.

Research Design: The Two Groups

For the present intervention, experimental and control classrooms were selected nonrandomly, as the teachers were selected because they were willing to commit to a year-long research study, and it was made sure that the teachers understood the procedure of the intervention and their roles in it. Teachers from both the experimental group and the control group agreed to the use of *The Lion, the Witch and the Wardrobe* as the central text in the Play World. Neither of the two teachers was aware of the exact purpose of the study nor the nature of the assessments. The study was divided into three phases: pretreatment, treatment and posttesting.

In the pretreatment phase, assessments of the children's baseline narrative and literary competence were conducted as well as of the teaching approaches adopted by each teacher in their presentation of the narrative to the children. The treatment phase lasted for 14 weeks. During this time the experimental group engaged in the Play World practice, consisting of joint adult–child dramatization of the text, general discussion, drawing and free play. During this time the control group engaged solely in practices which the teachers in this school traditionally implement when reading a text with the whole class: the teacher reading a portion of the text aloud to the class, class discussion of the text which has been read aloud, the children reading

level-appropriate picture books to a partner and then to themselves, the children writing individually on a topic of their choice and drawing a picture to accompany this writing. In the posttesting phase, we conducted assessments of the children's narrative competence.

In November 2004, both the experimental and control groups were put in the same pretreatment condition, consisting of classroom observations and the pretest of narrative skills. In December, after the preliminary test measurements, both teachers started to read *The Lion, the Witch and the Wardrobe* aloud to their entire class for a period of 10–20 min, three times a week; a segment of such a reading session is captured in the following field note excerpt:

> At the point in the story where the beaver whispers the coming of Aslan, John had the kids get close to him so that he could whisper the scene to them. This worked nicely – really drew them in. It was interesting the way he tried to explain the feeling of a pleasant dream or a terrible nightmare while awake (the reaction the children in the book had when they first heard to the sound of Aslan's name).

It was established that both teachers were handling the reading activity in a similar manner: First, they would read small portions of the text, reading dialogue using particular voices for each character and usually reading in an exaggerated emotional tone. After each reading, they engaged the children in a question-asking activity, either about the text or about the children's speculations regarding the next portion of the story: So, they were discussing the point in the book where the four siblings meet the beaver. The kids seemed to be into the story. I was sitting behind Lynn who was not shy about answering (usually accurately) all of the questions John posed about the story. He had to tell her to give others a chance to speak. During the moments when John had the students whisper to a friend what they thought was happening or going to happen in the story, Lynn would whisper really detailed answers. To the question of why the Beaver was speaking in a cautious tone to the siblings, she told me that she thought that one of the security guards that took the faun was coming to take the siblings, and she told me, "You weren't here when we heard that part of the story. John did a fantastic job at pulling everybody in and making sure all had their turn to speak."

In regard to the nature of everyday classroom participation, it is worth noting that two of the children, both boys, in the intervention group suffered from hearing problems which again led to poor verbal skills and pronunciation and were – in spite of the teacher's exemplary efforts – poorly integrated in many of the social aspects of everyday life in the classroom as well as displaying poor academic achievement. In addition, one of the two children, Danny, suffered from unspecified developmental disabilities:

> I remembered Danny from the first time I visited the school. He stood out because he seemed to have some difficulty producing speech. Turns out he has a fixable hearing problem ("his tubes need to be drained" – has yet to be done) that contributed to this. But I have a feeling that this isn't entirely the problem (I need to ask John and Rachel). He's a really affection kid. I waved him over and he sat with Joey, Kathryn and I for the next task, which involved drawing tri-angle-shaped objects. He was engaged and partook but seemed to lack a firm grasp on what exactly the task was.

One of the central questions, which arose during the pretreatment, was how well suited this specific form of intervention would be for ensuring social integration; the challenge was to shape interactions in a way that would facilitate participation based on actual developmental proficiencies as well as ensure continued development for both the children ahead of their chronological age as well as those lacking behind (Rogoff 2003; Vygotsky 1978).

The Zone of Proximal Development

As mentioned above, a prominent part of the research design behind the Play World intervention was the creation of *zones of proximal development*; when placing the discussion of the meaning of play within the CHAT framework, heeding to the separate role of the zone of proximal development in play and instruction is necessary. Like almost any other psychological or social phenomenon, the implications of play itself remain ethereal and difficult to define in relation to a broader context – the nomenclature of scientific research in the meaning of play is unfixed and often instantiated in a on-the-go manner by the individual researcher(s) undertaking the study due to the absence of paradigmatic language; problems of explaining the gap between play and learning in a theoretically thorough and appropriate manner remain to a large extent unanswered (El'konin 1971; Karpatschof 2002; Schousboe 2002).

Due to the educational philosophies of the times in which the theory was conceived, the role of play as an *integrated* and not seceded factor in the classroom has been overlooked as a possible alley to explore: In the classroom the zone of proximal development is first and foremost discussed in relation to acquisition of *scientific thought* and tied to activities which rely on a system of signs that generalize reality (Chaiklin 2003; Hedegaard 2002; Vygotsky 1978), formally expressed in the strive to teach the subjects general laws of physics, math, grammar, etc., and it can be seen to revolve around problem-solving and imitation skills – how well are the subjects able to replicate or utilize an example given by an adult in relation to the problem they are working with.

The zone of proximal development is thus most often defined as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky 1978: 86) as the dialectical operation between contradiction of internal possibilities and external needs that is thought to "constitute the driving force of development" (Daniels 2001: 57), and this original formulation can be said to focus substantially, in its own right, as a tool for assessment; Vygotsky gives the example of two children who are both 12 years chronologically, yet only eight years when their mental age is assessed through a standardized test. Now imagine, says Vygotsky, that one does not terminate the investigation here, but instead the test subjects are given adult assistance; we may now very well see that one child will be able to solve the task at hand to the level of a 9-year-old, while the other will be able to reach the level

appropriate for a 12-year-old. This goes to prove that they are not, as the initial test would claim, of the same mental age, and further, "the difference between 12 and eight, or between nine and eight, is what we call the zone of proximal development" (1978: 85f).

This kind of formally structured development is traditionally viewed as in opposition to the relatively unstructured development that takes place in children's free play, regarding which Vygotsky simply and without sophistry points out that "In play a child creates an imaginary situation" (1978: 93). This is by no means a trivial point; when placing the imaginary situation as a defining characteristic of play, we are able to pinpoint the place and time in the ontogeny where the child masters the art of removing herself from the immediacy of primary bodily functions and tentatively digress into the sphere of shared cultural symbols, and it further serves to make a clear distinction between the abstract and concrete modes of activity. Also, we have the criterion for play that "there is no such thing as play without rules. The imaginary situation of any form contains rules" (Ibid.: 94). This is a very important point – if we analyze play alone and remove the imaginary situation, we would be looking directly at the underlying rules. If the imagery is the flesh, then rules are the bones. The perfect example of this is two sisters who decide to play a game where they pretend to be *two sisters*, thus isolating and enacting what constitutes sisterhood. Finally Vygotsky puts up the criterion that "Play is […] a leading factor in development" (Ibid.: 96), a point that seems intuitively true and forms the main argument behind why it is worthwhile studying play in a school context. In play activity, as opposed to schooling activity, Vygotsky argues, there is relative freedom provided by the psychological support offered in the imaginary situation so that a child can be "a head taller than herself" (Vygotsky 1978).

However, this is a conceptualization that relies on a strong divide between the formal interactions between children and adults on the one hand and the informal play interactions children are apt to engage in when left alone on the other. This is a way of regarding development as separated and taking place in two unattached fields of practice: The ceremonious learning sphere where what occupies the child's attention is sought governed by adults and child behaviour placed under careful administration stands in stark opposition to the room of free play where the children are encouraged to engage in imaginative enactments. This other setting is understood more or less as directed by the children's own fantasies and characterized by the absence of *direct* adult influences, i.e. there is posed a minimum of demands and regulations. The Play World is a mediating entity interlocking these two oppositions.

Mediating Tangible Play with Abstracted Tools

The early Soviet psychologists emphasize the tool as being of a dual, i.e. technical *and* abstract, mediating nature, concrete in that it has physical properties and abstract in that it takes on a culture-given set of properties in its right context and

appears in cognitive relationships as an expression of ideality (Ilyenkov 1977). Indeed, Vygotsky heeds to language itself as the *tool of tools*, entertaining a fundamental difference between the technical tools and the psychological tools, and noted that, "by being included in the task, the psychological tool alters the entire flow and structure of mental functions. It does so by determining the structure of a new instrumental act, just as the technical tool alters the process of a natural adaptation by determining the form of labor operations" (1981: 137).

The technical artefact thus functions to serve as a conductor of human influence on the object of activity; it is externally oriented and aimed at producing concrete change in an immediate environment, a notion which would later take central stage in the activity theory, in the form of analysis focused on goal-oriented activity as the central concern for psychology (Engeström 1995; Keller and Dixon 1995; Leontiev 1977). The psychological tool, after its appropriation from the cultural environment, too is of a social nature but is distinguished by being internally oriented and aimed at mastering oneself; the modes of activity which characterize the two planes, internal and external, are so different from each other that the nature of the means they use cannot be the same across applications and contexts (Leontiev 1978: 55). Experiences from the Play World project have shown that the specific affordances of the concrete as well as abstract artefacts tied to the intervention, i.e. the narrative itself, the costumes, the props and sceneries in the reproduction and expansion of the intervention itself support a form of participation where the academically confident children support the less proficient in their learning processes, thus creating an *artefact-mediated zone of proximal development* void of adult supervision – giving reason for a critical discussion of the very nature of the concept of the zone of proximal development.

The Narrative: Retelling the Tale

The narrative background for the study was chosen in accord with Hakkarainen's idea that the enacted narrative must resonate with the children's personal narratives (1999); the story, *The Lion, the Witch and the Wardrobe*, takes places on the countryside in England during the time of blitz over London. A group of four siblings, Peter, Susan, Edmund and Lucy, are sent to stay with an old professor in his mansion, paralleling the children at Pendleton who for a large part had to endure long periods of time separated from their parents who were stationed in Iraq.

While staying with the professor, the youngest of the siblings, Lucy, enters a magical wardrobe and crosses over into a magical world, Narnia, which is being held under a spell of eternal winter by the White Witch. Therefore, during the pre-intervention, which begun after the children returned to school after their summer vacation, a large wardrobe with a removable backside, constructed to keep this feature concealed, was placed in the classroom with a large red ribbon around it and its front door secured with a padlock. The teacher did not begin reading the book aloud until late in first semester, and once he did, none of the children made a connection

between the wardrobe in the story and the one in their classroom; nor did the eight returning first grade children, who had been with the teacher in the same classroom as kindergarteners the previous year, offer the ribbon-wrapped wardrobe special interest.

When Lucy moves into the fantasy world of Narnia, she meets a faun, Mr. Tumnus, who invites her to tea and – under dramatic circumstances – confesses to being in alliance with the White Witch, having sworn to turn any of the, for him, mythological human children over to her, should he ever encounter any. Lucy comforts him and ensures him that she is sure he, after all is said and done, is a good faun; they can still be friends despite the fact he is a kidnapper *in spe*. She is instead returned to the real world through the wardrobe where she shares the experience with her siblings and is consequently accused of being a liar; only the professor seems to believe her.

Several days later, Lucy re-enters Narnia and Edmund follows. He fails to catch up with Lucy and instead comes across a great lady who introduces herself as the Queen of Narnia. She gives him his favourite food, Turkish delight, and promises to make him a prince, and later a king, if he brings the other children to her castle. After the Queen departs, Edmund meets Lucy, and they return together through the wardrobe. Lucy starts talking about Mr. Tumnus and then mentions the White Witch; when she describes the witch, Edmund realizes that she is the lady he has just made friends with, but he does not speak a word about meeting anyone in Narnia. Out of cruelty, Edmund will not admit to Peter and Susan that Narnia is real and Susan's health of mind is questioned again.

Finally, circumstances lead all four children to hide in the wardrobe, and they soon find themselves in Narnia. They discover that Tumnus has been captured for helping Lucy out of Narnia, and a pair of talking beavers named Mr. Beaver and Mrs. Beaver shelters the children.

They recount an ancient prophecy that "When Adam's flesh and Adam's bone sits in Cair Paravel in throne, the evil time will be over and done". The beavers tell of the true king of Narnia, a great lion called Aslan, who has been absent for many years but is now "on the move again". Edmund, still in the thrall of the witch, quietly leaves the house and goes to the witch's castle. His absence is not noticed until it is too late. Realizing after searching for Edmund that they have been betrayed, the others set off to meet with Aslan.

The narrative continues much further, but the recaptured part roughly formed the basis for the dramatization; the idea was to shorten the staged play and write a new, briefer ending, but, as we shall see, the children solved the problem by taking control over the project and writing their own.

The Flow of the Intervention: An Ethnographic Voyage

There were 14 sessions of the experimental intervention. These sessions also took place once a week and lasted approximately 2 h. Each session consisted of an

enactment of the text followed by discussion and then free play or art activities. In order to provide the transition from the written narrative and the read-aloud session into the actual enactment, where the researchers entered the classroom and transformed it to a holistic stage area, the book, which was used during the reading session, was replaced with one with blank pages:

> When John opened the book he acted surprised, then turned the book around and showed the pages to the kids. The pages started to fall out, which wasn't supposed to happen. This threw him off. He looked at me and then at Susan as if to ask, "*What now?*" but then he just went with the flow. The fact that the pages fell out of the book made a big impression on the kids who were very surprised. They all rushed to gather around John and inspect the book. One girl very clearly and slowly said "*Oh my god!*" and then a bunch of other kids echoed her. It was Oh My God's all around.

The next step was the actual dramatization, beginning from the start of the book with a section, which had been read to children a few weeks earlier. The old professor entered the classroom and – in spite of the sunny Californian weather outside – commented on the pouring showers of British rain, talking loud to himself about "those four kids from London who were supposed to arrive to stay here at the mansion". At this moment the classroom had not undergone any radical changes other than the placement of the wardrobe.

Meanwhile, the classroom was prepared for the staging; a transformation of the classroom into a stage, which would soon take over every available corner, begun:

> I turned on the sound effects. I slowly started closing the curtains, and then slowly walked outside to get into my costume. I only got a few glimpses of the kids while I was doing all this. They were looking around at what was going on but they didn't seem scared. Everything happened so quickly that I didn't even notice Rachel walking in to do her bit as the professor.

Rachel finished, walked outside, changed, and then we were on. The children were all very quiet and attentive – a few suppressed giggles here and there when the excitement got too much. The first session was us, the four kids, walking in and getting settled for the night, discussing all the adventures we were going to have in this big house and planning to play in the garden the following day if the weather was for it or hide and seek if it wasn't.

Following each session, the children were engaged in a group discussion regarding the play they had just witnessed; naturally the first session, which took the children by surprise, bred a plethora of radical hypothesis regarding books coming alive and the four children from the book visiting the school room.

Due to the rather untested nature of this form of intervention, very little – other than the few texts by Hakkarainen, Lindquist and Rainio already discussed – has been written regarding what to expect from this type of developmental studies. An interesting feature of the early field notes, which, other than recording the activity of the day, served as a communicative tool between the team members, is, that in spite of the efforts to focus the activity of the children, the anarchic nature of the research process shines through in the range of doubts and questions which are captured as well:

> This first session left me dazed and confused; were the kids confused by the play or did they get it? Some kids expressed recognition that the play was connected to the book and named

the characters. I'm wondering if the performance was too short, or if it dealt with a portion of the book that was too far in the past for the kids to regroup their memories? Most children had a almost conspiracy like theory regarding the events and some even mentioned that possibility that the White Witch had snug in and hexed the book – others seemed to be a little frightened by this idea. The general feeling seemed to be that the book had some-how been transformed into real life events – how do we capture what they think and feel? Will too much of this end up as mere guesswork?

This basically unstructured nature of the investigatory process may be regarded as problematic and raise the question of whether it is possible, with any scientific weight, to disentangle the many threads of development which present themselves in the course of the study, when the people behind the initiative so obviously lack a clear view of the processes they have started. How can one make theoretically expansive claims when the empirical data lacks a clear focus and is conducted by people who most of all seem to be crawling on the floor with the children they claim to study?

The answers are both easy and unorthodox: The children will, based on their engagement with the adults, lead the way – by being in a position where no clear goal for the intervention has been set, other than test whether it in itself is a worth-while practice or just a curios alternative to traditional classroom learning which will be welcomed by the subjects as an odd distraction from calculus and grammar exercises and leave little more than a confused teacher in a messy classroom behind, the research team has the benefit of applying a continuous pragmatic-methodological development as a direct function of the feedback which is offered by the participants and includes this in the data for later analysis. The chaos that ensues becomes a most treasured source of knowledge.

A key concern behind the inclusive discussions which followed the enactment of the text, which lasted approximately 30 min, was a strive for promotion of personal agency, allowing everybody to share what had caught their interest and encouraging the least vocal children to participate actively, which, as a rule, went on for as long as the children wanted. Next, the children were able to choose from either drawing with pencils and crayons, painting or engaging in pretend play with the props that the actors had left around the classroom, as they saw fit:

> Following the discussion John had the class split into two groups, each group receiving a large piece of paper and markers so that they could draw what they had experienced just then. John briefly demonstrated by producing a picture of Edwina. He emphasized to the kids that they were not to follow his example exactly – that they could draw whatever they wanted about the story. I think it was at this point, when the kids formed their two groups, that Joey said something along the lines of, *"Maybe we're in the story"*.

During the drawing sessions, the researchers joined the activity, drawing their own pictures and engaging with the children without instructing them on how and what to draw. During free play, the children, the teacher and the four researchers took the costumes and props from the performance and used them either for pretend play related to the book and the performance or other topics which seemed to concern the children.

An important feature of the Play World was the holistic manner in which it was integrated in the everyday practices; during the week, the children would, alongside their normal curriculum, construct new accessories for the coming drama session, based on their teacher's progression through the novel and the last enacted piece.

In the third week of enactments, one of the researchers playing the youngest sibling would open up the wardrobe and, for the first time, move into Narnia; however, it was decided that the children should have the opportunity to open and explore it before it was implemented in the play, and the teacher hid the key to the padlock, tied to a small red ribbon matching the one around the wardrobe, in a child's book box:

> John asked Danny to get [a book] from the bottom of the pile. He did and… he took out the key with the ribbon and looked at it. He showed it to Louis. He then took it to Michelle and Beverly who was reading behind the wardrobe. They sort of looked, paused, and then gasped. Then, with one voice they all were whispered *"it's the key"*, and then someone said it out loud, and then they ran to get John, and everyone ran to the wardrobe yelling *"The key! The Key! We have the key…"*

Inside the wardrobe, like in the narrative, they found four fur-lined coats; the children tried them on and took turns going into the wardrobe. That the efforts to make the mythology come alive for the children were effective became exceptionally clear when a girl on her way into the wardrobe was pulled back by a little boy, yelling "Nooo – don't go in without a coat; it's not safe! The Witch will see you!"

During the following sessions, the teacher joined the researchers in the enactment; during almost one third of the sessions, both the teacher and the children joined the researchers in the Play World, placing the children in a dual meaning system; the children were at the same time in a real situation and in a role, a cognitive state where they are enticed to function as both actors and directors. This way the children are drawn into dialogue by the characters which the adults dramatize, and as a result, both children and adults share a common Play World, which is gradually established as all participants interpret their experiences and portray a mutual system of meaningful symbolism (Lindqvist 1995; Rainio 2005).

The enactments involved not only props and costumes but also some combination of staging that appealed to the children's senses of touch, smell and sound. Examples included ice chips on the floor to represent the coldness of snow, pungent mothballs in the wardrobe when mothballs were mentioned in the text and a recording of a thunderstorm when it was raining in the scene being portrayed. In order to create a true sense of involvement, the first time the children crossed over from the real world and into the actual Play World was arranged as a large tea party in a cave together with Mr. Tumnus, the faun. This, however, took place *inside* the Play World but *outside* of the narrative:

> When I came back into the classroom after having acted my part they were already in the midst of the party, eating cake, and drinking tea. Everybody was moving around. A few kids here and there offered me eggs and tea and cake. It was great. I only remember Linda taking a minute or two to explain what had happened. Everyone else was busy eating or talking to Mr. Tumnus or waiting for Mr. Tumnus to finish peeling a hardboiled egg. There was a steady drone of "Mr. Tumnus!" in the background. I poured tea for some of the kids. Then

I sat with Stacey and Elizabeth to drink some tea. Stacey told me that if I wanted an egg I could ask Mr. Tumnus. I yelled out his name but he was too busy with the other kids to hear me. Then Stacey gave me a few pieces from her egg. Then she asked me to get her a piece of cake. Stephanie poured tea for me. When I came back with the cake for Stacey she offered the hypothesis, that if she were to take Mr. Tumnus out into the real world, and if people doubted he existed, she would simply point to his tail and his fur as proof that he was real. This caught John's attention. He knelt down to have her explain her idea again.

During this first time entering into interaction with the staged play, they expressed a clear sense of interacting with a figure from the narrative, albeit not being in the narrative per se; the children stressed the fact that although they were in Narnia, it was not the Narnia in the book, as they had not moved through the wardrobe.

However, over the following weeks, the narrative progressed and the faun was kidnapped. The researchers, dressed as the four children, now broke with the written narrative and, as a part of an enactment, decided they would need help; going up against the White Witch would require the help from more children:

We [the four researchers] all went into the wardrobe. I remember hearing some kids gasp when we opened the doors. Once inside Rachel and I stood by the doors and kept them closed while Susan and Larry walked on some of the ice. Someone tried opening the door from the outside and I heard someone else softly yelling no. Rachel was yelling her lines so that the kids could hear them through the closed doors. I was directly in front of her and had trouble holding in my laughter. Then suddenly the doors started trembling with the sound of all the kids' hands knocking. I had expected that only one of the kids would come up to the door and knock. Also, the knocking came too early (before the moment when Susan and Peter [characters from the play] apologized to me for not believing me); I hadn't heard John suggesting to the kids that they knock on the door. […] After the mad, loud knocking I peeked my head out through a crack in the door and the kids just burst out laughing. It was so loud and sustained and contagious. I don't know how I stayed in character. For some reason it felt to me that with the laughter the kids physically moved back a little. The laughter really seemed to last for a whole minute. Things went from me opening the door to Rachel taking the lead and guiding the kids into Narnia incredibly fast paced.

What cannot be captured in the field notes, but is overwhelmingly present on the video recordings which were captured from steady mounts during these sessions, is the incredible emotional investment and empathy the children express towards the characters as well as their insisting on keeping the researcher-as-adult separated from the researcher-as-character; if the faun wept, the children wept with him; if the beavers whispered the children whispered with them; and when the researcher left the classroom in costume only to return in the everyday dresses, the children would treat him as having been effectively absent through the whole session and go to great lengths to tell in detail what was missed during our absence.

Beginning with the aforementioned tea party, and the opening of the wardrobe, the intervention brought about a degree of investment which is arguably rare among children of this age; it was possible to serve the whole class meals of potatoes, tea, biscuits, eggs, cake and milk inside a cave made of construction paper without the least sign of trouble; the children, laughing and giggling without end, seemed aware that this was indeed what Hakkarainen refers to as a

special situation and the first sign of bad behaviour would break the spell and immediately reinstate everyday classroom rules. The journey from the classroom and into Narnia became a returning event, but without doubt it was the first time, which made the deepest impression:

> We put on our coats and then told the kids that there were coats for them in Narnia. (That week the kids had made their own individual coats (more like vests) out of paper grocery bags. They were multicolored and lined with cotton balls). We took their coats and handed them to the kids, reading their names, which were written on the inside. We introduced ourselves to the kids as we handed them their coats. I remember I gave coats to Logan, Elizabeth, Kathryn, and Alyssa. Once everyone had their coats we invited them in. We had placed one of the cardboard ice patches directly on the "inside" side of the wardrobe so that when the kids entered they stepped on the ice. The kids were ecstatic. Some of them weren't wearing shoes and so they really felt the cold. Their socks got soaked but they didn't seem to mind! I have a really strong memory of Sylvia saying "It's soooo cold!!" She had a huge smile and the widest eyes. And then there was the sound. It was just a mass of happy yelling and oooohhing and aahhing. It felt a little chaotic. I thought there wouldn't be enough space for us among the trees and Mr. Tumnus' cave but after a minute or so of trying to get the kids to settle down we were able to get them to gather round the general area of the lamppost.

In the end, the original written narrative and what was enacted bared little resemblance with each other apart from a shared cast of characters.

The following session consisted of various interactive tasks and the design of requisites. When the final day of the intervention came, the children had planned a grand finale; the faun was to be rescued, the White Witch' castle to be destroyed, and, most interestingly, the White Witch herself not to be killed but turned and made good; the children had discussed how to finish her reign of eternal winter and had come to the conclusion that she too had to be under a spell, a spell which could be broken:

> John and the kids did lots of preparing. They made colorful mountains out of cardboard; they converted the library next to the door to Ms. Anne's class into the witch's castle (also cardboard) – big and cozy; they constructed four huge (enough to fit 3–4 kids), but low thrones which they placed in the corner; they built the cage (colorful!) in which Mr. Tumnus would be jailed. Most impressive of all was their plan for defeating the witch and rescuing Tumnus. The important thing to mention about this plan is that it was the kids' own work start to end. They were the captains of the ship and John had his hands on the rudder.
>
> Also important was the fact that the kids developed a plan that incorporated the ideas of every child. The plan had stages, and each stage involved two or more kids collaborating in some activity that was directed at either defeating the witch or rescuing Mr. Tumnus. The kids knew what they needed to do (were supposed to do?) at least a few days before they did it. The idea of breaking the Narnia spell and setting the witch free is great - with John playing the part of the witch it seems they have great motivation to overcome the evil which his character represents. Truth to be told he did his part almost too well at the times.

The final session thus embodied the result of the strive to make the children active agents and involve them in critical participation; over time their personal engagement with the characters as well as their role as instructors became more and more pronounced, as the play activity took an increasingly central role in the everyday

school life. At the time of the final showdown in Narnia, when their plan was to be carried out, the classroom was at the same time buzzing with activity, all the while curiously controlled and focused:

> I thought there would be some moments of uncontrollable chaos. There were moments of chaos, but they didn't seem uncontrollable, or rather, getting things back under control didn't seem to be important in light of the joy that emerged from the chaos. I also felt more at ease that the kids had actually written out their plan and would be handing it to me before we entered Narnia. I figured I it would spell everything out for me. It didn't! But it didn't matter! The kids came back from their run. Susan, Peter and I were standing in front of the wardrobe. For some reason it felt a little awkward that we didn't greet the kids right away. They settled down in front of us and almost immediately Luis and (I think) Pedro got up to hand me the paper with the plan written on it. Tiger (and maybe Beth as well?) had to tell them to wait. After all, Susan had to set the stage for the kids (we can't find Edwina, we need to make a plan, oh you have a plan? Great! Etc.). I too had to remember to remind the kids to be quiet (there are spies in the forest!) and that it would be wiser to take care of the witch first before attempting to res-cue Mr. Tumnus. Once again, the kids were way ahead of us and before I could say anything one of the girls, I don't remember who told me (Lucas) that it would be wiser to take care of the witch first before attempting to rescue Mr. Tumnus. Next Susan tells the kids that we should all listen to Lucas because he knows his way around Narnia best. Luis and Pedro hand me the plans. I was expecting a notebook-sized piece of paper. Instead they hand me something the size of a poster! I was also expecting explicit details explaining how to go about executing the plan. Instead, there was a list of props with the names of kids written next to them. There was nothing to worry about. The kids knew the plan, lived the plan, and they helped be decipher what I couldn't figure out. Together we all read the plan out loud. The kids gathered the necessary props as we read them on the list. When we got the part of the plan for blowing up the castle, there was a little trouble. Joey, the kid who two weeks ago asked to leave and left the Play World as it was happening, started to plant the bombs in the castle. The other kids, who were supposed to help him, did help him.

When one compares the set-up of the classroom prior to the intervention with the layout at the termination of the project, it becomes obvious that even the simplest of common learning tasks becomes immersed in some reminiscence of, or reference to, the dramatic narrative.

Thus, a curious and wholly unanticipated side effect of staging the Play World in the classroom was tied to the volume, number and size of the designed and produced stage requisites and accessories. The scale by which the children, with the aid of the teacher, choose to construct the required artefacts remitted any possibility of stowing them away and bringing them forth when needed. Instead, they remained in the classroom throughout the entirety of the intervention, and, as mentioned, the children thus had accesses to the whole of the Play World frame in their free play, as well as they had to bear with its presence during everyday learning sessions, thus effectively erasing the boundaries of the fantasy world the children knew as Narnia, on the one hand, and the actual classroom, on the other. Monday-morning reading sessions would take place in an enchanted forest amidst blue and yellow trees, partner reading and solving math problem was undertaken inside the faun's cottage or beneath the beaver dam, and often the children could be seen to participate in group discussions wearing a fur-lined coat or holding a small cardboard shield.

Changing Settings: Changing Participation

Throughout the intervention, it was possible to observe how the classroom culture was remodelled in accord with demands raised by the increased awareness of the children as well as their interaction with the surroundings, or, in other words, the classroom became a personal space rather than an institutional setting, facilitating growth and invested participation in both play practices and actual academic tasks.

In the transgression from the form of enacted play, which took place in the shared world of pretence inhabited by children as well as adults who provided the rules of engagement, and into the children's self-motivated experimentation with the narrative revolving around re-enactment and exploration of alternative versions, the source of social development is recognized as a series of collective moves from one sphere of engagement to another where the boundaries of pretence, learning and teaching, play and seriousness are unravelled only to be woven together in new intricate patterns of sociality, and it takes little imagination to appreciate that radical restructuring of a learning space will lead to equally radical redistribution of agency, competence, power and social capital; classical classroom competencies are challenged and novel ways of thinking and behaving gain footing.

In effect, from an interactional and distributed developmental perspective, which regards the engagement with a culturally saturated environment where artefacts and significant others exercise constraints and opportunities and thus become key factors in the learning process, this means that when the settings are changed the mode of cognition will be changed as well; a point which has been discussed earlier in reference to the distribution of cognitive processes: Thought processes are not and cannot be isolated with a single individual and understood as completely internalized phenomenon but must be understood as mediated by and crystallized into the surroundings, often discussed in terms of their immediate affordances.

For many of the hoped for goals of education, we presuppose the success of the social constructability of affordances – that one can get a learner to attend to the pertinent properties of the environment or the designed object or the inscriptional notations such that the learner can join in to contribute to distributed intelligence in activity (Pea 1993: 52f). This points to a key problem in the traditional design of the tools we use for learning; the construction and implementation processes are often based on assumptions conceived in resituated research environments and then carried over to the learning spaces. An important lesson is that the principle of voluntary participation and engagement provides the best possible in vivo test situation for determining whether a designed artefact has, on the one hand, the learning affordances it was designed to have and, on the other hand, if its use may be sustained without having to be forced upon the learners (Cole 1996).

The Play World accordingly asked the children themselves to, within the given narrative frame, figure out what kind of equipment they would need in order to engage with the Narnia mythology in a way that seemed meaningful to them, thus to a large extent circumventing the problem of meeting a demand for artefact affordances by placing the responsibility for designing a working learning space on the learners themselves.

Expansive Developmental Zones: Introducing Synergic Systems

By exploring the dialectic nature of the connotations of *play* as both a form of creative expression and storytelling by means of dramatic statements (*a* play) and, on the other hand, the children's social free time activities (*to* play), the idea that participation in the Play World project placed the children in an *expanded zone of proximal development* which defers from any other kind of learning due to its *synergic nature* can be introduced; during evaluations of the activities that took place in the classroom outside the weekly intervention, it became clear that returning to the Play World became the preferred play activity among the participants.

When the children's free play takes the form of holistic social interactions, they re-enter the room of fantasy play and drama, inserting the participants into other spheres of the classroom than the traditional learning spaces, creating synergic propulsion by stretching the carefully managed confluence with the adults out into their everyday life.

Their play would thus maintain a momentum of literary engagement throughout the week until new inspirations and unsolved problems were added to their fantasy play. This spiral, instigated by the adult intervention, but kept alive by the children, is what may be referred to as the *synergic zones of proximal development* (Rossen 2006): Once their engagement with the fantasy world had been set in motion by the adults, the children continued to engage and seek in-depth understanding, exploring the possibilities of the narrative for the sake of the play itself and upholding the momentum of critical thinking that is sought in formal education, which may explain, in part, their academic as well as social development (King and Kitchener 1994).

However, it may be pointed out that an appropriate term that captures the idea of culturally mediated development would be the zone of *potential* development rather than *proximal*, stressing the fact that the next learning step is a *negotiation* between personal potential, immediate agencies, available mediators and a wide range of fluctuating influences, making the possible learning outcome a living and dynamic entity and not a predetermined *modus operandi* as implied by the notion of proximity, and the concept should therefore be referred to as a *synergic zone of potential development*.

Shifting Spheres: Play in Reality and Reality in Play

Putting things to their extreme, we can, based on the previous consideration regarding play activity and formal instruction in classroom settings, imagine a continuum from earthbound and concrete classroom teaching and the children's free play on opposite ends of a continuum. This is not suggesting that there is no imagery in the classroom – indeed most learning is abstract and requires a well-equipped imagination to comprehend.

We may at the same time split the power structure up in two opposites as a continuum that runs from the room where the adults decide how the children spend their time as opposed to the child-governed room where they may undertake any activity. This allows us to recognize four distinct zones of development; these are:

- A zone of concrete, adult-structured activity
- A zone of pretence, likewise structured by adults
- A zone of pretence, structured by children
- A zone of concrete activity, likewise structured by children

What is interesting in the present case of development through adult-structured play as a dialogical phenomenon, which mediates between classroom development and play development, is that although we may isolate four separate modes of cognition and also analyze the activity within these spheres separately, it is in the completion of a micro-genetic object-historical journey of learning, understanding and gaining knowledge that what can be referred to as a synergic zone of potential development occurs.

In this schema the traditional zone of proximal development may be recognized as situated in the top-left corner of the figure in a learning space where adults are in control and the education processes operate in a relatively concrete space, while the zone of proximal learning, which emerges as a result of children's pretend play, will be situated in the bottom-right corner.

Working with the Play World pedagogy, however, expands the area of structured learning from the learning zone of the traditional classroom and into other zones of activity. This begins with the move of the adult-structured activity away *from* the real world and *into* the imaginary spaces, illustrated by a move from the top-left to the top-right zones of activity; we do however see that the power structure remains more or less untouched, and adult influences are still pertinent and existing at this stage of the cycle.

However, as the project progresses and the learning space is increasingly colonized in the image of the Narnia mythology, we experience the children's agency increases markedly, and a slow process of redistributing the power structures of the classroom begins, based on the insights and ideas which the children import into the interaction with the adults from their free play explorations. It is important to realize that although this stage of the development has many traits in common with the traditional version of the zone of proximal development in pretend play, it is qualitatively different, first and foremost in that it is the sole result of the children's ability to communicate their wants and needs and persuade the adults to loose their grip over the classroom.

The power is now reversed 180 degrees and adults and children are working together as equals based on the children's instruction and imagination. Their suggestions and critique take the form of an investment in making the play their own; by exercising a growing critical reflection regarding everyday routines and becoming more vocalized in regard to the changes deemed beneficial for the basis of participation, as well as merging learning activities with their free play, the children became central actors in their own lives and level the traditional power relations to their favour.

Naturally, we are not entirely left in the hands of the children; a shadow of power falls from the traditional classroom and into the world of pretence, creating a state of intersubjective and distributed labour where the children operate according to traditional classroom rules of behaviour during the creative expression and relegation of play rules, which then draws the adults into their world. Thus, the intervention creates an equalized zone of proximal development in the third space in the model where the sphere of pretence becomes governed by children; here, the children were engaged in shaping the narrative and gained the sense of agency that would later empower their participation in the everyday activities outside the Play World frame, as well as it led to their investment in structuring the overall activity.

This represents the next step in the expansive principle, sending the children back into the classroom, where they remain in charge, yet engage in classroom activities. This was the case when the participants, after having finished the last Play World sessions with the adults, informed the teacher that they wanted to write a new play based on the book characters and stage it with their parents as audience.

The children then took initiative to a three-hour long discussion where the content of new play was negotiated: Could new characters be added or not? Could there be more than one White Witch? In the end, with the help of the teacher who had served more as an external mediator for thought processes and shared labour, the play was written and staged.

A final step in cycle of the synergic zone of potential development thus happens when the children make the move out of the Play World and back into the classroom, making the expansive zone of proximal come full circle.

My argument is, then, that the four fluctuating and ever overlapping possible states of activity depicted in the model each make possible a certain kind of development which *together* forms the synergic zone of potential development in an additive activity system which is the product of the total sum of the activity in the four modules, each representing a separate cognitive activity system that stands in direct contact with all of other complementary systems, forming a cycle of learning and engagement.

Thus, when the children's free play becomes a journey back into the Play World and is mediated by the artefacts that have their origin in an adult-structured learning activity that has become personally meaningful to them, they make literacy development a part of their play instead of a part of hard laborious school work, and, as the quantitative results have shown, it is not a form of learning that may be deemed *good enough* to be suitable to take up time and place in the classroom but is in fact a learning activity which produces results superior to traditional approaches but in a case where *it is supplemented* with these.

In conclusion the proposed synergic zone of potential development is characterized by the dialectic shift between *to play* and *to stage a play*, to learn and to teach, and to instruct and to be instructed, and thus, by allowing participation on all actual levels of development, it becomes a form of learning through participation which is grounded in critical, intellectual activity and personally meaningful contributions. The system in which this takes place becomes larger than any

classroom, and the individual will be developmentally challenged by means of the spiralling mediation of peers who may or may not be more capable as well as the culturally saturated artefacts.

The Play World can be summarized as a CHAT-based experimental intervention, which incorporates joint adult–child dramatization of a text from children's literature, alongside general discussions, art production and free play in the classroom.

Specific practices tied to participation in the experimental context were contrasted with a control intervention, which lacked pretend play and consisted of conventional school practices. It was predicted that participation in the Play World intervention would significantly improve children's narrative competence and the presented results appear to corroborate this prediction, and the analysis of narrative competence, pre- and posttest scores in the experimental and control groups, indicates significant increases in measures of narrative comprehension, narrative length and coherence for the experimental group. It is fair to conclude from these findings that the Play World practice promotes the development of narrative competence in at least these three areas.

Furthermore, the ethnographic data points to the teaching environment saturated with culture-specific artefacts as constructing a new form of meaning making and participation, which led to interactions between children with dissimilar learning proficiencies that called for the critical reflection of internalized knowledge and beliefs in the more proficient as well as an increased comprehension in the less capable as a result of shared externalization of information and culture-specific ways of interacting in the Play World as well as the classroom, leading to improved social interaction in the whole of the system. In overall these findings point to children's situated cognitive labour as a more "true" resource for knowledge about intellectual (and social) capacities then the test models which are used for measuring said skills.

In consequence, the current test philosophies and their implementation in the Danish Public School must be regarded as downright objectionable based on the catalogue of ethnographic, anthropological and distributed cognitive insights which have been accumulated over the span of years from the early pragmatist philosophers and Soviet psychologist up to contemporary CHAT practitioners.

The Play World and the Danish Public School

The findings from the Play World project may thus contribute to the design of a new and useful *complementary* method for teaching literacy in elementary schools. The typical presentation of children's literature consists of reading stories aloud and showing illustrations. However, based on experiences from Swedish, Finnish and American colleagues, we see that there is a radically different way to introduce literature to children. Following Lindquist's (1995, 1996) and Hakkarainen's (2004) pedagogy and theory of narrative learning, a classic piece of literature has been introduced into an activity that encompasses play, drama and art; those very

activities are currently marginalized in public schools in California and suffer a similar fate in Denmark, as they are currently viewed as nonessential for the development of academic skills. By enacting the text of a novel with children, we created a space into which children could freely enter to actively explore different aspects of the novel, including the characters and their goals, setting, plot and actions.

When one aims a research programme specifically towards generating qualitative data alone, one may, as was the case with the original Play World project, find an increase in general literacy skills and yet, due to the single track data gathering process, discover oneself stranded without resources for generating convincing, *popular* verification of points which are fully accepted and honoured in scholarly and academic settings. Following, the unfolding of the research programme and the expertise which has been accumulated in its course – which could be used for furthering these seemingly worthwhile combined research programmes and teaching contexts – seldom leave the universities and situated community institutions in which they were undertaken; if we as practitioners in the field of educational and pedagogical research are to make our work fathomable for a general public and "sell" the projects and the insight gained along the course of our work to the policymakers, there is a concrete and pressing need for narrowing on a similar discourse of efficiency and result-oriented implementation, and it includes the idea of public opinion as an in-built concern in the research design in the form of *supplemental* data gathering that satisfies the public and political realities *as well* as meets our academic standards, thus not compromising the initial programme but expanding it for the sake of sustainability.

To ensure this I propose a dual method praxis that satisfies the needs for providing tangible, hard data as well as generating ethnographies that will allow for later revision and in-depth interpretation and open up the door to a deeper understanding of what is actually under concern: the culturally mediated nature of human thought and development and the foundation of human learning as a cross contextual endeavour.

However, on the one hand, we lack a coherent theory of child development as unfolding across multiple contexts and, on the other hand, the divergences between the knowledge and praxis of the responsible practitioners who implement the learning agendas in the classroom, and the policymakers: I propose the Play World as an intermediary zone of learning and growth which may ultimately include the broader of society if the people working with pedagogical forms of intervention on all levels gather round a willingness to both develop and share their knowledge as well as adjust their methods and forms of argumentation to address the political reality in which they exist.

When regarding the social integration, I propose further investigation into the basis of mutuality as a modus operandi of inclusion and holistic participations which heeds to actual developmental levels which ensures the continued development of both the strong pupils and the less so. We experience development of the strong child as a result of him or her serving the weaker ones by taking on the role of the instructor and facilitating the learning processes, as well the children are exposing each other to good forms of behaviour, increasing the likelihood of the same behaviour to

occur in the other (Bateson 1972, 1979) while at the same time becoming forced to critically reflect on their own knowledge. In the process the interrelation between the literary narrative and the children's personal narratives has come to take central stage as they engage in continued renegotiations of the rules of engagement, facilitated by the available artefacts: primary, secondary and tertiary.

I propose the concept of the synergic zone of proximal development as the theoretical perspective which captures this shift between child- and adult-structured spheres of activity as well as wish to relate the introduction of novel and expansive concepts up to a previous claim; as it is an idea based on empirical observatory data and theoretical expansion, it must be carried back into the contexts of learning for re-implementation and re-evaluation before it can be claimed to have any use; there is thus immanent need for a new project which incorporates this hypothesis in the planned research questions in order to either support or reject its claims, again using the learning contexts as a design laboratory for both higher-order academically theory testing and school learning.

References

Bateson, G. (1972). *Steps to an ecology of mind*. Chicago: University of Chicago Press.

Bateson, G. (1979). *Mind and nature*. New York: E.P. Dutton.

Baumer, S., Ferholt, B., & Lecusay, R. (2005). Promoting narrative competence through adult–child joint pretense: Lessons from the Scandinavian educational practice of play world. *Cognitive Development, 20*, 576–590.

Brown, A. L., & Campione, J. C. (1994). Guided discovery in a community of learners. In K. McGilly (Ed.), *Classroom lessons: Integrating cognitive theory and classroom practice*. Cambridge, MA: MIT Press/Bradford Books.

Brown, A. L., & Campione, J. C. (1996). Psychological theory and the design of innovative learning environments: On procedures, principles, and systems. In L. Schauble & R. Glaser (Eds.), *Innovations in learning: New environments for education* (pp. 289–325). Mahwah: Erlbaum.

Chaiklin, S. (2003). The zone of proximal development in Vygotsky's analysis of learning and instruction. In A. Kozulin, B. Gindis, V. Ageyev, & S. Miller (Eds.), *Vygotsky's Educational theory and practice in cultural context*. Cambridge: Cambridge University Press.

Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge, MA: Harvard University Press.

Cole, M. (2007). Phylogeny and cultural history in ontogeny. *Journal of Physiology – Paris, 101*(4–6), 236–246.

Cole, M., & The Distributed Literacy Consortium. (2006). *The fifth dimension – An afterschool program build on diversity*. New York: Russell Sage Foundation.

Daniels, H. (2001). *Vygotsky and pedagogy*. New York: Routledge.

El'konin, D. B. (1971). Toward the problem of stages in the mental development of children. *Soviet Psychology, 4*, 6–20.

Engeström, Y. (1995). Objects, contradictions and collaboration in medical cognition: An activity-theoretical perspective. *Artificial Intelligence in Medicine, 7*, 395–412.

Hakkarainen, P. (1999). Play and motivation. In Y. Engeström, R. Miettinen, & R.-L. Punamäki (Eds.), *Perspectives on activity theory* (pp. 231–250). New York: Cambridge University Press.

Hakkarainen, P. (2004). Narrative learning in the fifth dimension. *Outlines: Critical Social Studies, 6*(1), 5–20. Available online at: http://www.kajaaninkampus.oulu.fi/vaka/viidesdimensio/Narrativelearning.pdf

Hakkarainen, P., & Bredikyte, M. (2004). *Vertical integration in developmental teaching at the ages4–8years.*http://www.ceeol.com/aspx/getdocument.aspx?logid=5&id=5d1e6e18-cde8-4e35-88d3-6bc669c840b9

Hedegaard, M. (2002). *Learning and child development: A cultural-historical study*. Aarhus: Aarhus University Press.

Hedegaard, M. (2005, September) *A cultural historical approach to development*. In Proceedings from the first congress of the International Society of Cultural and Activity Research, Seville.

Hutchins, E. (1995). *Cognition in the wild*. Cambridge, MA: MIT Press.

Ilyenkov, E. (1977). *Problems of dialectical materialism – Concept of the ideal.* Online resource: http://www.marxists.org/archive/ilyenkov/works/ideal/ideal.html

Karpatschof, B. (2002). Den legende virksomhed. Et essay om den unødvendige leg som et nødvendigt træk ved menneskets virksomhed. *Psyke & Logos, 23*(2), 381–394.

Keller, C., & Dixon, J. (1995). Thinking and acting with iron. In J. Lave & S. Chaiklin (Eds.), *Understanding practice*. Cambridge: Cambridge University Press.

King, P. M., & Kitchener, K. S. (1994). *The development of reflective judgment in adolescence and adulthood*. San Francisco: Jossey Bass.

Leontiev, A. N. (1977) Activity an consciousness. In *Philosophy in the USSR, problems of dialectical materialism* (pp. 180–202). Moscow: Progress.

Leontiev, A. N. (1978). *Activity, consciousness, and personality*. Hillsdale: Prentice-Hall.

Lindqvist, G. (1995). *The aesthetics of play: A didactic study of play and culture in preschools*. Geteborg: Coronet Books.

Lindqvist, G. (1996). *Lekens möjligheter (The possibilities in play)*. Lund: Studentlitteratur.

Lindqvist, G. (2001). When small small children play: How adults dramatize and children create meaning. *Early Years, 21*(1), 7–14.

Palinscar, A. L., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension monitoring activities. *Cognition and Instruction, 1*(2), 117–175.

Pea, R. D. (1993). Practices of distributed intelligences and design for education. In G. Solomon (Ed.), *Distributed cognitions: Psychological and educational considerations* (pp. 47–87). Cambridge: Cambridge University Press.

Rainio, P. (2005) *Emergence of a Play World – The formation of subjects of learning in interaction between adults and children* (Research plan, working papers 35). Helsinki: Center for Activity Theory and Developmental Work Research.

Rogoff, B. (2003). *The cultural nature of human development*. Oxford: Oxford University Press.

Rossen, L. H. (2005) Digital historiefortælling i Californien: Unge latinamerikaneres identitetsdannelse i en modkultur. *Psykologisk set 58*, 12–23.

Rossen, L. H. (2006, April). *The Play World of the Lion, the Witch and the Wardrobe: Teaching literacy by making the book alive*. Conference presentation at American Educational Research Association, San Francisco.

Schousboe, I. (2002). Et livstidsperspektiv på leg. *Psyke & Logos, 23*(2), 395–411.

Scribner, S., & Cole, M. (1981). *The psychology of literacy*. Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (1978). *Mind and society: The development of higher mental processes*. Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (1981). The genesis of higher mental functions. In J. V. Wertsch (Ed.), *The concept of activity in Soviet psychology* (pp. 144–188). Armonk: Sharpe.