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THE UNIVERSITY OF THE WITWATERSRAND

Masters of Education by dissertation

A critical exploration of the role of pedagogical documentation in a multimodal Grade R classroom. A case study in an urban South African School.

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Ethics protocol number: 2014ECE045M.

Supervisors: Professor David Andrew and Theresa Giorza

Declaration

I, Morag Margaret Williamson declare that this study is my own original work. Where use is made of the work of others it is indicated and acknowledged by means of complete references. It is submitted for the degree of Masters of education by dissertation at the University of the Witwatersrand, South Africa. It has not been submitted before for any other degree or examination in any other university.

Morag Margaret Williamson

August 2016

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To Brenda Howden

You allowed me to implement an open curriculum in my classroom and for your support.

To my Lord Jesus Christ, the author and finisher of my faith

Abstract

The researcher explored the role of pedagogical documentation in a multimodal Grade R classroom. The purpose of the research was to see how pedagogical documentation would work together with a multimodal approach to enhance learning in Grade R children in an urban South African school. A qualitative case study was conducted at a private girls' school in Johannesburg with a class of 22 Grade R children over the time frame of eight weeks. The children were exposed to a multimodal approach and pedagogical documentation was used in the classroom to make learning visible and to create a focus for discussion and planning.

The research focused on an in-depth analysis of five participants although all the children in the class were part of the data collection process. The children demonstrated an ability to make decisions regarding their learning and the curriculum developed around their interests rather than being predetermined by the teacher. The children also developed a willingness to reflect on their learning processes. They took complete ownership of their environment and were able to use all available resources: the environment, the materials, and those emerging from collaboration with their peers and reflecting on their own learning. An open curriculum was successful with children of this age. However, it is proposed that pedagogical documentation together with a multimodal approach would be more effective in collaborative whole school interventions.

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Chapter One: Introduction

1. Research Topic

A critical exploration of the role of pedagogical documentation in a multimodal Grade R classroom. A case study in an urban South African School.

2. Introduction / Background

Multimodal pedagogy has been the focus of research worldwide and it encompasses a wide range of disciplines. A multimodal approach recognises that learning happens through different modes and pedagogy should encompass these modes. Very simply defined, "A multimodal approach to communication considers language to be only one form of representation amongst others, such as gesture, sound, images, and music" (Archer & Newfield, 2014, p.1). In South Africa, research and work in the field of multimodal approaches has been explored over the last fifteen years. The Wits Multiliteracies group has completed numerous studies "within the arts and humanities, social sciences, engineering and physical sciences" (Archer & Newfield, 2014, p. xvi) and there is collaboration between universities both within South Africa as well as with universities and organisations internationally (Archer & Newfield, 2014). The research in South Africa was inspired by the New London Group and the research they conducted within and around multimodal approaches (Archer & Newfield, 2014). In South Africa the connection between "research, educational practice, and an agenda for social and political change" (Jewitt, 2014, p.xvi) is also a reason why multimodal approaches are important within the context of a country that is diverse in its languages and cultures. Multimodal pedagogy in South Africa pays "attention to equity, participation, and social justice" (Jewitt, 2014, p.xvi) and this is one of the reasons the research done in South Africa has added significantly to the multimodal discourse worldwide. "A multimodal approach has provided a range of possibilities for a transformed approach to the semiotic space of the classroom and student voice-in both historically disadvantaged and privileged sites" (Archer & Newfield, 2014, p.4) and as such could be considered beneficial to all students regardless of their socio-economic background. The field of multiliteracies and multimodality originate from language discourse but the field is becoming

increasingly interdisciplinary as focus moves to communication and culture and as such there is an obvious interface between language and arts learning.

As a South African educator I have an interest in how children make meaning using a wide range of what Loris Malaguzzi (1920-1994), the founder of the Reggio Emilia approach, referred to as "languages" or modes and not just relying on verbal or written communication. I have noticed that children at Grade R level have the ability to make autonomous decisions and practice agency for their own learning to a certain extent, but this ability quickly seems to dwindle as they feel the pressure to conform to the expectations of the school system. I wanted to provide the children in my class with strategies to continue to use different means of expressing themselves and I wanted to research the effectiveness of these strategies. My research is situated within multimodal discourses and I conducted a qualitative case study with my current class of Grade R children in order to analyse the use of pedagogical documentation as a way of enhancing multimodal learning. Pedagogical documentation was utilised by both the teacher and the children. I used pedagogical documentation to encourage the children to reflect on their learning as well as reflecting on my own practice. The knowledge gap existed for research into specifically a Grade R context in South Africa, as pedagogical documentation as a specific meaning making tool has not as yet been extensively researched in a Grade R context.

The Reggio Emilia approach is an approach to early childhood education that uses a multimodal approach (Dahlberg, 2012). One of the key concepts in the Reggio Emilia approach is pedagogical documentation and it is used to make the children's learning visible and therefore available for a reflective practice to become central to the learning process for both adults and children (Dahlberg, 2012). For the purposes of my research I used pedagogical documentation as a strategy to explore the children's learning in a multimodal way. Pedagogical documentation, as developed in the Reggio Emilia approach is described:

> not as documents for the archives, or as panels to be hung on the walls, or as a series of nice photographs, but is a visible trace and a procedure that supports learning and teaching, making them reciprocal because they are visible and shareable…documentation as visible listening, as the construction (by means of writing, slides, videos, etc.) of traces that can not only testify to the children's learning paths and processes, but can actually

make them possible because they are visible (Rinaldi, 2006, p. 100).

Reflexivity is the ability "to learn to consider different perspectives, to analyse and problem-solve complex issues and to think critically about social issues" (Crafton, Silvers & Brennan, 2009, p. 34). Meta-cognition is the ability to reflect on action so as to continuously learn, this reflection takes place while engaging in an activity and also after the activity (Schön, 1995). Thought can be seen as a cognitive action and Schön's reflective practice applies to thought as well as action (Schön, 1995). Autonomy, in this research is perceived as the ability to make decisions and to exercise independence in collaboration with peers. The extent and limit of this autonomy, as I have used the term, was defined by the limits imposed by the school setting, the children's own capabilities and my ability to allow the children full reign in the data collection phase while not imposing my expectations on them.

3. Problem Statement

Local and international literature indicates that Early Childhood Education Programmes are significant in determining success during formal schooling (Bruce, 2009; Dahlberg, Moss & Pence, 2007; Stein, 2008). In South Africa, the Curriculum Assessment Policy Statement (CAPS) document states that:

> Grade R should not be a watered down Grade One …It has its own unique characteristics based on how children in this age group make sense of their world and acquire the knowledge, skills, values and attitudes that will allow them to maximise the opportunities afforded in the formal learning years…learning is based on principles of integration and play-based learning (Department of Basic Education, 2011, p.20).

Integration in this context could relate to the idea of an emergent curriculum as a starting point and the curriculum not being limited to subject boundaries but looking at real life situations and thus opening up into different areas of exploration. I am aware of the issue of integration versus strongly classified subjects and I recognise that there is a porous and fluid nature between subjects or disciplines. "Children develop and learn better when both their interests and needs are met" (Bruce, 2004, p.29) and children at Grade R level should not be forced into a formal and rigid programme. They need to be afforded the opportunity to learn through play and educators

need to provide an environment rich in learning opportunities rather than turning all learning into formal lessons (Bruce, 2004). The concept of "play-based learning" (Department of Basic Education, 2011, p.20) needs to be consciously pursued in South African Grade R classrooms in order to allow the policy as stated in the CAPS document to become practice. South African Grade R classrooms do not consistently reflect the view of the child as reflected in the CAPS document.

4. Purpose Statement

This research took the concept of multimodality and pedagogical documentation and the potential for these two concepts to work together to improve learning in a Grade R classroom. The research took the form of an in-depth qualitative case study of my current class of Grade R children at a private girls' school in Johannesburg. The focus of the research was on pedagogical documentation and how this tool enhanced reflexivity in both the teachers and the children. Children are able to express thoughts and ideas in modes in which they are already competent, rather than having to use only one mode (verbal and later, written) which is new and unfamiliar and one of the challenges for me was to document more than the verbal. The view that pedagogical documentation enhances reflexivity and meta-cognition in both the children and the teacher was researched within specific contexts within the classroom. I proposed to use a reflexive approach as a strategy for the children to not only express their own perspectives but also to be aware of others perspectives (Clark, 2010).

5. Research Questions

Does pedagogical documentation create opportunities for collaborative learning in both the learners and the teacher?

To what extent does a multimodal approach together with pedagogical documentation make learning visible and enhance reflexivity in the learners and the teacher?

6. Scope of Research

I proposed to implement a multimodal approach and analysed the impact of this approach. A multimodal approach has merit in terms of the way children learn and the fact that children do not learn in a linear manner (Bruce, 2004; Dahlberg et al., 2007). Pedagogical documentation is a

central practice in the Reggio Emilia approach and facilitates collaborative planning and reflection (Dahlberg et al., 2007; Dahlberg, 2012). Learning is perceived as collaborative research being shared by children and the adults working alongside them. Pedagogical documentation is a form of data collection for this on-going research (Dahlberg, 2012). In South Africa, pedagogical documentation could be a way of harnessing visual modes to support reflection and meta-cognition. This research looked at how this could be implemented in a Grade R context.

The research was conducted specifically in a Grade R classroom for the period of eight weeks. The children were exposed to a series of interventions that were designed to enhance a critical multimodal approach. Pedagogical documentation was used as a tool to enhance reflexivity and meta-cognition. The data collected was analysed according to a specific framework of areas identified to be informative in ascertaining whether or not the pedagogical documentation and the multimodal interventions enhanced reflexivity. The research did not analyse the quality of the artefacts created by the children or their verbal ability. Multimodal interventions were used as a tool to enhance reflexivity; therefore the quality of the actual artefacts that the children created was only important in that it provided evidence of the learning taking place.

The research was a qualitative case study not an action research study. As such the interventions were not repeated but rather evaluated as an entity. The scope of the research did not include an evaluation of whether or not the children's artistic or verbal ability improved as a result of the multimodal interventions and the pedagogical documentation. The research looked at the multimodal interventions and the pedagogical documentation as a whole over the eight week data collection period and analysed the data and formed a hypothesis based on this data.

7. Relevance of Research

Grade R in South Africa (or Reception in the United Kingdom, Kindergarten in the United States) is the place where informal and formal education meets. It is a vital year as children need to be able to make the transition from a varied expectation of their learning depending on the institution to set criteria or outcomes laid down by the government (Ebrahim, 2014). Children experience changes in identity as they have to orientate themselves to a larger physical environment (Lillemyr, Dockett & Perry, 2013) and this transition can cause significant stress.

The National Curriculum Statement states that it aims to produce learners who can "identify and solve problems and make decisions using critical and creative thinking" (Department of Basic Education, 2011, p.5). Research in Early Childhood Education highlights the value of informal learning and an open curriculum (Bruce, 2004; Dahlberg et al., 2007) and this research will add to the existing research in providing an alternative to a formal and rigid curriculum. Multimodal approaches to education are practised around the world as well as in South Africa. However, the dominant approach to education is for children to be seated at desks for large tracts of time and for teachers to engage in predominantly 'chalk and talk' practices (Archer & Newfield, 2014; Edwards, Gandini & Forman, 2012; Stein, 2008). Grade R classrooms still reflect compartmentalised practices and children are not generally allowed to actively pursue the creation of their own learning experiences.

This research provides specific tools that can be used to create a multimodal approach that increases reflexivity in Grade R classrooms in South Africa. Education in this context is not determined by the quality of materials available for use and as such could be translated into any school no matter what their socio-economic status. For South African policy makers, it provides an accessible means of improving the quality of critical thinking, reflexivity and autonomy in Grade R classrooms. This research provides evidence that a multimodal approach and pedagogical documentation have value in the Grade R context. The success of a multimodal approach was evident in the research and therefore makes the research relevant to teachers, policy makers and academics.

Chapter Two: Literature Review

"Multimodal pedagogies have the potential to make classrooms more democratic, inclusive spaces in which marginalised students' histories, identities, cultures, languages and discourses can be made visible"(Archer, 2008 as cited in Archer & Newfield, 2014, p.4) and it is from a perspective of a multimodal approach that this research will be positioned. The purpose of the literature review is to explore what existing research and literature is available that focuses on multimodal approaches and pedagogical documentation. It identifies the theoretical framing that informs the research. The purpose is also to position this research in existing theory and to ascertain that there is a knowledge gap for the proposed research to explore. It aims to construct a thinking tool and a guide for the data collection and the data analysis.

My review of the existing literature on multimodal perspectives, and the Reggio Emilia approach in particular, stemmed initially from my own interest and observations of how children use art, drama and music to make meaning. But the school system seems to place little value on art and play as a worthwhile learning tool. Mary Renck Jalongo describes a preschool child who uses drawing as a meaning making tool confidently in her daily play, but this ability had little value within her school experience:

> When Caitlin returns to school and kindergarten, however, expectations are very different. Her teacher feels considerable pressure to push, pull, or drag the kindergartners through scripted phonics lessons day after day in hopes of accelerating their reading achievement. Rather than appreciating five year olds' imagination, Caitlin's teacher approaches fantasy and imagination as frivolous, immature and anathema to "real learning"…Such attitudes are rooted in the erroneous assumption that children's creative thought has no practical value and that even adults' imagination is worthwhile only if it saves money or labour, increases global competitiveness, or advances technology (Jalongo, 2009, p. vi).

The attitude described above is common in numerous schools regardless of their socio-economic demographic and even if the teachers place value on the different ways in which children make meaning, society as a whole seems to place more value on mainstream skills (Bruce, 2009;

Narey, 2009). In my own experience as a Foundation Phase teacher, subjects that are quantifiable like maths and formal reading are more valued by parents and administrators than the arts. My review of the literature grew out of the need to find proof for myself that a multimodal approach is not only of sound academic value but also possible to implement in various educational settings. I wanted to ascertain from a review of existing literature whether "the arts(can) contribute immeasurably to the quantity and quality of ways in which children can convey not just feelings but also thinking and attain not only creative expression but also academic achievement" (Jalongo, 2009, p. ix).

1. Multimodal Approach

It is necessary to define what a multimodal approach is and in order to do this I will give examples of how it is put into practice to ascertain what a multimodal classroom looks like. The New London Group (2000) developed a theory of multiliteracies which is incorporated into practices around the world. Multiliteracies is a developing body of research and the emphasis is on the fact that "children in the 21st century have to learn to negotiate multiple literacies… they have to learn to consider different perspectives, to analyse and problem-solve complex issues, and to think critically about social issues" (Crafton et al., 2009, p.35). The New London Group (2000) emphasises that children need to learn from the beginning of their school career that it is necessary to nurture attitudes of critical engagement and to understand that they have the power within themselves to make a difference in the lives of others (Crafton et al., 2009). Literacy should not be seen as focusing on print but must encourage a variety of strategies. "Through play, art, music, technology and language, children can address complex issues that concern them and their world" (Dyson, 1993 as cited in Crafton et al., 2009, p. 35) and literacy should become an understanding of the correlation between language and power.

Multimodal approaches within the area of multiliteracies are the specific tools used to make meaning e.g. art, drama and music (Andrew, 2011). In order to take a "multimodal/social semiotic theoretical stance" (Kendrick & McKay, 2009, p.55) a much broader view of literacy must be taken instead of purely language based practices. Gunther Kress, a leading theorist in the area of multimodal social semiotics, describes the connection between modes, semiotics and sociocultural theory as follows:

> The approach of '*multimodal social semiotics'* deals with material resources, *modes*, and cultural/theoretical resources. *Modes* are socially shaped material resources such as speech, gesture, writing, dance, image and movement. They are the outcome of the characteristics of a material (such as sound) and of its 'affordances', shaped in the ceaseless social- semiotic work of fitting this material to the 'needs' of specific communities, over long histories of semiotic work (Kress, 2014, p.142).

Multimodal learning allows for children to explore different concepts and communicate on a much deeper level that they would otherwise be able to if they were only relying on spoken and written communication (Narey, 2009). We need to "rethink children's paths into writing" (Kress, 1997, p. xv) and acknowledge that there are numerous ways that children communicate and learn. The end point of communication and exploring different ways of the production of knowledge should not only be reading or writing. Children are born with the ability to make sense of their world from birth (Kress, 1997). If this ability is recognised and encouraged through a multimodal approach to teaching and learning across the board, not only in a preschool situation, children would be given the opportunity to make meaning instead of becoming bound by only the written form. Learning and teaching should be about providing access to the production of knowledge and if a multimodal approach provides this access it should be utilised. Kress comments that:

> We cannot understand how children find their way into print unless we understand the principles of meaning making. Children make meaning in an absolute plethora of ways, with an absolute plethora of means, in two, three or four dimensions. Different ways of meaning making value different kinds of bodily engagement with the world that is not just sight as with writing, or hearing as with speech, but touch, smell, taste, feel. If we concede that speech and writing give rise to particular forms of thinking, then we should at least ask whether touch, taste, smell, feel also give rise to specific forms of thinking. In our thinking, subconsciously or consciously, in our feelings, we constantly translate from one medium to another (Kress, 1997, p. xv)

An objective in the National Curriculum Statement is for the child to be able to "communicate effectively using visual, symbolic and/or language skills in various modes" (Department of Basic

Education, 2011, p.5). The idea that language and speech are not the only way to communicate and other meaning making communications are acceptable ensures that children are able to move between many concurrent meaning making opportunities. "The end product of education is the whole child who can, through creative thinking, expand knowledge and skills, make meaningful connections, and build relationships with the world" (Robinson, 2009 as cited in Hathaway & Jaquith, 2014, p. 29) and a multimodal approach would assist in fulfilling the National Curriculum Statement objectives but would also more importantly provide superior educational practice.

2. Sociocultural Theory

In order for a multimodal approach to be successful it is important that it stems from a theoretical stance that treats each meaning making mode as equally important (Kendrick & McKay, 2009). It is common for research on multimodal approaches to adopt the sociocultural theory as proposed by Vygotsky as a starting point and in particular his theory of spontaneous concepts. Drawing and painting are a way to "provide a window on the children's spontaneous concept development in relation to literacy" (Kendrick & McKay, 2009, p. 55). Vygotsky, in contrast to Piaget does not focus on sequential stages of development. Art educators like Kindler and Darras (1997) question the application of Piaget's stages to artistic development of children and it is important to remember that children do not develop in a linear way even when considering the theories of Piaget and Vygotsky (Kendrick & McKay, 2009).

Vygotsky and Piaget are seen to be "two of the most influential educational theorists in our era" (Jalongo, 2009, p. vii) and their theories can be a starting point to building understanding. Although there are significant areas where Piaget and Vygotsky's theories do not coincide, they do agree that imagination and cognition cannot be separated (Jalongo, 2009). The use of the imagination in learning is vital and according to an expert in the field of literacy, Frank Smith, the three aspects of human learning are firstly imagination, secondly identification and thirdly social interaction and in order for teaching/learning to be successful all three need to be evident (Smith, 2003). Brian Sutton-Smith (1998) put forward the following thoughts on the link between imagination and cognition:

> But what if the imagination is itself the very font of thought? What if the imagination is

> what permits thoughts to work by providing it with images and metaphors that give direction? What if the imagination is primarily not mere fancy or imitation, but itself thought's direction? Presumably our educational foci would be very different (Sutton-Smith, 1998, p.7).

In order to further the argument for a multimodal approach to learning I turn to post- modernist theory. Post-modernist approaches "provoke reflexivity and greater awareness of the moral and ethical implications of managing, organizing and theorizing rather than seeking either explanations or understanding (as seen in the modernist perspective) offers critiques and other forms of appreciation" (Hatch & Cunliffe, 2013, p.9). As such the world is seen to appear through "language, discourse and artwork" (Hatch & Cunliffe, 2013, p.15). Postmodern thinking focuses on the ability to make meaning as

> Postmodern conditions bring processes of individualisation. They also foreground relationships. Knowledge, identity and culture are constituted and reconstituted in relation to others, they are co-constructed. Relational concepts abound: dialogue, conversation, negotiation, encounter, confrontation, conflict. If knowledge is no longer viewed as an accumulation and reproduction of facts, but as perspectival and open-ended, then knowledge can be viewed as an open-ended conversation, privileging no party and seeking neither consensus nor a final truth. Constructing identity not in essentialistic but pluralistic terms implies that a child is connected to many different groups of shifting ethnic, religious, cultural and social character (Dahlberg et al., 2007, p.58).

A rigid set of developmental stages have been developed from Piaget's theories, even though he was a scientist, his epistemology has been applied widely by others and have influenced education programmes around the world. This developmentalist approach infers that learning is linear (Kindler, 1997). Theorists have challenged the claim that abstract thinking only develops after children have learned to think in concrete terms. Egan (1992), for example, believed that a child is born with the ability to think abstractly and that the school system weakens this ability. However, Piaget's theory provides a useful framework in terms of his conception of how children and adults actually learn. Piaget believed children's thinking was different from adults and children are not mini-adults (Hook, Watts & Cockcroft, 2004). Children's learning is not a

static process and children are constantly interacting with their environment. Cognitive development is not stimulated by passive movements and in order to learn a child needs to interact with his/her environment.

Piaget advocated that children actively engage in the environment in order to learn and he included other people when referring to the external environment (Hook et al, 2004). He rejected the claims that knowledge was empirical i.e. knowledge exists in the external world and is gained through experience. He also rejected the claim of innatism and a child being born with knowledge and the need to access it (Burman, 2008). He argued in favour of constructivism and that an individual is continually creating his/her knowledge by organising, structuring and re-structuring an understanding of the world (Hook et al, 2004). Piaget believed that "knowledge and learning took time and could not be hastened; simply telling children the truth about something could not make them understand it" (Duckworth, 1996, p. 32). An education system needs to provide opportunities for the child to develop their language, cognitive skills and thought processes (Burman, 2008). In this context he "asserted that to understand is to invent" (Jalongo, 2009, p. vii) and when pairing this with Vygotsky's notion that "imagination interacts with cultural tools and symbol systems to produce learning" (Jalongo, 2009, p. vii) a case for imagination and social interaction being an intricate part of learning can be made.

Vygotsky (1896-1934) proposed a sociocultural theory of learning and development in that children learn by interacting with the people around them. He proposed that "development of an individual is a process in which children grow into the intellectual life of those around them" (Vygotsky, 1978 as cited in Crafton et al., 2009 p. 34). A child's mind develops in "the course of acquisition of social experiences" (Karpov & Bransford, 1995, p. 61) and the child must develop "psychological tools" (Karpov & Bransford, 1995, p. 61) in order to learn. The concepts (and tools) acquired by the child can be divided into two groups namely spontaneous and scientific concepts.

A spontaneous concept is a concept "formed from a child's experience and independent thinking" (Howe, 1996, p. 38). Everyday knowledge is functional and is for the everyday use of the child. Children learn a number of concepts without any formal teaching. They learn these concepts by interacting with the environment and the people within their environment. A child

will learn concepts unconsciously and unsystematically (Karpov & Bransford, 1995). A pre-schooler's learning is spontaneous and while they learn a myriad of skills, concepts and tools in early childhood none of this learning needs to be directed and if it is directed then the pre-schooler has to be interested in the learning and the time frame should suit them (Karpov & Bransford, 1995). A scientific concept on the other hand must be "acquired consciously and in a certain system" (Karpov & Bransford, 1995, p. 62). Scientific knowledge is abstracted and as such is not always readily obvious to the child. The "main feature of properly organised instruction, according to Vygotsky, is that it should be based on psychological functions not yet formed in the child" (Karpov & Bransford, 1995, p. 62). In other words, in the course of formal education, the child should be exposed to concepts they have not yet learned.

Spontaneous and scientific concepts work hand in hand when teaching a child. The child will come into the classroom with certain spontaneous conceptual knowledge and this can be used as a basis for teaching the child scientific concepts. It cannot be assumed that all children have the same knowledge base to draw from. This becomes important in a multi-cultural and multilingual classroom. All the learners have a different frame of reference and a teacher cannot assume that based on their age or the previous syllabus that they have acquired particular concepts. A multimodal approach can be used to assist the children to move between the two and will allow children the opportunity to express concepts not readily accessible to them through spoken or written language.

Vygotsky's sociocultural theory proposes the idea that children need to be actively involved in their learning (Karpov & Bransford, 1995). Sociocultural theory posits that "learning is an active process involving social participation" (Crafton et al., 2009, p. 34) and children bring their prior knowledge with them into the classroom and then make meaning as part of that classroom community. Vygotsky (1978) theorised that there is a Zone of Proximal Development (the Z.P.D.) and that children can perform certain tasks with assistance or in collaboration with their peers or teachers but not independently as yet. Vygotsky (1978) stated that a child makes meaning because other people "attach meaning to what they do" (Bruce, 2009, p. 89) and as such the quality of the learning opportunities to make meaning through signs and symbols is very important in pre-school classrooms. Children need the opportunity to use their ability to make

meaning and find ways of expressing their identity within the social context they find themselves in. A multimodal approach and an environment rich in meaning making opportunities would enable this to take place.

Vygotsky (1978) studied the connection between thought and speech. Part of this connection is the way we use signs and symbols as a way of communicating meaning. A study of signs and symbols is called semiotics which can be defined as "the study of signs, how acts and objects function as signs in relation to other signs in the production and interpretation of meaning" (Crafton et al., 2009, p. 33). Humans live in a multimodal world and use visual modes as a way of communicating as much as the use of language (Kress, 1997). When children enter formal schooling, this ability to express themselves in more than one semiotic manner is 'systematically downsized" (Crafton et al., 2009, p. 33) just at the time when a child's ability to make meaning using different resources is at its "richest, undifferentiated peak" (Crafton et al., 2009, p. 33).

Wenger (1999), a neo-Vygotskian, presented a theory of learning and the formation of identity as being constructed by participating with the community an individual finds themselves in (Crafton et al., 2009). Wenger's model of identity construction is widely recognised as valid for educational settings although he was not an educationalist. An understanding of the connection between identity and practice helps one to understand that communities are formed while individuals within a community are negotiating "ways of being" (Wenger, 1999, p. 149). Children learn from the community they are in at a given time and their identity is being formed during this interaction. There is an important link between identity and the way in which knowledge is constructed and how learning takes place (Crafton et al., 2009). Wenger's (1999) theory strengthens the idea that children need the time and space to make meaning of their environment in collaboration with others. Children need to engage with a variety of learning tools and experiences and as they engage in different communities of practice their competencies and skills benefit not only the individual child but the group as a whole (Crafton et al., 2009). A classroom should become a community of practice where the children and the teacher take time to reflect on their practices together (Crafton et al., 2009).

Mendelowitz (2010) highlights the contribution of Vygotsky's work on imagination and creativity. Vygotsky argues for the merits of play in the development of cognition and linguistics

as the "capacity to imagine during play allows a child to build a world independently from what is immediately visible" (Mendelowitz, 2010, p.57). According to Vygotsky, imagination is seen to be the basis of creative activities as it encourages new ideas to be formed and that the richness of an individual's experience will determine the richness of their imagination (Mendelowitz, 2010). The role of play and arts education will be discussed in order to explore how these mediums can be used to create an environment in which meaning making can take place.

3. Art Education and Play as meaning making tools

Art education and play are both meaning making tools and can be positioned in a discussion on sociocultural theory, semiotics and multimodal approaches. They are particularly interesting to me as they are two of the primary tools that children in early childhood settings use to make meaning and create bridges to the verbal. Art and play are often conflated because "both involve the freedom, the autonomy and the originality of the individual" (Sutton- Smith, 1997, p. 133). They are similar in that neither art nor play is successful unless it is directed by children collaborating and negotiating together. However in modern day pre-schools, we often dictate both the terms of the child's play and the product and processes they are supposed to be mastering in art classes. The children's discovery in play or art is neither reflected upon nor followed up on. The ideal of learning being "based on principles of integration and play-based learning" (Department of Basic Education,p.20) as set out in the National Curriculum Statement would work well with working in a less predetermined way, where the teacher and children would follow their interests and events pertinent to them at that particular time. While there is an inherent contradiction in the CAPS document as the overview encourages free flow learning and thinking, the structure that is prescribed works against this thinking to some extent. I propose however that an emergent curriculum can fulfil all the outcomes set out in the CAPS document and that it is possible to use an open approach in a South African government school classroom.

The concept of what 'arts education' actually is has been the focus of significant debate. "The scholarly literature on the arts in education is filled primarily with advocacy statements" (Gaztambide-Fernández, 2013, p.212), in other words academics, art educators, policy makers and artists themselves spend significant time and resources in trying to define what art actually is and what this means to education. In light of the fact that arts education cannot be defined in

narrow and easily defined terms, Gaztambide-Fernández, (2013) posits that art is not about "doing anything" (Gaztambide-Fernández, 2013, p.227) but rather about "conceptualizing teaching and learning for all students, not because it improves learning but because it is learning" (Gaztambide-Fernández, 2013, p.226). The concept of arts education should be embedded into every aspect of the curriculum and not seen as a separate entity. In early childhood education the "arts are frequently viewed as directed production" (Narey, 2009, p. 2) featuring pre-determined mass produced performances or art work. Art should be "a multimodal, child-centred understanding of art as a means of 'coming to know' in order to underscore the early childhood education professionals' responsibility to advance the arts in various settings in which they work" (Narey, 2009, p. 3).

Likewise, play is an "umbrella word" (Bruce, 2004, p. 143) for a concept that is impossible to define and narrow down into one definition. Play has been studied for centuries and a lot of emphasis is placed on the importance of play in modern day pre-school programmes (Bruce, 2004). The Dutch historian, Johan Huizinga (1955), creates an ideal point of entry into the question of the role of play (Henricks, 2006). Huizinga produced a list of the 'chief characteristics' of play and these areas are pertinent to the study of play (Henricks, 2006). Firstly, play is voluntary and children choose to play (Henricks, 2006). Secondly, play is a break from ordinary life and children learn how to survive in the world through their play (Henricks, 2006). Thirdly, play takes place away from the world and has a beginning and an end (Henricks, 2006). Fourthly, play brings a temporary moment of perfection in a troubled and imperfect reality and has its own set of rules (Henricks, 2006). Lastly, play is surrounded by secrecy and children feel a deep commitment to the people in their game and to the rules (Henricks, 2006). Play has far reaching consequences and value to any child engaging in it and should be encouraged at all costs. The concept of play links to Vygotsky's concept that knowledge and meaning are created socio-culturally. Pre-school education systems tend to encourage free choice activities but this is always for a limited time span and is adult directed and to a large extent adult guided. This source of information (children's play) is not mined for its richness in most preschools (Bruce, 2009). Play is fundamental to the development of a child and as such is recognised as a meaning making tool in the context of this research. The Reggio Emilia approach is known as the 'listening curriculum' because teachers listen to what emerges from play and

they use this to deepen learning (Abbott & Nutbrown, 2005; Vecchi, 2010).

The following quote from *Children are wet cement* by Anne Ortland 1981 sums up the value of play:

> There's no evidence that toddlers who read early are better readers by the time they are in sixth grade. So what should a two to five year old be learning? He should learn to know what he likes and what he doesn't; how to build with blocks; to paste, to climb, to swing, to run, to hop, to skip…
>
> He should learn to imagine: to pretend he's a policeman, a bus driver, a daddy…
>
> He should begin to learn how to take simple things apart: how to pour; how to pile; how to push…
>
> Look at children at play. We're apt to say, "They should be doing something, exposed to something. We should take advantage of this valuable time"
>
> They are doing something; they are encountering life. When a child moves into group play, when he shares or takes turns, when he acts out conflicts, anxieties, fears, confusions…he is doing the plain uncompromising work of growing up (Ortland,1981, p. 62).

The above quote offers a valuable insight into how society as a whole sees play as being a waste of time. From a multimodal perspective the value of art and play is not in the end product but rather in the process and meaning making that arises from embarking on either activity. A shift in thinking would have to occur to change the dominant approach to these at an early education level. The classroom as being a place where the process is important is not:

> a claim to some grand utopia-but perhaps micro-utopias are worthy of consideration. There are possibly micro-events; there are perhaps moments in the class, glimpses of another way of acting and subsequent decisions to act on these glimpses (Andrew, 2014, p. 183).

The ideal of a classroom that functions in a way that recognises that every member of that

classroom uses different meaning making practices throughout their day makes a clear case for attempting to make these "glimpses"(Andrew, 2014, p.183) visible and open for further discussion and meaning making. In the context of this research this takes the form of the recognition of art and play and social interaction as vital for the learning process. In a study by Kendick and McKay (2009) children's view of literacy was researched by analysing their drawings. The "image-based literacy research" (Kendrick & McKay, 2009, p. 67) came to the conclusion that the lens with which we as teachers and researchers interpret a child's experiences is as much socially constructed as the child's meaning making process and we need to be cognisant of this in order to improve our teaching and researching skills (Kendrick & McKay, 2009). In other words adults should not have preconceptions about what art is.

4. Emancipatory Education

The concept of emancipatory education and in particular the ideas of Jacques Rancière (1991) build my argument in terms of a view to an open curriculum and learning not being predetermined. The view that the child can have agency and that their learning can be self-determined is a concept that Rancière explores. The view of knowledge as being able to transform and change society and the view of the child as an author in their own education concurs with an idea of emancipatory education. Jacques Rancière (1991), a French philosopher, has "been the focus of attention in the fields of political sciences, philosophy, literary and art theory, and history during the last twenty years" (Pelletier, 2009, p.137) but his relevance to education arose largely due to his critique of Pierre Bourdieu's view of education (Pelletier, 2009). He opposed Bourdieu's view of emancipatory education being a consistent and gradual change in the existing status quo (Pelletier, 2009). "Rancière's argument is that there is no other means of achieving equality than to assume it, to affirm it, to have it as one's epistemological starting point, and to then systematically verify it"(Pelletier, 2009, p.142) and as such his views concur with the idea of an open curriculum.

In his book '*The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation*' (Rancière, 1991) he tells the story of the intellectual journey of Joseph Jacotot, a lecturer in French literature who had his views on education altered during the course of his career (Rancière, 1991). The book is not written as a prescriptive text and might rather be understood as a fable

that acts as a challenge. Academics have struggled to categorise the book as it does not fall into a specific genre (Pelletier, 2009). Jacotot began his career with the view that a teacher's job was to "explicate" (Rancière, 1991, p. 3) all knowledge into simple terms so that his students could understand the content. Once he had been lecturing for more than thirty years, Jacotot takes

> a job as a teacher of French literature at the University of Leuven. Speaking no Dutch, and his students speaking little or no French, he organises his lessons around an object which they can nonetheless study together, a bilingual edition of Fe´nelon's *Te´le´maque* (Pelletier, 2009, p.142).

He was surprised to discover that with minimal explanation through a translator; the students studied the text using their knowledge of their own language, by developing a sense of how language works and then using logic and initiative to develop an understanding of the text. He concluded that you can 'teach what you do not know' because learning was about engaging one's own thinking processes (Rancière, 1991).

This challenges the idea that the teacher's knowledge of content and the way it is 'delivered' is what counts. Jacotot realised that teaching was mostly "enforced stultification" (Rancière, 1991, p.7) in that teachers left no room for their students to learn because they were so busy explaining in terms they thought would be understandable to their students. He used the example of a child learning to talk, through no formal explanation but rather by modelling their speech on the speech they heard around them. But when the child was ready to learn to read, they had to be taught by a professional and they could no longer be trusted to learn on their own.

Rancière (1991) claimed that all learning came down to a matter of "will" (Rancière, 1991, p.13) and when looking at the experiment of the students learning with minimal formal instruction one had to acknowledge that even though the teacher did not specifically explain the text, they still made the text available and thus the meeting of the two wills: that of the student and the teacher, became central to the process. This learning was seen as "emancipatory" (Rancière, 1991, p.13) in that learning had taken place but no "enforced stultification" (Rancière, 1991, p.7) had occurred. Rancière (1991) said that the act of learning could take place "by an emancipatory master or by a stultifying one, by a learned master or an ignorant one" (Rancière, 1991, p.14).

Ultimately the teacher should aim to empower the student to be able to learn far beyond their own knowledge and in fact internalise the basic assumption that the student is equally as capable and intelligent as the teacher (Rancière, 1991).

Kelly (2009) agrees with Rancière's (1991) view that the traditional views of education are flawed. "What is needed is a model which accepts the need for clear purposes and for initiation of the young into that which is deemed worthwhile" (Kelly, 2009, p. 88). According to Kelly a teacher's task is complex and cannot be seen in terms of a "generic plan" (Kelly, 2009, p. 81). The call for "emancipatory knowledge" (Kelly, 2009, p. 58) can only be achieved when we have a broader idea of what education is actually hoping to achieve. Kelly (2009) uses the example of how reading programmes manage to empower children to decode twenty six letters of the alphabet but how there are plenty of non-readers. It is not enough for learners to be able to manage the basic skill of reading; the love of literature also needs to be imparted for a literacy programme to be successful (Kelly, 2009, p. 77).

Rancière viewed emancipatory education to be empowering to all people regardless of their ability or social and economic standing (Rancière, 1991). He cites the example of one of Jacotot's employees having a mentally disabled son and yet Jacotot managed to teach him Hebrew and he became a lithographer (Rancière, 1991). Rancière saw learning as a matter of announcing that anyone can learn and he said that "whoever teaches without emancipating stultifies. And whoever emancipates doesn't have to worry about what the emancipated person learns. He will learn what he wants, nothing maybe" (Rancière, 1991, p. 18) and so it is ultimately one's own will that drives learning.

This view of emancipatory learning can be argued to be in line with the implementation of a multimodal approach as the teacher creates open ended opportunities for learning to take place rather than having a specific set of criteria that need to be achieved (Dahlberg, 2012). The Reggio Emilia approach combines both of these approaches in the emergent curriculum. The child chooses what concepts they will engage with and they have autonomy to choose their path of learning to a large extent. The teacher listens and pays attention to children's interests, intentions and desires. The student needs opportunities to explore new concepts without the intervention of someone explaining to them. The environment also plays a significant role in the

student being able to learn new concepts without having them explained to them. Rancière (1991) calls this "universal learning" (Rancière, 1991, p. 16) and he claims that it is the oldest form of learning in the world.

My argument thus far is that children learn in a sociocultural and semiotic manner (according to Vygotsky, 1978), in ways that differ from adults (Piaget, 1964) and that children need to have agency for their own learning (Rancière, 1991) and that this can be achieved through a multimodal approach. Multimodal approaches to both research and teaching are increasing in South Africa and work has been done in this field in South Africa for the past fifteen years (Archer & Newfield, 2014). A multimodal approach is appealing within the South African context because of the issues of access and agency due to our unique political and social situation (Archer & Newfield, 2014). South Africa is a democracy, however the challenges caused by the apartheid education system still make it impossible for many children to gain access to the dominant form of education and:

> Although many children in the present South African education system were born after the demise of apartheid, it is necessary to remember the discriminatory and separatist principles of the former education system in order to comprehend the degree of transformation that is required (Archer & Newfield, 2014, p.2).

Multimodal approaches across all sectors of education aim to address these issues. I turn my attention to how this can be achieved by drawing from examples around the world as well as in South Africa. In doing so, I aim to highlight that the knowledge gap exists for specific research into multimodal approaches (as a vital learning tool in every classroom) in an early childhood education setting in the South African context. Researchers in South Africa have completed extensive research in numerous areas using the multimodal approach but there is still a gap for this research to be situated in a Grade R context (Andrew, 2011; Archer & Newfield, 2014; Harrop-Allin, 2014; Stein, 2008).

5. Reggio Emilia approach

I want to cite the Reggio Emilia approach as my key example of a successful multimodal approach in an early childhood education context. This philosophy is one of the cornerstones of

my argument that a multimodal approach can be successful in an early childhood education classroom. However, I am not advocating that it is the only viable option but I am examining the principles that are employed in the approach with a view to creating access for South African children. The Reggio Emilia approach is the main theoretical basis on which my argument is formed with specific reference to the concept of pedagogical documentation. It is important to make the distinction between a philosophy and a curriculum and the fact that the Reggio Emilia approach does not present a blueprint of how to teach but rather opens up numerous ideas and conversations that challenge existing paradigms of learning. The Reggio Emilia approach does not advocate an approach that is absolute or complete but rather a changing system of ideas and ideals. In terms of my context this approach presents a number of ideas and thoughts that challenge the existing structure that I teach in.

The Reggio Emilia Early Childhood Education approach was founded in Italy after the Second World War. It was a whole system of schools practicing the approach and eventually became a municipal system within the city of Reggio Emilia. Loris Malaguzzi was the founder of the system but he was always careful to reiterate that the education of the children was up to the whole community and not one school, person or system (Abbott & Nutbrown, 2005).

The following verses are from the poem *The Hundred Languages* written in Italian by Loris Malaguzzi (1920-1994) and later translated by Lella Gandini. These verses highlight the philosophy that a child is born with many ways of expressing themselves and that it is up to the education system and the community to nurture this and not narrow a child's education to merely the written and spoken word (Abbott & Nutbrown, 2005). Malaguzzi also believed that a child learned by using all their senses and that intellect and the body were not separate from each other (Abbott & Nutbrown, 2005).

The child has

a hundred languages

(and a hundred hundred hundred more)

but they steal ninety-nine.

The school and the culture

separate the head from the body.

They tell the child:

to think without hands

to do without head

to listen and not to speak

to understand without joy

to love and to marvel

only at Easter and at Christmas.

They tell the child:

to discover the world already there

and of the hundred

they steal ninety-nine.

They tell the child:

that work and play

reality and fantasy

science and imagination

sky and earth

reason and dream

are things

that do not belong together

(Malaguzzi, 2012, p.3)

The Reggio Emilia approach provided a childhood service that freed women to work and build up the community. Italy was a nation depleted physically and emotionally. Northern Italy was a stronghold of resistance and ideals of community were of utmost importance. The citizens of Reggio Emilia recognised the need to build up the community. They believed that the community's strength and rebirth lay in the community providing a childhood service that embraced all children and gave them access to education. The main concept of the Reggio Emilia approach is that the child is born competent and that education should foster the child's intellectual growth through a variety of forms of expression. Children do not have to grow into fully-fledged adults to be citizens, they are born as fully fledged citizens who already have rights and belong and are treated as such. The Reggio Emilia approach focuses on children's competencies and not their deficits. They practice an entirely inclusive policy and special needs children are seen as 'special rights' children and the environment is able to accommodate all children regardless of their abilities (Abbott & Nutbrown, 2005; Vecchi, 2010). A key premise in the Reggio Emilia approach is the idea of democracy and that a child is born into democracy and is born with certain rights (Abbott & Nutbrown, 2005). They do not have to grow into fully fledged citizens; they are born as fully fledged citizens and are treated as such. Central to the Reggio Emilia approach is that teachers and children discover new ways of seeing the world together. Digital cameras, computers and various technologies are used daily by both teachers and the children to document learning (Vecchi, 2010).

The Reggio Emilia approach is distinct in that it employs art, not as an end, but as a critical graphic mode of inquiry. The *Atelier* or studio space is central in the Reggio Emilia municipal schools both metaphorically and literally. The *Atelierista* is an artist with a formal education in the arts and who is inducted into Reggio pedagogies. The Reggio Emilia approach places

emphasis on the role that art and aesthetics play in learning. The positioning of the *Atelier* was a conscious declaration that art is central to all learning. The *Atelier* was introduced to create a new element in schools to make the "work more complex and to encounter children's complex ways of knowing the world around them" (Claudia Guidici as quoted in Cooper, 2012, p. 297). Emphasis is placed on the quality of the child's interaction with the studio as a space as well as the media they are exposed to (Vecchi, 2010). Aesthetics are central to the Reggio Emilia approach and children are constantly exposed to different learning experiences where the value of aesthetic appreciation is highly positioned and a "conscious awareness together with the presence of the aesthetic dimension raises the quality of learning processes" (Cooper, 2012, p.300). The attitude of the educator as both researcher and collaborator within the Reggio Emilia approach is also a feature and needs to be continuously reflected upon (Dahlberg et al., 2007; Vecchi, 2010). The Reggio Emilia approach does not advocate a linear way of learning nor is art about the product but rather about the process. The *Atelier* is seen as a "rich research environment" (Cooper 2012, p. 297) and not a studio where arts and crafts are created. By the same token the *Atlelierista* is a "thoughtful, skilful researcher of children's and adult's ways of knowing" (Cooper, 2012, p. 297).

Progettazione or project work is a key element of the Reggio Emilia approach and works closely with the concept of pedagogical documentation. *Progettazione* "evokes the idea of a dynamic process, a journey that involves uncertainty and chance that always arises in relationships with others" (Rinaldi as quoted in Moss, 2012, p. 111). The Reggio Emilia approach does not advocate a set curriculum or a series of finite lesson preparations. Rather, the teachers create what they call 'provocations' in order to allow the children a springboard to explore a concept. The teacher uses pedagogical documentation and small group teaching to provoke learning and to encourage reflexivity. The project approach has no clear parameters at the outset of a project. The view of the child as being the author of their learning journey and the child as a competent and fully fledged citizen informs this unique approach (Moss, 2012). These views are consistent with emancipatory education and multimodal pedagogies.

The Africa Reggio Alliance was founded in Johannesburg in 2008 and it aims to promote the Reggio Emilia approach in Africa. There were existing links between South Africa and the city

of Reggio Emilia as Reggio Emilia and the African National Congress (ANC) had an alliance during apartheid in South Africa. South Africa found herself in a new democracy and it was hoped that the success that was experienced in Reggio Emilia Italy could be translated into a South African context. South Africa differs entirely from Reggio Emilia in Italy is that we have high pupil/ teacher ratios in many of our schools. This makes it difficult to follow an approach which relies on the collaborative efforts of two teachers in every classroom. However, the concept of the child and the way in which children learn can be translated into any context. The Reggio Emilia approach places value on each context being different and for the teachers and children to negotiate their learning path within their context (Vecchi, 2010).

In Reggio Emilia inspired classrooms the existence of varied learning opportunities is important. The environment should inspire and allow children the opportunity to explore their environment in a way that informs their thinking. An environment should be rich in meaning making opportunities. The Reggio Emilia approach is not prescriptive in how the classroom should be set up but rather insists that the central approach of collaboration and meaning making is adhered to (Vecchi, 2010).

In Reggio Emilia schools there are always two teachers working collaboratively with a class and the environment is referred to as the "third teacher" (Danko-McGhee & Slutsky, 2009, p. 169). This view of the environment as the third teacher should encourage "carefully prepared environments to nurture critical thinking skills. They are designed in a provocative way to encourage a child to learn…the teacher's charge is to provide these materials to invoke thought that will set the stage for constructivist teaching" (Danko-McGhee & Slutsky, 2009, p. 171). This does not suppose that every school has access to expensive equipment but rather encourages teachers to think about every decision they make within their environment, to think creatively as how to use the existing space and to recognise the fact that the environment is a vital learning tool. The view of the child as the most important and valuable resource is also important (Dahlberg, 2012).

Malaguzzi, the founder of the Reggio Emilia approach, placed emphasis on the environment being of utmost importance in the education of the child and he recognised that "children's self-identity is inextricably linked to their sense of place identity" (Clark, 2010, p. 67). Significant

emphasis is placed on aesthetics and within the Reggio Emilia approach aesthetics are seen as a "social connector" (Cooper, 2012, p.295). The way the environment looks and is set up is a way of connecting the child with their peers and is also a tool that can inform learning and meaning making (Cooper, 2012).

The Reggio Emilia approach recognises that although aesthetics have been "claimed by the fields of art and philosophy" (Cooper, 2012, p.296) there is significant value in the role aesthetics plays in education. This view of aesthetics does not advocate a certain view of what the classroom and learning environment should look like. Rather it is acknowledging the fact that every classroom is unique and that the classroom should be viewed as a living organism that enables learning to be made visible and the production of knowledge should happen in each unique context (Rinaldi, 2006). The school becomes an important symbol for a young child and as such the environment should be carefully constructed to ensure that it is a place where the child feels happy, accepted and able to learn. This view of aesthetics links to the contemporary understanding of what aesthetics are and how the notion of beauty is relational (Cooper, 2012). The environment should connect the children to exploring relationships between materials, each other and knowledge and should not be stagnant and static. This challenges the traditional view of a classroom being a static place equipped with a definitive list of suitable learning materials. It also opens up numerous possibilities for innovative and creative learning and teaching. The notion that there is not a perfect environment but rather an opportunity for each teacher to create learning opportunities in collaboration with the children enables "beauty [to become] a way of knowing" (Cooper, 2014, p.295).

"How to create a nurturing environment that promotes learning is one of the most important considerations for teachers when planning the curriculum" (Danko-McGhee & Slutsky, 2009, p. 170) and in the Reggio Emilia approach the physical space should nurture creativity and learning. "Early childhood institutions will be among the first public 'places and spaces' in which many young children begin to establish relationships" (Clark, 2010, p. 67) and as such the environment should be conducive to allowing each and every child to express themselves and to learn and explore new concepts. The ethics of the school and the aesthetics of the school are linked and both should be considered simultaneously. There should be an on-going conversation

in every school environment and all members of the school community should be part of this conversation and ask: "what is it like to be an adult in this space and what is it like to be a child in this space?"(Clark, 2010, p.197).

Programmes that work in a multimodal manner do not have to be the property of schools who can afford to pay for the implementation of expensive equipment and programmes. These are not dependent on social or financial standing but rather a shift in thinking of the teachers and policy makers as well as the involvement of the families of the children attending the schools. The Africa Reggio Alliance attempts to address the discrepancies that exist in South African early childhood provision and attempt to shift the understanding of the educators that the resources exist within themselves and the children.

6. Pedagogical Documentation

Pedagogical documentation is a process that runs throughout the work of the Reggio Emilia approach and "most simply expressed, pedagogical documentation is a process for making pedagogical work visible and subject to dialogue, interpretation, contestation and transformation" (Dahlberg, 2012, p. 225). Pedagogical documentation "embodies the value of subjectivity" (Dahlberg, 2012, p. 225) in that the Reggio Emilia approach acknowledges that observation will never be objective and rather than this being problematic, the subjective way in which learning is viewed provides a springboard for valuable meaning making and also encourages children, their parents and their teachers to take responsibility for the learning that takes place on a continual basis (Dahlberg, 2012). Learning that is taking place becomes visible for anyone who wishes to view it, the practice opens up a "public space" (Dahlberg, 2012, p. 226) where dominant ideas can be discussed and debated. The Reggio Emilia approach emphasises pedagogical documentation as beginning with actively listening to what the children are exploring, noticing, noting, what questions they are asking, what they are thinking about and discussing. It involves a level of "serious engagement and inquisitiveness" (Dahlberg, 2012, p. 226) and the teacher has to be committed to experimenting with the children and thus children are co-researchers in their educational journey.

Pedagogical documentation offers an alternative language to the language of evaluation. The language of "meaning making" (Dahlberg et al., 2007, p.6) is a term that implies that our practice

is not static or quantifiable. This alternative way of seeing evaluation and assessment enables teachers and children to make meaning in collaboration with the environment and with each other (Dahlberg et al., 2007). The Reggio Emilia approach of evaluation does not advocate stressful testing but rather consistent evaluating of the meaning that is found in all learning opportunities. The practice of pedagogical documentation comes from a social constructivist perspective and is conducted in a way that allows the learner to assess their own learning in order to "construct or reconstruct new and deeper understandings" (Fyfe, 2012, p.275) and the teacher to play their role in sustained shared thinking.

Reggio teachers are specifically trained in the Reggio Emilia approach. It is important to note that while it is easy to use the correct terminology, these views have to become embodied in the teachers' practice for them to have an impact. Pedagogical documentation and *progetazzione* go hand in hand and both aspects are consciously used in planning and reflecting on learning (Fyfe, 2012). Pedagogical documentation allows us to revisit and review earlier educational experiences and it is a visible reminder of what happened in the past and how this impacts on the learning going forward (Fyfe, 2012). It forces teachers to be continually cognisant of what their views on learning actually are, as well as their view of the child. Pedagogical documentation challenges teachers and researchers to carefully consider their own existing preconceived ideas and be open to new perspectives of their view of the child and the way learning and teaching take place. It enhances a reflexive practice both in the teacher and the children.

> Through (Pedagogical) documentation we can more easily study and ask questions about our practice. Which discourses of teaching and learning have we bought into? What voices, rights and respect do children receive…? Do we merely *talk* about the 'competent child', 'creativity', 'participation' and 'reflective practice' or do these ideas actually permeate what we *practice*. The point of departure here is that the greater our awareness of our teaching practices, the greater the possibility we can promote change by constructing a new space, where an alternative discourse can be established (Dahlberg, 2012, p.228).

Pedagogical documentation encourages teachers to constantly examine their practice and it also makes not only the children's learning, but also the teacher's practice visible. Teachers

"participate in the production of new knowledge" (Dahlberg, 2012, p. 228) and they allow creativity to become central to the learning experience. Malaguzzi was concerned with the fact that teachers did not work in teams (Dahlberg, 2012) and in the Reggio Emilia approach time for collaboration and action research is built into the weekly running of the centres.

The time it takes to meet and analyse documentation has often been cited as one of the main barriers to successfully implementing pedagogical documentation but in Reggio Emilia schools this time is seen as essential to the success of the programme (Fyfe, 2012). The collaborative times are carefully structured and each person has the responsibility of bringing raw data to be analysed. "The meeting space should support focused and serious discourse" (Fyfe, 2012, p. 283) and there should be no distractions. This step in the process cannot be rushed or fast tracked and teachers need to spend time debating and looking at what the documentation reveals about the children's development (Fyfe, 2012). This element of the approach is powerful when done with rigour and deep engagement. It is the most powerful when used in collaboration with children, parents and other teachers.

The Reggio Emilia approach not only utilises pedagogical documentation as a key concept but also recognises that a multimodal approach can successfully engage preschool children in reflexivity and meaning making. In the South African context it would be beneficial to utilise the tools that the Reggio Emilia approach uses and to research the effectiveness of this approach in a local context. This approach offers solutions for teachers to not only reflect on their practiced use it to plan collaboratively but also to enable the learners to reflect and collaboratively plan as well (Vecchi, 2010). Thus, in doing so, improve the quality of the learning and teaching which is taking place.

The principles of pedagogical documentation can work successfully outside of the Reggio Emilia context. In the book '*Negotiating Critical Literacies with Young Children'* Vivian Vasquez tracks her work done with young children in Canada. She created a classroom where the curriculum was defined by the issues that were raised by the children themselves (Vasquez, 2004). Vasquez's concept of critical literacy supports the idea that education is "neither neutral nor completely objective" (Vasquez, 2004, p. x) and that education is not merely about subject content or specific strategies. The curriculum in Vasquez's study was formed by focusing on

issues from the lives of the children and she gathered data by means of an "audit trail; a public display of artifacts" (Vasquez, 2004, p. 3). This visible display, made learning visible not only to the children but to the broader school community as well. As with pedagogical documentation, the fact that learning was visible encouraged discussion and debate amongst the children, their parents and the greater school community (Vasquez, 2004). It became an exercise in reflexivity and the children would use the audit trail as a point of reference for discussions around issues raised in the past, how they all linked and where the learning could go in the future. The audit trail, or learning wall, as the children referred to it, encompassed the learning the children had done over the entire year and it was used as a tool for critical conversation (Vasquez, 2004).

The idea that "retracing thinking involves theorizing" (Vasquez, 2004, p.3) was central to the approach and both teacher and children used the audit trail as a point of reference and a place where they could engage in meta-cognition. The audit trail was visible, thus it "made the curriculum available for public conversation" (Vasquez, 2004, p.33) .Vasquez emphasizes that the audit trail was not about a pretty wall display, but rather about creating a visual representation that would enhance the critical thinking and reflexivity of the children, herself and anyone visiting the classroom (Vasquez, 2004). Vasquez claims that "the extent to which I was able to negotiate spaces to engage in critical literacy practices was related to the extent to which I understood the possibilities for engaging in critical literacies" (Vasquez, 2004, p. 31). She explained that the conceptualization of the practice had to do with acting upon her beliefs and not just theorizing about them (Vasquez, 2004). Conceptual understanding needs to deepen in order to negotiate different spaces for critical literacy to develop and this deepening of understanding is an ongoing practice (Vasquez, 2004).

Pritchett Elementary School in the United States of America (USA) also completed a study on critical literacies and the study highlighted that critical thinking and reflexivity emerged when the children were given opportunities to form their own opinions. The teacher, Mary Brennan, used a multimodal approach to engage her first graders in social justice practices within her classroom (Crafton et al., 2009). She used a carefully structured choice of read aloud books in order to make her class aware of social justice issues. These books were chosen for the fact that

they challenged existing ideas of prejudice and bias. She encouraged her class to interact with the text by drawing their impressions of the story. Because the children were not only using language to interact with the text they had the time to let their opinions form and engaged in letter writing and picture making which was posted to the local newspaper around an issue that they decided needed attention (Crafton et al., 2009). This critical literacy practice created a space for the children to explore the issues at hand in a holistic manner without the timetabled allocation given to literacy and the arts as separate entities being the motivating factor.

7. Harvard Project Zero

The connection between the research done at Harvard Project Zero at Harvard University in Massachusetts, the USA, and the Reggio Emilia approach was strengthened in 1997. Reggio Emilia Italy and Harvard Project Zero embarked on a collaborative project "out of a mutual desire to explore questions about the nature of learning in groups and how documentation can make that learning visible"(Project Zero & Reggio Children, 2001, p.18). The collaboration aimed to "help teachers and others understand, support, document, and assess individual and group learning" (Project Zero & Reggio Children, 2001, p.19). Harvard Project Zero saw their purpose in the collaboration as identifying why and how the Reggio Emilia approach was and is so successful. Harvard Project Zero recognised that the Reggio Emilia approach did not offer a methodology but rather a unique way of viewing the child (Project Zero & Reggio Children, 2001).

Harvard Project Zero was founded in 1967 at Harvard University in Massachusetts USA and it challenges the behaviourist approach to psychology that had become prevalent in the USA since the 1920s (Kindler, 1997). Howard Gardner (2001) described Harvard Project Zero as becoming "one of the larger and certainly one of the most long-lived, American institutions that conduct basic research in cognition, learning and pedagogy, with a continuing special focus on the arts" (Project Zero & Reggio Children, 2001, p.26). Cognitivists were interested in "how humans process information as well as the ways in which they construct and represent knowledge through various systems of symbols" (Kindler, 1997, p. 46). Children's artistic development in various symbol systems was the aim of the research. Music, language and graphic symbols were

all researched at Harvard Project Zero. Interestingly, Harvard Project Zero, Howard Gardner and Jerome Bruner in particular, formed collaborative relations with Reggio Emilia (Vecchi, 2010).

Researchers at Harvard Project Zero saw a similarity between the early performances of young children in visual art, language and music as well as the performances of professional artists, writers and musicians. The project considered the development of art in order to make meaning as a form of literacy (Kindler, 1997). It also looked at how children can share their perceptions of the world through the meaning making process of art (Kindler, 1997). A young child can successfully use their drawings to communicate what they may not yet be able to put into words. Harvard Project Zero developed a theory of what they called the U-curve of creativity. This theorises that a child is at their peak of creativity at five years old and this creativity declines between the ages of eight to eleven because children become interested in replicating exactly what they see (Kindler, 1997). After this age most people, unless they go on to become professional artists, stop using drawing to make meaning in their teenage years. Age five is often referred to as the 'golden age' of creativity and as such should be utilised to inform a child's learning (Haanstra, van Hooran & Damen, 2011). Controversy exists around whether or not the criteria used to assess a child's art are too Western (Haanstra et al., 2011). However, for my purposes it is sufficient to note that children at age five are proven to be highly creative. Egan (1992) also considers age six the optimum age for the use of symbolism and metaphor and, as such, the indication is that Grade R is the ideal age to use a child's natural ability to make meaning by using symbols to inform a multimodal approach within the classroom.

8. Multimodal Pedagogy

This aptitude for visual thinking is similarly foregrounded in the work of Beth Olshansky who founded the 'Centre for the advancement of literacy' at the University of New Hampshire in the USA. Her work is on-going and aims to use art making and responding to pictures to improve written literacy. She recognises that "pictures provide a universal language. They speak equally to native speakers of English and those learning English as a second language. They have deep roots in our history, both as individuals and as a species" (Olshansky, 2008, p. xi). She has integrated art into literacy for the past two decades and her approach has been successful among different ages, races and socio-economic primary school children. Pictures are our first written

language and the connection between the language of art and the language of writing is irrefutable (Olshansky, 2008). We need to use this connection to our advantage instead of accepting that children become less creative as they mature. The rich expression afforded to them by creating pictures needs to be used to their advantage when putting their ideas into words. Once we understand that "pictures are our first written language" (Olshanky, 2008, p. 16) we can see the benefit of encouraging children to use this language to express themselves.

The need to become less "verbocentric" (Olshansky, 2008, p. 16) within our education system is vital if we are to allow children to use all the tools at their disposal in order to learn both formal and informal literacy skills. Pictures form a universal language in the way spoken language does not and we need to recognise that pictures can fulfil the verbal function of telling a story. Once we acknowledge that pictures have the function of being language we can allow children the access to this language in which they are already fluent. Central to Olshanksy's method is the idea of *transmediation,* which she defined as "the act of recasting or translating meaning from one sign system to another" (Olshansky, 2008, p. 33). In this context the *sign systems* (the many ways in which we share or create meaning) refers to both written and spoken language as well as visual art. Children are capable of moving between the language of pictures and the language of words (Olshansky, 2008, p. 33) and this skill needs to be used in order to enrich their literacy development.

The New London Group is part of a developing body of research about multiliteracies and their challenge is to "nurture the critical engagements that are necessary for students to design their social futures and provide them with access to the language work, power, and community" (Crafton et al, 2009, p.35). Gunther Kress refers to these multiliteracies as "new literacies" and he claims that children need to learn to negotiate multiple literacies in order to achieve overall success (Kress, 2003). The work of the New London Group and Kress specifically were an ideal springboard to research into multimodal pedagogy in South Africa.

9. South African Examples of Multimodal Pedagogy

The implementation of multimodal pedagogy can often reach further afield than just the classroom and bridge the gap that often exists between the school and the community. The Olifantsvlei Fresh Stories Project was implemented in the South African context. Pippa Stein

stated that "multimodal pedagogies work consciously and systematically across semiotic modes in order to unleash creativity, reshape knowledge and develop different forms of learning beyond the linguistic" (Jewitt & Kress, 2003, p. 123). She was a South African teacher and an academic who conducted extensive research into the idea of multimodal pedagogy as a means of providing "epistemological access" (Lotz-Sisitka, 2009, p. 1) to all South African children regardless of socio-cultural and economic backgrounds. The Olifantsvlei Fresh Stories Project in 2001 aimed to "develop a body of imaginative fresh stories based on and arising from the children's lives and local experiences" (Jewitt & Kress, 2003, p. 123).

A multimodal approach was used in order to develop the stories and the research proved successful in encouraging the children to draw from their own experiences in order to make meaning. One of the components of the process was the making of figures for their stories and the children successfully completed this component at home with the input of significant female role models (e.g. mothers, grandmothers and aunts) to complete the project. The children were involved in the process of making dolls which had a specific relevance to them and their community as the making of 'fertility' dolls was part of their historical culture. Stein called this part of the process the "semiotic chain" (Stein, 2008, p. 98) and posited that the children made meaning out of the experience because they were able to move between modes of expressing themselves. The doll making process also highlighted how the children could draw on their home environment and long established meaning- making practices in order to make meaning. The children were involved in the process of making fertility dolls which had specific relevance to them and their community as they were a part of their historical culture. Their learning did not depend on the resources available but rather on the children's inner resourcefulness and resources that existed in the community, in this case physical and knowledge resources (Stein, 2008). This study highlights the fact that it is possible for all children, regardless of their background, to move successfully between modes in order to make meaning.

Susan Harrop-Allin (2014), also a South African, explored how primary school grade six children in a school in Soweto South Africa used a storytelling, dramatic game called *Xoxisa* to successfully move between semiotic modes. She emphasises that teachers and researchers should value the meaning making strategies children employ in their play and "that accessing,

recognising, and employing children's representational resources can realise an inclusive education and acknowledge diversity" (Harrop-Allin, 2014, p. 38). She argues that educators need to be aware of and understand the "cultural, creative, and artistic resources children bring to formal education settings" (Harrop-Allin, 2014, p. 38). Children's play should be seen as a valuable educational tool that when utilised in formal settings can promote learning (Harrop-Allin, 2014). The "disparities between formal and informal "sites of practice" (Harrop-Allin, 2014, p. 38) could be minimised if teachers were to observe and utilise the ways in which the children played beyond the bounds of the classroom.

10. The Emergent Curriculum

The attitude that the "world lives in a culture where we are constantly being offered solutions, before we have asked the critical questions" (Dahlberg et al., 2007, p. 6) is prevalent in many early childhood practices and indeed in most educational institutions regardless of the age of child being taught. Most educational institutions and policy makers seem to be quick to grab onto one view or theory of how a child learns or what knowledge they think they should be acquiring and then set about making sure that the children acquire the skills that are deemed necessary for their wellbeing. This view of knowledge supposes that children need to be adapted and managed into existing society. Socialisation is a part of early learning but there are important choices to be made in this regard. A 'developmentalist' paradigm is the dominant discourse in Early Childhood Education (ECE) for many government and funding agencies and as such "each stage of childhood is a kind of apprenticeship for successive, more important stages" (Dahlberg et al., 2007, p. xxi). These stages are based on research among a particular population which are now applied as a measure for all children in all societies (Dahlberg et al., 2007).

I am proposing an alternative view of the child being able to make autonomous decisions regarding their learning. I would therefore be in favour of an emergent curriculum or open curriculum. In order to implement this, teachers need to recognise that:

> our students can no longer consume information but must actively shape knowledge. To do this, they need a high metacognition of information… and an awareness of information plurality and malleability to confidently participate in interpreting, selecting and designing meaning (Dias, 2010, p. 469).

An emergent curriculum is challenging for both teacher and student when trying to fulfil rigid curriculum requirements and it also raises the question of whether or not a pre-school child is able to make autonomous decisions regarding their own learning. The conceptual framework that I have chosen is consistent with the view that an emergent curriculum is not only possible but also beneficial to children as individuals and also the larger community. The research will focus on the implementation of a multimodal approach and pedagogical documentation within the specific context of a South African Grade R classroom.

Chapter Three: Design and Methodology

1. Site Selection

I teach Grade R at a private girls' school in Johannesburg and I chose to complete an in-depth qualitative case study with my current class as I had an existing relationship with each child and the study would be more valid due to the fact that young children react differently to strangers than they do someone they know well. It was imperative that the girls were comfortable exploring new approaches, and as the approaches were different from what they had been exposed to previously at pre-school level, the relationship between researcher and the participants was important. It was important for the children to feel comfortable and secure within the environment in order for their reaction to the interventions to be genuine. An important aspect of the case study was my own reflections and this was made more valid by the fact that I had an existing relationship with the children.

The site was my own Grade R classroom and the participants were my class of twenty two girls ranging in age from those turning seven in October 2015 and those turning six in November 2015. At the time of data collection the children were ranging in ages from five years two months to six years three months. The school is an English speaking Christian girl's school for girls from Grade R to Grade Seven which has been in existence since 1921. It is multi-racial and multi-cultural and strives to provide affordable private school education. There are 298 learners at present and at Grade R level there are two classes with twenty two learners in each class. The school is run by the parent body and the parents are actively involved in all decision making that pertains to the running of the school. The grounds are well maintained and the facilities are of a high standard. The classrooms are well equipped and there is excellent ventilation and lighting. The learners and staff have access to extensive resources. Every classroom has an interactive whiteboard and technology is used extensively throughout the school. There has been a recent purchase of numerous iPad devices and they are used across the school to enhance teaching and learning. The school management spends a significant amount of time and money ensuring all teachers are trained in the use of the technology available. This training is used in the classroom where learners and teachers are very comfortable with the use of different digital devices.

2. Research Role

My role was that of a "complete insider" (McMillan & Schumacher, 2010, p. 348) as I had "complete membership" (Adler & Adler, 1994, p. 380) of the group. Thus I did not have to establish a rapport with my participants as our relationship was already established. The relationship I have with the children enabled me to provide 'provocations' (a term used in the Reggio Emilia approach to describe the impetus used by the teacher to encourage engagement by the children) that were consistent with their individual interests and abilities as well as the group's strengths and interests. I listened to their responses and due to the literature I had read was aware of new conceptions of knowledge and learning. My sense of anticipation and not having a preconceived idea of how the research would play out strengthened the validity of the case study. All the children in my class participated in all aspects of the data collection, as this formed part of the curriculum. However, I made it clear to both them and their parents that their inclusion in my research dissertation was entirely voluntary and the children would be at no disadvantage if they did not want to be included in the data analysis.

3. Purposeful Sampling Strategies

I conducted an instrumental case study as I wanted to gain a deep understanding of the process I was initiating (McMillan & & Schumacher, 2010). A case study is "intended to provide a detailed account of particular circumstances rather than offering broad, generalized findings" (Goldstein, 2007, p. 381) and I analysed each intervention that I initiated in detail. The whole class participated in the data collection, i.e. twenty two girls ranging in ages from five years, two months and six years, three months. I completed an in-depth analysis of five of the participants. These participants were chosen according to a range of ages across the spectrum of the class as well as children that in the data collection process highlighted different aspects of the research. These participants were only selected after I had collected all the data and I received permission from all the parents and children in the class to be possibly used in my research. I committed to allowing both the parents and children to preview any photographs I would be using of them, and gave them the opportunity to request that I did not use specific photographs and also to withdraw their consent to be in my final dissertation at any stage. I had to balance my commitment to each child as their teacher with my commitment as a researcher to represent a clear picture of how the children reacted to the specific interventions that I put in place.

4. Ethics

Traditionally children have been seen as objects in the research process and as such research has been completed 'on' them and not 'with' them (Harwood, 2010). The view of the child being an incomplete adult has relegated children to not having any power within the research process. A new perspective on children and research has emerged whereby the children are seen as valuable contributors to the research as "children observe with different eyes, ask different questions…they ask questions that adults do not even think of" (Kellett, 2005, p.8). The call for "ethical symmetry in research relationships with children while taking into account the social and cultural positioning of children in their particular circumstances"(Christensen & Prout, 2002, p.477) recognises that children have a valuable contribution to make to the research process, not just as objects to be studied, but as complete people with valuable insights and opinions. I endeavoured to ensure that the power relationship within the research was distributed between me and the children. I wanted the children to have a sense of their value to the study throughout the process. I shared insights as we progressed with the data collection and took cognisance of their insights and gave them value. The children were made aware from the outset what I was researching and their opinions were noted. Once the ethics clearance from the University of the Witwatersrand had been obtained, I could obtain consent from the "gatekeeper of the field" (McMillan & Schumacher, 2010, p.351) in this case the school principal. I then obtained consent from the parents of the children and the children themselves. It was not necessary to "map the field" (McMillan & Schumacher, 2010, p.351) as I had an intimate understanding of the management and ethos of my own classroom.

I used photography to provide visual evidence of the processes involved in my data collection. The practice of pedagogical documentation also relies on photography and as such was used as a teaching tool as well. I obtained permission from both the parents and children to use photographs of the children. However, the parents and the children were given the opportunity to preview and approve the actual photographs that are used in the final research report. I applied for ethics clearance from the ethics committee at The University of the Witwatersrand. Once this was obtained and I had received a protocol number I applied for permission from first, the school principal (it is an ISASA school and I therefore did not have to obtain clearance from the GDE). Secondly, the parents completed a consent form and a photography consent form. Thirdly, the

children themselves (due to their age I read the following explanation to them and asked them to place a tick on the happy or sad face, indicating their willingness to be in the dissertation).

Explanation to read to the children

The Penguin class is going to be working with lots of new ideas and tools. We are going to work together as a class to learn new ways of showing how we are thinking and learning.

This is going to be fun and not at all scary and I am going to write a story about how we learned and how we show our learning for my University (remember I told you that even big people like to learn new things).

Can you all give a tick at the smile if you want to be part of my story or a tick at the frown if you don't want to be part of my story? If you do not want to be part of my story then that is your choice and I won't be sad or upset with you. Remember we talked about everyone being allowed to make their own choices in our classroom as long as our choices didn't harm us or our friends? This is like that; if you don't want to be in my story then that is your choice.

5. Data Collection Strategies

The data collection took place over a two month period and I set aside a two and a half hour slot within the morning programme to practice an open curriculum. The school is a private school and as such I had the freedom to practice an open curriculum as long as I covered the core skills that the other Grade R class was covering in conjunction with the research process. I had to keep in mind that I am a staff member at the school and that my professional duty could in no way be compromised by the data collection. My data collection took numerous forms and I made sure that I wrote up the conversations, reflections and insights each day. I also catalogued all photographs and art work and other artefacts daily so that when it came to analysing the data I had a large body of information to draw from.

The data collection took place over a period of two months. However the strategies that informed the research have continued into the day to day running of the classroom. I decided to use my own class of Grade R children at the private girls' school where I currently teach as my sample.

The reason for this was that I could complete an in-depth case study and would not be bound by the constraints of having to go off site to collect my data as I am a part-time student with full time teaching commitments.

First, I kept a record of my own reflections on the process and how the children and I were reacting to the interventions. I jotted down reflections after each data collection session while the children began break after the data collection each day. I then wrote more in- depth reflections each evening and also tried to correlate these reflections with insights I had seen in the available literature around the topic of pedagogical documentation and a multimodal approach. By the end of the two month period I had a collection of my own personal reflections to use in the analysis.

Second, I kept a record of our 'meetings' to review the documentation and make decisions. These meetings happened daily and at the beginning of our session and different children had a chance to chair the meeting. As such, I was able to observe how the class came to decisions around what we were going to research on a given day. I wrote down sections of the meeting verbatim as the children were talking and also photographed their representations of the 'agenda'.

Third, I made in class observation notes on the children's interactions and reactions, field notes including verbatim exchanges between me and the children as well as the children with each other. I would make the decision to follow a specific group's dialogue as they went about their research in the morning and this would generally lead into the creation of drawings, paintings or three dimensional representations. The verbatim exchanges gave me insight about individual children, small groups and at times the whole class.

Fourth, I took photographs of the children's work and the children engaging in the data collection activities. These were taken by both me and the children: the children have access to iPads and are competent in using them for photography. I made sure I downloaded and dated these every day and as they were coming from various iPads I had to make sure that I had downloaded all the photographs as the ones on the school iPads would not be saved when the iPads were returned to the computer room. The children became invested in making sure that their photographs were downloaded and also used in the documentation panels that I printed for

display in the classroom.

Fifth and last, the children's artwork and any artefacts they created during the data collection phase were used for analysis and also to form part of the different classroom displays that are fundamental to the practice of pedagogical documentation. The artwork and artefacts were photographed for the purposes of the dissertation and the originals were returned to the pupils unless they were to become a permanent part of our classroom displays. No originals were kept or used in the dissertation. Data was collected at each stage of the process and where possible transcriptions and reflections were done on the same day so as not to risk their validity being compromised by the fact that I was teaching and researching simultaneously and could easily lose the fine detail of the experience over time.

6. Data Management and Analysis

The school is ninety four years old and there is an old oak tree that is at the centre of the school both literally and figuratively. This oak tree is a symbol of shelter and nurturing within the school ethos. It is mentioned in the school song and it has significance for the present pupils at the school as well as returning alumni. I decided to utilise the tree as the starting point for my data collection. I used the tree as the impetus or provocation to introduce the children to different multimodal perspectives. I was implementing an open or emergent curriculum, and as such I could not predict where the 'provocation' would lead the class.

I analysed the data in terms of how each of the five participants and the class as a whole were able to utilise the pedagogical documentation and different multimodal 'languages' to make meaning. This analysis was primarily drawn from informal conversations with and between the children, my own reflections and field notes. The children's reaction to a multimodal approach was analysed by means of photographs taken of their work and them in the process of creating. The data was analysed in terms of the use of different multimodal 'languages': the extent to which these were utilised, whether the children made meaning in collaboration with their peers and whether the pedagogical documentation reveal learning processes to the learners and me as the researcher.

The photographs were also used to make documentation panels which were displayed in the

classroom. The children's reactions to the pedagogical documentation was also recorded and analysed in terms of whether or not they were able to make meaning by viewing the available documentation. Due to the nature of the interventions and the view that the child is competent to decide on their own learning my proposed interventions were informed by the way the group reacted to the meaning making opportunities that were available to them.

Chapter Four: Presentation of research data

1. Description of participants

The sample class consisted of 22 Grade R children ranging in age from children turning six years old in November 2015 and those turning seven years old in October 2015. The whole class was exploring multimodal approaches within the classroom context and pedagogical documentation was implemented while data was collected throughout the process. All 22 children were involved in each stage of the process. For the purposes of the presentation and analysis of the data I chose to present the data of five of the participants in order to "focus on cases that are especially rich in information" (Winograd, 2003, p.1651). The five children were chosen because they are at various stages of development and also encompass a wide range of ages within the Grade R year.

Participant One has her birthday in November and will be turning seven years old this year. She is one of the oldest members of the class and this is the second year she is spending in Grade R with me as her teacher. A joint decision was made between me and her parents last year that she would benefit from consolidating her preschool skills before embarking on the formal Grade One programme. She was the youngest member of the class last year and is now the fourth oldest. She is developing leadership skills and a sense of confidence that were not evident last year. Academically her skills have matured and she is reading simple readers and completing formal mathematics operations. Her reactions to the interventions that I put in place were interesting to analyse as she has an entrenched relationship with me and definite expectations of how her day should progress. As such she was receptive to the multimodal interventions I put in place and took on the role as co-researcher very capably and enthusiastically.

Participant Two has her birthday in October and she will be turning six years old. As such she is one of the younger members of the class. She is a very shy child who doesn't like interacting with people she doesn't know and even when she is familiar with someone she can still be reserved. She has attended Play Therapy and Occupational Therapy prior to coming to the school which is unusual in such a young child. Her mother is concerned that the school is "too academic" for her child and has been advised in the past that her child may not cope with mainstream education. Participant Two talks to herself a lot and is a very emotional child. She uses drawing as a means of expressing herself and making sense of emotions and events. She can

explain the meanings of her drawings in detail. During the data collection she enjoyed dictating her insights to me. I decided to analyse her reactions in depth because she found the open curriculum section of our day particularly enjoyable and I could see her progress developmentally and emotionally as we used multimodal interventions on a daily basis.

Participant Three has her birthday in February and she has already turned six. She does not speak English at home and she spent the first three years of her life in a rural area in Zimbabwe being raised by her grandmother while her parents were finding employment and settling in South Africa. She is on a scholarship to the school and as such is not in the same economic bracket as most of the class. Her command of English is not at the same standard as her peers and she has a limited English vocabulary. She attends Speech Therapy to correct a lisp and also to help her with her auditory processing skills. I also give her a one-on-one remedial lesson after school once a week to consolidate her perceptual skills. She is an exuberant and affectionate little girl. I chose to look at her reactions to the interventions because she is so responsive and engages enthusiastically in multimodal activities.

Participant Four has her birthday in May and she was still five at the time of data collection. Her birthday falls in the middle of the class age ranges. She is a quiet and confident person. She enjoys all aspects of her school morning and she enjoyed our open curriculum sessions. She is popular socially and very settled in her school environment. She has good academic skills and she liked posing challenging questions during our morning meetings. Her reactions to the interventions were interesting to analyse.

Participant Five has her birthday in September and she was still five at the time of data collection. She is slightly young for the class but she is confident and capable and enjoys trying new things. She came to the school this year not knowing a single other child and yet she already plays with a wide range of friends. Her preschool prior to this school did not concentrate on perceptual skills but she has not allowed this to hinder her and she has developed a skill set that is comparable to the skills her peers display. She is an interesting child to analyse because she is always keen to try new things and she threw herself wholeheartedly into the provocations. This participant in particular enjoyed documenting her own work through the use of my own personal iPad in order to photograph a construction or picture she had created.



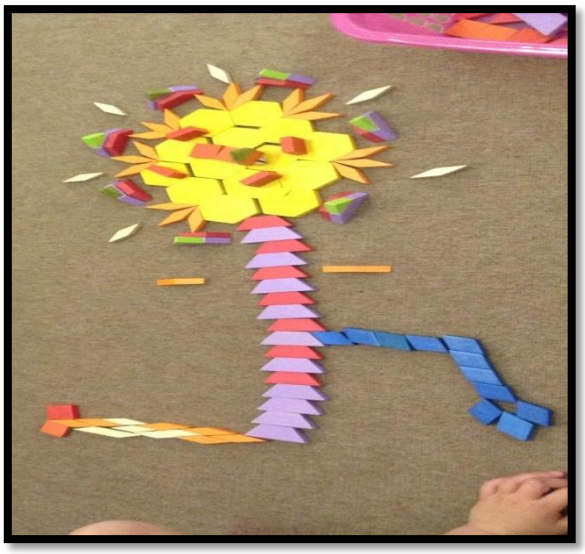


Figure 4.1 Mosaic patterning photographed by the children themselves. The children experienced ownership of what they were doing because they had the autonomy to photograph their work themselves. They realised during the data collection process that what they had created during any time of the day had significance. This realisation was responsible for an awareness of every moment and all interactions during the day took on significance for both the children and me as teacher and researcher.

2. Data Collection Process

I proposed to implement an open curriculum where possible within the confines of the school's expectation of covering a set curriculum. The two Grade R classes at the school work closely together and my colleague, our teacher's assistant and I have weekly preparation planning meetings. The school affords us a certain amount of latitude and as it is an ISASA school we are not bound by the CAPS document. However the girls do have to follow a formal reading programme and they learn formal reading skills in Grade R. They also cover formal maths skills and are able to do written addition and subtraction sums by the end of the year. It is within these confines that I implemented our open curriculum and as such there were constraints that I had to

adhere to. I decided that I would implement the open curriculum for the first two and a half hours of the morning when the girls were at their most receptive. We would then continue with the more formal programme for the remainder of the day. This time frame also enabled the girls to go straight from the open curriculum session into break and we could finish whatever we were working on until it came to a natural conclusion. I discovered that even when we were doing our formal work, the skills and thought processes that we had been utilising in the morning carried over into the remainder of the day. The children developed a reflexive approach to all their learning and this skill was evident in the learning taking place in the classroom.

As we were all engaging on a learning journey with no set outcome we began each morning with a morning meeting. I adapted the format that Vasquez (2004) uses in her book *'Negotiating Critical Literacies with Young Children'* and a different chairperson chaired a morning meeting each day. The children could all bring their questions or comments to her and she would record them on a clipboard during the morning arrival time. She then chaired the meeting and we decided as a group which questions were going to be discussed that day. Initially, the girls looked to me for approval and were a little shy and concerned about a peer being in charge of the decision making process but this initial reticence was short-lived and the girls embraced the morning meeting with enthusiasm. The girls made their list of questions to put to the chairperson with discussion and thought. The chairperson 'wrote' the list of questions in whatever format she desired and as long as she could 'read' back the questions there was no set format. This process improved as the girls became more confident in their list making abilities. They also fulfilled one of the CAPS document criteria of "emergent writing" (Department of Basic Education, 2011, p.35). I felt that it was relevant to align aspects of what the children had achieved to CAPS criteria in order to highlight that this approach could work in a government school context and not only a private school context. The idea of an open curriculum does not exclude the children learning skills laid down by the National Curriculum but rather makes this part of a learning journey and not an isolated lesson.

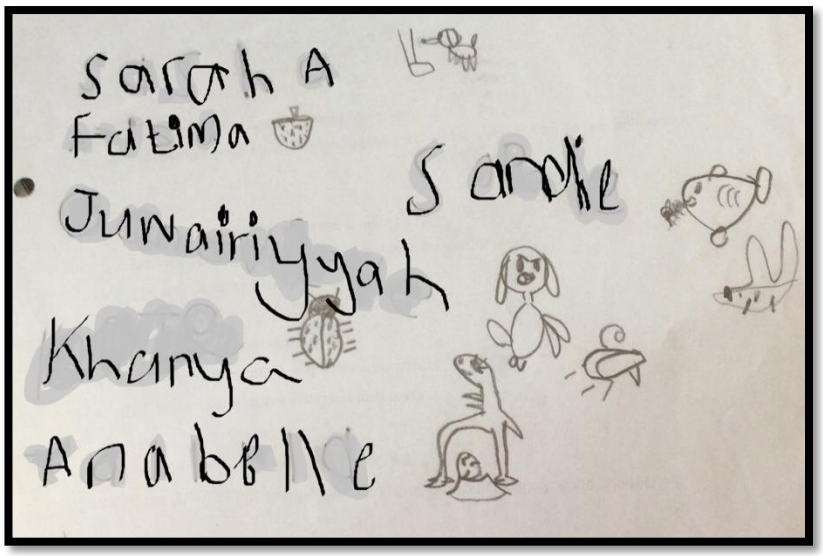


Figure 4.2 Photograph depicting lists of questions asked in morning meetings. The children drew their questions and the chairperson remembered what the girls had asked. This indicates that because the children had discussed the questions they remembered what was asked. Fatima asked "Why do the acorns fall out of the trees?" This question prompted an in- depth exploration of the question as the children answered it. (The names of the children have been changed and only the original drawings are visible.)

The morning meeting informed the questions we were going to embark on in the session I had allocated for our open curriculum part of the morning. Once we had a week of morning meetings in order to familiarise the girls with the process, I began the formal data collection process. On the morning that I began the data collection all the questions began with the oak tree as a starting point as I wanted to give the girls a broad framework within which they could structure their meeting. The conversation proceeded as follows:

Morning Meeting Conversation

Chairperson (Participant Two): ***Why do the acorns fall out of the trees?***

Participant Five: The wind blows them.

Participant One: They get old and fall down.

Participant Five: Because the wind blows hard

Chairperson: Because the squirrels knock it down

Participant Three: Not squirrels in Johannesburg! You only get squirrels in Cape Town!

Participant Two: There are no squirrels at school, only at the zoo.

Participant Five: the acorns fall out of the tree because it is autumn.

Participant Four: The leaves fall at the same time

Chairperson: the wind is strong and blows the acorns down.

Participant Four: Acorns are nuts for Squirrels

Chairperson: We can't eat those nuts

Participant Five: they are not to eat-an oak tree grows out of an acorn

Participant Three: It takes long to grow seeds

Participant One: when its winter all the leaves come down but only from the oak tree.

Participant Three: Some trees are apple or banana trees

Participant Five: This tree is special because it's been there a long time

Participant Three: why is the oak tree growing so big?

Participant Five: because it's old!

Participant One: It grows too big because there is rain and sun

Participant Five: we water plants to make them grow

Participant Three: let's plant the acorns and see if a tree grows!

Once the chairperson had chaired the discussion on the questions their peers had asked we embarked on exploring possible answers. This exploration took the form of going to the library to get books to answer the questions. I had arranged with the librarian to expect some members of the class and she was accommodating in helping the girls with their quest. Another group of girls went to the computer centre to obtain iPads so that they could search the internet for answers. I had arranged for the information technology specialist to expect a group of girls and she assisted them in accessing the information with the computers and iPads. The girls then reported back their findings to the whole group. The level of excitement was tangible and the questions "What is in an acorn?" and "Why are the acorns and leaves falling off the tree?" were answered by the children themselves. The fact that the girls discovered the answers themselves yet again covered a number of the CAPS curriculum criteria including questioning and answering techniques like "asks questions and looks to books, television and computers for explanations" (Department of Basic Education, 2011, p.48). After this meeting we went outside to sketch the oak tree. The girls chatted as they sketched and I made notes of their conversations which I transcribed later.

Conversation while sketching the Oak Tree

Participant One: Oak leaves are really sticky and sweet. I showed my cousin the sticky leaves. I have an oak tree at home.

Participant Two: when I went to your house and all the oak leaves were sticky on my feet.

Participant One: It sticks and sticks…the leaves are sticky because they are sweet…they have a honey thing in it but you can't eat it or put it in your tummy.

Participant Three: I am drawing the bark, it is beautiful.

Participant Four: Look at my finger-it is all full of pencil.

Participant Five: I think pencils are made out of wood.

Participant Four: the tree is also made out of wood!

Participant Three: papers are also made out of wood.

Participant Five: paper is made out of trees.

Participant Four: I don't understand how paper is made out of trees?

Participant Five: I think you cut it very thing in a factory. It gets flattened into paper.

The girls were working in pencil and my only brief was to "draw what they could see, not what they think they could see", this was to try and discourage the hearts and butterflies that seem to sneak into Grade R girls' drawings. I also told the girls that when they thought they were finished drawing they should stop and that there was no set time frame. A lot of the girls have brought the idea from preschool that I must approve when they are finished and I am trying to empower them to make this decision themselves. I created a documentation panel of the conversation and photographs of the girls and their sketches. The parents were aware what pedagogical documentation was because I had explained it to them in my letter to them requesting their permission to use their daughters in my research. I had also briefly told them what my research would entail during our parent information evening in January 2015. The parents were therefore very engaged from the start in any documentation that was made visible in and around the classroom. This involvement and interest encouraged dialogue between parents and their children, parents and me, parents and other parents, and the children amongst themselves.

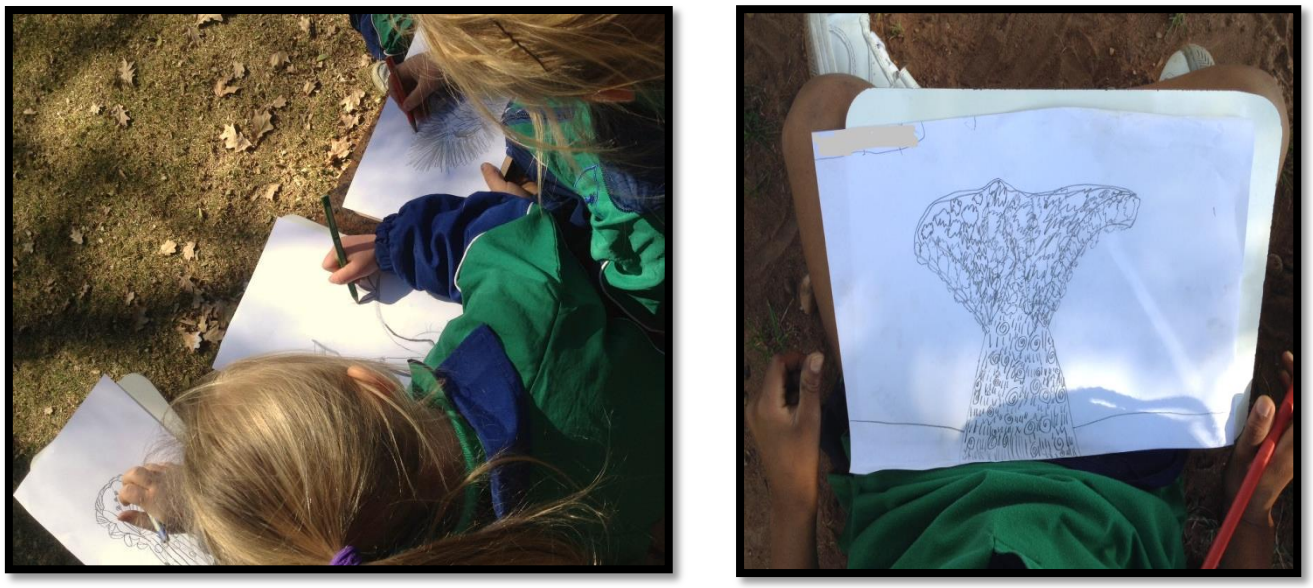


Figure 4.3 The photograph on the left shows children sketching the oak tree in pencil. The photograph on the right shows one of the sketches. This was at the beginning of data collection and the children discussed how they would represent the different elements in their pictures. They were also intrigued by the idea that they could be "real artists and only use a pencil like Picasso". This comment prompted a discussion and then research into Picasso.

The girls completed their sketches and a group of three girls started to spontaneously collect acorns and their peers enthusiastically followed their lead. I used this interest and told them to bring their collections back to class. We used the acorns to complete some 'acorn maths' and I did not prescribe what they should do with the acorns. It was interesting to note that some completed one to one correspondence and some completed addition sums on whiteboards with whiteboard markers.



Figure 4.4 The photographs depict acorn maths and shows one-to-one correspondence and addition using acorns as counters. The child on the right is playing an addition game on the iPad and she is using the concrete apparatus in the form of the acorns to find the answers. The use of the concrete apparatus is encouraging her not to guess which answer is correct in the game.

This activity was also dictated by the girls and yet fulfilled assessment criteria without a formal mathematics lesson taking place. The children were recognising the symbols and the corresponding value of numbers and were completing counting activities. The 'acorn maths' also differentiated the level of difficulty without me putting the girls in groups and dictating the

ability level they should work at, they completed sums using concrete apparatus and helped each other with the concepts. We collected the acorns in a basket and they became the focus of fantasy games and activities during morning arrival times. The children also liked to refer to the documentation panel that depicted the 'acorn maths' and I observed some girls using the pictures as a template to recreate addition sums themselves.

A couple of days later our morning meeting question focused on "where does paper come from?" The girls had numerous ideas and yet again they dispersed to find the answers from the computer centre and the library. This led us into a discussion on tissues and whether or not they were paper too. I had seen an example of a tissue informed provocation at the Africa Reggio Alliance Conference in June 2014 and took the opportunity to use the children's interest and explore the properties of tissues. We all took a white tissue and explored what we could do with the tissue. The girls gave me words or phrases to describe the tissue which I wrote down and we put these together to form a class poem.



Figure 4.5 These photographs show the children exploring the properties of tissues. They rolled, tore and folded the tissues. The class decided on words and sentences to create a class poem.

The children used their own ideas and as well as their peers ideas when finding words to describe the tissues.

"White Tissue Poem"

White and pretty,

Light and soft,

Smooth and silky,

Flat and floppy,

Bendy and foldy,

Floats and breaks.

Good for origami.

It can fly,

If you put it on your arm

It flaps like a bird.

The colour of a swan,

It tears easily,

It falls down like a parachute

And it can be useful too!

I then gave each child a black square of cardboard and a tissue and they created their tissue picture on the cardboard using glue. We put each individual work together to make a square and one child commented: "*Alone they just look like tissues stuck on black cardboard but together they make a beautiful picture."*



Figure 4.6 Photograph of all the tissue explorations together. This was displayed as a documentation panel and the children could recognise their own exploration and explain how they had made it. A group of girls extended this exploration to using coloured tissues and then tissue paper.

I created a documentation panel of the whole process and it was displayed by the next morning. The girls were proud of the poem in particular and many of them requested that their parents read them aloud. The concept of poetry intrigued the girls and we embarked on a poetry exploration and read numerous poems together. This process yet again covered aspects of the curriculum but without a pre-determining of when this material would be learned. A group of girls decided autonomously to make up their own inventions following our discussion on tissues being a very clever invention. They drew their inventions and then one of them brought me a

permanent marker and told me they "*were ready to tell me what to write".* I was delighted with this development in our classroom as the girls were deciding what they wanted to do and explained to me what facilitation they needed from me. We were beginning to move away from activities where the whole class completed the same project and I was impressed by how the girls could embark on an activity either individually or in a small group. Their awareness of how they were making meaning with their peers would not have been as easy to develop in a formal curriculum setting.



"My invention is a person that goes to the house and stops my baby sister from crying"



"My invention is a thing that cleans your teeth if there is cupcake on them – but super-fast"

Figure 4.7 Above are examples of the inventions that the girls imagined. The child on the left has a baby sister and this is obviously a concern of hers. This illustrates how children bring their home context to school. The girls extended this activity into researching inventions that interested them. It also prompted a discussion on manmade inventions versus nature. One child told us that her dad says that "Johannesburg is the biggest man-made forest in the world". This opened up another whole area to explore.

The next day, following our morning meeting the whole class decided to go outside and see if there were any visible changes to the environment since our last trip to the oak tree. We all went and sat and just looked at the tree, some girls decided they wanted to sketch the changes, while

others chose to just look. I did not insist that they all sketched the tree and was surprised by how many girls chose to run back to class and get themselves some paper and a pencil. I took notes and photographed the tree and the sketches.

Conversation while observing the oak tree

Participant Five: I can see loads of leaves

Participant Three: I think the branches are thick at the bottom of the tree are thick because the leaves are so heavy

Participant Five: No silly, the leaves are not heavy it's the birds that are heavy!

Participant Two: What are you writing? (Little girl peering at my notes)

Participant Four: She is writing what we say about the tree

Participant Five: So the moms can know what we say

Participant Four: You are writing what we think so the moms can see why we think

Participant One: Please can you move? I literally want to be on my own to concentrate.(moving away from her peers)…a long time ago I did a small tree cause I didn't know how to draw well, but now I know how to show the tree is big. You need to take up the whole paper like this…

Participant Five: All the leaves are going off and there are not so many acorns

Participant Two: It is autumn, so it is not dying it is just waiting for spring

Participant Four: How did they plant such a big tree? Did they need a big truck?

Participant Five: No, it's very old, it started from an acorn

Participant Three: Look there is a hollow in the tree filled with bugs. In another country there would be a bear but here there are just bugs.

This exercise sparked in the children the need to collect evidence of the changes and we returned to class with handfuls of dry leaves, more acorns, some interesting grasses and some feathers.

The girls began sorting their 'treasure' into categories and one child had the idea of making a picture like the tissue one. This meant every child had to retrieve their items from the sorted groups and we embarked on creating our collage. The decision to get their items back was discussed first and one child suggested that everyone should pool their resources to make the collage. However, it was the group consensus that everyone should find the item they had brought. One child started to grind her dry leaf and made it onto powder which caused a lot of interest amongst her peers. The result was a lot of group crushing and making of fine powder which was used for their pictures. The activity was labour intensive and quite messy and as one child said: *"it doesn't look as pretty as our tissue pictures but it was fun to make and I reckon we learned a lot."* This type of reflective practice was becoming more common as the data collection commenced. The children were making comments on their preferences and how successful they thought the activities were as well as reflecting on how they could improve on activities they did not think were particularly successful in. They began to rely on the documentation panels as well as photographs on the iPad and one little girl commented *"sometimes you need to look at things from a photograph because you see different things. Maybe is it because it is smaller and also you don't just see your own work but everybody's."*

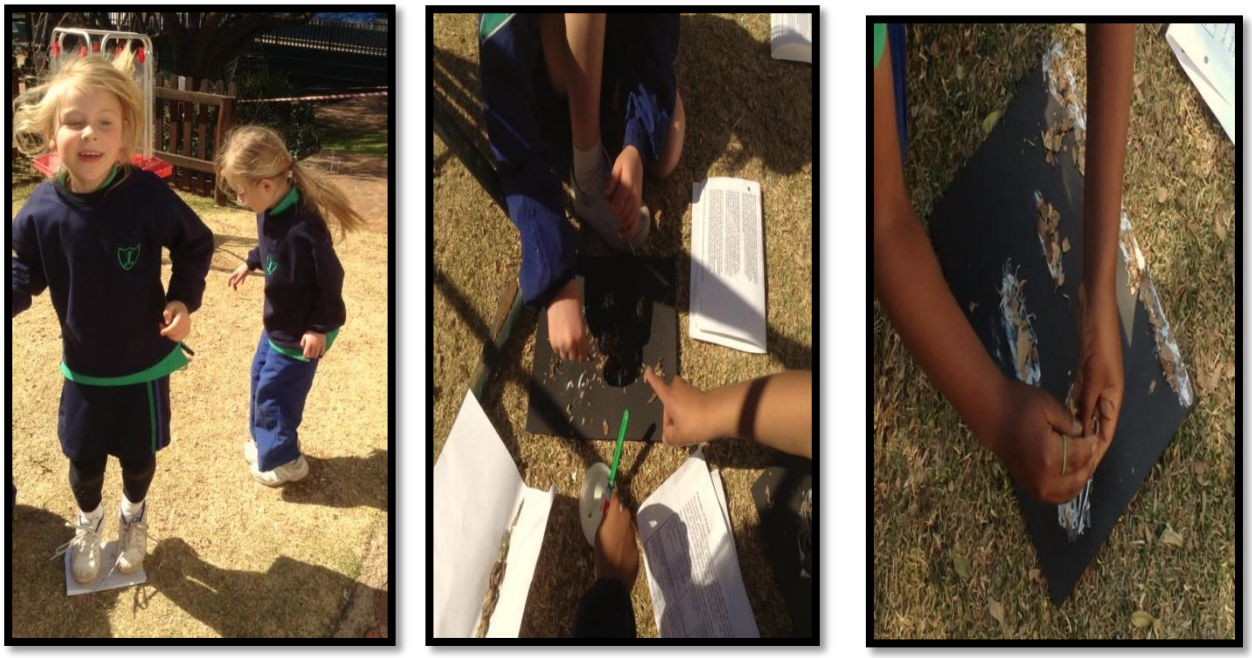


Figure 4.8 The child on the left discovered that if she put her leaves into a piece of scrap paper

and jumped on it she would turn the leaves into dust "more quickly than with hands because feet are bigger". Her friends quickly followed suit. The children then stuck their dust onto black cardboard. There was a common consensus that it was not as "pretty to look at" (aesthetically pleasing) as the tissues but was "lots of fun."

A week later the chairperson of the morning meeting suggested that perhaps we should see the oak tree *"from the other side, because maybe it will be different."* The class agreed enthusiastically and organised themselves with whiteboards to press on, paper and pencils. It was interesting to note how the girls managed to organise the proposed activity with no help from me. They marched down to the tree and all took up positions on the other side of the tree. The girls discussed the different perspectives themselves. They also discovered a bird house in the branches. This sparked a lot of interest and speculation. A number of girls drew fairies because they had decided that the bird house must in fact be a fairy house. The subject of fairies sparked a lot of interest and discussion among the class.



Figure 4.9 Photograph of 'fairy house' in the oak tree. It caused a lot of discussion because it has fallen over and that is why it "could not be bird houses because birds don't like being lopsided and fairies don't mind". A group of children tracked the status of the house over a week but were disappointed to discover that "it never seemed to move".



Figure 4.10 Photograph portraying a child drawing the fairy house. She explained that "fairies would love the pretty tree and would especially like the birds." She had managed to give the imaginary fairies a character and could even dictate what their preferences would be.

<u>Conversation while sketching the oak tree (around the subject of fairies)</u>

Participant Five: Did you even know that there was a fairy house there?

Participant Three: Who put it there?

Participant Two: I don't have a fairy house but I have a fairy tree.

Participant Four: What is a fairy tree?

Participant One: It attracts Fairies

Participant Two: How do you know fairies exist?

Participant One: Of course they exist! We have proof! The tooth fairy is a fairy!

Participant Four: Here are fairies coming out of the house, I am drawing them cause I saw them…this is a boy fairy cause I saw him…he has spiky hair…and the girl one has long hair

Participant Five: Let's call the fairies!

Participant One: No! You have to wait until the magic comes, then we can call them! I know because I have these stories and they say you must wait until the magic comes. The story is about Ruby Red Fairy.

When we returned to class we decided to draw a fantasy fairy castle for the fairies. The girls were enthusiastic about this activity and their pictures were detailed.



Figure 4.11 Photograph of two examples of painting, pastel and scraps used to create fairy houses. The girls had definite ideas of how a fairy house would look and they would listen to each other and then either add a friend's suggestion or decide against it. They all seemed to have a clear picture of what they wanted to achieve and no two castles looked the same.

While we were busy with this activity, some Grade six girls brought a pile of empty iPad boxes and asked if I could use them. I accepted them readily and was just packing them away when a child asked, *"Did you get those so we can make real fairy houses?"* This suggestion was met

with approval from her peers and there was a great scramble to fetch material scraps and wood glue.



Figure 4. 12 The girls created three-dimensional structures out of iPad boxes and other recycled materials in order to make fairy houses. They then used these houses in fantasy play. They kept adding to the houses and the houses took on symbolic importance for many of the children. They were loath to take them home and as one child said "they look like a fairy village all together. If we take them home then the fairies would live alone and be sad". (Further examples of fairy house structures in Appendix A).

The day started off with a sketch of the oak tree and we ended up exploring our ideas of fairy homes. This is yet another example of how the open curriculum supports the CAPS document as the children were exposed to making three-dimensional representations but yet again in a way that interested them and not as an isolated skill. We displayed our creations, with photographs and a typed up record of the conversation at the oak tree. This documentation was cause for discussion amongst the girls as they were very proud of the whole process. The fact that there

was a visual representation of the whole process enabled them to reflect on the learning and the girls were able to systematically explain the process to their parents.

A couple of days later I found some charcoal in my art supplies. This is not a media that is normally successful with Grade R children as it is very messy and smudges a lot. However, during the data collection process so far, I had been so impressed by how the girls were engaging with the different media and decided we would explore the charcoal. I called the girls in groups of six to our 'boardroom table', a hexagonal table set apart in the classroom where we have smaller meetings or work in a smaller group. The table in effect takes the role of a mini '*atelie*r' and I try and utilise it when exposing the girls to new techniques and media. The small group explored the use of the charcoal on a blank piece of paper.



Figure 4.13 The photograph depicts an example of a charcoal exploration. The child who drew this was interested in dinosaurs and she enjoyed the "smoke shapes" she could make with the charcoal. She said they reminded her of "how it would really look like in dinosaur times when it was all smoky and a bit scary". She had used the charcoal as a way of telling the story she wanted to tell.

The next day one of the girls suggested we take the charcoal and go and sketch the oak tree. We duly returned to *'our tree'*, as it had become known, and the girls settled very quickly into the task at hand.

Conversation while sketching the oak tree

Participant Five: The tree is different because it has more coloured leaves so I will draw more leaves. The oak tree is a friendly thing but he can't speak.

Participant One: I think he's alive. I like him. He's a boy because he is so big. He is old because he is so big. He shields us because he is kind.

Participant Two: He's changed colour from what he was before. The tree is special to me. He makes our school pretty.

Participant One: I think he is a boy because he is green and boys like green

Participant Two: Hey! Blue is my favourite colour and that's supposed to be a boy colour, but I am a girl. You can like any colour!

Participant Three: It's a boy because he shades us nicely and protects us. His name is Oakley.

Participant Four: It's a boy. You can tell by the way it looks.

Participant Two: I am drawing a bird who is king of the pigeons because he has leaves on his head like a crown. I am doing shapes on the bird house. Have you noticed that the bird house has fallen to the side? If any birds go up and build a nest it will fall to the side. I want to be a fairy so I can fly up and make it straight…and also to see it more closely. Do you know how old this tree is?

Teacher: I think over one hundred years old

Participant Two: Wow! No one can live up to there and yet this old boy has! That makes it so special…I think it is the only tree that has lived so long! It is a magical oak tree!

Participant Three: I am glad the oak tree doesn't stay alone. He has friends; the wind, the children, the birds. He is lucky.

Participant Two asked: *"if we are drawing what we can see and I can see people then can I draw them too?"* I assured her that she could indeed draw what she could see. When I looked at her sketch I was amazed to see that she had not only drawn my assistant who was taking photographs on the iPad, while I wrote notes, but she had drawn her holding the iPad and on the iPad was a picture of the oak tree.



Figure 4.14



This drawing portrays the participant's ability to see different perspectives. Note how she drew the assistant holding the iPad and taking photographs. The iPad showed a picture of the tree proving that the child had worked out what would be displayed on the iPad even though she couldn't see it. This was proof of higher order and symbolic thought on the part of the child.(Further examples of charcoal sketches in Appendix B)

She demonstrated her ability to see what someone else would be seeing and her level of reflexivity as well as her ability to express herself. I made a documentation panel of our sketches and her sketch caused a lot of discussion amongst her peers.



Figure 4.15 This photograph depicts a child looking at a documentation panel and reflecting on the process of drawing the oak tree in charcoal. After she had looked at this panel she suggested we make a collaborative picture as a class of different types of trees. She knew how she wanted the picture to look but as the children discussed the picture before starting it she commented that "what she saw in her mind was changing and becoming better with everyone."

On returning to class we decided to use some play dough that was drying out to make trees. The girls divided the play dough and made their representations. There was a discussion around why it was easier to draw rather than try to make things stand up. The general consensus was that although it was fun to make the representation out of dough it was more effective to draw and paint the tree. We decided that we would try the play dough exercise again on another day with new play dough.

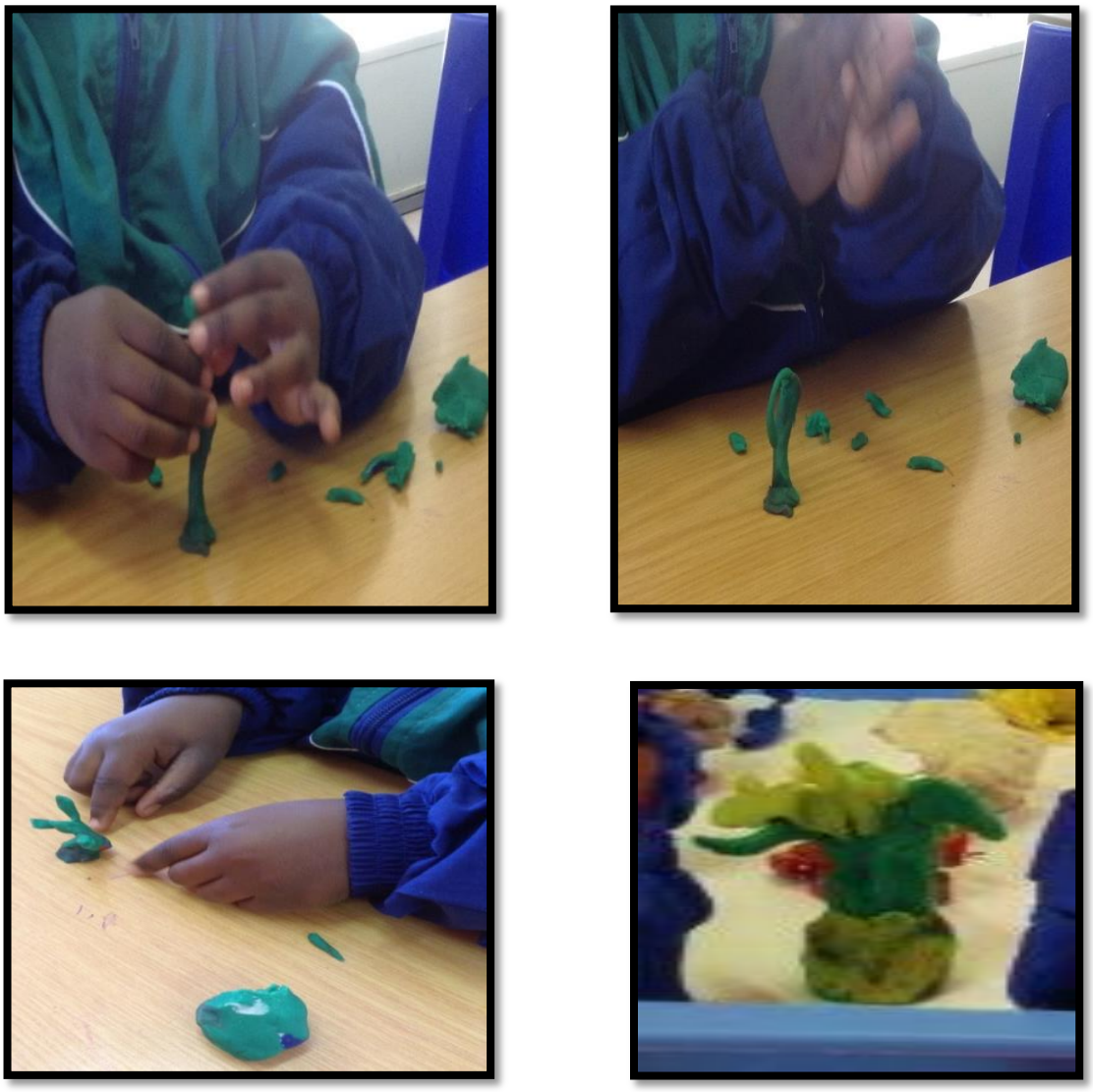


Figure 4.16 Photographs showing the process of a child creating a tree with play dough. She could verbalise that it was 'easier to draw because when you make a standing up tree it likes to fall over." She went home after this exploration and requested that her mother make her some play dough so she could attempt this again. (Further examples of three-dimensional tree constructions in Appendix C).

The idea of perspective came up in our morning meeting a few days later and we spent time in small groups exploring this concept. One group of girls drew a picture of what it would look like to view a person flying a kite from the back as we had been discussing kites and wind in autumn.



Figure 4.17 This drawing shows kites flying in the sky. This child could imagine what a person would look like from the back and she managed to represent this. She became fascinated by different perspectives and would draw and photograph items and people from different angles.

The whole class discussed their pictures and one group did a series of sketches on the whiteboard of the kite flying person from every angle. I used this opportunity to introduce the concept of perspectives like a bird's eye view, foreground and background.

As a class we had been experimenting with different painting and drawing techniques. I had provided each child with a folder and they had the choice of what papers to include in their folder. We were making a collection of textured papers in order to complete our artist/storytellers workshop. This is a technique that I adapted from Olshansky's artist/writers workshop in her book '*The Power of Pictures: Creating Pathways to Literacy through Art*'. I used the stages she followed except for the writing up stage, as at Grade R level there is no expectation to write a story (Olshansky, 2008). Once we had enough papers of varying techniques we embarked on creating our collaged picture. The picture had to have a tree in it and apart from that the girls could add any other elements. There was lively conversation while the girls set out all their

papers and embarked on their project. The creation of their work took over two hours and I did not put a time frame on the activity.





Figure 4.18 Photographs of children creating a story using textured papers they had made. The children could choose where they wanted to work and what papers they would use. They had created a portfolio of papers and they enjoyed using these papers in "a new way". When they had finished this activity they collected the papers and stored them for another picture. This was decided by the group and was not at my request.

The following day the girls retrieved their collage and on a whiteboard told the story of their picture. The girls used various strategies to depict their story: some drew it in stages, some merely re-drew the collage and some attempted to write. I stressed that it didn't matter how the story was depicted as long they could re-tell the story. They then dictated the story to me and I typed these and created a display with each story and collaged picture as well as a documentation panel.



Figure 4.19 The picture above shows a child's collage picture and then her accompanying story. Note how on the white board she attempted to write actual words as well as drawing the story. She was able to "read" her board to me. (Further examples of collages in Appendix D).

The girls had the opportunity of explaining their picture to the class over a couple of days. The children's level of questioning and their ability to reflect on their own processes as well as their peer's processes at this stage of the data collection process went beyond the expectations that I normally have of children at this stage of the year. The girls reminded me if we had not had our discussion about the pictures in the morning and they looked forward to the component when each child had a chance to describe their pictures to the class. The child who was discussing their picture had a turn to sit on our 'artist's chair' and discuss their picture which was displayed in our 'artist's frame'. This gave value to each collage and each decision they had made during the creation of their story.

During the data collection period there were numerous isolated incidents when individual children or small groups of children were involved in learning that lent itself to pedagogical documentation. The challenge as a teacher was in choosing which group to observe or engage with at a given time. As we were following an open curriculum for a set period each day there were many activities happening simultaneously. The girls were quick to bring to my attention when they thought their activity was worthy of recording and dictating insights to me. I also had

to be consciously aware of being engaged with all the children and not just the outspoken ones. When going into the data collection process I was concerned that the data collection would detract from my teaching, but I found it had the opposite effect in that it made the learning that was taking place in my classroom not only visible but important. Each member of the class took pride in what we were learning and as a class we became cohesive very quickly. I put this down to the fact that I was consciously and continually aware of what was happening in our classroom. In the Reggio Emilia approach there is the belief that there should be no 'anonymous moments' in the child's day and the process of pedagogical documentation in my opinion improved my practice as a teacher. 'Anonymous moments' refers to an approach that considers every aspect of the day to be important. Whether it be snack time or story time or free choice activities, every single moment is important and worthy of reflection. As a teacher this way of thinking was a revelation as I became aware of every single conversation and interaction within the classroom. The children also became more aware of their insights being important and would often bring my attention to something they or their peers had discovered.

Participant Three responded to the artist story teller's workshop and it became common for her to draw elaborate pictures and then bring them to me to photograph *"for your special story at university"* and dictate to me what was happening in the picture. Her emergent literacy skills had developed to the level that she could read some of the words I was writing and she would read them to me and as such her literacy skills were developing in an informal manner.

I had explained to the children at the beginning of the data collection process what I was doing and why I required their permission to use their insights and work. As the data collection process progressed the children were very eager to highlight their insights and creations for the special story we were writing as a class. I had explained to the class that we all had ownership of the research but I was not expecting them to participate or understand to such a degree the relevance of what we were discovering as a class. The classroom culture was significantly enriched by the research and the girls became aware of their learning in a way that was deeper than just completing an activity and moving onto the next activity.

The following is an example of one of Participant Three's drawings and the accompanying story.



Figure 4.20 "There are two little girls. They were both looking for friends. Then they found each other by the one girl's house. They told each other they were lucky and they visited each other. It is important to have friends because they can make you happy."

Participant Three's first language is not English and she used her drawings to help her find words to describe her pictures. She also immersed herself in construction activities during the data collection process and she particularly loved building stories around people and animal figurines. She managed to use the materials as a way of improving her social skills and her descriptions of her play and her drawings became very animated (Kress, 2014). She also became very verbal about wanting to keep her constructions intact for later and she was very often able to pick up her fantasy story where she left off the day before.

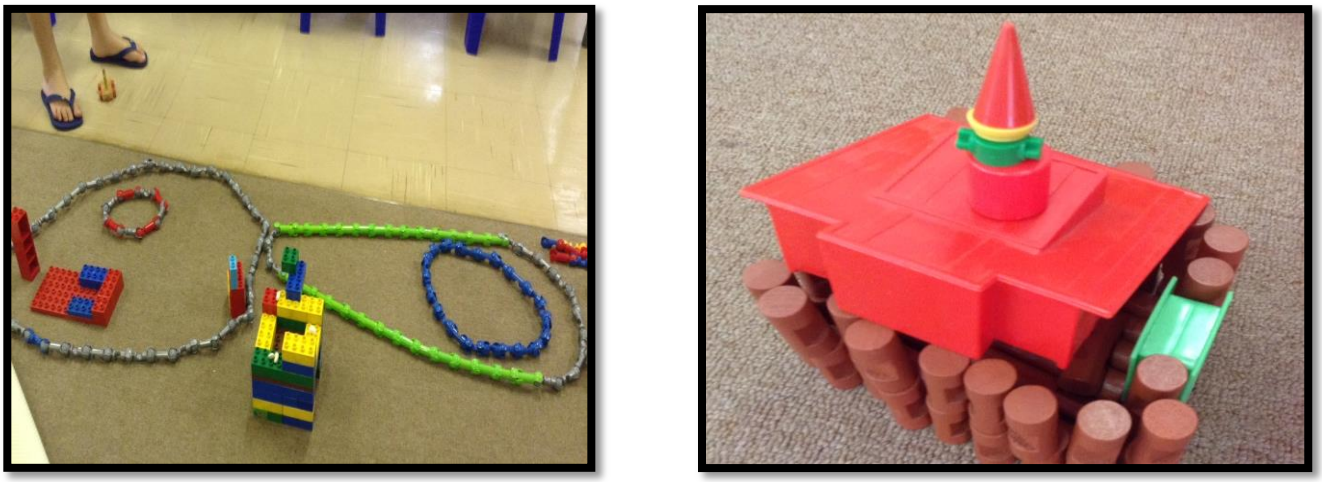


Figure 4.21 Examples of different constructions made and photographed by the children.

The children enjoyed photographing their constructions and also looking at photographs of past constructions for discussion and future design purposes. They also found space in the classroom to make construction "villages" and I gave them the choice of when to dismantle the constructions.

One morning participant Four and Participant Five were deeply involved in getting scraps of paper and sticking them together to make a panel. They then drew a series of pictures together and there was lots of discussion as they worked around the story they were telling. They then called me to *"bring my book so they could tell me the story"* which I duly did. The drawings were not necessarily very detailed and I would probably have missed this whole interaction as a free play scribble and it was actually a carefully thought out story told collaboratively. The fact that they knew I would be interested in their drawings was an indication for me of how the pedagogical documentation was having an effect on how the girls perceived their own learning. They had become my co-researchers and they enjoyed the process of creating something, describing it and then reflecting on their process. The girls were meeting the CAPS criteria of drawing and painting "pictures to convey a message" (Department of Basic Education, 2011, p.30). These participants were moving between verbal and graphic representations seamlessly and with enjoyment.

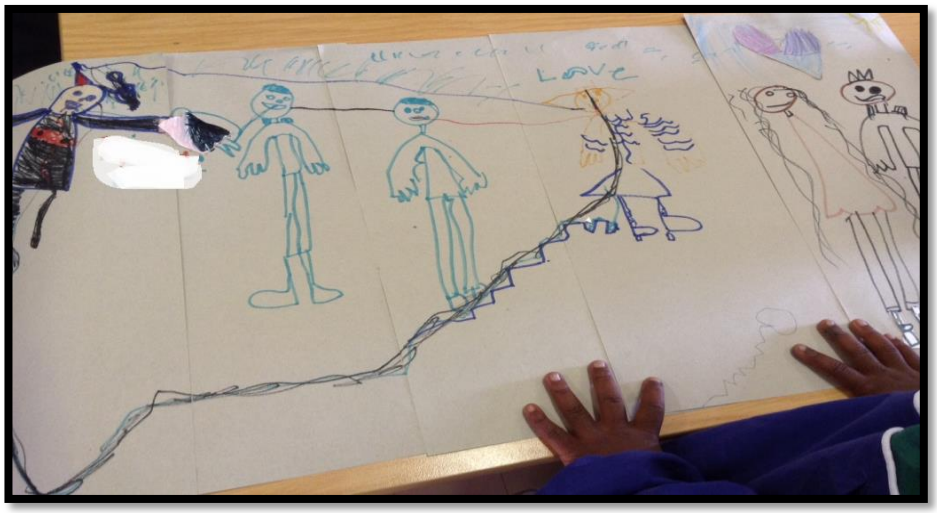


Figure 4.22 The free play storyboard created by the two participants. This example shows how the children were using a collaborative approach to depict their story. They were clear to tell me

that it "was not a beautiful picture but that the pictures told words and so we have only sketched the pictures".

Story Conversation

We made a story book. But it's in a different language- picture language and we will tell you the story.

1. *The evil witch is trying to get that girl to die because she wants the boy to marry her.*
2. *The boy gave the evil witch a poisonous kiss and she died.*
3. *The boy gave the girl a kiss cause it was the only way that he could save her*
4. *The girl and the boy got married.*

Can you see how it tells the story in order?

The content of the story was a fairy tale that the two girls had created borrowing ideas from fairy tales that they had been exposed to and was not significant to me. What was significant to note was the fact that the girls drew the story before deciding what the accompanying words would be. The girls were moving between modes and not following the conventions of writing or telling the story and then illustrating it. We had already completed the artist/storytellers workshop as a whole class activity and these two participants enjoyed using free choice time to create a story together.

Participant Two developed an interest in dinosaurs during data collection. She grappled with whether or not "*girls could like dinosaurs or if it was a boy thing?"* and instead of launching into a detailed explanation of gender equality (at a five year old level) I decided to put the question to the group. The common consensus was that any person could do any job and we drew a series of pictures about what jobs they would want to do one day. These drawings were so successful that I kept them for our school magazine submission at the end of the year. The interesting thing to note for myself was how we arrived at drawing these pictures during the course of our morning and not with me dictating that we were now going to do "when I grow up" drawings.



Figure 4.23 A drawing of 'When I grow up I want to be a palaeontologist.' This drawing sparked a discussion on gender roles and how "every person either a boy or girl can do any job they want." One little girl said she had met a lady plumber and that she thought "maybe it is a good job for a woman but I would rather do something that didn't mean you had to get dirty." The child who wanted to be a palaeontologist said she loved getting dirty and the class agreed that "different people like different things whether you are a boy or a girl."(Further examples of 'when I grow up' drawings in Appendix E).

Participant Two used the data collection activities to hone her skills of observation. She would spend large tracts of time drawing fantasy figures, copying drawings by other artists in picture books and she even set up her own still life scene of some figurines to copy. She became more verbal as the process progressed and the confidence she had gained through her drawing had an impact on her social skills as well. She now considered herself an expert at something and this newfound confidence was a turning point for her. Her mother expressed how the family had seen a difference in her verbal ability and also in confidence. Participant Two took to taking a notebook with her everywhere to *"draw her thinks".* She would sketch a number of different

scenarios and then she would insist on dictating her thoughts and stories to an available adult. She would want these to be read back to her and she would often change her ideas and reword certain sentences.

The pedagogical documentation panels that were on display in the classroom and also loose displays which I placed in the book corner were of particular relevance to Participant Two. She would look at them at length, often call a friend to see aspects she had noticed and she would also enjoy sequencing the different events. Pedagogical documentation became a way of making the work done in classroom valuable and for Participant Two this aspect was a way of initialising social interactions. She used them initially as a way of starting up conversations with her peers and then later to refer to work she had already completed and building on her prior designs.

Conversation while looking at loose documentation panels

Participant Two: Look here was the time we had the incubator in our classroom. Do you remember?

Participant Three: I see that. I was scared to hold the chicks when they hatched because I was a little bit silly.

Participant Two: No you weren't silly, you were just too little to realise that sometimes things we don't know are not scary just because we don't know them. Would you hold a chick now?

Participant Three: Yes I would because I see the pictures and I see how little they are and I see they didn't hurt anyone.

Participant Two: Look here (picking up another panel), here is the first time we sketched the oak tree. I didn't know how to draw many leaves and just did one line going around the tree, but not I know we can draw the leaves separately. It takes more time but it looks much better and it shows what I was seeing… really, really…

Participant Three: I like looking at all these pictures. I think they show we are learning.

Participant Two: Should we sketch the oak tree as it looks today and see if it is any different from these sketches. Because the seasons are changing and we are getting better at drawing too….



Figure 4.24 A photograph depicting participants looking at loose documentation panels and discussing them. Initially the children enjoyed finding themselves and their work in the photographs. However the panels soon became a point of reference to discuss prior activities and also to decide what direction a new activity would take.

As previously mentioned, Participant One displays leadership skills and she particularly enjoyed having her turn to chair the morning meeting and when the children came to her in the morning for her to place their questions on a clipboard she enquired if they had any *"issues"*. This was not terminology she learned in the classroom context but it quickly became our class's way of describing our questions. She also enjoyed the multimodal interventions and she was very quick to lead a small group of willing peers into an activity that interested her. For example the one morning she turned the semi-precious stones that I had put out as a provocation into a large depiction of a lion. The girls surrounding her quickly followed her lead and they came up with numerous depictions of stories using the stones. One of the Reggio Emilia approach's beliefs is

that materials can represent any number of things for the child and this was evidenced in this activity. I had expected the girls to sort the stones into colours and sizes and yet, as with the acorns, the stones took on a whole symbolic meaning for the group. If I not been poised to observe the girls I would probably have missed this moment and put it down to a free play.



Figure 4.25 Semi-precious stones used to make a graphic representation of a lion. The children returned to the semi-precious stones often in their play and they were used to represent different items. For example, one child uses the stones as food for the dolls in the dolls corner and yet another used them as money in a shopping game.

I read the children's story '*Happy Birthday Jamela'* by Niki Daly to the children in our story time. This inspired us to make our own Jamela's shoes. The children took ownership of the activity and once they had traced around their feet they asked for beads to decorate their shoes. The children used pastels, kokis and paint to create their designs. Some children made both shoes identical while others chose to make the designs different. This sparked a discussion on symmetry and also how it was each person's choice how they chose to design the shoes. They chose to put them on the floor *"so people can follow the path to what we are doing in our classroom."*



Figure 4.26 The girls designed shoes inspired by 'Jamela's birthday'. They moved them around, changing the pathway and following the different pathways. This activity prompted a discussion on pathways and we went round the school looking for different pathways.

Conversation while creating the shoes

Participant Four: Why are you making your shoes different? They should match. Shoes are never different, they come in pairs.

Participant One: We can do the shoes how we like and I think it would be boring to have two the same. You can choose what you want to do and I can choose what I want to do…

Participant Four: But why would you do shoes that didn't match?

Participant One: Because I am a designer and designers can do what they want. I was watching 'Project runway' and they don't do matching things always. Besides we are not going to wear these. But I wish we could, I would still make them not matching…

As a class we found our open curriculum format became a part of the ethos and culture of our classroom. We made a joint decision to continue having our morning meetings and to continue to

develop our project approach. The girls had gained agency for their own learning and I was keen to continue in the same vein. The approach I had implemented to research is by no means a static, perfected set of lessons and I will continue with my class to improve on our pedagogical documentation and multimodal exploration.

Chapter Five: Analysis of Data

The research questions that I asked at the beginning of the dissertation were as follows:

Does pedagogical documentation create opportunities for collaborative learning in both the learners and the teacher?

To what extent does a multimodal approach together with pedagogical documentation make learning visible and enhance reflexivity in the learners and the teacher?

I broke these two main questions into the following six sub-questions and analysed the data according to these questions. I looked at each of the five participants individually in terms of these areas and where it added to my analysis also included insights of the class as a whole. The research questions that follow emerged during the data collection process.

1. To what extent did the multimodal interventions promote autonomy (make decisions and exercise independence in collaboration with their peers) in the learners?
2. Was there evidence that the pedagogical documentation enhanced reflexivity (consider different perspectives, to analyse and problem solve) and meta-cognition (to reflect on action whilst and after the activity) in the learners?
3. Did the process of creating pedagogical documentation panels encourage reflexivity and meta-cognition in me as the teacher?
4. Was a community of practice established in the classroom that acknowledged and supported the social construction of knowledge through multimodal interventions?
5. Was the pedagogical documentation instrumental in creating a collaborative learning environment?
6. Did the environment play a role in making learning visible?

1. Level of autonomy displayed by children

Question One: To what extent did the multimodal interventions promote autonomy (make decisions and exercise independence in collaboration with their peers) in the learners?

The children surprised me throughout the data collection with the way they took responsibility for their learning and how as a class they displayed a level of autonomy unusual for Grade R children. My expectation at the beginning of the data collection was that the children would enjoy the multimodal interventions and that the pedagogical documentation would cause them to reflect on what they had done. I did not expect the children to display the level of autonomy they displayed. I was reminded of the Reggio Emilia approach views that children are born competent and also that of Rancière that children have the ability to learn without adults around them dictating what this learning should be. While as an educator I subscribe to these views I have to admit I did not expect to see the level of autonomy children can achieve. This raises the question that if children are capable of such independent and responsible behaviour and can learn competently when given freedom of choice, then perhaps children are being denied access to education through the constraints imposed by formal curricula.

Participant One, as mentioned in Chapter Four, displays leadership potential and it is also her second year in Grade R and as such her reactions to the interventions and the pedagogical documentation were instrumental in setting the tone for many of the children's reactions to the multimodal interventions and pedagogical documentation. Participant One was the first chairperson in our morning meeting. She took her role very seriously and used phrases like *"now to our next issue"* and *"that is an interesting point, what do the rest of you think?"* She was quick to come up with strategies for us to research as a class and from the very beginning of the data collection she took responsibility for her learning as well as encouraging her peers to research too. To some extent her reactions could be attributed to the fact that she knows me well as this is her second year with me and she is very in tune with my way of thinking. She also comes from a home environment where her opinions are valued and her parents allow and expect her to question the workings of her world. However the way in which she was able to lead her peers was developed through the morning meetings. She was very impressed to realise that she was in fact at liberty to go on whichever learning path she wanted and encouraged her peers to *"enjoy being able to make what you feel like".* Participant One can tend to be bossy in a social context but in this forum her natural ability to lead was utilised without overpowering her peers.

Participant Two took a while longer to relax into being able to make her own decisions but once

she had decided that there were *"no right or wrong answers"* she relaxed and displayed a level of autonomy in her drawing particularly that showed how she was able to make decisions about her own learning. She continually questioned me throughout the data collection, one example being when we were sketching the oak tree and she said *"you said we had to draw what we see and not what we think we see, and I can see Rose (not her real name) taking photographs on the iPad and so I am drawing her".* This level of autonomy was unexpected from this particular child as she was very insecure and also tended to be a perfectionist. During data collection she became confident in her ability to make her own decisions about her learning and consequently her verbal and non-verbal output increased and was of a high standard. In my opinion, the multimodal approach together with pedagogical documentation was directly responsible for this area of development. She was able to make decisions about which direction her work would take and once she realised that there was no question of her work or opinions being compared to anyone else she was eager to express her views both verbally and non-verbally.

Participant Three found a new sense of autonomy due to the fact that she realised that what she was doing was important to me and to a lesser extent her peers. She began the year very reticent to express her opinions with the language barrier being a factor and she rarely participated in group discussions. However, she gained confidence as I photographed her work and she loved seeing herself depicted in the pedagogical documentation panels that were displayed around the classroom. Initially, she just enjoyed looking at them and expressing simply what she was busy doing. As we got deeper into the data collection phase she began to discuss the implications of the learning. For example the one day upon looking at a photograph of her drawing the oak tree she said *"look here, I was still learning that a tree has many branches not just a few".* She then decided that she needed to draw the tree again and organised herself with the necessary implements to complete said drawing and announced to me that she was going to the tree. When she returned she brought it to me and requested that I photograph it and make *"a new picture story for the wall."* This level of autonomy would not have been achieved had we not being following our open curriculum section of each day. The multimodal interventions were, for Participant Three, a gateway into enjoying the educational process and pedagogical documentation gave her learning meaning.



Figure 5.1 Photographs showing the progression of Participant Three doing a pencil tree sketch. She used this series of photographs to refer to at a later stage "to see if the tree had more leaves on it now." When she viewed the panels she commented that "it must have been a cold day because I have my tracksuit on but then I got hot and took it off." She had begun to look at every detail in the pictures and her surrounding environment.

Participant Four is a capable and confident child. She always finishes any task quickly and with accuracy but as I mentioned in my reflections *"Ameera (not her real name) rushes through activities, I need to find a way of getting her to slow down and enjoy the process."* I felt that she

was already jaded by the schooling system and had learned techniques to function within the structure. This is not necessarily a negative trait as it is preferable to cope with the school system rather than battle with it, but for my purposes as a Grade R teacher and one who believes that creativity is directly responsible for the ability to problem solve and think critically, I was determined to expose Participant Four to more than just going through the motions of her day. The multimodal interventions that I exposed the children to were initially frustrating to Participant Four as she kept asking if she was *"finished"* and if she had it *"right."* I repeatedly turned the questions back on her and would reply, *"I don't know, are you finished?"* After a couple of days during the initial stages of the data collection, Participant Four relaxed and began to enjoy the process of her art and not worry about the finished item. She still needed affirmation that she was on the right track, but learned to trust herself as the data collection proceeded. Her level of autonomy was probably not as developed as Participants One, Two and Three but she definitely benefitted from the interventions and pedagogical documentation in terms of the way she was able to focus on a project for more than a few minutes and also add and change her pieces.

Participant Five enjoyed the freedom that our open curriculum gave her from the start of the data collection. She is young for the group and initially she just followed what the common consensus was, normally initiated by Participant One. However as the data collection progressed she took a more active and outspoken role in the decision making and especially in our morning meetings. During data collection she and Participant Four became firm friends and they often decided to embark on group projects. The importance of peer relationships and how learning happened in conjunction with others was evident in this relationship. They began to use each other as a sounding board for new ideas and projects and also used each other's strengths in conjunction with their own. Participant Four benefited from the way Participant Five thought aloud about projects for example I heard her say *"No Ameera (not her real name) we can't be finished with our drawing because we don't know what the end is."* She used drawing, dough and construction toys to tell elaborate stories and was quick to make autonomous decisions as to what she wanted to learn and explore. The multimodal interventions and the pedagogical documentation were instrumental in Participant Five developing a level of confidence and autonomy that would otherwise not have happened. She was able to take a leadership role in her peer interactions and

she also developed empathy and an ability to listen to other people's ideas and opinions.

2. Did pedagogical documentation enhance reflexivity and metacognition in children?

Question Two: Was there evidence that the pedagogical documentation enhanced reflexivity (consider different perspectives, to analyse and problem solve) and meta-cognition (to reflect on action whilst and after the activity) in the learners?

The ability to consider different perspectives and to analyse and to problem solve, in other words to reflect, is an important part of the educational process. Education has begun to move away from the approach where obtaining a canon of knowledge is the aim of education and the call is for people to be able to function and adapt to a shifting society (Kelly, 2009). This shift in the theory of knowledge is still academic in many instances and the practical changing of the practices in education still needs to catch up with the theory (Kelly, 2009). The Reggio Emilia approach is an example of an approach that has been successful in practically implementing the notion of education encouraging reflection and critical thinking. The Reggio Emilia approach encourages preschool learners to learn how to reflect on and analyse their learning. This is achieved through the way the school day is structured and also through the use of pedagogical documentation. The teachers aim to make the learning visible on a regular basis and use the children's insights to further their exploration of concepts. I felt that the use of pedagogical documentation enhanced the quality of the learning taking place in my classroom.

Participant One was able to analyse her learning from the start of the data collection process. She had been exposed to my attempts at pedagogical documentation for the whole of the year before as I grappled with the Reggio Emilia approach in my teaching and researching. She was able to verbalise immediately that the panels were *"for thinking"* and from the start of the data collection process she would examine the pictures and comment on what they were showing her. She would also engage with her peers and would ask them *"what do you think?"* The fact that she utilised them as a valuable tool from the start was instrumental in them being a positive teaching tool and not merely decoration. Participant One was particularly interested in the tissue exploration panel that I created following this session in our open curriculum. I had created a series of photographs showing her hands as she folded and glued her tissue.



Figure 5.2 The tissue exploration was instrumental in an exploration of poetry as well as a movement exploration where the children tried to replicate the different ways the tissues had moved with their bodies. They decided that "people have bones and they can't float like tissues."

She recognised the photographs as being of her hands but after she had commented on this; she fetched a tissue and tried to recreate her initial shape. She then copied a couple of the other creations of her peers from the photograph of all of them together. Some of the rest of the class became interested in what she was doing and they began to recreate the tissue pictures. Participant One fetched my iPad to photograph the new explorations and commented *"they still look better all together and not by themselves but I think that these ones today are much better, maybe because we could see what we did last time."* This level of insight and reflexivity would not have been facilitated without the initial documentation panel and the whole interaction would have gone unnoticed without the level of awareness that the pedagogical documentation brought to only me and the children.

Participant Two used the documentation panels as a means of talking through her thoughts. She does not normally voice her opinions but when she was looking at the panel and did not feel all

the focus was on her she verbalised her insights articulately. I heard her saying to a peer, *"Now if you see here, this person drew the tree from this side and this person drew it from the other side….How do we know this? I can see it is because the bird house is in the one picture and not in the other. Also because this one has a longer stem and so maybe the person was drawing it from the bottom and not from the side."* The oak tree can be viewed from two levels and her perspective was absolutely right. Yet again this insight would not have occurred had there not been documentation for the children to make the connections. Participant Two enjoyed showing her mother the drawings of the trees and discussing them at length. She is normally not a verbal child and her mother commented repeatedly throughout the data collection process how much she was improving verbally in the home situation.

Participant Three would often request that she be allowed to remove the documentation panels from the wall and place them side by side on the carpet. She would then move them around and use them as a story-making prompt: *"Once upon a time there were some girls and they drew a tree, they drew it from all sides and then they became friends and the tree was happy because he had friends too"* is an example of one of her impromptu descriptions. She showed an empathy for and connection with the tree and she was able to verbalise her feelings. The pedagogical documentation had in essence elicited a 'conversation' between Participant Three and the panels. She was not just using them as a point of reference but she was also able to use the panels in a way that made a two way conversation between her and the panels possible. Due to her need to 'play' with the panels to make meaning I made some panels that were not put on the wall, I also printed photographs of the class and did not put them into a panel but rather let the children look at these and make connections as they saw fit. Some children enjoyed this, but Participant Three told me she preferred it *"when the pictures tell a proper story."* I told her that there was no 'proper way' of telling the story and that the way the panels were set up was just how I perceived the story and that the story could change depending on who was telling it. She pondered this for a while and then asked if she could tell a story with the loose pictures. The pictures in question were of the children building with construction toys and mosaics. She sorted them into categories that were interestingly not sorted according to type of object but into the type of structure that was depicted e.g. houses, animals etc. She said *" I know people will normally put things together by how what they are made of, like blocks together and marbles together but I am going to sort*

these pictures into different groups… see all the animals come here even if they are made from different things." The reflection that she was able to engage in would not have been possible without the pedagogical documentation panels and the culture of discussion and acceptance that was developing in our classroom. She was aware that her input would be listened to and reflected on not only by me but also by her peers. The relationships in the classroom became deeper as a result of this type of reflective practice.

Participant Four is advanced for a Grade R in terms of her emergent reading skills. Prior to the data collection she would take any opportunity to copy pages from books and words that were visible in the classroom. She would practice her pre- writing skills by copying all her peers' names onto whiteboards and pieces of scrap paper. When the documentation panels were placed on the walls she would be more interested in what the words on the panel said than the photographs. She would ask me to read every panel and particularly enjoyed the panels where I had transcribed conversations between the children and the class "tissue" poem. She also enjoyed dictating her insights to me and would watch that I had written each word. She would often ask me to read it back to her. She had taken ownership of her learning and her learning was self-directed. The pedagogical documentation in her case encouraged reflexivity in terms of how she analysed the formation of sentences and words. She learned certain "rules" of writing without any formal teaching, for example she was able to follow sentences by working out that sentences started with a capital letter and ended with a full stop. She was working with her own will and intelligence on the object of her learning (Rancière, 1991). She used the documentation panels as teaching tools and reflected on an area that interested her specifically. In this case the Zone of Proximal Development was bridged through pedagogical documentation.

Participant Five particularly enjoyed the multimodal interventions that were put in place during data collection. She was wholeheartedly involved in the open curriculum and I noticed strides in her ability to make meaning and express herself throughout the data collection. The pedagogical documentation did not initially result in much reflexivity in her and she looked at the panels briefly and commented on what she was doing. She showed them to her mother but definitely perceived them as photographs to show the activities she had been involved in. However, in week three of the data collection she was standing by and listening as a group of children studied

a panel that depicted drawings of people from the back flying kites. She had not been involved in that particular exercise but upon listening to them discussing the drawings I noticed her examine the panel at length once they had moved on. She then called a friend to discuss it with her and they decided to draw themselves from the back. They found this challenging especially drawing their pony tails and there was much laughter around it *"looking like a fountain not hair."* This use of metaphor indicated that she was involved in higher order learning:

> "When we project the mental image of a container into the abstract concept of a category, we use it as a metaphor. This process of metaphorical projection is a crucial element in the formation of abstract thought and the discovery that most human thought is metaphorical has been another major advance in cognitive science. Metaphors make it possible to extend our basic embodied concepts into abstract theoretical domains" (Capra, 2002, p. 55).

Participant Five used the pedagogical documentation as a provocation or impetus into her own exploration of how to depict different perspectives in drawing. Her analysis of other people's work encouraged her to try her own exploration.

3. Did pedagogical documentation enhance reflexivity and metacognition in the teacher?

Question Three: Did the process of creating pedagogical documentation panels encourage reflexivity and meta-cognition in me as the teacher?

Due to the fact that I was both teacher and researcher I felt it was important to go into the data collection process with strategies in place that would ensure that I took time to reflect on what had happened in the classroom at the end of each day as well as when I analysed the data I had collected. I made notes while we were in the open curriculum phase of the day as well as more detailed descriptions at the end of the school day. I endeavoured to not bring my own preconceived ideas into the data collection process and tried to achieve this by really listening and observing what was occurring in the classroom.

The reflexive approach that we adopted as a class was enhanced by the pedagogical

documentation. It takes a significant amount of time to create a documentation panel and I had to make a conscious decision to make the time to look over the data and prepare panels for discussion regularly. The children assisted me in deciding what we were going to document and also with the preparation of the panels. This co-operative approach was beneficial to all parties and highlighted the fact that the children are capable of making reasoned decisions at this age. It is also a challenge not to just present a collage of photographs and instead to look beyond the obvious. In the Reggio preschools in the city of Reggio Emilia there are always two teachers for each class. This makes the practice of pedagogical documentation easier in that there are at least two pairs of eyes to observe the children and at least two different sets of opinions when looking at what the children are learning and to decide how best to proceed with their learning. There is also a commitment to learning through dialogue. As I did not have a co-teacher I used journaling as another voice for reflection although the presence of the children's voices in terms of their ideas and perceptions became my main source in looking at other perspectives in our documentation panels. My relationship with the children changed and the power distance between them and me was reduced considerably and our relationship changed.

The pedagogical documentation encouraged reflexivity and meta-cognition in me personally and it was also another lens through which I could view the data. I did not think I had preconceived ideas about how the children would react to the open curriculum but I was surprised by their level of engagement and the sense of autonomy that they embraced from the outset of the data collection. I had not expected them to so quickly embrace our morning meetings and as I wrote in one of my reflections *"the morning meetings have been amazing in the way the girls have taken ownership of the process so quickly."* Within the first week of morning meetings our open curriculum had developed a *"life of its own"* and I reflected that *"I didn't think I had stopped the children from embracing learning before, but by being so teacher centred in discussions the girls have been giving me the answers I want. They now have the freedom to explore the things that are burning issues to them."* The children used a multimodal approach from the outset and they did not find it hard to use the resources available to them in varied ways. I was struck by the fact that the children are able to engage with whatever learning opportunity they are presented with. The challenge as a teacher is to be aware of the extent that the children are able to engage and learn and utilise this ability.

I commented regularly on the children's growing level of autonomy and in week one of the data collection I wrote *"the girls are excited about having a turn to chair the meeting and they are quickly becoming at ease with deciding on which way the discussion will go."* Through my reflections and the creation of documentation panels I could see a progression in the level of autonomy and agency within the classroom. By week eight I wrote *"I believed in the ideal of emancipatory education before the data collection and I also had an idea of how that would play out in my classroom. My watered down view of what my girls were capable of at the beginning of this process was challenged on every level."*

The process of pedagogical documentation ensured that I really listened to and took note of the proceedings in the classroom. It caused me to reflect on my own view of the child and of what education should achieve repeatedly throughout the data collection process. I wrote *"It is easy to go through the motions of teaching and to be a 'good teacher' but collecting this data and making the panels with the children has challenged all the notions that I have about children and how they learn. I say I believe they are competent but I don't think I really believed that until now. The panels have highlighted to me that these are competent individuals and my job is to journey alongside them and not at the helm. A sobering thought initially, but actually very empowering once I put into practice the view of the child that enables them to be free to learn."* My neat idea of how the data collection would play out was challenged. Sitting down daily to reflect and create the panels daily was instrumental in a deep level of engagement in me as a teacher. For example when completing the *"Happy birthday Jamela"* activity the children became engrossed in the activity and as a class we explored all of the Niki Daly books we could find in the library. The children became interested in how the artist used his art to tell a story and their level of engagement went far beyond what I had expected.

Pedagogical documentation is visual evidence of the learning that is taking place in the classroom. In the Reggio Emilia approach "pedagogical documentation is a process for making pedagogical work visible and subject to dialogue, interpretation, contestation and transformation" (Dahlberg, 2012, p. 225). As a class we were able to interpret and discuss our learning and we used the process to transform not only what we were learning but also our view of each other and our view of our classroom. However although pedagogical documentation

"embodies the value of subjectivity" (Dahlberg, 2012, p. 225) in my context I found this challenging as the school concentrates on academics and the learning that is displayed does not have the purpose of opening a dialogue around the children's learning. I had to work within the parameters of the school's ethos and my means of assessing and reassessing my practice took place through collaborating with the children to present documentation panels and my reflective journaling which enabled me to explore the concept of pedagogical documentation within my specific context.

I had to make a conscious effort not to allow the pedagogical documentation to be relegated to a 'window dressing' technique. Although the documentation panels were primarily for a critical exploration within my classroom I attempted to open conversations with my colleagues and the parents when I discovered them looking at the panels. The children also got into the habit, encouraged by me initially, to discuss the panels and their learning with interested adults. I wrote that *"even if the adults do not fully understand what we are trying to achieve, the girls are learning to reflect on their learning by verbalising their thoughts"* and as such the documentation panels encouraged reflection in me as well as the children. I would take note of the conversations and was impressed by how the children became more able to reflect critically on the panels while describing them. For example I overheard Participant One telling her father to *"really look at how I drew this tree and not just think it was a picture but try and see what I was trying to show…see here I drew the leaves going to an angle to show it was windy."* This level of reflection and meta-cognition impressed her father who commented that he would not take her drawings at face value any more.

4. Evidence of Knowledge being co-constructed

Question Four: Was a community of practice established within the classroom that encouraged knowledge to be socially constructed as a result of the multimodal interventions?

The children in my class all came from traditional preschool backgrounds and none of them had been exposed to an open curriculum or the Reggio Emilia approach prior to the data collection. As such they were used to their day being structured into 'work time' and 'play time.' They expected me to dictate what the activity was; they expected to finish it and then have 'free play'

time. They also finished an activity and brought it to me to check if it was correct. They were prepared to accept that school was about working within a set of adult defined outcomes. I chose to expose the class from the beginning of the year to a different approach than the one they were used to and I made clear decisions from the first day of school as to how we would implement these together. By the time the data collection took place, the class had an existing relationship with me and each other and were not unfamiliar with taking ownership for their learning and making decisions regarding what they would create and do. However we had not explored the level of multimodal interventions that I wanted to include in my data collection.

The introduction of our morning meeting on the first day of data collection was instrumental in creating a community of practice where the children knew their opinions were valid. The ability to listen to each other and not talk over each other developed steadily throughout the data collection process but was initially very challenging for most of the children. At this age most Grade R's are used to parallel playing with their peers and not really listening to each other's input. By insisting from the outset of the morning meetings that the chairperson had to listen to everyone's question and sometimes repeat someone's question back to the class, a habit of listening to each other started to develop. I found that the children were also intrigued by the fact that I would write down what they said and this caused them to begin to listen to each other with more engagement.

The multimodal interventions were varied and I had sometimes decided on what 'language' I would expose the children to as a result of looking over my notes from the day before and making documentation panels. However, to a large extent the children determined what they would explore and with what media. I made a number of resources available to them at any given time and tried to create an '*atelier*' environment where the children were free to choose what they would use and not wait for permission. The class developed a culture of acceptance and expectation that was conducive to knowledge being constructed by the children themselves.

Participant One is a social child with a strong sense of her standing within the group. She enjoyed the multimodal interventions immensely and was particularly keen to break away into a smaller group and explore an area that interested the group. She liked the fact that the art activities were, as she said to a friend, *"letting the stuff talk to you. It doesn't have to be pretty*

you know!" She had begun to understand that she could have a 'conversation' with the different media and that there was no limit on what she was able to discover. Aesthetics in this example became a "way of knowing" (Cooper, 2012, p.296) and Participant One had a clear understanding of this way of viewing her explorations. She was quick to make autonomous decisions about what she was going to do in the open curriculum section of our day and she generally had a following of other children who were keen to explore with her. When we were experimenting with charcoal as a class and then drawing the oak tree, she spent a while feeling the bark and then drew lines with charcoal to try and show its texture. She then became fascinated by the texture of the charcoal on the paper and ended up with it all over her hands. Her picture was a mass of black charcoal.



Figure 5.3 Participant One used charcoal to draw the oak tree. She became so involved in the experience of using the charcoal that she ended up drawing over her tree and enjoyed exploring the actual charcoal and was not concerned with her finished picture. She was particularly delighted with the documentation panel because she said "it shows how my picture grew from a line to a scribble."

She was not at all concerned about the outcome and told me *"see I learned all about rough and smooth and what charcoal can do."* On a social level Participant One used the multimodal interventions as a means of creating knowledge with her peers. She was very aware that sometimes she needed to withdraw from the group and told her friends one day while she was drawing the oak tree, *"Please move away and give me space. I literally need to be alone to think. I will talk to you all once I am finished."* This could be perceived as precocious behaviour but in the context her friends accepted her explanation and she concentrated on her drawing before returning to the group. She had a clear perception of herself as a part of the class and as an individual. Reflexivity had led to self-awareness and self-knowledge. This level of understanding and the ability to verbalise it was noteworthy and to some extent caused by the multimodal interventions and her engagement with them.

Participant Two found the multimodal interventions challenging at first as she was insecure in her abilities. She was more comfortable having me dictate what she should be doing and did not initially participate in the morning meetings. However her confidence grew steadily as she realised that her 'voice' could be heard through her drawings which were detailed and intricate. At the start of the data collection she would prefer to draw and create apart from the group but she was soon drawn into conversations around her drawings because her peers wanted to know *"what she was saying"* and she became the expert in the drawing realm which gave her confidence and thus agency to continue to construct meaning through her drawing. The multimodal interventions helped her to become a part of the class community and collaborate with them to create knowledge.

Participant Three enjoyed being a part of the class from the very beginning of the year. She was intrigued by the class being called the Penguin Class and she would spent time looking for pictures of penguins in the books available in the classroom and in the library. She identified strongly with being part of our class community and she had a strong sense of her place within the group. Participant Three found it easy to make the transition into our morning meetings and although she initially did not follow the thread of the conversation due to the language barrier she was confident that her opinions were worthy of discussion. She constructed knowledge with her friends and she particularly enjoyed building with construction toys and developing fantasy

games around them. Her English vocabulary was extended significantly by interacting with her friends and I reflected *"Khumo (not her real name) is becoming more and more adept in English. This informal 'learning by doing' is so much more valuable than me correcting her tenses and trying to enrich her language in a formal manner."* Participant Three did not perceive her friends correcting her as criticism and they would chat while building and their ideas would flow readily and the knowledge that was being constructed was not isolated to language development; they were learning geometry in their building and also using their imaginations in their fantasy play.

Participant Four displayed evidence of knowledge being constructed in conjunction with her peers throughout the data collection. The most obvious example of this was during our artist/storytellers workshop. She was initially daunted by the task of creating a picture out of her textured papers and she called a friend to come with her to go and study the books I had available that showed examples of collaging. They discussed the pictures in detail and then she embarked on her collage. She chatted to her friend the whole time she was busy and they made decisions together as to what paper to use. She was intrigued by the way she had *"cut out a story"* and when it was her turn to put it in the 'artists frame' and discuss her picture she was confident in her descriptions although she did look at the friend she had worked with and said *"we decided to use this paper because it looked most like bark."* Participant Four also needed to discuss her story with her friend before representing it on a whiteboard and dictating it to me. Throughout the process of the artist/storytellers workshop she made meaning in collaboration with her friend.







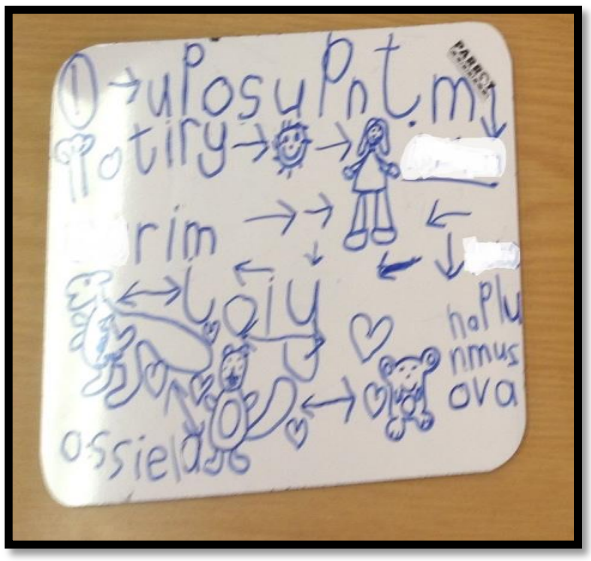


Figure 5.4 The above panel shows the artist/storytellers process. The children had autonomy when choosing what material to use and how to create their collage. They could also choose whether to draw or write or tell their story. This participant utilised all three options.

Participant Five was able to gain full benefit from the multimodal interventions by first watching her peers and what they were doing. She was one of the youngest members of the group at the time of data collection and was still finding it hard to cope with the change from preschool to Grade R. She was visibly keen to try the 'provocations' but would wait until a group had decided to engage with one and then she would join the group. She particularly enjoyed trying to depict the oak tree in a three dimensional manner and she was confident to try and manipulate the play dough into the form she wanted it only when she saw her peers trying to do the same. Her need to be anonymous in the group lessened as the data collection proceeded and she was enthusiastic to try different media with her peers. She learned how to function within the group through the multimodal interventions and she gained confidence in the fact that her peers valued her input. She would have eventually settled into formal school without the multimodal interventions but she would probably have tried to remain in the background. In my reflections I wrote *"Kate (not her real name) settles easily in the morning now and she is quick to choose a provocation that interests her. She is collaborating with her friends and I am excited by how quickly she has*

integrated into our classroom community." The process of collaborating with others and the use of different materials was in my opinion responsible for the level of confidence and excitement that she displayed.





Figure 5.5 The children playing with a light box and using different colours of cellophane to see which colour reflected the light. I put the light box out as a provocation and while they enjoyed exploring light and shadow they did not utilise it to the extent I had expected them to. This was an indicator to me not to expect the children to learn what I thought was necessary but rather to make the opportunities available with no preconceived ideas.

5. Did pedagogical documentation create collaboration?

Question Five: Was the pedagogical documentation instrumental in creating a collaborative learning environment?

The pedagogical documentation and the children's response, receptivity and ownership to it were the main focus of my data collection. I aimed to critically evaluate whether or not I thought it was a feasible learning tool within my specific Grade R context in South Africa. I was convinced through my reading and research that pedagogical documentation was successful in the Reggio

Emilia approach but I was not convinced that it would be feasible in my context in terms of the fact that there is a set curriculum for Grade R as dictated by the Education Department. I was also aware that I was not working in a Reggio Emilia inspired school and that while the school was supportive of my doing my research with my class, they were not looking to change the structure of the school in any way. The principal of the school is comfortable giving each teacher a certain amount of latitude within their own classroom as long as it does not impact the running of the school. It was within these constraints that I preceded with my data collection.

I was not expecting the pedagogical documentation to have such an impact in creating a collaborative learning environment. I had expected it to take the role of making the learning visible and it did fulfil this function. However, it became an area of focus in the day to day running of the classroom and a point of reference as the children collaboratively explored the multimodal interventions. The panels became a record of our learning and also a starting point to discussions around the learning that we were embarking on. The children looked forward to viewing new panels and were quick to give advice as to what I should be preserving. I explained to them that it was not possible for us to make panels of every single thing that occurred in our classroom. It became important to the children that the panels reflected the learning that they deemed important. The panels became an intricate part of the 'conversation' we were having in our classroom and the panels informed the children's decision making. There were numerous discussions in our morning meetings about what panels should be made. This added another layer to the reflexive process and the children engaged in higher order questioning skills. They also developed empathy for each other's feeling and were careful to ensure that everyone had some of their *"special learning"* documented. The children identified their special learning as moments when they realised something for the first time. This could be anything from realising that they could depict wind in drawings to realising that they had formed a new friendship. We also had a discussion around the idea that the panels were not the only way learning could be documented and the children became adept at drawing or *"writing"* their own panels and explaining them to each other, me and their parents.

Participant One used the panels as a means of referring to what she had already learned and would like panels that displayed individual learning as well as ones depicting group learning.

She could verbalise that she preferred the group pictures because *'it is always more fun to do things together and you can hear what other people say and think 'oh yes! I didn't think of that'. When we look at these pictures it reminds us of what we were doing and who we were with."* She commented on the progression of events and was quick to point out any areas where she perceived learning had taken place. For example, she explained her view of the panels and said; *"When we look at the pictures and our drawings and the writing about what we said we can remember how things went and then we can decide if we liked it that way or if next time we do something we will do it in another order."* The one morning she arrived and noticed a new panel depicting the morning meetings. She called her friend over to look at the panel and said, *"Look, at the beginning you used to draw pictures when you were the chair person and now you can write some names."* Her friend pointed out that she had copied the relevant names from the names on the children's lockers to which Participant One said, *" that doesn't matter you still wrote them yourself and that was really clever."* She was genuine in her praise and her friend was visibly pleased with her comments. The friend then in turn showed the panel to her mother and pointed out how she had progressed and her mother was impressed. This collaborative awareness of the progression of writing would have been lost without the documentation panels.

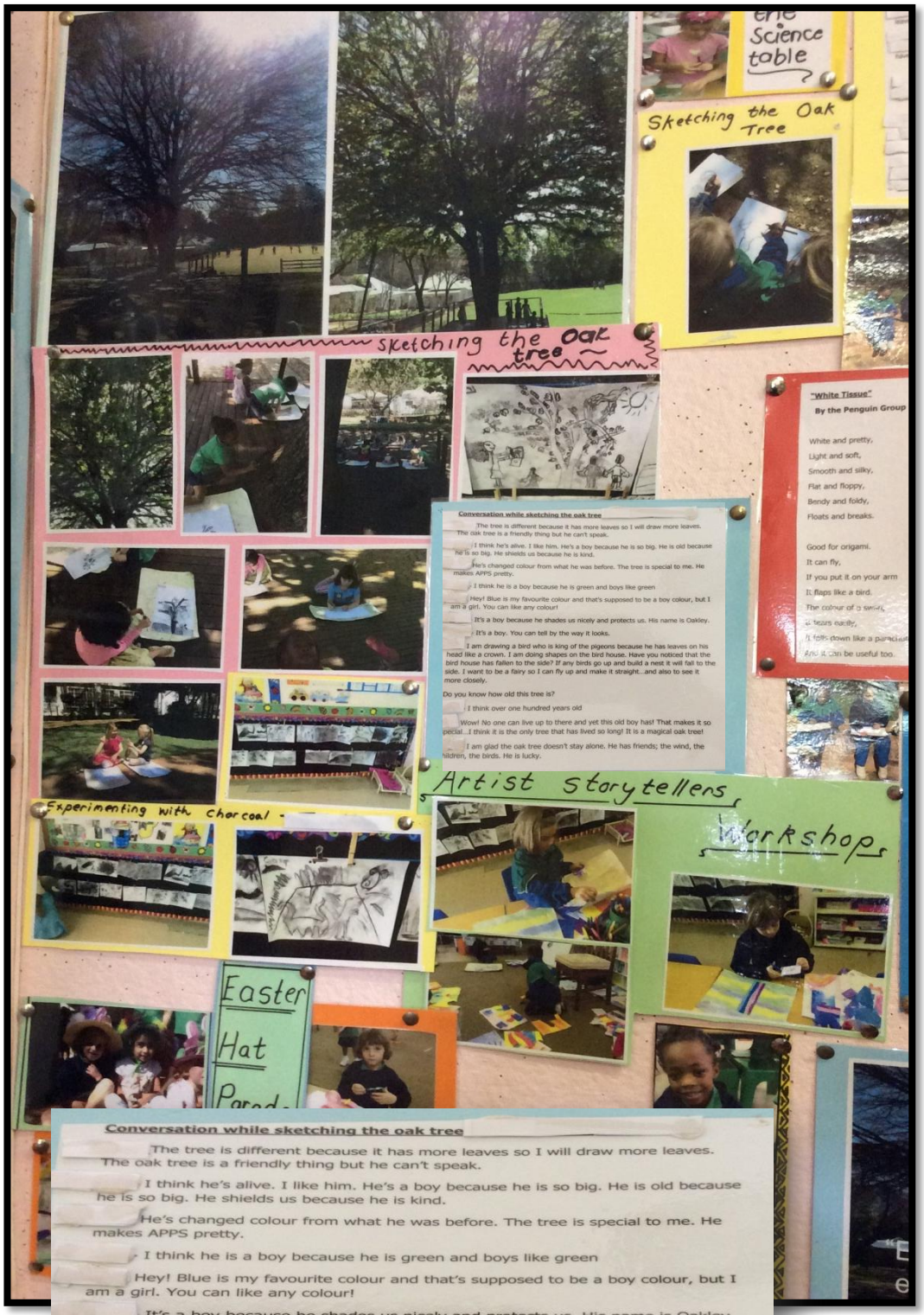
Participant Two would study the panels when they were first put up and refer to them often. She objected when I took down the first lot to make way for new panels. Space is a premium and I had run out of space to display new panels. I told her if she could come up with a solution to create more space then I would put up the old panels. She brought this problem to the morning meeting and it was the first time she was actively involved in the discussion. The children amongst themselves decided that I had not utilised the space available to capacity and by the end of the meeting they had found many more display areas including the bricked area at the bottom of the display boards and the windows. When I asked them why it was so important to keep the displays visible Participant Two told me *"that otherwise our journey in the Penguin Class will be lost and no-one will be able to see or remember what we have done. We will not know what to do next either."* The collaborative learning and decision making that was happening in the classroom was being actively informed by the pedagogical documentation.

The following three pages are a visual dialogue showing a pedagogical documentation panel in detail. The children referred to the different panels often and they used the panels as a point of reference in their discussions with each other and their parents as well as any visitors to the classroom. The reason for the inclusion of these three pages is to give a sense of how the pedagogical documentation became part of the classroom culture. The panel encompassed different aspects of what was happening in the classroom and promoted "an understanding of multimodality, an understanding of these ways of working, their potential relationship, and their potential purchase in the classroom, and more importantly beyond the classroom" (Andrew, 2014, p.176).



Figure 5.6


Tracing with 'Big Sisters'
fun in the Penguin Class
Changing the form of leaves to use for art ..... we crunched and crunched and jumped and pummeled until we had dust !!
Seeing what we can do with Tissues :)
painting our big bodies
We can WRITE!



Conversation while sketching the oak tree

The tree is different because it has more leaves so I will draw more leaves. The oak tree is a friendly thing but he can't speak.

I think he's alive. I like him. He's a boy because he is so big. He is old because he is so big. He shields us because he is kind.

He's changed colour from what he was before. The tree is special to me. He makes APPS pretty.

I think he is a boy because he is green and boys like green

Hey! Blue is my favourite colour and that's supposed to be a boy colour, but I am a girl. You can like any colour!

It's a boy because he shades us nicely and protects us. His name is Oakley.

It's a boy. You can tell by the way it looks.

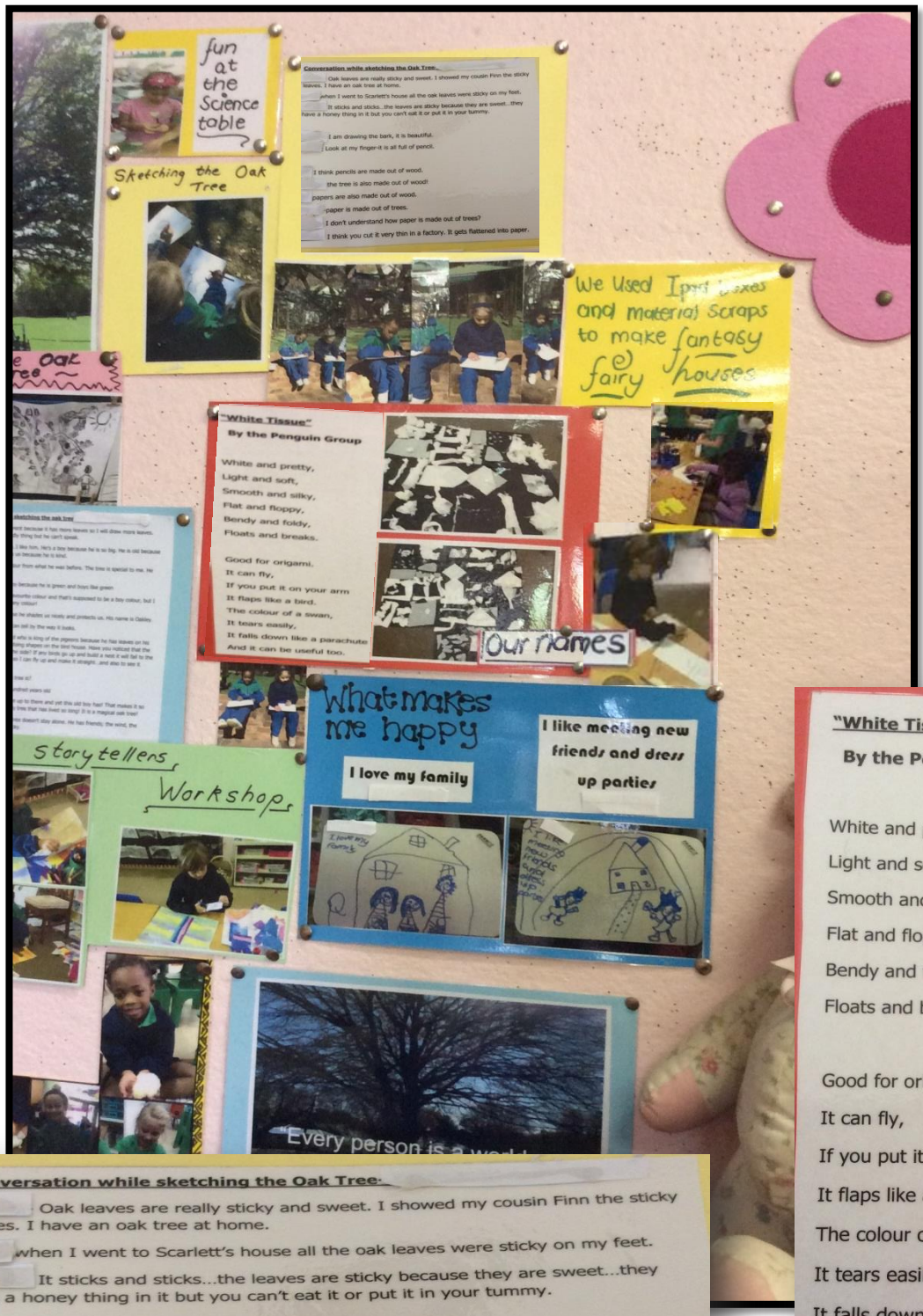
I am drawing a bird who is king of the pigeons because he has leaves on his head like a crown. I am doing shapes on the bird house. Have you noticed that the bird house has fallen to the side? If any birds go up and build a nest it will fall to the side. I want to be a fairy so I can fly up and make it straight...and also to see it more closely.

Do you know how old this tree is?

I think over one hundred years old

Wow! No one can live up to there and yet this old boy has! That makes it so special...I think it is the only tree that has lived so long! It is a magical oak tree!

I am glad the oak tree doesn't stay alone. He has friends; the wind, the children, the birds. He is lucky.



"White Tissue"
By the Penguin Group

White and pretty,
Light and soft,
Smooth and silky,
Flat and floppy,
Bendy and foldy,
Floats and breaks.

Good for origami.
It can fly,
If you put it on your arm
It flaps like a bird.
The colour of a swan,
It tears easily,
It falls down like a parachute
And it can be useful too.

Conversation while sketching the Oak Tree:

Oak leaves are really sticky and sweet. I showed my cousin Finn the sticky leaves. I have an oak tree at home.
when I went to Scarlett's house all the oak leaves were sticky on my feet.
It sticks and sticks...the leaves are sticky because they are sweet...they have a honey thing in it but you can't eat it or put it in your tummy.

I am drawing the bark, it is beautiful.
Look at my finger-it is all full of pencil.

I think pencils are made out of wood.
the tree is also made out of wood!
papers are also made out of wood.
paper is made out of trees.
I don't understand how paper is made out of trees?
I think you cut it very thin in a factory. It gets flattened into paper.

Participant Three enjoyed finding pictures of herself and took delight in trying to recognise her hands or her art in the panels. She also liked trying to recognise her peer's art and she initiated discussions around who was doing what when viewing the panels. She used the panels as a means of communicating with a wide range of peers and her ability to express herself improved as a result. Participant Three also liked to have the verbatim conversations read back to her and in the one instance used the conversation around the gender of the oak tree to reinitiate the conversation. She and a group of friends decided that the tree in fact had no gender and that "*the tree could be anything you wanted it to be and it didn't matter."* She also initiated a trip to the library to fetch books about trees and they returned with both fiction and non-fiction examples which they categorised. Once again the pedagogical documentation had been instrumental in allowing the children to learning collaboratively and not in a teacher directed manner.

Participant Four was a keen emergent reader and as mentioned before, the pedagogical documentation panels were a way for her to practice her reading and writing skills. The way in which she used the panels to inform her progress was interesting to track as she would keep returning to the panels to check if she had written individual words correctly. She started keeping a list of words that she could read. These included names of her peers as well as the words that occurred regularly in the panels. She was in fact making a list of 'sight words': a method of learning high frequency words that are not easy to spell out. Participant Four had used the panels to find a way of increasing her formal reading ability without any adult intervention or expectation. Participant Four used the pedagogical documentation in our classroom to collaboratively construct knowledge i.e. formal reading skills, in this instance with me. I could then extend her interest and teach her some of the formal phonics skills that would assist her in her quest to understand how the printed word can be decoded. Teacher initiated activities in this example were necessary but the difference between this and a formal approach is that the child indicated her interest and was not required to learn the skills because the curriculum dictated it.

Participant Five was interested in the introduction of the pedagogical documentation panels from the first day they were displayed in the classroom. I did not draw attention to them as I wanted to observe if the children even noticed them. She was quick to notice the first panel which depicted the children lying on large sheets of paper while their Grade Seven buddy traced around their

silhouette. Each child is allocated to a Grade Seven for the year and we plan to do an activity with them once a term. This fosters a sense of belonging and nurturing. I had made a panel showing this activity more as a record than for discussion in my data collection phase. However, Participant Five used these photographs as impetus for doing different body image pictures showing different perspectives. She had used the documentation panel as a means of informing her learning and she also got some friends interested in the process. She requested that her and her friends be provided with some more large sheets of paper and they proceeded to make footprints out of paint on the sheets. Once the paint was dry they drew their bodies and attached them to the feet.

6. The role of the environment

Question Six: Did the environment play a role in making learning visible?

The Reggio Emilia approach calls the environment the 'third teacher' and significant emphasis is placed on the creation of an environment that is conducive to learning. They have very specific criteria as to how the environment should be set up and the preschools in the Reggio Emilia municipality are famous for their beautiful buildings and classrooms. Loris Malaguzzi, the founder of the Reggio Emilia approach, insisted that the school should be a place where learning was visible and available for discussion by the community. When the emphasis is on keeping true to the Reggio Emilia approach and attempting to make the learning visible and accessible; there are many examples in the South African context of successful Reggio Emilia inspired schools regardless of socio-economic qualifiers. The Africa Reggio Emilia Alliance (AREA) encompasses schools from different contexts and the emphasis is on understanding the approach.

In my specific context I am able to print the documentation panels in colour and I can set my classroom up as I see fit with the exception that the school requires certain posters and documents to be evident in every classroom. In the Foundation Phase this includes two charts of our phonics programme, a birthday chart, a number chart and an alphabet chart. The whole school is required to display the code of conduct and the uniform regulations. When setting my classroom up for the data collection phase I made specific decisions around the utilisation of space in my classroom. I created a 'mini *atelier*' space in one corner of the classroom. I did not

have space to display the art materials in this corner so I sorted the bottom shelves in my storeroom to place items and media for the children to use at will. We also have an outdoor painting area outside the classroom and we used this for painting projects.

I created 'provocations' (which in the Reggio Emilia approach are objects or scenes created to provoke thought or discussion) all around the classroom depending on what had emerged from the previous day's pedagogical documentation. This took various forms and I was conscious of making sure the provocations did not become predictable. First, I displayed different books around topics of interest in the classroom. For example in order to set up the artist/storytellers workshop I placed a selection of books featuring collaged items in the book corner for the children to view. Second, I put out collections of various 'loose parts' (a Reggio term for any selection of materials that can be explored). These collections included semi-precious stones, buttons, fabric remnants and different types of seeds e.g. popcorn, lentils, dried peas. Third, I displayed different photographss of relevant topics on the interactive whiteboard. Fourth, I put out different art media and different paintbrushes and sponges on the outside art station for exploration.

In the Reggio Emilia approach the emphasis is on natural light and materials and also on bringing the outside into the classroom. I have live plants in the classroom and we regularly grow different vegetables in our Grade R vegetable patch. The children are aware of taking care of the environment and as a class we recycle our paper daily. The school has a recycling programme we all take part in. I was conscious that my aims of the data collection phase were making learning visible and that this was not an exercise in recreating the perfect Reggio Emilia classroom.

Participant One would automatically choose a provocation and begin to explore it. She did not need any encouragement from the outset of the data collection phase to embrace the open curriculum and her enthusiasm encouraged her peers to follow suit. She did begin to show an interest when the documentation panels were displayed and she would notice the environment as depicted in the photographs, for example she commented *"look how pretty our classroom looks in this picture, you can see all the work we have been doing."* She enjoyed exploring the different media and began to take more time completing her art activities when she realised that

they were unique and not *"the same as everyone else's."* The environment became important to Participant One and she became proud of all aspects of her classroom. She was quick to explain to the principal on a visit to the classroom what we were doing and how best to read the documentation panels. The environment was an important aspect of learning and she could verbalise her feelings around this, *"our classroom is a place where we all have a place and all listen to each other. We bring our issues to the morning meeting and we decide what to explore. We have a pretty classroom and we learn here."*

Participant Two noticed every detail of each provocation. She noticed when they changed and would examine the new items with interest. She would not begin any activity until she had looked at every aspect of the classroom. She would sometimes choose to draw the items in the 'loose part' collections and was not in a hurry to manipulate any of the items except through drawing. She could verbalise that she liked the different provocations and her cautious way of approaching the items enhanced her enjoyment; *"I don't like to rush, I try new things slowly. My mom said I take ages to try new things but when I try them I like them."* Her understanding of how she learned and her ability to reflect on it was made possible to some extent by her feeling of acceptance and confidence in her environment.

Participant Three approached the different provocations with enthusiasm. She liked to go around the classroom in the morning and see what new provocations there were present in the classroom. She would generally settle down working with the construction toys and I tried to put out different types regularly. She also enjoyed utilising the 'loose parts' as objects in her games. For example she fetched all the semi-precious stones and used them to *"build a wall around our castle."* Her games were always elaborate and could include as many as eight children. She would often say *"We are not ready to break it up"* and we would leave it on the carpet to be added to as they days went on. We would often have to push it to one side and in the end as a class we decided that all construction structures be broken down on a Friday to facilitate proper cleaning. I would then have to photograph the structure from every angle and she would look for it in subsequent documentation panels and loose photographs. The freedom that the environment allowed her was conducive to learning.

Participant Four found the changes in the environment stimulating. She liked to look at the

aesthetics of arrangements. I put a collection of leaves and seeds out as a provocation along with some water colour paints in our mini '*atelier*.' She looked at them from every angle and then she rearranged the collection in a way that she thought was more pleasing. She then proceeded to paint her still life with the water colours. She would regularly bring fresh flowers from home to adorn the classroom. She liked making what she called *"scenes"* and because of her interest in making the doll and fantasy corner a *"story"*, many of the girls took to bringing in flowers and items from home for the classroom. We have a rule in our class that we are not allowed to bring toys to school and the girls were very creative in getting around this in the name of making the classroom *"more pretty."* Our classroom rules were developed by the girls in the first week of school. They discussed them and decided what was fair. I did not dictate what I wanted the rules in the classroom to be. The 'no toys' rule was decided because they felt that the toys could get damaged and as Participant One said, *"also school is not where you show off your toys, you learn to share and make games out of other toys. If you want to show off your toys you should have a play date."* However the girls enjoyed bringing things from home to share with the class. In a sense this crossed the divide between home and school which is an important aspect in the emotional development of Grade R children. We decided in a class meeting that we could bring things from home to adorn our classroom but we had to be prepared to share the item. This new rule worked well and the girls mostly brought flowers and living items like pot plants for the classroom.

Participant Five would immediately settle down to whatever art provocation was available each morning before our meeting time. She would explore the different media with enthusiasm and as soon as she had a friend join her she would suggest that they complete a *"team picture."* She enjoyed the social aspect that the provocations allowed her and she would often come and show me what she had created with her friend and request that I transcribe either the process or the accompanying story or both. She interacted with all aspects of the environment and would be quick to comment on any changes she had noticed both inside and outside the classroom. The pedagogical documentation was an important part of the environment for her and she would comment on the fact that *"we make it so everyone can see what we are doing in our classroom."* All aspects of the environment including the provocations, the documentation and the people in the classroom made up the learning process and she was fully engaged with each aspect.



Figure 5.7 A mural that the girls drew together inspired by our exploration of trees and suggested by a child after looking at pedagogical documentation panels of charcoal drawings of the oak tree. The children decided that they did not want the mural to be "taken from the front" but rather wanted to pretend they were "birds flying over a forest of trees". This meant that the trees were drawn from all sides of the paper. The children asked if the large piece of paper could be left on the floor so that they could add to the drawing over a couple of days. Once they had decided that they were finished adding to the picture they carried it outside and used colour wash to seal the pastels. They then decided where they wanted it displayed in the classroom and they removed the pictures that were displayed in the space. Initially they wanted it displayed outside but they decided that the wind may damage it. This mural is an example of how the children used a collaborative approach to complete an assignment that they had set for themselves.

7. Conclusion to Analysis of Data

My initial research questions which were:

1. Does pedagogical documentation create opportunities for collaborative learning in both the learners and the teacher?
2. To what extent does a multimodal approach together with pedagogical documentation make learning visible and enhance reflexivity in the learners and the teacher?

The data collected gave me a better understanding of how a multimodal approach and pedagogical documentation could create collaborative learning opportunities and enhance reflexivity. I became aware that my initial questions did not reflect the depth and multifaceted layers that the interventions elicited. The children responded to the multimodal interventions in a way that I had not anticipated and this in turn led me to more questions.

First, the level of autonomy that the children were able to achieve within a short space of time made me question the extent to which opportunities that are given to children are limited because they are not perceived as able to take on the responsibility for their own learning. A complete shift in thinking around how we perceive the child has to occur in order for the children to have the space to engage in autonomous learning. The children were able to take command of their learning and displayed an agency that I had not expected. This discovery will continue to inform my practice as a teacher.

Second, I became aware of the responsibility on the teacher to fully engage with the children and to take the children's lead. I began to question how this approach could be adopted without a complete shift in the conception teachers have of themselves as teachers. Kress (1997) raises this question too and he claims that teachers need to have the knowledge to teach effectively:

> "I am firmly convinced that the best teaching has come from teachers who have acted clearly and strongly in the authority of their knowledge. My argument is not that teachers should abandon their authority; they know that learning is action and work" (Kress, 1997, p. xvi).

The conception of authority with reference to my research refers to the idea that the teacher

should gain their own sense of autonomy from their view of knowledge and not from the status or power that they have simply from being teachers. A different conception of authority emerged for me during the course of my research as I became aware of my ability to allow the children autonomy for their learning. My authority came from an understanding that the children were learning and constructing knowledge with me and that my role in the process was in creating an environment and learning opportunities within the classroom.

Third, the research revealed that the children could use multimodal means to express themselves. They used the different media effectively and yet they quickly realised that the process was important and not the final product. The children were able to talk about and think about the different stages of their learning and the final product ceased to have the importance that it would normally have done prior to data collection. This awareness however did not extend to the adults with such ease and both parents and other teachers were quick to comment on the standard of the 'art'. The children realised that this was not the aim but the adults found it hard to move away from this thinking. The question of how to "rethink" (Kress, 1997, p .xv) the adult's perceptions and understandings was raised. I engaged in extended and repeated conversations with the parents around what we were aiming to achieve during the data collection. I presented a power point presentation to the staff at the beginning of the data collection on a multimodal approach and the Reggio Emilia approach specifically. I then presented a power point presentation at the end of the data collection to show what the children and I had discovered. The presence of the pedagogical documentation panels in the classroom were also a tool to explain the processes we were engaging in with the adults.

Fourth, as the research progressed I began to question how this approach would benefit the children when they left my class at the end of the year. An open curriculum became the dominant approach in my classroom but this would not extend into the next grade. I am convinced that the children benefitted from the reflexivity and collaborative learning but have to face the reality that they will feed into a formal system. I believe the skills that they have learned will help them in a formal system because the ability to reflect and think critically is a vital learning tool no matter how formal the system.

Fifth, the research revealed that these specific children, in this specific context benefitted from the interventions. The question of whether this was due to the fact that these children come from middle-class backgrounds and as such their parents parenting style is one of "concerted cultivation"(Gladwell, 2009, p.104). In other words the children are raised by parents who actively "foster and assess their child's talents, opinions and skills" (Gladwell, 2009, p.104). The children come to school with certain aspirations and abilities and these are in part determined by their backgrounds (Appadurai, 2004). I had to bear in mind that although these children responded to the interventions in a certain way this could be to some extent be attributed to their backgrounds (Bourdieu, 1993).

Lastly, the use of metaphor is a sign of higher order thinking taking place (Vecchi, 2010). The children used metaphor throughout the data collection process and I began to see this as evidence of their reflexivity and metacognition (Capra, 2002).This area could be researched in more detail at a later stage. The data analysis raised more questions than I initially expected and the research revealed a much deeper understanding of the possibilities that have not been fully explored in the South African context for early childhood education and Grade R specifically.

Chapter Six: Research Conclusion

In conclusion the research I conducted into the role of pedagogical documentation in a multimodal Grade R classroom both affirmed what the existing literature and research claims about a multimodal approach and pedagogical documentation and generated considerable new insights into the ways multimodality and pedagogical documentation work together in this context.

1. Multimodal approach

The class of Grade R children at the private girls' school in Johannesburg were able to embrace a multimodal approach during the eight week period of data collection and demonstrated that their artistic and creative practices could be used as a *resource* with regards to their own learning both individually and as a whole class (Harrop-Allin, 2014). This "capacity for recruitment" (The New London Group, 1996, p.72) implies that the children were able to work with the "affordances of the aural, visual and kinetic modes" (Harrop-Allin, 2014, p. 37). In other words the children were able to utilise themselves, their peers and any materials available to pursue an idea and they were able to use these meaning potentials or affordances in Kress' (1997) terms effectively.

The following transcript and any subsequent transcripts in the Chapter Seven are repeated from earlier Chapters in the research. This was done purposefully, to reintroduce the voice of the child in the concluding paragraphs of the research. The following conversation that the children had during the data collection phase is one example of how the children were able to use the materials available and interaction with their peers in order to make meaning:

Conversation while observing the oak tree

Participant Five: I can see loads of leaves

Participant Three: I think the branches are thick at the bottom of the tree are thick because the leaves are so heavy

Participant Five: No silly, the leaves are not heavy it's the birds that are heavy!

Participant Two: What are you writing? (Little girl peering at my notes)

Participant Four: She is writing what we say about the tree

Participant Five: So the moms can know what we say

Participant Four: You are writing what we think so the moms can see why we think

Participant One: Please can you move? I literally want to be on my own to concentrate.(moving away from her peers)…a long time ago I did a small tree cause I didn't know how to draw well, but now I know how to show the tree is big. You need to take up the whole paper like this…

Participant Five: All the leaves are going off and there are not so many acorns

Participant Two: It is autumn, so it is not dying it is just waiting for spring

Participant Four: How did they plant such a big tree? Did they need a big truck?

Participant Five: No, it's very old, it started from an acorn

Participant Three: Look there is a hollow in the tree filled with bugs. In another country there would be a bear but here there are just bugs.

This example shows the depth of the children's thought and the fact that they used each other as well as what they were seeing, hearing and experiencing to make assumptions about the world around them. The children were able to comment on and discuss areas which interested them. In terms of the open curriculum being effective, in this one conversation a whole number of curriculum content and subject areas were opened for exploration.

Firstly, the concept of heavy and light were touched on:

Participant Three: I think the branches are thick at the bottom of the tree are thick because the leaves are so heavy

Participant Five: No silly, the leaves are not heavy it's the birds that are heavy!

Secondly, the understanding that writing could convey a message as well as the fact that what the children were thinking was an indicator of their learning:

Participant Two: What are you writing? (Little girl peering at my notes)

Participant Four: She is writing what we say about the tree

Participant Five: So the moms can know what we say

Participant Four: You are writing what we think so the moms can see why we think

Thirdly, Participant Four showed evidence of higher order thinking, metacognition and excellent use of expressive language when she asked for her peers to give her space to think and decide how best to represent the tree:

Participant One: Please can you move? I literally want to be on my own to concentrate.(moving away from her peers)…a long time ago I did a small tree cause I didn't know how to draw well, but now I know how to show the tree is big. You need to take up the whole paper like this…

Fourthly, seasons were discussed and the children used their existing knowledge as well as the knowledge their peers had to comment on the changing seasons:

Participant Five: All the leaves are going off and there are not so many acorns

Participant Two: It is autumn, so it is not dying it is just waiting for spring

Lastly and by no means conclusively, the participants used each other's knowledge and ideas to build on their own knowledge:

Participant Four: How did they plant such a big tree? Did they need a big truck?

Participant Five: No, it's very old, it started from an acorn

Participant Three: Look there is a hollow in the tree filled with bugs. In another country there would be a bear but here there are just bugs.

The above example of one conversation makes it abundantly clear that a multimodal approach is far more than making different materials available to the children. It is acknowledging that the children themselves have the ability to make meaning through every sense and mode available to them in a given situation. This ability generated in-depth class discussions as well as small group

discussions. The children were able to decide how they were going to further their exploration of various topics, media and skills. They became more confident in their own abilities and no longer relied on the teacher for direction.

An example of this was when the children decided to find leaves following our tissue exploration and one child discovered that if you crushed and ground the leaves you could make a powder. She commented that *"it doesn't look as pretty as our tissue pictures but it was fun to make and I reckon we learned a lot."* The children were using any item available to make meaning and not only that, they were able to verbalise what the crux of their learning was.

The children used metaphors to describe their findings and emotions and as Kress (1997) describes signs as a metaphor they became well versed in using signs to depict what they were learning both well before and after they become proficient in verbal and written modes. As one child described it, she could *"draw her thinks".* A collaborative approach was developed and all members of the class displayed a sense of belonging to the group that is unusual for this early in the year. Following our tissue exploration and the documentation panel with all the tissues together a child commented that: "*alone they just look like tissues stuck on black cardboard but together they make a beautiful picture."* The children became fascinated by how they could make *"beautiful group pictures and things together"* and their maturity when working together was interesting to track as with each week of the data collection they became more reliant on working together.

They took ownership of the morning meetings with ease and developed the ability to make decisions and act on these decisions. From the first week of the data collection phase the class grew in confidence and they were able to construct ideas as a group with minimal input from me. A benefit of this approach is that it is a departure from the approach where the teacher prepares a lesson, tells the children the content, allows for a brief discussion and then ends with an activity. The multimodal interventions that I set in motion were to a large extent then commandeered by the children. I became a co-researcher and the children used a number of multimodal "affordances" (Kress, 1997 p. 12) to make meaning of their world.

The following conversation of a morning meeting highlights how the children were able to take ownership of where there exploration would take them:

Morning Meeting Conversation

Chairperson (Participant Two): ***Why do the acorns fall out of the trees?***

Participant Five: The wind blows them.

Participant One: They get old and fall down.

Participant Five: Because the wind blows hard

Chairperson: Because the squirrels knock it down

Participant Three: Not squirrels in Johannesburg! You only get squirrels in Cape Town!

Participant Two: There are no squirrels at school, only at the zoo.

Participant Five: the acorns fall out of the tree because it is autumn.

Participant Four: The leaves fall at the same time

Chairperson: the wind is strong and blows the acorns down.

Participant Four: Acorns are nuts for Squirrels

Chairperson: We can't eat those nuts

Participant Five: they are not to eat-an oak tree grows out of an acorn

Participant Three: It takes long to grow seeds

Participant One: when its winter all the leaves come down but only from the oak tree.

Participant Three: Some trees are apple or banana trees

Participant Five: This tree is special because it's been there a long time

Participant Three: why is the oak tree growing so big?

Participant Five: because it's old!

Participant One: It grows too big because there is rain and sun

Participant Five: we water plants to make them grow

Participant Three: let's plant the acorns and see if a tree grows!

The children used each other and the structure of the morning meeting to discuss content relevant to them and at the same time content that is part of the curriculum. They were able to learn from each other in a respectful manner and no-one's ideas or comments were not valid. In a traditional context the teacher normally has an idea of the answer he/she is looking for and only the child who gives said answer is praised and feels validated in that moment.

2. Pedagogical documentation

The pedagogical documentation enabled us as a class to learn the "value of subjectivity" (Dahlberg, 2012, p.225). The children became aware that there was not a specific set of skills or outcomes to be learned and this was instrumental in allowing the children to begin to construct meaning in collaboration with each other (Vygotsky, 1978). The children responded to the process in different ways but in all cases the pedagogical documentation created more awareness in the children of their ability to express themselves and to be cognisant of the learning process as they were experiencing it and also after the event. As a participant commented, *"When we look at the pictures and our drawings and the writing about what we said we can remember how things went and then we can decide if we liked it that way or if next time we do something we will do it in another order."*

The pedagogical documentation became a vital tool in this process. The children used the pedagogical documentation as a continual point of reference and they would refer to the panels when making decisions on how best to continue with a train of investigation. They would call me and tell me to *"bring my book so we can tell you the story."* They also displayed an awareness of their learning being important and became co-researchers with me, bringing items and conversations to my attention regularly. The pedagogical documentation was firstly, a record of what we had done, secondly, a means of reflecting and thirdly, a tool to inform further investigation. It became an integral part of our classroom culture. I also realised that the children

enjoyed being involved in creating the documentation panels and that their perceptions and input were an integral part of the process.

The following conversation highlights how the children used the pedagogical documentation panels to make meaning and to decide on a future course of action. It is interesting to note that Participant Three could use the panels to get over a fear she had of the chicks. This was a real shift for her because we had a mobile farmyard visit the school a couple of weeks later and she was confident when handling the baby rabbits and guinea pigs.

Conversation while looking at loose documentation panels

Participant Two: Look here was the time we had the incubator in our classroom. Do you remember?

Participant Three: I see that. I was scared to hold the chicks when they hatched because I was a little bit silly.

Participant Two: No you weren't silly, you were just too little to realise that sometimes things we don't know are not scary just because we don't know them. Would you hold a chick now?

Participant Three: Yes I would because I see the pictures and I see how little they are and I see they didn't hurt anyone.

Participant Two: Look here (picking up another panel), here is the first time we sketched the oak tree. I didn't know how to draw many leaves and just did one line going around the tree, but not I know we can draw the leaves separately. It takes more time but it looks much better and it shows what I was seeing… really, really…

Participant Three: I like looking at all these pictures. I think they show we are learning.

Participant Two: Should we sketch the oak tree as it looks today and see if it is any different from these sketches. Because the seasons are changing and we are getting better at drawing too….

3. Children as meaning makers

The children were able to verbalise what was happening in the documentation panels and what they had learned. As teacher and researcher I had to acknowledge that as the adult my "own overwhelming focus on language and literacy made it difficult for me to see the children's meaning-making principles" (Kress, 1997, p.13) and I made a conscious effort to allow the children to become "agents of their own cultural and social making" (Kress, 1997, p. 13) within the classroom context. I had to acknowledge that my experience had striking parallels with those described by Kress and the children themselves experienced "active, transformative practice" (Kress, 1997, p.13) in that they were readily able to make use of what was available to them to make meaning; meaning which had profound and lasting effects on their thinking and their sense of themselves as participants in the class. The children felt they had autonomy to use the space and the materials in any way they chose as evidenced by this comment; *"I know people will normally put things together by what they are made of, like blocks together and marbles together but I am going to sort these pictures into different groups… see all the animals come here even if they are made from different things."*

The following conversation between two participants while they were creating shoes is interesting as it highlights how the children were able to express their opinions and also make meaning in collaboration with each other, the materials available to them and the environment. Participant One was able to conclusively state that she did not think her shoes should match and *"even if they were real"* she would still not choose to make them matching.

Conversation while creating the shoes

Participant Four: Why are you making your shoes different? They should match. Shoes are never different, they come in pairs.

Participant One: We can do the shoes how we like and I think it would be boring to have two the same. You can choose what you want to do and I can choose what I want to do…

Participant Four: But why would you do shoes that didn't match?

Participant One: Because I am a designer and designers can do what they want. I was watching 'Project runway' and they don't do matching things always. Besides we are not going to wear these. But I wish we could, I would still make them not matching…

4. Parents reactions to the process

It was more difficult to educate the parents in understanding that this was a philosophy of learning that required a shift in their thinking. The parents needed to be educated in an understanding of firstly multimodal theory, secondly, the Reggio Emilia approach and pedagogical documentation specifically, and thirdly the concept of an open curriculum. I explained the research in our parent meeting at the beginning of the year. At this point there was so much to take in, with a new school as well as a new grade and a new teacher to contend with. I also sent them the letter explaining the research when I asked for permission to include their child in my research. However, I discovered that they needed a lot of explanation as the research unfolded too. I was reminded of how children learn differently to adults; the children accepted the pedagogical documentation as a part of our classroom and used it as a tool immediately. I made literature available to the parents should they be interested in reading more about the theory. The adults needed further explanation of the pedagogical documentation as they initially saw the panels as a photograph collage. I did notice that the types of conversations that I had with the parents around their children's progress was influenced by the data collection process.

The parents in my class became aware that the pedagogical documentation was more than a collage and began to ask questions about what we were learning. The need to develop the parents' understanding of how the children learn became apparent. I began to explain the process in more depth and I think in the long term the approach would create a very different scenario in parent teacher meetings as parents and teachers became aware of the children's ability to think and reason. A culture of collaboration had developed in the classroom that went beyond the bounds of the parent's viewing their child's 'art' on the wall and often comparing it to their peers. For the most part I found that the parents were eager to trace their child's learning with the child and they were supportive of the data collection process. This culture of collaboration could have a profound impact on assessment processes and the content and focus of parents' meetings

in the long term. The pedagogical documentation has the potential to change the whole nature of assessment at this level (Dahlberg, 2012).

5. Teachers as collaborators

Pedagogical documentation takes a significant amount of time and thought and I found that it was necessary to jot down thoughts and conversations for further reflection at a later stage. The act of pedagogical documentation forced me to be completely engaged with what the children were learning continually and also allowed me to "participate in the production of new knowledge"(Dahlberg, 2012, p. 228). This was a revelation to me as I saw first-hand how the children were making meaning with each other and their worlds through discussion, dialogue, joint meaning making and critical feedback. However, I also discovered that the pedagogical documentation process is very demanding for the teacher as I had to be able to intensely engage with the children but also document what was going on. This took careful planning on my part and required a conscious effort to remain engaged at all times. As previously mentioned the Reggio Emilia approach advocates two teachers with each class at all times with additional support from an *atelierista* and occasional visits from a pedagogical advisor. While this scenario would be ideal, in the broader South African context lowering the high pupil teacher ratio would have serious cost implications and would not be possible in the foreseeable future. A key aspect of the Reggio Emilia approach is collaborative teaching and this is not just to lower the pressures on a single teacher but also the approach recognises that the practice of thinking together works for teachers as well as children (Vecchi, 2010).

I found myself considering what relevance my research had in the broader context and tried to consider ways this could work practically across schools. In order for collaborative teaching to work I would suggest that multimodal pedagogy be included in the training of student teachers at university level. I would also suggest that that practicing teachers be offered training courses in the field in order to improve their understanding of the benefits of collaborative teaching. In my context I found it beneficial to align myself with like-minded colleagues or at least colleagues that had an interest in what I was researching and trying to involve them in collaborative endeavours. The librarian and the computer specialists were particularly interested and I was fortunate to be able to use their skills in the data collection phase. I did however find it

challenging to explain my research to colleagues as they all knew something about a multimodal approach and when I mentioned what I was doing I was treated to offhand comments like *"I know Reggio, it is play based and that is fine for preschools but it sounds exhausting*" or "*rather you than me making all that extra work for yourself".* This was quite disheartening and I did find it easier to withdraw and only utilise the help of teachers who were genuinely interested in the research. I think the only way for a multimodal approach to be successful in schools, whether it is the Reggio Emilio approach or any other multimodal interventions, is for teachers, principals, district officials and policy makers to be educated in the benefits of adopting this approach. My critique of my research was that I did not find a way of getting the whole school or at least the other Grade R class on board and this will be an area of future reflection and possibly action for me. I believe I conclusively affirmed the value of this approach but need to find a way of making this accessible and not daunting to colleagues.

6. Theories the research affirmed

The data was collected over an eight week period and as such it was possible to track the effect the multimodal approach and the pedagogical documentation were having on the classroom. Within the first week of morning meetings the children were able to decide what concept they wanted to research and what modes they were going to utilise and they did not rely on me to lead discussions. Because of the time span the children's reactions could not be put down to maturity. If the research had been conducted over a longer period of time, the children's improvements could be attributed to the fact that developmentally their ability to question and engage with media arguably improves in the Foundation Phase as the children become more eloquent.

There were other factors besides pedagogical documentation that allowed for the learning that was taking place in the classroom. The children were able to engage in conversations and explorations that interested them specifically and this enhanced the learning. They also became very aware of each other's strengths and this happened in a non-competitive manner. They were quick to call each other for help when trying to decide how to solve a problem. The children also became aware that every action and conversation was important in the classroom and they began to value each other's input and commented on it. As one participant described it: *"it is always more fun to do things together and you can hear what other people say and think 'oh yes! I*

didn't think of that'. When we look at these pictures it reminds us of what we were doing and who we were with."

The data collection phase was so much more than tracking multimodal interventions and pedagogical documentation. It became about the whole learning process and the concept of the child and learning. The process refined and strengthened my concept of how pedagogical documentation could work in a Grade R context. When having a conversation about why the documentation panels were important in our classroom Participant Two told me *"that otherwise our journey in the Penguin Class will be lost and no-one will be able to see or remember what we have done. We will not know what to do next either."*

Kress (1997) explores the idea that children "slowly work themselves into a world that already has form" (Kress, 1997, p. 94) and that they achieve this by the making of signs which they use to inform their understanding of the world. Andrew (2014) proposes that the classroom, like an artwork, is formed and defined through social interaction and relational aesthetics. Relational aesthetics in this context refers to an understanding that "the objects produced (if indeed there are objects produced) are subordinate to the capacities released by the experience of being involved in processes that are often collaborative and participatory…these are projects that are often ephemeral and performative" (Andrew, 2014, p. 183). In other words the classroom becomes a space that the children like the artist, claim ownership of, while recognising that this artwork has no beginning or end. Learning becomes about making public what is being learned and what can still be learned. This implies that the classroom cannot be static or have defined parameters. The environment as a teacher as practiced in the Reggio Emilia approach strengthens these theories and beauty becomes "a way of knowing" (Cooper, 2012, p. 295) and it also become a social connector (Vecchi, 2010). In this context beauty and aesthetics are not used in the conventional sense but rather as descriptors of a dynamic and fluid relationship between the participants in the environment and the environment itself.

7. Original Contribution to the field

The research affirmed theories of multimodal practice and that of pedagogical documentation. It also made an original contribution to the field in the South African context in terms of the environment being a teacher and of importance to the educational process.

A multimodal approach and Reggio Emilia inspired philosophies were implemented in the classroom without the benefit of another teacher. In the municipality of Reggio Emilia each classroom has a supportive system with two teachers, a resident artist (atelieriesta) and a visiting pedagogista (responsible for a number of centres in the area). In addition, the environment is perceived as the third teacher. While this would be the ideal this is not possible in South Africa. The reality in the South African context is that there is very seldom a low pupil / teacher ratio and this is one of the main reasons cited for a more child centred approach being difficult to implement. The research successfully implemented strategies that normally depend on collaborative teaching by recognising the children's ability to make decisions and to exercise independence in collaboration with their peers. It makes an original contribution in that it highlights the fact that one teacher can still use these methods without the benefit of a co-teacher. Even though the research took place in a private school setting there was still one teacher and twenty two children and yet the children's contribution to the everyday running of the classroom was unexpected and opens up possibilities for education in the South African context. However, it was not only the creative 'running of the classroom' that the learners contributed towards – their presence and interactions generated something that might be described as an 'intellectual and creative project'.

AbdouMaliq Simone argues "that the boundaries of Johannesburg are constantly mediated through *infrastructure* (which are) made up of what he calls "people", "bodies", "intersections" and "networks"(Mbembe & Nuttall, 2004, p.368). In thinking through what I observed in the classroom, I was struck by the possibilities of reading the learners as a form of 'intellectual and creative infrastructure'. The classroom at the centre of this research is very different to many of the cities that Simone experiences, but it is generative to extrapolate the metaphor and physicality of infrastructure into the classroom. The research was situated in a classroom in Johannesburg and like the changing and fluid infrastructure of the city; the classroom became its own infrastructure, the permanent structure of the classroom i.e. the actual building was secondary to the children and their learning. The children created a supportive system which was made possible by the fact that they were given the trust as collaborative thinkers to create an environment where they were could learn. The view of the children being the infrastructure creates a new dialogue in terms of what children are capable of. If children themselves are

recognised as being able to create the infrastructure whereby they can learn it opens up a host of possibilities for future education.

The children were able to transform their learning space into a living space that was alive with possibility and learning opportunities. As one child said, *"our classroom is a place where we all have a place and all listen to each other. We bring our issues to the morning meeting and we decide what to explore. We have a pretty classroom and we learn here."* They took ownership of the learning process and as such they were able to utilise any space available to them. They also managed to move seamlessly between home and school and the learning that they were engaged in was not confined to the classroom walls. They realised that what they were told at home could have value in the classroom; *"I don't like to rush, I try new things slowly. My mom said I take ages to try new things but when I try them I like them."* Both literally and physically the learning had the sense of being completely fluid and continually in motion. The oak tree became part of our classroom as did the library and the computer centre. The children displayed what Andrew (2014) describes as the "dispositional capacity for agency very different to the conformity present in most classrooms" (Andrew, 2014, p.187). The classroom became an expression of the learning that was taking place and the original contribution that the research made was that this aesthetic work was constantly changing and the space was open for new publications all the time. There was a sense of the work we were doing in the classroom to be of importance and the children immersed themselves in the living artwork that our classroom had become.

The oak tree took on a definite character and personality for the children. The following conversation highlights how the children were using metaphor, thinking about their own thoughts and giving value to each other's thoughts. They had become immersed in their environment and this adds a new dimension to the existing research around multimodality and pedagogical documentation.

Conversation while sketching the oak tree

Participant Five: The tree is different because it has more coloured leaves so I will draw more leaves. The oak tree is a friendly thing but he can't speak.

Participant One: I think he's alive. I like him. He's a boy because he is so big. He is old because he is so big. He shields us because he is kind.

Participant Two: He's changed colour from what he was before. The tree is special to me. He makes our school pretty.

Participant One: I think he is a boy because he is green and boys like green

Participant Two: Hey! Blue is my favourite colour and that's supposed to be a boy colour, but I am a girl. You can like any colour!

Participant Three: It's a boy because he shades us nicely and protects us. His name is Oakley.

Participant Four: It's a boy. You can tell by the way it looks.

8. Recommendations for Future research

The research could be extended over a longer period of time and could be extended across an entire school encompassing a wider range of age and abilities. The benefit of a multimodal approach and pedagogical documentation could be analysed across the grades. The fact that creative arts (as timetabled by the Education Department) are relegated to a small part of the timetable could be looked at in terms of the possible benefits to the development of the whole child. Thus, the children would be exposed to different ways of expressing themselves. The pedagogical documentation would encourage dialogue across the school.

The initial purpose of the research was to critically explore pedagogical documentation in the context of a multimodal Grade R classroom. In my opinion the benefit of this approach was conclusively established. However, this is an area with many possibilities for future research. The benefits of a multimodal approach have the potential to reach whole schools and not just individual classrooms. This is dependent on the buy in from all stakeholders, the parents, the teachers, the children and the governing bodies. This relies on a shift in thinking and goes back to my point that teachers are the key point where thinking has to shift. It is important to research how to move teachers' perceptions and their view of the child beyond what they think is possible. The children indicated their capabilities with ease. It remains to find ways of encouraging teachers, management and parents to follow suit. A multimodal approach and

pedagogical documentation can only be effective in the long term if it is possible to find a way of making it sustainable in whole school context. From my research I found that the approach was relatively easy to implement with careful planning but getting teachers and parents to understand the benefits was more challenging. I had to conclude that the benefits were significant but could only have far reaching consequences once a shift in thinking occurs amongst the adults.

What has emerged for me as the most important area for future research is an exploration of how the environment is another teacher, how aesthetics are teaching tools and how the classroom can become a living, interactive work of art. The educational value of the children expressing themselves and thus improving their ability to live in a multimodal world far outweighs the importance of improving literacy scores and school achievement.

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Appendices

Appendix A: Three-dimensional fairy house structures











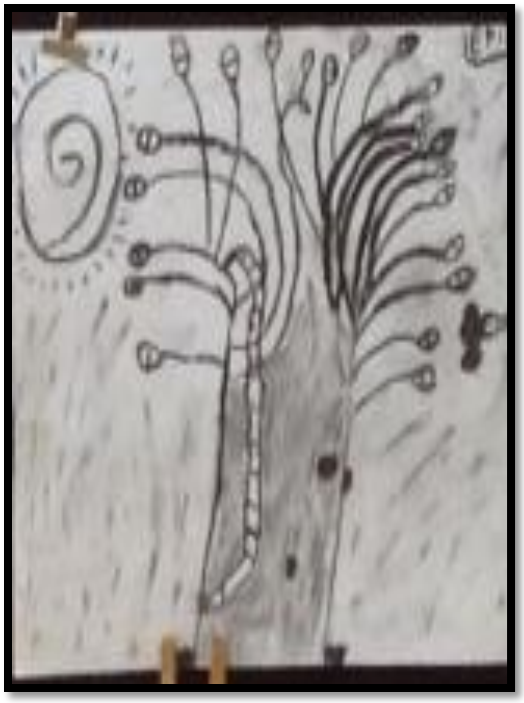


Appendix B: Charcoal exploration of trees



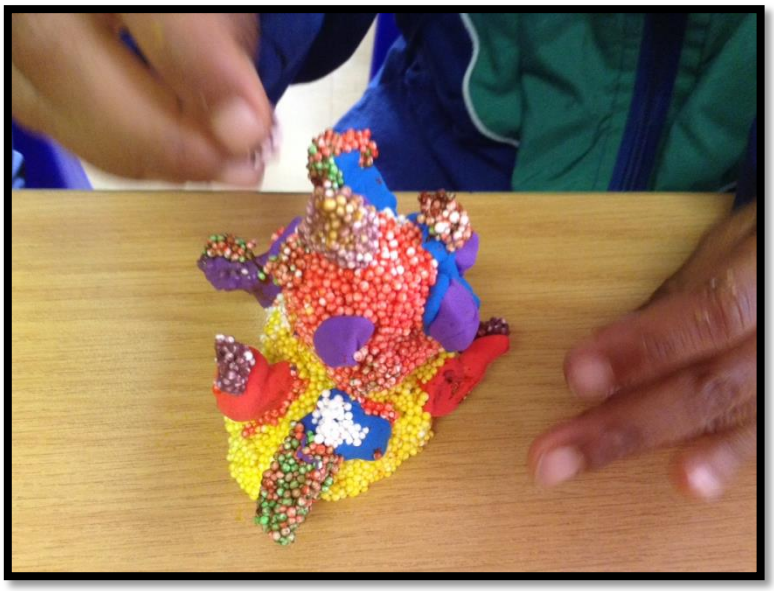








Appendix C: Play dough exploration of trees



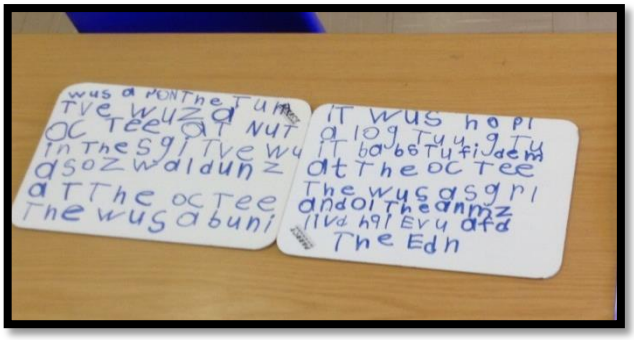




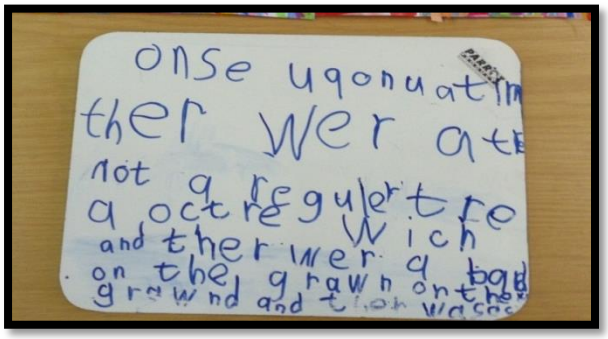




Appendix D: Collage pictures that tell a story



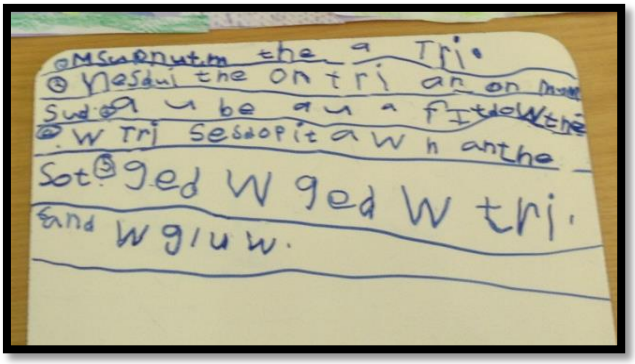














Appendix E: Drawings of 'when I grow up'













Appendix F: Letter to principal

Morag Williamson

[redacted]

The Principal

[redacted]

Johannesburg

2000

Dear [redacted]

Re: Permission to conduct research with my Grade R class

As you know I am currently researching my Masters by Dissertation Part time at the University of the Witwatersrand. My protocol number is 2014ECE045M. My proposed research topic is "A critical exploration of the role of pedagogical documentation in a multimodal Grade R classroom. A case study in an urban South African School."

The research project outline

I intend to use my own class of Grade R children in order to conduct a qualitative case study into the positioning of a multimodal approach and the practice of pedagogical documentation. It will

take two months to collect the data for the study. I will store the photographs and any typed transcriptions of verbatim exchanges on my personal flash drive and will delete the information in five years. This data can only be accessed by myself with my password and as such will be protected. I plan to expose the children to a multimodal approach using pedagogical documentation as a specific tool. I want to examine the effects rich and diverse multimodal interventions, specific factors in the environment and pedagogical documentation has on whether or not the children can begin to develop a reflexive and meta-cognitive approach to their own learning. This study will happen in conjunction with normal curriculum demands and will in no way detract from the work they are required to cover in Grade R. There is no direct reward or benefit to the participants beyond the value of the learning taking place in my classroom. If the research gaze intensifies the reflexivity of the experience then it may be seen as added benefit. The children will be exposed to innovative teaching methods and will also utilize artistic media and skills. Neither the children nor their parents will receive payment for participating in the research.

Confidentiality

Confidentiality cannot be guaranteed as the whole class will be participating in the study. However a great deal of effort is put into the development of mutual trust and confidence between the children as part of the learning process. The research data will be kept on a password protected flash drive and will only be used in an educational forum.

Anonymity

Anonymity cannot be guaranteed in the study because I will be using photographs of the children but these will only be used if parents and children give consent. However, the learners' names will not be included in the study at all; neither will any of their original art or writing be used (reproductions will be made). The parents and children will both be given the opportunity to approve or veto individual photographs before they are included in the final report.

Learner participation

Each child will be given a letter for their parents to explain the study and allowing them to consent or not to consent for their contributions to be included in my final dissertation report.

Children will also be asked directly for consent to use photographs, transcribed conversations and copies of their artwork and any other artefacts that are created during data collection.

I will also inform the parents that I will be photographing the process and that the use of photographs of the learners' artwork and of the learners themselves will be used in my research report and in possible future educational presentations and publications. The permission of the children and parents will also be obtained for the use of photographs of each individual child in the group. I will also obtain their permission to audiotape some of the pedagogical conversations arising from the process that will be transcribed to use in the dissertation report. I will also be collecting data by jotting down notes of exchanges and observations as they occur and I will seek parental consent for verbatim quotes and observations to be included in my study.

I will make it clear to both the children and their parents that the inclusion of their child's input in the dissertation is entirely voluntary. The children will participate in all the lessons as this will form part of the school curriculum, however, the children and their parents may choose not to be included in my final report at any time and there will be no repercussion.

Thank you.

Yours sincerely

Morag Williamson

[redacted]

[redacted]

Appendix G: Principal permission form

Permission Form

I, [redacted] grant permission/ do not grant permission for Ms Morag Williamson to conduct her research with her Grade R class.

Signature: _____ Date: _____

School stamp

Appendix H: Letter to parents

Dear Parents/Guardians

As you know I am currently researching my Masters by Dissertation part-time at the University of the Witwatersrand. My protocol number is 2014ECE045M. My proposed research topic is "A critical exploration of the role of pedagogical documentation in a multimodal Grade R classroom. A case study in an urban South African School".

Child's participation

I require your permission for your child to participate in the study. Their participation is voluntary and, although all the children in my class will participate in the lessons, if you do not want their specific input to be included in my final dissertation please advise me. You may also choose to withdraw your child from the study at any time with no repercussion. The children will participate in the lessons and will be observed will engaging with the media and her peers. I will photograph the process and will also audiotape some of our pedagogical exchanges. No formal interviews will take place. The children will participate in their normal routines and there will be no added pressure placed on them.

Photography release

I will be photographing the whole process, both the children's artwork and them engaging in the research. These photographs will be used in an educational forum only; for my final dissertation presentation and for possible future presentations and publications on my research findings.

Audiotaping consent

I will audiotape some of the conversations arising during the process. These audiotapes will be transcribed and be will used in an educational forum only; for my final dissertation presentation and for possible future presentations and publications on my research findings. The children will be anonymous and pseudonyms will be used.

The research project outline

I intend to use my own class of Grade R children in order to conduct a qualitative case study into the positioning of a multimodal approach and the practice of pedagogical documentation. I plan to expose the children to a multimodal approach using pedagogical documentation as a specific tool. I want to examine the effects that rich and diverse multimodal interventions (specific factors in the environment and pedagogical documentation) have on whether or not the children can begin to develop a reflexive approach to their own learning. This study will happen in conjunction with normal curriculum demands and will in no way detract from the work they are required to cover in Grade R.

Anonymity

The children will be anonymous in so far as the fact that their names will be replaced with pseudonyms. However the photographs will depict the children busy engaging in the lessons and as such anonymity cannot be guaranteed. If you do not wish to give consent for your children's photographs to be used please state this on the photography release form.

Yours sincerely

Morag Williamson

Appendix I: Parent/Guardian consent form

Dear Parents/Guardians

Please complete the reply slip below and sign it in order to give me consent to use your child's input as part of my case study research which I am conducting within our classroom.

Yours sincerely

Morag Williamson

Consent

I_____ parent/guardian of_____ in Grade R W give consent/ do not give consent for my child's input in Morag Williamson's dissertation research.

Signed: _____

Date: _____

Appendix J: Parent/Guardian photography release form

Dear Parents/Guardians

Please complete the reply slip below and sign it in order to give me consent to use photographs of your child and her artwork in my research. I also request permission to use these photographs in any future presentations and academic publications. These photographs will only be used in an educational forum; for my final dissertation presentation and for possible future presentations on my research findings (e.g. conference presentations and journal articles). Anonymity cannot be guaranteed as the photographs will depict the children busy working, playing and interacting. These photographs will be kept on my personal flash drive which is protected with a password and will be deleted after five years.

Yours sincerely

Morag Williamson

Consent

I_____ parent/guardian of_____ in Grade R give consent/ do not give consent for Photographs of my child and photographs of her artwork to be used in Morag Williamson's dissertation report and any presentation of her research findings in an educational forum only.

Appendix K: Parent/Guardian audiotaping permission

Dear Parents/Guardians

Please complete the reply slip below and sign it in order to give me consent to audiotape pedagogical conversations between myself and your child and between your child and her peers in order to transcribe the conversations and possibly use the data in my final research report. Their names will not be used in the transcribed conversation and anonymity will be guaranteed. These conversations will only be used in an educational forum; for my final dissertation presentation and for possible future presentations on my research findings (e.g. conference presentations and journal articles). The audiotapes will be kept on my personal flash drive which is protected with a password and will be deleted after five years.

Yours sincerely

Morag Williamson

Consent

I_____ parent/guardian of_____ in Grade R give consent/ do not give consent to audiotape my child and the conversations to be transcribed to be used in Morag Williamson's dissertation report and any presentation of her research findings in an educational forum only.

Appendix L: Explanation to be read to children

The Penguin class is going to be working with lots of new ideas and tools. We are going to work together as a class to learn new ways of showing how we are thinking and learning.

This is going to be fun and not at all scary and I am going to write a story about how we learned and how we show our learning for my University (remember I told you that even big people like to learn new things).

Can you all give a tick at the smile if you want to be part of my story or a tick at the frown if you don't want to be part of my story?

Appendix M: Children permission form

Name	
	