Ndlovu Pre-school project: Dennilton, South-Africa:

"It takes a village to raise a child." (African saying)

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Content

Introduction

This masterthesis is the report of a realistic evaluation (Pawson & Tilley, 1997) of the implementation of a Reggio Emilia based intervention at three pre-schools in Moutse district, South Africa. Two of them - Tholulwazi and Kopanang - are Ndlovu pre-schools; the Mma Lerato pre-school once belonged to Ndlovu but is now run by the community itself.

The main goal of this study is to improve the development of the children at the three preschools. To do so, intermediate goals have to be reached. During last year's visit by several staff members of Utrecht University, it was observed that the children do not get offered quality play. That is, activities are strongly teacher-directed, and during free play the children do not get any direction. Therefore, the first aim of the present study is to find an intervention which all the stakeholders can work with and improves the quality of the play. The Reggio Emilia Approach has been chosen to be implemented at the pre-school to achieve this goal. The first step is a theoretical exploration before designing the Reggio Emilia based intervention.

The model used to design the intervention at the pre-schools, the Reggio Emilia Approach, is an Italian pre-school program based on four pillars: 'Art work', 'collaboration and interaction', 'caregiver and community involvement' and 'working with projects' (Firlik, 2006). This approach is chosen because of the strong relation it requires between the pre-schools and the environment of the children which suites the collective aspect of the rural culture of South-Africa (Van der Laan, 2010; Hofstede, 2001). The effectiveness of the intervention is challenged by the required lower power distance to allow more input from the children (Van der Laan, 2010; Hofstede, 2001). That is, teachers should allow children to have more space in developing a program for the day. The function of a lower power distance in promoting fantasy play is discussed in more detail in the theoretical exploration.

The intervention is a fantasy play centre and training for the teachers in guided play which should improve the quality of play towards a more mature level (Bodrova & Leong, 2007), in the chapter 'Methods' there will be a more profound description of the intervention. The implementation will coincide with the implementation of a numeric play centre in the same classrooms (Hoppenbrouwer, 2011). The second aim of the research is to find out if this change in playing behaviour is also affecting the cognitive and English language development of the children in the present sample. Thirdly, the childcare specific believes of the teachers will be measured to see if this is more in line with the Reggio Emilia Approach now then it was a year ago. Finally, the caregiver and community involvement is stimulated by organizing more caregiver participation. This will start with a caregiver meeting every two weeks which will be developed with the teachers. In addition, it is the goal of this research to find a valid and reliable tool to measure caregivers involvement.

The research is enabled by the Ndlovu Care Group (NCG), that works with a community based model for integrated health-, child- and community care. The model works with the rural advancement plan, of which the main pillar is the Autonomous Treatment Centre, ATC; which provides care and treatment in case of acute health problems. The Community Care Health Awareness Mobilization and Prevention (CHAMP) program includes primary and secondary prevention and after the first treatment the model aims to motivate patients to keep taking their medicine to prevent setback. Ndlovu Care Group provides evidence-based services which work on three levels: the individual, the locality and the community as a whole (Tempelman, Slabbert, Goseling & Vermeer, 2010). This model is used for prevention and treatment of HIV/Aids and child related problems.

The preschools are part of the Ndlovu CHAMP Children's program (NCCP). The NCCP targets vulnerable children by empowering people in their environment, such as family members or caregivers. The NCCP offers the following programs: Orphans' Programme including the Child-

Headed Households (CHH), Nutritional units and pre-schools, Life skills Programme, Dental program and Environmental Education Program (Tempelman, et al., 2010).

To improve the quality of the pre-schools, realistic evaluation (Pawson & Tilley, 1997) is used to develop an intervention and to monitor the change at the pre-schools and effectiveness of the intervention. The first step in a realistic evaluation is profound theory based research of the actual or similar situations at the pre-schools. The basis of the theoretical exploration are last year's researches by J. van der Laan (2010) and R. van der Raadt (2010), which have provided a theoretical baseline for implementing the Reggio Emilia Approach at the pre-schools. The research of Van der Raadt (2010) shows that the children at the Ndlovu pre-schools (Tholulwazi & Kopanang) score significantly better on several cognitive test in comparison to children who do not attend any pre-school. A number of studies conducted by Van der Laan (2010) suggest that the context of the pre-schools is suited for the implementation of a Reggio Emilia based curriculum but some mechanisms have to be blocked. The present research starts with committing the baseline studies adapted from Van der Laan (2010) and Van der Raadt at the third pre-school, Mma Lerato. Outcomes of the baseline concerning the environment are discussed in the theoretical background as they supplement the baseline studies of last year. The results of the baseline study concerning the cognitive and English language development of the children.

The second step in the wheel of realistic evaluation (Appendix one) after the theoretical research is developing the hypotheses based on the theoretical framework. These hypotheses will describe the context of the situation, meaning the environment, culture, physical presence of people, buildings and space (Pawson & Tilley, 1997). The context and mechanisms are comprehensively described by Van der Laan (2010) as she examined the specific childcare believes, the extension of caregivers involvement, the general childrearing believes and the quality of the pre-schools. In the first chapter these studies will be used to describe the context, mechanisms and regularities of the pre-schools. The context enables mechanisms; the social processes which lead towards the regular outcomes (Pawson & Tilley, 1997). By the theoretical exploration of last year and

other similar situations a clear view of the Context, Mechanisms and Outcomes will lead to the CMO-configurations which will be described in the final paragraph of chapter one. These will be used as the hypotheses during the research as they give more insight into how the regular outcomes can be changed by blocking mechanisms.

1. Theoretical exploration

The research design is a realistic evaluation of the changes in the pre-schools. This asks for a research of the Context, Mechanisms and Outcomes. The context is described by Pawson & Tilley (1997) as the unchangeable environment of the intervention. The mechanisms are the social processes which are enabled by the context but could be changed by an intervention which stimulates other social process or blocks the former social process. To let an intervention work it should oppose blocking mechanisms, the intervention, to the undesired mechanisms. Therefore the theoretical exploration is an examination of similar cases and findings suggesting which blocking mechanism could lead to other outcomes. Last year the research of Van der Laan (2010) was focused on the possibility to implement the Reggio Emilia Approach at the pre-schools; this chapter will further explore that possibility. In the chapter 'Methods' the intervention is further designed.

This chapter shows a summary of the theoretical exploration of the context, the mechanisms, the current regularities, the blocking mechanisms and the expected outcomes. It will conclude with the hypothesis described in the Context (C), Mechanisms (M), and Outcome (O)- configurations (Pawson & Tilley, 1997).

1.1. Context

The following two paragraphs will focus on the cultural beliefs on a macro level and the context of caregiver involvement which cannot be changed by the intervention and will not ask for a blocking mechanism.

General childrearing beliefs on a macro level

During the research of last year the general childrearing beliefs were examined as a possible mechanism which had to be blocked by an intervention. But, as also stated by Pawson & Tilley

(1997), the culture is part of the context and hard to change. It would be too much to expect a cultural change in four months time. Treating the cultural dimensions as a part of the context, an unchangeable aspect of the situation, makes it an aspect which has to be taken into account while designing the interventions instead of a mechanism which has to be blocked.

Hofstede (1986; 2001) formulated 5 different cultural dimensions to describe a culture: (1) collectively vs. individuality, (2) high vs. low power distance, (3) High vs. low uncertainty avoidance, (4) masculinity vs. femininity and (5) long vs. short term orientation. Depending on the cultural believes based on the cultural dimensions (Hofstede 1986; 2001), teachers are interpreting 'play' and 'learning' in a cultural colored way. From the former research (Van der Laan, 2010) at Tholulwazi and Kopanang and the baseline study computed at Mma Lerato we know that the teachers have emphasized the importance of the collective (1); in return of loyalty the group takes care of its members. Harmony is seen as important and by negotiation shame is avoided (Van der Laan, 2010).

In addition, the teachers assume a high power distance (2) between them and the children, and the degree to which inequality is accepted by the teachers is high. The children have little input in the activities and are expected to listen at all times (Van der Laan, 2010).

Uncertainty avoidance (3) is high (Van der Laan, 2010) which means that there are strict behavioural rules and unpredictable situations are avoided (Hofstede, 2001).

Masculinity (4) is stressing on competition, maximal distinction between the genders and material success. Femininity is stressing on sympathy for the weak, social behaviour and relationship orientation (Hofstede, 2001). These two can both coexist in the community (Harkness, Super, & van Tijen, 2000). At Tholulwazi and Kopanang, masculinity is present in the form of competition and material success by giving a reward to good learners hoping others will put an extra effort to achieve the same; femininity is present in supporting the weak and the believe that educational development should be in balance with social development (Van der Laan, 2010). In the baseline study at Mma Lerato a deviation is found which suggests that the

principal of Mma Lerato does not focus on social development but focuses more on educational development, she believes that the weak students should not be supported. They should learn from the example of others doing right. This indicates that Mma Lerato is more masculine focussed.

The former research and the baseline study do conclude that the teachers have a short term orientation (5) (Van der Laan, 2010); they plan ahead with for example themes, but it is not clear what the activities within that theme will be for the next day.

Caregiver involvement

One of the pillars of the Reggio Emilia Approach is the caregiver and community involvement (Firlik, 2006). However, it is also stressed in the Guidelines for Early childhood education of the South-African government that early childhood interventions have a lack of using the African community wisdom (Unicef, RSA Department of social development, 2006).

Caregivers could be an important link to the community wisdom and a collective way of running the pre-school. During last year's research no valid and reliable tool to measure the amount and quality of caregiver involvement was available. However, it was observed that in many areas the caregivers still could be stimulated to participate.

To inspire the caregiver meetings and to develop a measuring tool, the categories of Epstein (1995) will be used. Epstein (1995) describes six categories of caregiver involvement: parenting, communicating, volunteering, learning at home, decision-making and collaborating with community.

The caregivers are often badly educated and stay at home as they do not have a job (Brands, 2009), which creates boundaries of what you can ask of the caregivers. However, it also creates opportunities as they have spare time to spend at the pre-school.

1.2. Mechanisms, Blocking Mechanisms and Outcomes

Specific childcare believes on a micro level

The Reggio Emilia Approach works with four pillars: Working with projects, working with art, interaction and collaboration and caregiver and community involvement.

Using this framework, this research describes the current mechanisms and regularities with respect to the Reggio Emilia Approach. At first the pillars 'working with projects' and 'working with art' will be addressed shortly as they are not part of the intervention. These two pillars are already part of the curriculum at the pre-schools and do not need any urgent change. The pillar 'interaction and collaboration' will be addressed more profoundly as this pillar is the basis for the 'fantasy play centre intervention' and the pillar 'caregiver and community involvement' as this is the basis for the 'caregiver involvement intervention'. The regularities are the results of the mechanisms within this specific context. The mechanisms and regularities concerning the fantasy play can be described in two steps: the first step is the playing behaviour of the children when they do not get any direction. This will be measured during the baseline observations of fantasy play. It is assumed that fantasy play has an effect on the cognitive English language development so the second step is measuring the cognitive and social development of the children. The baseline is measured by Van der Raadt (2010) at Tholulwazi and Kopanang and by my own research at Mma Lerato.

1.2.1. Working with projects

The projects in the Reggio Emilia Approach are used to let the children explore one theme from several sides (Stegelin, 2003); instead of working on language, numeric skills and social skills the children explore a theme (for example the weather) by using those areas. The teachers work with weekly themes which the children can explore in-depth (Van der Laan, 2010), though the themes are not tuned on the preferences of the children like the Reggio Emilia Approach proposes. Due

to a lack of materials the children play outside when they have free time and practice gross motor skills (Van der Laan, 2010).

1.2.2. Working with Art

The teachers of the pre-schools do a lot of art work during the day but mostly this means the children are copying an example (Van der Laan, 2010). As is also shown in the classrooms, no art made by the children is showed, only the examples of the teachers and paintings of a professional painter on the wall. The children do take their self-made art with them at the end of a theme so they can show them at home.

1.2.3. Interaction and collaboration

The Reggio Emilia Approach distinguishes three different types of teachers in the environment of children: (1) other children are the main teachers of infants, (2) the older people in their environment like caregivers, community and teachers and (3) the physical surroundings of the child (Firlik, 2006). Copple and Bredekamp (1997) stress that a child needs a balance between child-centred and adult-centred learning to get the most out of an experience. The intrinsic motivation of the child during child-centred learning combined with the challenge a teacher can add to that has the key balance to benefit most from the activities.

If no direction to fantasy play is given by the teachers, children will develop fantasy play but it will be less effective since children tend to repeat the same actions over and over again, use props realistically, have a play with little or one role based on one prop and use little language. They also don't coordinate actions with each other and do parallel play with no planning before the game starts. The children will fight over the popular props and will be less concentrated with the play so they are not in for it for more that 5 to 10 minutes (Bodrova & Leong, 2007).

Blocking mechanism 'interaction and collaboration': fantasy play

Van der Laan (2010) emphasizes that uncertainty avoidance and high power distance present at the pre-schools form a challenge to install the more free Reggio Emilia Approach, as this approach commands more input from the children. The guidelines for Early childhood development (Unicef, RSA department of social development, 2006; p47) state that '*children learn best when the everyday activities include opportunities for imaginary play*'.

To make the play as constructive as possible children have to be challenged and to have the space, props and toys to make mature play (Bodrova & Leong, 2007). Stimulating diversity in play, dramatic play props should be accessible and changing all over the time and it should also be linked to what they see in their environment. Children should have different areas in which they can play and find different toys. In this way they can come to diverse play and extend their playing (Davey-Zeece, et al., 2000; Bodrova and Leong, 2007).

Tools of the Mind

To develop a curriculum for the centre, the research will make use of the Tools of the Mind (TOM) curriculum (Barnett et.al. 2008; Bodrova & Leong 1996). It is found that the TOM improves classroom quality and children's excusive functioning as they are more capable to regulate and control their own physical, emotional and cognitive functioning. The teachers now have a mainly adult-guided teaching method (Van der Laan, 2010). TOM is based on an active participant learning and while it is child-centred it also has a role for the teacher and focuses on self-regulation. The basic principles of the curriculum as described by Barnett et al. (2008) are: (1) children construct their own knowledge; (2) development cannot be separated by its social context; (3) learning can lead development; and (4) language plays a central role in development.

TOM guides teachers in supporting the children in developing certain psychological tools. These tools can be described as cultural-based symbolic artefacts. If internalized, these images, symbols, or graphic organizers are helpful for children to master their own psychological functioning. By promoting mature dramatic play the children develop these tools, which will help them to master perception, memory and attention in an advanced way (Barnett, et al. 2008). Dramatic play is the leading mechanism in developing self-regulation and so the curriculum is play-based where teachers and child both play an essential role. The teacher helps the children to write plans and to reach a consensus when they disagree with each other. The dramatic play eventually leads to the practice and internalisation of social rules.

To stimulate the development of mature play the teachers can intervene by (Bodrova & Leong, 2007):

1. Giving a minimum of 40-60 minutes to play. The play should not be interrupted by the teacher but can be guided by the teacher to help the interaction between children.

2. Provide themes that extend children's experiences and enrich play. Children naturally aim at the basic roles of a theme; the sickness and health theme is translated in playing the doctor. The teacher can help by identifying other roles and actions.

3. Choose appropriate props and toys. The toys give a context to the play but should also have more than one function. The children should be free to attribute specific functions to the materials. The props also remember to the roles and help to self regulate their actions.

4. Help children to plan their play, by asking what they intend to do. This way they start talking about the scenario before playing it. Reviewing the play when it is just over helps to extent the play to the next day. Children can draw their plan before/after the play.

5. Monitor the progress of play, observe the play with the criteria of mature play and do (as little as possible) suggestions.

6. Coach individuals who might need help.

7. Suggest or model how themes can be woven together. Questions that start with 'what if... ' can model the children in opening up another theme in the playfield.

8. Model appropriate ways to solve disputes.

9. Encourage children to mentor each other in play. By giving the older children more responsibility in developing fantasy play they can lift the level up for the whole group.

These interventions should stimulate a better quality of fantasy play.

Good 'make-believe play', also called mature play, is performed when the children are creating their own pretend scenario and act it out. While doing this, they invent props which fit their roles and give symbolic meaning to props if the correct one is not there. The roles have specific characteristics and the children may play more than one role in one game but the change of role will become clear from the change of actions and language. The children use long dialogues about the content of the play and use language during the play to explain what they are doing. This involves a lot of interaction about the scenario and props before and during the play. During the play they use language a lot as they make their fantasy clear to others and direct others by making the scenario clear. The roles interact with each other as all the roles have a part in the scenario.

Language also has an important role in solving problems about disagreements, instead of fighting over props. The children can continue the play for several days while extending it with new ideas.

Effects of fantasy play on Cognitive and English language development

All babies are used to ask for what they need by crying. As they grow up, children have to learn to control their emotions, behaviour and attention (Neuman, Copple and Bredekamp, 2000), unfolding a high level of dramatic play supported by grownups is a measure to do so.

The effects of pretence and fantasy play are a better understanding of other minds, or mindreading (Nichols & Stich, 2000). Pretence play based on simulation of others makes the

understanding of those others easier. Besides that, the ability of fantasy play has a correlation with counterfactual reasoning (Goldman, 1992), conditional planning (Goldman, 1992; Harris, 1993), empathy (Currie, 1995b; Goldman, 1992), moral understanding (Currie, 1995c), literary appreciation (Currie, 1990, 1995a), and visual imagery (Currie, 1995d). Also, attention, memory and perception are practiced by fantasy play (Barnett et all, 2008). Bodrova & Leong (2007) say that using language is an essential aspect of mature fantasy play. Therefore they state the use of language can be stimulated by fantasy play which benefits the development.

1.2.4. Caregiver and Community involvement

Within the Reggio Emilia Approach the community and the caregivers of the children is seen as an essential part of designing the education of young children (Mercilliott-Hewet, 2001). The involvement of the community in Early childhood education is important to make the children grow-up in a holistic way. Besides, the children often show more interest in things they see around the instead of distant things they do not know. Teaching children about the see when they have never seen one will not as exiting as showing them how their fathers car works (Gandini, 1994).

Among other results, research has shown that the involvement of the caregivers results in higher grades, better school attendance and increased motivation and self-esteem for the children . The more the caregivers are involved at an earlier stage in the education of their children, the better the effects are (Cotton and Wikelund, 1998). The effects of caregiver involvement were found to predict the educational career twice as good as the social economical status of the caregivers (Walberg, 1984).

 Blocking mechanism caregiver and community involvement

The stimulation of the caregivers to participate in at the pre-schools mentioned in the guidelines for Early childhood education because this stimulates the caregivers also to participate in later phases of the education of the children. By involving the parents in the daily issues at the pre-

school and the development of the child the caregivers gat a chance to get better insight in their role in taking care of the child and extend this role beyond their own homes (Unicef & department of social development, 2006).

This research will aim at exploring the effects of the fantasy play centre on the playing behaviour of the children and their cognitive development and English language development. Improving the caregiver involvement will exist of caregivers meetings once every two weeks to explore how they can be involved in the work of the pre-schools.

1.5. Research questions

A realistic evaluation focuses on the question 'what works for whom in what situation?' This research focuses therefore on the question; 'does the fantasy play centre work by improving the fantasy play and the development of the children?' and; 'does the caregiver involvement improve the caregiver involvement of the caregivers?' The sub-question for both interventions is whether the teacher can work with the implemented innovations. By organizing guided play and implementing the centres the children should show more spontaneous and challenging fantasy play, or as defined by the Vygotskian approach: mature play (Bodrova & Leong, 2007). The first step in the evaluation is to monitor the change in playing behaviour that can occur in the centres. If a development in playing behaviour is observed, the second step will be to measure the development of cognitive skills and English language skills. Besides that the evaluation also aims at answering if the intervention works for the teachers who have to keep working with the new curriculum. This means they have changed some of their 'childcare specific believes' towards a more child-centred way of teaching and accepting more influence and involvement of the caregivers.

Research question study one: Does the fantasy play centre with guided play improve the development of the children at the Ndlovu pre-schools?

Sub-questions:

How is the quality of the fantasy play of the children affected by the intervention?

How is the cognitive development and English language development of the children affected by the intervention?

How are the childcare specific believes of the teachers at Ndlovu affected by the intervention?

The caregiver involvement is essential to the Reggio Emilia Approach, to successfully implement the curriculum the caregivers will have to play a role in the pre-schools activities. The first step are the caregiver meetings, if these really have effects on the quality of the caregiver involvement will determine the success of the intervention.

Research question study two: Is the caregiver involvement improved, quantitatively and qualitatively, by the organized 'caregiver meetings'?

1.6. CMO Configurations

In the following paragraph the CMR-configuration; the context mechanisms and regularities of the current situation, will be written out next to the CMO-configuration, describing the context, blocking Mechanisms and presumed Outcome of the intervention.

Figure 1: Context, mechanisms and outcomes, (Pawson & Tilley, 1997)

CMO-configurations (hypothesis)

Sub-question one: does the fantasy play centre works for the development of more mature play of the children?

In a culture with a high power distance, high uncertainty avoidance, collectiveness, short term orientation and a mixed feminine and masculine orientation → the teachers can learn to give enough time, enrich the play, help children to choose and plan their play, monitor the process, coach individuals, suggest to interwoven themes, help solving arguments, encourage mentorship by children which enables → quality and mature fantasy play to be developed by the children.

Sub-question 2: does the development of more mature play works for the children to develop better cognitively?

In a culture with a high power distance, high uncertainty avoidance, collectiveness, short term orientation and a mixed feminine and masculine orientation → quality fantasy play is developed by the children which leads to → better self regulation & inhibition, better working memory, improved attention and improved language development.

Sub-question three: Does the fantasy play centre work for the teachers as a tool to enhance the curriculum of the pre-schools?

In a culture with a high power distance, high uncertainty avoidance, collectiveness, short term orientation and a mixed feminine and masculine culture → the teachers agree on child-centred teaching and to give more direction in free-play which makes → the teachers interact more freely by giving the children space to discover their preferences but also by challenging the child.

Is the caregiver involvement improved, quantitatively and qualitatively, by the organized 'caregiver meetings'?

In a culture with a high power distance, high uncertainty avoidance, collectiveness, short term orientation and a mixed feminine and masculine culture → the teachers start to think of the caregivers as a resource to improve de education at the pre-schools, both in supporting the pre-school and in supporting the children in their learning → the caregivers are expected to help with improving the pre-school education when the teachers ask for that.

2. Research design

Before implementing the intervention a realistic evaluation requires observations to test the hypotheses (Pawson & Tilley, 1997). In the former research (Van der Laan 2010; Van der Raadt 2010) the assumptions made from the theoretical exploration have been checked with the stakeholders and are submitted in a refined way to the theoretical exploration of this research. To continue the involvement of the stakeholders during the implementation of the play centres teacher meetings will be organized every two weeks to monitor the process and to define obstacles.

2.1. Methods

As described in preceding sections, the Reggio Emilia Approach is based on working with projects, interaction and collaboration, art and caregiver and community involvement (Firlik, 2006). It is a western curriculum based on the individual child, therefore the intervention is designed together with the teachers and it is set-up in line with the guidelines for early childhood education of the South-African government.

Since 'working with projects' and 'art' already are a big part of the curriculum used by the teachers the intervention will focus on improving the 'interaction and collaboration' and 'caregiver and community involvement'.

The intervention design 'interaction and collaboration': the fantasy play centre

The Guidelines for Early childhood education (Unicef & department of social development RSA, 2006) aim at making the children ready for primary school on three themes: literacy skills, numeric skills and life skills. Fantasy play has shown to work stimulating towards learning life skills, to improve the concept of giving a symbolic value to objects or pictures (Bodrova & Leong, 2007) and to improve the literacy appreciation (Currie 1990, 1995c). Therefore the intervention will include a fantasy play centre. In each pre-school two centres will be set up, one numeric

centre and one fantasy play centre in which a more teacher guided method instead of teacher directed method will be practised. Some of the time the children play outside can be used to play in the play centres which will exist of newly provided materials. Besides that, all classrooms will be provided with a play centre including multi-usable props of different materials and shapes.

The three pre-schools all have a different classroom set-up. Mma Lerato has one classroom for all children. Kopanang has 3 classrooms: for babies (2 and 3 year olds), toddlers(4 year olds) and Grade R(5 and 6 year olds), which makes it easier to provide activities and materials which challenges the whole class. Tholulwazi has only a Toddler (2, 3 and 4 year olds) and a Grade R group (5 year olds). At Tholulwazi and Kopanang the children are divided in different groups which positively influence the collaboration between children (Van der Laan, 2010). At Mma Lerato however the activities are carried out with the whole group as there are no separate classrooms for the different age groups.

The intervention design 'Caregiver and community involvement'

In addition to the fantasy play centre the intervention will exist of making the caregiver participation part of the pre-school strategy to cope with challenges and to improve the involvement of the caregivers in their child education in an early stage. The guidelines for early childhood education (Unicef and the department of social development, 2006) have an emphasis on the caregiver involvement to improve the chances of the children to escape the poverty trap. During the teacher meetings the teachers show great interest in making the cultural heritage part of the fantasy play centre. Therefore materials will be provided and the parents and community can help shaping the play centre.

The high power distance also seems to be a challenge for more caregiver involvement as they are not expected to participate in the decision making progress. Van der Laan (2010) used the categories of Epstein (1995) to come to a conclusion about how the caregiver involvement can be improved at Tholulwazi and Kopanang. The same list has been used during the baseline at Mma

Lerato. The list below shows an overview of activities which were not in practice during the baseline studies. These activities could be part of a blocking mechanism to improve caregiver involvement. If the name of a preschool is written behind the activity that school alone has shown an interest in implementing these activities:

• Discussion groups for caregivers (Kopanang)

• Family support programs to assist families with health, nutrition and other

Services. (Tholulwazi)

• Talking with the teacher about classroom rules. (Kopanang)

• Information on skills the student acquire in each grade. (Tholulwazi)

• Quarterly information folder (students work, important notices, memos)

• School and classroom volunteer program (Mma Lerato)

• Participation in fundraising activities in the school: cultural day with dances. (Kopanang)

• Creating materials for the pre-school: plastic mats (Tholulwazi)

• Homework that requires the children to discuss with their families (Mma Lerato)

• Presentations from family (traditions: stories & dances) (Kopanang)

 The most popular items were for the caregivers to make labour intensive materials or led the community elders explain about the tribe traditions such as stories and dances (Van der Laan, 2010). The most important involvement of caregivers is doing learning activities at home (Cotton and Wikelund, 1998).

2.2. Measurements

After the theoretical exploration, designing the CMO-configurations and checking the configurations with the stakeholders the fourth step of a realistic evaluation is to specify the intervention and bring it into practice. Pawson and Tilley (1997) speak of a pre- and post-test to measure the effects of the intervention and to measure if this really makes a change.

As will be shown in the results section the baseline study shows significant differences between the pre-schools; Tholulwazi, Kopanang and Mma Lerato. Therefore the baseline study of last year

conducted at the Ndlovu pre-schools cannot function as a control group for all the pre-schools. Two different experimental designs will be used to measure the effects of the intervention. The first will measure the effects of the intervention by using the results of last year's class at Tholulwazi (N=11) and Kopanang (N=27) to function as a control group.

The children are tested by a person who speaks their mother language, the tests of the control group are conducted with the help of a teachers at the pre-school. This year the experimental group is tested with help of the coordinator of the nutritional units and pre-schools because of practical considerations. The use of last year's results will make the bias because of the test-effect smaller but because of the lack of randomization and the time difference the bias due to individual differences and external effects bigger (Boeije e.a., 2009). The children who were older than 60 months at the day of testing are removed from the baseline data list to avoid bias by age. The means will be compared by an independent sample t-test.

The sample of children of the age 3 and 4 years who are attending Mma Lerato, which has only one classroom (N=25) will be submitted to a pre- and post-test on cognitive development and English language development. Both the pre- and post-test will be conducted with the help of the coordinator of the nutritional units and the pre-schools. The results will be analysed with a paired sample t-test.

Cognitive development

To measure the cognitive development, all children of the age of 3 and 4 at Tholulwazi (N=15), Kopanang (N=24) and Mma Lerato (N=25) are tested on inhibition, working memory and attention. It is also tested if the fantasy play centre has an effect on the (English) language development.

Inhibition is tested by the Shape Stroop (Garon et. all, 2008). The children saw two big pictures of animals for example a dog and a monkey. Inside this picture a smaller version of the other animal

was placed. So the smaller monkey was placed over the bigger dog and the smaller dog over the bigger monkey. The children were asked to point at a specific small animal. If they would point at the big picture they would score lower on inhibition. The pre-test showed if the children know the difference between big and small and the different animals. Only if they succeeded in recognizing 'small and big' and the different animals during the pre-test , inhibition was measured by 12 test items.

Working memory is tested by three tests out of the Automated Working Memory Assessment (Alloway, 2004; Alloway et all. 2008): digit recall, non-word re-call and the odd one out which are suitable for this age category (van der Raadt, 2010).

The Automated Working Memory Assessment does not work by language and is therefore less sensible for language bias (Campbell et. all, 1997). It is also focusing on the process instead of knowledge and the tests are therefore less biased by culture. Alloway and colleagues (2008) found that the AWMA is a reliable test for working memory.

The digit recall tested how many numbers the children could remember in a row. The first row existed of 1 number the child had to repeat. If the child made one mistake in the first 4 rows it would get a fifth row, if it made two mistakes a sixth row was added. With four or more correct reply's the child could go to the next round and one number was added to the row. If a child had less than four rows correct the test would stop and the score would be assessed counting all the correct replies together.

Non-word recall is similar to the digit recall, only that the children now have to repeat non-words. The assessment of the raw score is the same as the digit recall. The test words do not include Zulu or Northern Sotho words and are therefore not biased by language (van der Raadt, 2010).

The odd-one-out exists of two aspects. The first is recognizing the odd shape between three shapes of which two are the same and the third one is different. The second aspect is the working memory as the child sees three empty boxes and has to point at the box in which the odd-one-

out was placed in the former picture. Every round the child had to remember one extra odd shape and point at it in the empty boxes. After three mistakes the test stopped.

Attention was measured with Visual search (Enns and Cameron, 1987). The test exists of three rounds. In each round the children had to look at 25 pictures of animals of which three were elephants. The other pictures were similar to the elephant in colour and some feathers. The children had one minute to find and point at the elephants. The amount of elephants found and the time in which they were found was measured.

Language development

To measure language development the Peabody Picture Vocabulary Test (Dunn & Dunn, 1997) and the non-word recall were used. In the PPTV the children heard an English word and had to point at the picture matching that word out of four pictures shown. Each round exists of 12 words, if more than 8 mistakes were made the test stopped. The test started at the lowest level because English is the second language of the children, for the same reason only the raw scores were used.

The verbal short-term memory was measured by the non-word recall (Messer et. all, 2010), the same test described at the digit-recall test.

Operationalisation and definition of the quality of fantasy play

To measure the effects on the quality of the fantasy play the play is monitored by making a film every two weeks of at least 30 minutes in the fantasy play centre to assess the quality. The more mature the fantasy play is, the higher the quality. To measure mature play first there has to be a clear view on what mature play is. As operationalised by Bodrova & Leong (2007) mature play exists of 8 items. Each item will be scored on a 7 point Lickert scale. The pre-cool uses 13 items to measure how teachers stimulate the quality of fantasy play. By a small adjustment these items are translated to measure the quality of the play of the children which means that questions like:

'Do you stimulate that children play fantasy play together?' were translated into: 'Do the children play fantasy play together?' The scores are pilled in a 7 point Lickert scale.

The items can be divided in 4 scales of fantasy play: the duration of play, materials, social play and complexity.

The duration of play scale exists of three items: playing without interruption, duration of the play, and prolonging the same play over several days. On the six measuring moments the Cronbach's α is calculated: at T1 Cronbach's α = .691, at T2 Cronbach's α = .920, at T3 Cronbach's α = .918, at T4 Cronbach's α = .985, at T5 Cronbach's α = .667, at T6 Cronbach's α = .947. The reliability of this scale is classified as moderate to high (Field, 2005).

The materials scale exists of 5 items: using materials which enrich the play, fantasy play with an object, playing together with an object, using the materials what they are meant for. This aspect has a Cronbach's α at T1 of .954, at T2 Cronbach's α = .900, at T3 Cronbach's α = .968, at T4 Cronbach's α = .930, at T5 Cronbach's α = .935, at T6 Cronbach's α = .521. The reliability of this scale is high except for the last measurement which is classified as low (Field, 2005).

The social play scale exists of 6 items: all children are involved in the play, the children are doing fantasy play together, the children having fantasy play together with an object, the children are arguing, the children are making agreements about their roles, the children are using language. Social Play has a Cronbach's α at T1 of .942, at T2 Cronbach's α = .948, at T3 Cronbach's α = .977, at T4 Cronbach's α = .931, at T5 Cronbach's α = .935, at T6 Cronbach's α = .752. This is classified as a moderate to high reliability (Field, 2005).

The complexity scale exists of 7 items: the children are learning from each other, the children are playing the role of someone else, the children are playing several (and separate) roles, the children have coordinated roles, the children know who they will play in advance. The complexity aspect has a Cronbach's α at T1 of .818, at T2 Cronbach's α = .943, at T3 Cronbach's α = .983, at T4 Cronbach's α = .980, at T4 Cronbach's α = .985, at T6 Cronbach's α = .958. The reliability of this scale is classified as high (Field, 2005).

The correctness of the observations is controlled by researcher triangulation (Boeije, e.a., 2009). Three observation movies, one of each pre-school at T4, have been assessed a second time by an independent researcher, a graduated researcher in psychology, who had the description of Bodrova & Leong (2007) about immature and mature play. Because the data are not normally distributed a Spearman correlation is calculated. The correlation between the two assessments on the 'duration of play' scale is significant, $r = 1$, p (two- tailed)$< .01$. The Spearman correlation between the assessments on the 'materials' scale is also significant with a $r =1$, p(two-tailed)$>.05$. The assessments on the 'SocialPlay' scale gives a Spearman correlation of $r=1$, p (two-tailed) $< .01$. And final the two assessments on the 'complexity' scale have a significant correlation, $r=1$, p(two-tailed)$<.01$.

Childcare specific beliefs

To measure if the intervention also works for the teachers, all 8 teachers will be part of a focus group discussion about the NAEYC-themes using vignettes (Appendix 2). The focus of this discussion is to see if the teachers have changed their childcare specific believes more towards the four pillars of the Reggio Emilia Approach. The focus group discussion is taped, transcribed and coded according to the five aspects of the NAEYC: learning environment, teaching methods, assessment, relationship with families and curriculum.

Caregiver involvement

A focus group discussion was held to measure the current level of caregiver involvement and the desired caregiver involvement using the dimensions of Epstein (1995) (Appendix 3).

In sequence three focus group discussions were held during the caregiver meetings to measure the feasibility of caregiver involvement at the pre-schools. The outcomes of the focus group discussion with the teachers are used to give direction to those meetings. The ideas of the

teachers were leading in the discussions and further developed with the caregivers of the children.

3. Results

The results section will consist of five paragraphs: (1) the baseline study at Mma Lerato compared to the other pre-schools, (2) the results of monitoring the development of the fantasy play, (3) the results of changes of the childcare specific believes of the teachers, (4) the results of the cognitive tests and English language test (5) and the results of the intervention on caregivers involvement. This chapter will give an answer to the question: "What works for whom in which circumstances? "(Pawson & Tilley, 1997).

3.1. Baseline measurements at Mma Lerato compared with Kopanang and Tholulwasi

This paragraph will discuss the baseline at the Mma Lerato and the comparison with the first measurements at the other two pre-schools (Van der Raadt, 2010). Because there are no standardized results for these tests available they are compared with the other groups. Because the sample sizes of the groups are not equal the Hochberg Post-Hoc test and the Games-Howell Post-Hoc test are performed to control for unequal variance.

Inhibition

Inhibition is tested by the Shape Stroop. There is a significant difference between the groups as Tholulwazi scores best, Mma Lerato follows and the Children of Kopanang scores significantly lower, F (2, 83)=1.533, p<.05.

Working memory

The working memory was tested by the AWMA tests: digit recall, non-word recall and the odd-one-out. There is a significant difference between the three groups on the Digit recall test: F (2, 71)=19.526, p < .05. Mma Lerato scores significantly lower on the tests than the two other pre-schools. The non-word recall shows a significant difference between the pre-schools as Mma

Lerato scores significantly lower on the test, $F_{(2, 78)}$ = 10.431, p <.05. On the odd-one-out memory score the groups do not show a significant difference: $F_{(2, 67)}$ = .534, p>.05.

Attention

The three pre-schools do not score significantly different from each other at the visual search; $F_{(3, 81)}$= .823, p > .05.

English Language development

The English language development of the children at Kopanang is significantly better than at the other pre-schools $F_{(2, 82)}$= 22.322, p<.01.

3.2. The development of fantasy play

The quality of the fantasy play is divided in four aspects: duration of play, use of materials, social play and complexity. Together these factors measure the quality of fantasy play.

Overall the aspect of the 'duration of play' did not improve significantly, $F_{(5)}$=1.212, p> .05. After the first introduction of the new material and the instructions to the teachers about 'guided play' the duration of the play was prolonged but after a few measurements the score for the duration of the play is stabilised and lowers a bit (table one).

	Mean	Std. Deviation	N
Durartion of play1	3.4444	.69389	3
Durartion of play2	4.2917	1.52468	3
Durartion of play3	4.2222	1.34715	3
Durartion of play4	4.7778	1.57527	3
Durartion of play5	4.6667	.57735	3
Durartion of play6	4.5556	.83887	3

The aspect 'materials' (table two) also did not improve significantly, $F(5)=.858$, $p>.05$. Just as the duration of the play, it improves strongly during the first observations and stabilizes after three observations.

	Mean	Std. Deviation	N
Materials1	3.3333	1.44684	3
materials2	4.2000	1.44222	3
materials3	4.4667	1.28582	3
materials4	4.5333	1.33167	3
materials5	4.6000	1.40000	3
materials6	5.0000	.40000	3

The aspect 'Social Play' (Table three) is improved significantly $F(5)= 2.560$, $p<.05$. But the improvement of Social Play is also stronger in the beginning than it is during later observations.

	Mean	Std. Deviation	N
SocialPlay1	2.7778	1.22852	3
SocialPlay2	3.9769	1.40246	3
SocialPlay3	4.3333	1.30171	3
SocialPlay4	4.3333	1.30171	3
SocialPlay5	4.7222	1.29458	3
SocialPlay6	4.8889	.78764	3

The aspect 'complexity' (Table four) is not improved significantly $F(5)=2.236$, $p>.05$. It does show a strong improvement in the first observations and then stabilizes.

	Mean	Std. Deviation	N
Complexity	2.4762	.70470	3
Complexity2	3.7619	1.32737	3
Complexity3	3.7917	1.22687	3
Complexity4	4.2083	1.30104	3
Complexity5	4.6250	1.75000	3
Complexity6	4.7917	1.12731	3

Taking all the scores for the pre-schools together we see a strong, but not significant, improvement during the first observations. The installation of the play centres at the pre-schools and the first instruction of the teachers had the biggest effect on the quality of fantasy play. The small improvements measured in most aspects during the later observations suggest that the quality is still developing. The improvement suggests that the installation of the play centres and guided play works for the children to improve their fantasy play.

3.3. Cognitive development and English language developement
Working memory

The children who were submitted to the intervention at both Tholulwazi and Kopanang scored significantly lower on the Digit-recall, $t(30)=5.272$ $p<.01$ & $t(41)=5.703$, $p<.01$. This means their working memory shows a lower capacity compared to last year. At Mma lerato there is no significant difference after the intervention: $t(21)=.624$, $p>.05$. The memory score of the Odd-one-out does not significantly differ at Tholulwazi, $t(27) = -1.441$, $p>.05$, Kopanang $t(35)=-.199$, $p>.05$ or Mma Lerato, $t(16)=-.111$, $p>.05$. The experimental group at Tholulwazi score significantly lower on the non-word recall, $t(40)=2.230$, $p<.01$. And also the children at Kopanang score significantly lower with the intervention: $t(40)= 2.502$, $p<.01$. Mma Lerato scores significantly higher on the non-word recall after the intervention: $t(19):-2.990$, $p<.05$.

Inhibition

At Tholulwazi the children do not score significantly different at the Shape Stroop test, t(28)=.719, p>.05. At Kopanang the children with intervention score significantly lower, t(48)=2.591, p<.01. At Mma Lertao the children are tested before and after the intervention and score significantly better after the intervention than before: t(10)=-2.556, p<.05.

Attention

At Tholulwazi no significant difference at the Visual search test was found, t(26)=.647, p>.05. At Kopanang the children with intervention score significantly lower on the Visual search test, t(49)= 2.379, p<.01. The children at Mma Lerato do not score significantly higher on Attention after the intervention: t(20)=1.477, p>.05.

English language development

At Tholulwazi no significant change in the knowledge of English is recorded, t(29)= .474, p> .05, And at Kopanang the experimental group shows a significant decline in the knowledge of English, t(39)=3.643, p<.001. At Mma Lerato no significant change is measured, t(18)=-465, p>.05.

Looking at the results it shows more than once that Kopanang scores significantly lower on the cognitive tests and the English language test. The reason for this significant decline on some of the test can be attributed to several factors and a full reflection of the results can be found in the conclusion. But one important factor is probably the different tester during the pre- and post-test. During the pre-test the children were tested by their own teacher while during the post-test

the coordinator of the nutritional units and pre-schools tested the children. The children could be less a ease with the coordinator which lowers the score of the post-test and the teacher could be more inclined to help the children with intonation or gestures to improve the score of the children.

3.4. Childcare specific beliefs of the teachers

The results of the focus group discussion on the five pillars of the NAEYC; learning environment, teaching methods, assessment, curriculum and relationships with families, will be compared with the results of last year to monitor the process with respect to the Reggio Emilia Approach.

Learning environment

The learning environment of the children should stimulate them and give them a safe environment to explore new things (Neuman, Copple and Bredekamp, 2000). The Reggio Emilia Approach focuses on exploring themes from different angles and aim to make the environment stimulating to the children (Stagelia, 2003). The teachers show a strong preference to protect the children from physical harm. One of the teachers (R2) responded: "The children should never leave the playground without our supervision" Another one(R7) adds: "We are the carer of these children, we have to protect them." Going out with the children to see what is behind the gates is not accepted, as one of the teachers (R2) explains: "They will run away because they will think they can go home." And another specifies (R5): "Going to the nutritional unit however can be accepted, as long as someone is with them." No big difference can be seen between the focus of last year and this year's discussion.

Teaching methods

The teaching methods of the teachers should balance between teacher centred and child centred in the activities as the children explore along the lines of their own affections but with the goal of preparing the child for school (Neuman, Copple and Bredekamp, 2000). Reggio Emilia is primary

Child-centred and focuses on the child's actions and wishes to explore (Stagelia, 2003). The teachers all agree on the fact that they choose the activity but within the activity there is space for variance. As one of them (R3) puts it: "It is good if the teacher chooses the activity, but when they are young you cannot make them do something." They also focus on the fact that the children cannot tell the teacher what they are going to do during the fantasy play. One of the teachers who was part of a classroom with the 'fantasy play centre' intervention (R2) said: "The children learn when they play, if I don't tell them what to do they will learn". During the observations of the fantasy play this teacher showed a low level of interference although she did take part in the game of the children. One of the other teachers (R4) responds differently: "The children need new ideas during play so I tell them what to do, but then they make-up new things themselves." The teachers did agree on the fact that the children have to be older to direct them more during play.

The teaching methods of the teachers were one of the most important mechanisms to block with this intervention. It seems from this interview that this is partly succeeded as the teachers give more freedom to the children and challenge the older ones at the same time.

Assessment

The assessment of the children should be a routine in developing the curriculum and setting the goals for the individual children. The teachers agree on the fact that you need an assessment, even though they do not have an assessment for the children other than an information folder of Unicef with general school readiness guidelines. The children are not assessed in anyway except when they go to school. There is no change with the baseline studies on this subject.

Curriculum

During the discussion one of the teachers (R4) goes and fetches a book from the office. The teachers of the Ndlovu pre-schools are following the themes of Karin Stedall who has made 32

'theme manuals' for 32 weeks of pre-schools education. "We have only four books, but a teacher should plan the themes so you can prepare." (R4) A teacher of Mma Lerato responds: "We have no books, that is not right." (R7). Although the Ndlovu pre-schools have only four or five of those books and Mma Lerato none, they all use the daily structure as a guideline. The books also provide a weekly 'play area planning' on which the teachers have based their areas. The teachers prepare their activities one day ahead. One of the teachers(R7) says: "The activities are based on what we know, together with the themes." The Reggio Emilia Approach also focuses on projects and deepening a theme by working on it for a while and explore different aspects (Firlik, 2006; Stegelia, 2003). The theme books are helpful in making structure to the themes. They also work with several area's which are adjusted to the theme and can be used during free time according to the preferences of the children. During the baseline the same wish for a curriculum was observed but not the lack of the curriculum itself.

Relationships with families

The relationships with families is a two sided information flow (Epstein, 1995) as the teachers give information about the child at school, general child development and community services while the caregiver gives information about the child at home and can help at the pre-school with activities. "The caregivers are more involved now, they are helping us with the garden." (R1) The teachers agree on a caregiver who wants to teach. "If the teacher is there, it is okay. "(R2). A teacher of Mma Lerato stresses that the teacher should be present because the caregivers would make it too difficult for the children and the caregivers don't know how to teach.

3.5. Caregiver involvement

The results of the four focus group discussions, one with the teachers and one on each pre-school with the caregivers, are divided by the six types of involvement made by Epstein (1995), some of the items are corrected or skipped (Appendix 3). These six types of involvement are used to

describe the present involvement, the involvement due to the intervention and the area's in which the involvement can be improved.

Parenting

By both the teachers and the caregivers the 'parenting' type was most popular to improve the involvement of the caregivers. The teachers favoured caregiver-education on nutrition, health/hygiene, safety and child development (Teacher, FGD). 'Child development' is a popular topic because the caregivers do not always understand what some activities are for as becomes clear from the following quote: 'The caregivers think we are not doing our work when they see the children playing outside, but this is also necessary for the children to develop gross motor skills (Teacher, FGD).' The caregivers showed interest in caregiver-education in gardening as each pre-school is situated next to a nutritional unit (Tholulwazi FGD & Kopanang, FGD), how to assist the teacher at school and at home(Kopanang, FGD), caring for children and the children's needs(Mma Lerato, FGD). The nutritional units can also provide a gateway to the clinic and other services offered by Ndlovu (Teachers, FGD).

Communicating

During the 4 months of the intervention the attending rate of the caregiver meetings is described in the following table.

Table five: Caregiver participation at the caregiver meetings

Pre-school Week	Tholulwazi (N=52)	Kopanang (N=45)	Mma Lerato (N=43)
Wk 7	25p	30p	13p
Wk 9	19p	27p	15p
Wk 11	16p	32p	12p
Wk 13	20p	24p	X
Wk 16	16p	22p	11p
Wk 17	15p	23p	X
Wk 19	13p	21p	11p

The content of the meetings was focused on the overdue payments, looking for volunteers for cleaning and watching the children when the teachers where sick (Kopanang, week 11). The

caregiver meetings are used to inform the caregivers about the play centres intervention and they were encouraged to bring materials like empty boxes, old cloths and mats (Tholulwazi, week 13). Mma Lerato asked for art materials for several times (Week 7/week13). Next to that the caregivers would get general information about the wellbeing of the children like the advice to wear warmer cloths as winter was coming (Mma Lerato, week 19), giving them breakfast at home as there was none at school (Mma Lerato, week 9).

After the intervention of organizing caregiver meetings every two weeks the teachers pronounced that they are not inspired to keep the caregiver-meetings refreshing in such a short period (Teacher FGD). That is why they preferred to continue having one caregiver meeting every 3 months but they will organize more if an extra meeting is necessary. The caregivers at the Kopanang pre-school however felt like this was not enough and encouraged the teachers to organize caregiver meetings every month (Caregiver FGD Kopanang). The meetings and informative letters are considered to be the most effective way's of informing the caregivers and is sufficiently present in the current policy of the pre-schools. Some of the children have a notebook in which the teachers write down their remarks for the caregivers to read. During the intervention this was only used to inform the caregivers about caregiver meetings.

Volunteering

As a result of former caregiver meetings the caregivers at Tholulwazi and Kopanang are involved in working at a vegetable garden of the pre-school and in cleaning the surroundings. Most of the volunteering is done by the caregivers who are working for the committee (see the paragraph on decision making). According to the teachers the talents and volunteering possibilities of the caregivers are limited (Teacher FGD), but in the focus group discussion with the caregivers they stated that an administration of the talents of caregivers could be set-up when new caregivers subscribe their child to the school (Caregiver FGD, Kopanang). The teachers focused on caregivers for the vegetable garden where the caregivers offered to help with the decoration of the pre-

school, watching the children in case of a lack of staff and cleaning the area. The caregivers suggested that those who are not helping at the pre-school should provide materials as they are also profiting from their work (Caregiver FGD, Tholulwazi).

Learning at home

Both the teachers and the caregivers believed that the caregivers are well aware of the required skills for the children and the educational activities to achieve school readiness. Both the teachers and the caregivers state that no further involvement is required in this type of caregiver involvement.

Decision making

The teachers do not prefer specific influence of the caregivers in making decisions, they claimed that the caregivers have too little knowledge on pre-school policies. Every pre-school however has a committee who provides volunteers, these are not necessarily caregivers of children however many of them have a relative attending the pre-school. The caregivers claimed that they want more say in the decisions made at the pre-school. As a response Mma Lerato has extended the committee with extra volunteers (From 3 participants to 8), and Kopanang decided to have more caregiver meetings.

Collaborating with community

The caregivers want to get more information about the facilities of Ndlovu for the community. On the other hand they also want the children to become more aware of their traditional background and the committee members of Kopanang are working to get that into the pre-schools by making traditional clothes. The cloths on picture 1, 2, and 3 are made by the caregivers and committee members of Kopanang pre-school.

Picture 1: Zulu boy's. Picture 2: Sotho girl. Picture 3: Ndbele couple.

4. Conclusion

The next chapter will give the conclusions regarding the research questions. Together with these conclusions the recommendations for further interventions and further research will be given. The last paragraph will display the discussion and reflections for further research.

4.1. Conclusion and recommendations

Fantasy play

The hypothesis was that if the 'teachers can learn to give enough time, enrich the play, choose (and are provided with) to help children to plan their play, monitor the process, coach individuals, suggest to interwoven themes, help solving arguments and encourage mentorship by children' the children will benefit by having more mature fantasy play (Bodrova & Leong, 2007). The results of monitoring the development of the fantasy play show that there are three different aspects which influence the quality of play. During the first weeks after implementing the props and guiding interventions from the teachers the fantasy play improved most. Only in Mma Lerato the improvement stayed behind. This might suggest that this classroom set-up (45 children in a rather small room) prevents the development of mature play. All in all, one could conclude that the development of mature play is influenced by teacher guidance(1), available props(2) and classroom set-up(3). Some of the aspects were developed significantly better after 3 months of intervention, although there is no general significant improvement the trend shows improvement at all pre-schools in all aspects.

One of the concerns is that the teachers will use less of the implemented props and information after the implementation of the intervention. However, it is necessary that the teachers will keep putting their effort into the development of fantasy play to accomplish better results. One of the measures to keep them connected to guided play is a training they are offered by the Ndlovu Care Group. The Khanya Family Centre develops custom-made trainings for pre-school teachers.

A training has been developed using the characteristics of guided play (Khanya Family Centre, 2011).

Cognitive development and English language development.

Good quality of fantasy play should lead to better self-regulation and inhibition (Neuman, Copple & Bredekamp 2009), working memory (Barnett et all, 2008), attention (Barnett et all, 2008) and language development (Bodrova & Leong, 2007).

The three pre-schools all show different results. Only Mma lerato shows significant improvement at the cognitive tests, which contradicts with the fact that they have the lowest score on 'fantasy play'. Tholulwasi shows no progress in general and Kopanang shows significant lower results after the intervention.

Part of these results can be explained by the different research designs. The children of Mma Lerato have been tested before and after the intervention both times with the coordinator of the pre-schools and nutritional units as the tester. Before the intervention they had been attending the pre-school for 1,5 month and after the intervention they were at the pre-school for 5 months. The general education during this period and personal growth besides the intervention could be of influence of the positive results. Besides, the 'fantasy play intervention' was combined with the implementation of a numeric play centre at the same time in the classrooms, this centre might have had a positive effect on the 'working memory' and 'attention' of the children (Hoppenbrouwer, 2011).

At Tholulwasi and Kopanang the children attending this year were compared to the children who were attending the toddler groups last year. The moment of measurement was the same so the children were attending pre-school a comparable amount of time. The negative results at Kopanang could also be due to the short time of intervention; the children did not have enough time to benefit from the intervention but this would not explain the negative results.

The coordinator of the pre-schools and nutritional units assisted during the tests of the intervention group (of this year) instead of the teachers (who assisted during the baseline at the

pre-schools last year). This might cause a bias in test-results because the children are more nervous or get less support then they would have from their teacher. The children who were tested last year by the coordinator also have scored lower but this was attributed to the fact they were not attending the pre-school. This could also explain the significant differences between the children at Mma Lerato and the other pre-schools in the baseline. The baseline tests and the post-test at Mma Lerato were both performed with assistance of the coordinator. Because the children were tested twice under the same circumstances these results seem more reliable than the results at Tholulwasi and Kopanang. Also the fact that the children are only controlled on age and not on social economical status, family composition and years of attending the pre-school makes it impossible to make a valid comparison.

Recommended for further research is to test the same children with the same people twice to avoid bias by personal and environmental differences and, if possible, to make the time span between the pre- and post test longer. If more tests will be done to monitor the change over time and with different children it is recommended that a baseline database will be made of the characteristics of the children and their family.

Childcare specific beliefs

The Reggio Emilia based intervention has been implemented in the pre-schools while there was no curriculum available to intertwine the approach with. The first step in making the Reggio Emilia a success is choosing a curriculum for the pre-schools, preferably one in line with the Reggio Emilia Approach. As comes forward from the Guidelines for Early Childhood Education (Unicef & department of social development, 2006) the government stimulates on the same fronts as the Reggio Emilia Approach like parent involvement and making play a part of the curriculum.

Therefore it is recommended that the curriculum of the government will be used. In addition, further play centres and caregiver and community involvement will be implemented at the pre-schools.

Parental involvement

As stated in the paragraph above, the Reggio Emilia ideas are interwoven with the new strategies of the government but the Reggio Emilia Approach still distinguishes itself by the amount of caregiver involvement and the involvement of the community as a whole (Firlik, 2006) which can be extended in further interventions. The fantasy play centre has been a catalyst for the community and caregiver involvement and further developments like the vegetable garden and the presentations for the parents about healthy food can also fulfil this role.

If the caregiver involvement will have results will be shown in the future. Four months of improved involvement is too short to resolve a blocking mechanism in the cognitive development of the children. Just like in any community some caregivers are more involved than others but in general the caregiver's involvement at the pre-schools was good from the teachers' point of view; they can rely on the presence of volunteers in case they are needed. From the caregivers point of view more involvement can be stimulated as an average of 23% attended to caregiver meetings or participated in any kind of caregiver involvement. Also the simple presence of the caregivers when the children are picked up from school is missing; no-one of the caregivers asks the teachers about the general wellbeing of their child at the end of the day.

4.2. Discussion

The intervention that is implemented is only a start in making the pre-schools work according to the Reggio Emilia Approach. The realistic evaluation has proven to be a good research design as the stakeholders are actively involved in giving the intervention shape. The constant tension during the intervention had been between the western wish for progress together with individual development and the local culture of high power distance and clear directions from the teachers.

In the children's culture the harmony in the community is more important than the individual progress. In the tough conditions the children grow up, the goodwill of the community and people around you seems indispensable. The teachers and parents are therefore the most important stakeholders who have to believe in the addition to the curriculum. During the research informal interviews have taken place to find the boundary between being 'out of line' and 'taking initiative' but this will always be a point of attention in implementing western programs like the Reggio Emilia Approach in settings like the townships in Dennilton.
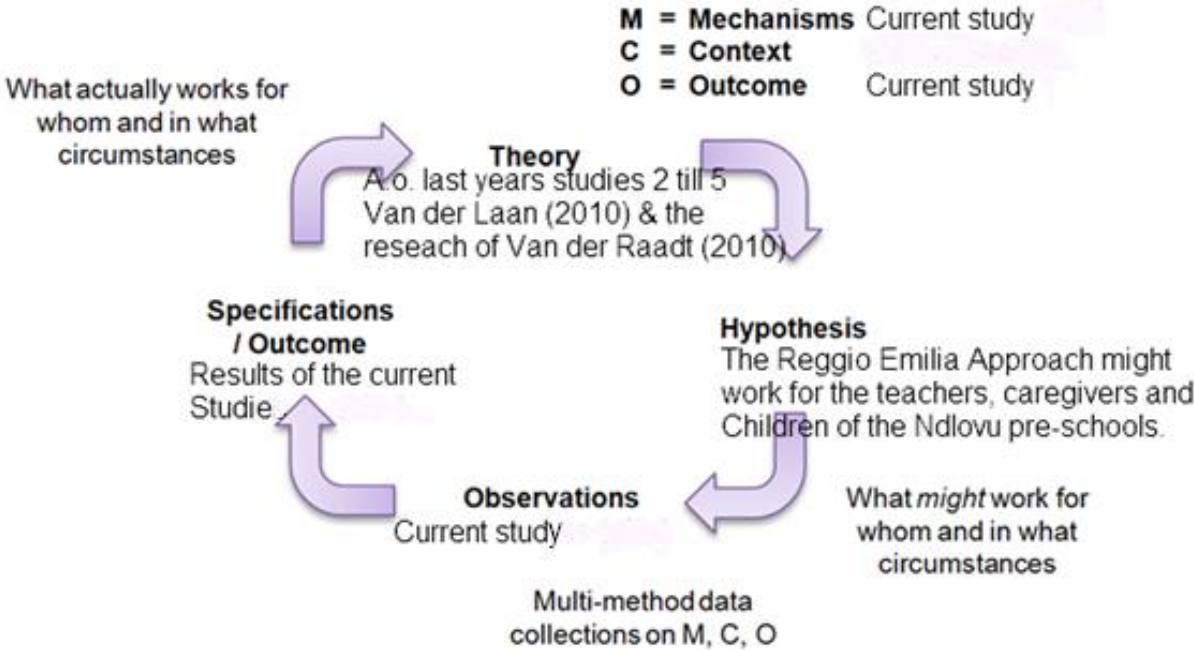
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Appendix one: 'The realistic evaluation wheel'

M = Mechanisms Current study
C = Context
O = Outcome   Current study

What actually works for whom and in what circumstances

Theory
A.o. last years studies 2 till 5
Van der Laan (2010) & the
reseach of Van der Raadt (2010)

Specifications / Outcome
Results of the current Studie

Hypothesis
The Reggio Emilia Approach might work for the teachers, caregivers and Children of the Ndlovu pre-schools.

Observations
Current study

What *might* work for whom and in what circumstances

Multi-method data collections on M, C, O

Appendix two: 'Vignette's: specific childcare believes'

Vignette 1- The social emotional atmosphere

1. Anna notices that the children in her school are often leaving the school ground, she lets the children go out and come back when they want.
2. Anna decides no-one can leave the play ground during pre-school time and closes the gate firmly.
3. Anna chooses the most active children to explore the space behind the gate and leaves the smaller and shyer children at the pre-school.

Vignette 2- Teaching method

1. Nancy is a teacher and at the beginning of a new activity she says what the activity is all about and explains it in detail.
2. Nancy is picking one of the children to choose what activity will be chosen.
3. Nancy discusses whit some children the activity they want to do and stimulates them to make up rules for the activity.

Vignette 3- Assessment

1. The teacher aims at improving general skills of the children with no specific goal.
2. The teacher knows which children will go to primary school in a little while and practices extra the 'school readiness' items with them.
3. The teacher checks at the beginning of the year how far all the children are reflecting the 'school readiness' items and works towards a overall improvement for the whole class.

Vignette 4 –Relationships with families

1. A parent of one of the children asks if she can do something for the pre-school.
2. A parent wants to give lessons herself about a subject she knows much about.
3. A parent wants to have a conversation with the teachers about what her child is learning at the pre-school.

Vignette 5 – Curriculum

1. Jessica has monthly and weekly themes but does not have an aim in the distant future.
2. Jessica decides at the beginning of the year what she want to learn the whole class and makes a curriculum every month according to that aim.
3. Jessica has a plan for each child in her class which she wants to learn specific things and has build a curriculum for divers groups which are close to each other in the class.

Appendix three: 'Measuring tool caregiver involvement'

Epstein's Framework of Six Types of Involvement

1. PARENTING: Help all families establish home environments to support children as students.

o Meetings with parent-education and other training for the caregivers.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

o Teachers help the families with finding support programs to assist families with health, nutrition, and other services.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

2. COMMUNICATING: Design effective forms of school-to-home and home-to-school communications about school programs and children's progress on the school readiness items.

o Caregivers meetings with all the parents at least once every 3 months.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

o Regular schedule of useful notices, memos, phone calls, newsletters, and other communications.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

3. VOLUNTEERING: Recruit and organize parent help and support.

o School and classroom volunteer program to help teachers, administrators, students, and other caregivers.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

o Regular meetings to identify all available talents, times, and locations of volunteers.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

4. LEARNING AT HOME: Provide information and ideas to families about how to help students at home with homework and other curriculum-related activities.

o   Information for families on skills required for students in all subjects at grade R and information on educational activities and homework policies and how to monitor and discuss educational practices at home.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

5. DECISION MAKING: Include caregivers in school decisions, developing caregivers leaders and representatives.

o Active caregivers organizations, advisory councils, or committees for caregiver leadership and participation; caregiver representatives.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

o Independent advocacy groups to lobby and work for school reform and improvements.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

o Networks to link all families/other caregivers with caregiver representatives.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

6. COLLABORATING WITH COMMUNITY:

Identify and integrate resources and services from the community to strengthen school programs, family practices, and student learning and development.

o Information for students, families and caregivers on community health, cultural, recreational, social support, local traditions and other programs/services.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

o Information on community activities that link to learning skills and talents.

Is this form of caregiver involvement   o present or   o not present

If it is present, explain how.

Is this form of caregiver involvement   o Wanted more or   o Wanted less

If it is wanted more or less, explain how.

Appendix four: 'Measuring tool mature fantasy play'

Pre-kool:

1. How do the children play?

   The Children play without interuption of the teacher.

   Frequency:

   Never   1   2   3   4   5   6   7   Most of the time

   The children are looking for materials that enriches their play.

   Frequency:

   Never   1   2   3   4   5   6   7   Most of the time

   The play of the children is prolonged for a longer period of time.

   Frequency:

   Never   1   2   3   4   5   6   7   Most of the time

   All the children are involved in the play.

   Frequency:

   Never   1   2   3   4   5   6   7   Most of the time

2. Imaginary play

   The children are playing an imaginary play.

   Frequency:

   Never   1   2   3   4   5   6   7   Most of the time

   The children are playing an imaginairy play together.

   Frequency:

   Never   1   2   3   4   5   6   7   Most of the time

   The children are learning from others (other children, the teacher) how to do imaginary play.

   Frequency:

   Never   1   2   3   4   5   6   7   Most of the time

The children are doing imaginairy play with an object. together.

Frequency:

Never   1   2   3   4   5   6   7   Most of the time

The children are doing imaginairy play with-out an object (with their hands).

Frequency:

Never   1   2   3   4   5   6   7   Most of the time

The children are together playing an imaginairy play with an object.

Frequency:

Never   1   2   3   4   5   6   7   Most of the time

The children are playing the role of someone else (father, mother, dockter).

Frequency:

Never   1   2   3   4   5   6   7   Most of the time

The children are playing together several roles.

Frequency:

Never   1   2   3   4   5   6   7   Most of the time

The children make rules together about which role they are going to play.

Frequency:

Never   1   2   3   4   5   6   7   Most of the time

Mature Play(Bodrova & Leong, 2007)

The children repeat the same activities over and over again such as chopping vegetables.	1	2	3	4	5	6	7	The children create a scenario and play out a scene that is developed in that scenario.
The children use objects realistically.	1	2	3	4	5	6	7	The children give a symbolic value to the materials which changes the meaning of them.
The play does not have many roles.	1	2	3	4	5	6	7	The children play roles with specific characteristics or rules for action.
Children use little language to create a play scenario or their roles.	1	2	3	4	5	6	7	Children engage in long dialogues about what the play scenario will be, what the role will be, and how the scenario will unfold.
Children do not coordinate interactions but engage in parallel play.	1	2	3	4	5	6	7	Play is coordinated with multiple roles and themes. All of the roles play a part in the play scenario.
Children cannot describe what they will play in advance of beginning the action.	1	2	3	4	5	6	7	The children can engage in extended discussions about their roles, actions and the use of props prior to starting their play.
The children argue and fight	1	2	3	4	5	6	7	The children solve disputes and

over props and roles.								disagreements and invent props instead of fighting over them.
The children are unable to sustain play for longer than 5 to ten minutes.	1	2	3	4	5	6	7	Children become immersed in play and can continue the next day of for several days.