ANGLIA RUSKIN UNIVERSITY

FACULTY OF HEALTH, EDUCATION, MEDICINE, AND SOCIAL CARE

Exploring the introduction of the Montessori method in a Malawian cultural context through collaborative action research with children and teachers.

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A thesis in partial fulfilment of the requirements of Anglia Ruskin University for the degree of Doctor of Education

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"We shall walk together on this path of life, for all things are a part of the universe, and are connected with each other to form one whole unity"

(Montessori, 2019, p. 6)

Acknowledgments

The completion of this thesis has been possible because of the many people who have been part of the journey. I cannot name you all as the there are not enough words!

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ABSTRACT

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DOCTOR OF EDUCATION

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Montessori education is based upon a dynamic triangle of three essential, interdependent elements: the child, the teacher, and the environment. This study explores the introduction of a Montessori approach into a rural community school in Malawi. It takes inspiration from Montessori's early work in the first of her children's houses and my own interpretation of her writings. The main research question is: How do we reconsider the Montessori method to support cultural collaboration and learning in a Malawian context? Applications of the elements of the dynamic triangle are explored and analysed, with respect to culturally specific pedagogical principles.

A collaborative action research framework encompassing three action phases and three reflective phases was designed to enable collaboration and inclusivity. This approach facilitated the involvement of 11 teachers-researchers, 11 child-researchers and child participants. Reflexivity and reflection have played a key role in choosing and developing the research methods namely: observations; collaborative conversations; and photographs. The data analysis evolved in three steps: economical coding strategies, small note analysis, and a qualitative theme-based analysis.

Teachers received training in key pedagogical principles combined with opportunities to experiment and reflect on practice. Application of the Montessori pedagogy supported the adaption of the prepared, temporal, social environment to fit with local practicalities and Malawian cultural influences. The findings illustrate what authentic Montessori education can mean in a Malawian cultural context. Analysis of the data highlights that children's involvement and independence increase in a culturally influenced Montessori environment.

Despite Montessori being an approach formed a century ago my findings indicate that it can be successfully implemented as a sustainable approach to education in contexts such as Malawi. The nature of this work relies on the collaboration between the trainer, the community, the teachers, and the children to redefine Montessori education and teacher training. A model is proposed for creating culturally responsive Montessori pedagogy and practice. Culture, reflection and teacher training draw together the three elements of the dynamic triangle to frame a culturally collaborative Montessori approach.

Keywords: Montessori, Malawi, Culturally responsive pedagogy, Collaborative Action Research, Funds of Knowledge,

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Glossary

AMI	Association Montessori Internationale
BERA	British Education Research Association
CBCC	Community Based Childcare Centres
CRIDOC	Child Rights Information and Documentation Centre
CRP	Culturally Responsive Pedagogy
CRC	Convention on the Rights of the Child
CSO	Civil Society Organization
ECD	Early Childhood Development
ECDI	Early Childhood Growth Index
ECE	Early Childhood Education
ECEC	Early Childhood Education Centre
EMIS	Educational Management Information System
EsF	Educateurs sans Frontières
ESD	Education for sustainable development
EYFS	Early Years Foundation Stage
FEN	Fundación Escuela Nueva
INGO	International non-governmental organization
MANEB	Malawi National Examination Board
MCI	Montessori Centre International
MCP	Malawi Congress Party
MDG	Millennium Development Goals

MoGCSW	Ministry of Gender, Children and Social Welfare
MoGCDSW	Ministry of Gender Child Disability and Social Welfare
MoWCD	Ministry of Women and Child Development
MGDA	Malawi Growth and Development Strategy
NAC	Nyasaland African Congress
NGO	Non-governmental organization
ODL	Open Distance Learning
OECD	Organisation for Economic Cooperation and Development
RTP	Reflective Transition Phase
PSIP	Primary School Improvement Programme
PSLCE	Primary School Leaving Certificate of Education
SDGs	Sustainable Development Goals
TUM	Teachers Union of Malawi
UNCRC	The United Nations Convention on the rights of the Child
UNICEF	United Nations International Children's Emergency Fund
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WDR	World Development Report

Chapter 1 Introduction to research

"Society must heed the child, recognize his rights and provide for his needs. Once we have focused our attention and our studies on life itself, we may find that we are touching the secret of mankind, and into our hands will fall the knowledge of how it should be governed and how it helped"

(Montessori, 2007a, p15)

1.1 Chapter introduction

This first chapter is written to introduce a personal context to the research. It gives an insight into the lenses through which I viewed the study. It presents the rationale, the question and my personal motivations that underpinned my doctoral research. The Chapter ends with a brief overview of the nine chapters in my thesis.

1.2 Rational for my research

Dr Maria Montessori (1870-1952) had a vision that her method of education would offer opportunity for the child to reach their full potential, through culturally motived activity and learning experiences. This research explores the implementation of the Montessori method of early years education in rural Malawi. Based on my experiences as a Montessori teacher, trainer and practice-based researcher, I believe Montessori practice to be significant, sustainable and adaptable to cultural context, with a common goal of a society working together to prepare their children for the future. Montessori has international appeal (Lillard & Hughes, 2019a; Trabalzini, 2011). Following publication of her first book, Montessori's message spread across the continents (American Montessori Society, 2018, online). My search set out to explore the cultural adaptations of the Montessori Method of philosophy and practice as the approach was implemented within a rural community in Malawi.

On a personal level, carrying out the research enabled me to challenge my own thinking and to view Montessori with criticality and better understanding of its effectiveness (Marshall,

2017). Working in collaboration with teacher-researchers and child-researchers in rural Malawi as they explored Montessori philosophy and practice has enabled me to build on the foundations of Montessori's own work (Chapter 2.5 and Chapter 4) to develop Montessori practice and Montessori training.

Central to the Montessori method is the dynamic triangle namely the child, the teacher, and the environment (Chapter 1.5). These three elements thread through this thesis and lead the reader on a journey of action research. Each Chapter begins with a Montessori quote which aims to describes the heart of the Chapter with Montessori's own words. The quote at the start of this Chapter is one that describes my research and the concepts on which I built my theoretical framework (Chapter 5.4).

1.3 The research topic and question

My research explored the introduction of the Montessori method in an early years centre in rural Malawi. I have built on my interpretation of Montessori to explore aspects of the method that were beneficial, effective, or naturally incorporated into this cultural context. Through observation and action, a culturally responsive environment unfolded to reshape the learning experiences of the children and the role of the teacher. As reasoned by Marshall (2017) "it has been argued that there might be dangers in adopting wholesale and uncritically an educational method that originated over 100 years ago, in a world that was different in many ways to todays. If the method is to be adopted piecemeal, which pieces should be adopted?" (p2). Collaboration with teacher-researchers and child-researchers in Malawi ensured I increased my understanding of the cultural context. The opportunity to add to research in Montessori pedagogy, through this study in Malawi, adds value to the Montessori community because it highlights cultural influence on Montessori practice in the current day.

The research addressed the question:

How do we reconsider the Montessori Method to support cultural collaboration and learning in the Malawi context?

1.4 Personal motivations

My Montessori journey has been one of personal discovery. From the very first time I had an unexpected visit to a Montessori nursery 25 years ago, my life totally changed direction; I discovered the child, I discovered Montessori and I found something I am passionate about. Then fate again played its hand and six years ago I learned about a small charity that was running an early years' centre and feeding programme in rural Malawi. I was then offered the opportunity to visit Malawi. I was told that in no uncertain terms, the first time I visited Malawi, I would take a little piece of it home with me which would keep pulling me back. Not a truer word has been spoken. I am always drawn to the amazing African scenery, but it is the people, particularly the children, and their always smiling faces, who for me are the spiritual heart of this special community.

During this volunteer visit I found myself wanting to support the teachers who were trying to learn more about Montessori as an early years' educational approach to use in their classrooms. The foundations of this special place were rooted in a community, on who I felt Montessori would have an impact, almost like stepping back into the early 1900s (Montessori, 1946/2012), just a different place and a different time.

Over time, through my own practice experiences I have refined my own pedagogical values and beliefs inspired by Montessori and after my very first visit I knew I had an opportunity to now develop my research skills bringing together Montessori and this rural Malawian community.

1.5 The research context

The importance of this research was to consider what role the Montessori method, that was developed in Italy 100 years ago (Trabalzini, 2011; American Montessori Society, 2018, online), could have in rural Malawi in the 21st century (Educateurs sans Frontières. 2018; American Montessori Society, 2018; AMI, 2018). I explored what value it can bring to support the development of the children's knowledge and skills, their involvement in their learning and the role of the teachers in the school. The intention of the research is to add to knowledge and understanding of Montessori practice.

1.6 Introducing the child

At the root of Montessori is the child (Montessori, 1912) and this project created an opportunity for me to identify with the child in another time and place: this situated knowledge has given direction to my work and offered opportunity to interpret Montessori through a different lens and through the spirit of this other child. Montessori (1946/2012) advocated a respect for the child from those around them, to enable trust and empowerment in who they are.

The child is central to this research project, both as a child-researcher but also as an agent for change. 'The child' is discussed further in Chapter 2 and although it can be argued that in many respects' children are the same across the world, it is also acknowledged that they are driven by natural urges that lead the child to become "a fully realized human being" (Stephenson, 2000, p10) influenced by their understanding of the cultural contexts through which they develop their experiences. Montessori considered that a child will reach their full potential when they learn in an environment prepared to meet their holistic developmental needs. An environment that challenges obstacles of human and cultural making that can obstruct their journey.

Over the years of working and researching with children, Montessori (1946/2012) discovered that they "possess different and higher qualities than those we usually attribute to them. It was as if a higher form of personality had been liberated, and a new child was to come into being (Standing, 1998, p39). In her 1946 lectures Montessori herself wrote about the 20th century being the century of the child.

1.7 Introducing Malawi

The research was situated in rural Malawi in a charity run early years centre and school, which offers education and a feeding programme for children not yet at primary school. Up to 200 children a day can attend the early years centre, coming from eight local villages.

The board of the NGO Foundation, from now on I will refer to this entity as 'the Foundation', who support the early years centre in Malawi, had already agreed to implement the introduction of Montessori education to the teachers and children. They were in the process of finding ways to train the Malawian team in the Montessori method. There is a growing interest in early years education in Malawi, creating an awareness of early childhood development and the theories surrounding it (Neuman et al, 2014; Watkins & Ashforth, 2019). This interest is why part of the vision of the Foundation in Malawi to bring about change within the Community is through education.

Central to the Malawian context was a Community built of the village chiefs, the Foundation, the teachers, other adults in the school and children. I quickly understood the need to learn more, to gain a broader knowledge base of the Malawian context. Defining the culture as the beliefs, attitudes, values, habits, customs, and traditions shared by a group of people (Ford & Rea, 2009; Ladson-Billings, 1995) was underpinned by the Malawian co-researchers' funds of knowledge (Moll et al, 1992) and by the development culturally relevant pedagogy

(Ladson-Billings, 1995), as discussed and threaded through this project. These theories supported an equitable collaboration between the Community, me, and the co-researchers.

1.8 The Sustainable Development Goals (SDGs)

The SDGs came into effect on 1st January 2016 as part of the 2030 agenda for Sustainable Development, adopted by all United Nations member states (United Nations, online). They cite outcomes for people, planet and prosperity. I introduce the SDGs here, their influence in Malawi is discussed further in Chapter 3 and the foundation links to Montessori are discussed in detail in Chapter 4. SDG four 'Quality Education' (Table 1.1) particularly aligns closely with my research which focuses on access to education, sustainable education, the cultural value of education and international co-cooperation for teacher training (United Nations, online). In 1950 United Nations Educational, Scientific and Cultural Organisation (UNESCO) introduced Montessori as the founder of a new education (Montessori,1998a). During this visit Montessori described a child who was a citizen of the world. She promoted education as the culture of peace and the child as an agent to bring about change. She spoke in direct correlation to SDG 4.7.

Table 1.1 Research Relevant Goal 4 'Quality Education' (United Nations, 2015)

Target	Details
4.2	By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
4.3	By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
4.7	By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
4.8	By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

The SDGs have highlighted education as a tool in the pledge for international and sustainable change, and early childhood is a crucial element in motivating this transformation (Boyd,

2018). Through integrating practices, principles and values of sustainability in the aspects of the education and learning provided, my research had opportunity to balance cultural traditions, learning and teacher training (Pramling-Samuelsson & Siraj-Blatchford, 2014) for the Malawian Community. Sustainable development is argued to be built on social, economic and environmental pillars (Purvis, Mao & Robinson, 2018) and appears to be subject to inconsistent interpretation. For my research I focused on the education that created the foundation for these three pillars, and their links to Montessori's cosmic education.

Boyd (2018) argues that Montessori recognised the importance of the right to education to address knowledge development to challenge societal issues and problems. Something that UNESCO (2015) are requesting international communities to address now, one hundred years after Montessori (Boyd, 2018).

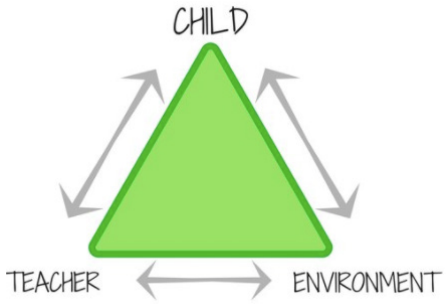
1.9 Introducing Montessori philosophy and practice

Montessori philosophy and practice is the bedrock on which the theoretical framework is built and is part of my fund of knowledge (Moll et al, 1992) that I bought to the research. The research project reaffirmed my belief that Montessori has possibilities for the future. Maria Montessori had a passionate dedication to the young child as an individual in their own right, she advocated a trust in the child to know themselves and their own learning journey and furnished the child with the task of constructing the human being itself (Grazzini, 2020). A key foundation of the design of my research was implicit trust in the child, to follow their interests and to develop teacher knowledge that would in turn enable the child opportunity to construct himself physically, cognitively, emotionally, and socially.

Over a period of 50 years Montessori established a method of education on the observation of children and the environments that they needed around them to reach their full potential (Montessori, 1946/2012). Her work culminated in an education method (Montessori,

1946/2012) designed around three elements of collaboration: the environment, the teacher and the child. In writings about Montessori these three elements, always depicted as a triangle, are termed in multiple ways, by different authors, for my thesis I have used the definition 'dynamic triangle' (Fig 1.1), as this definition best describes the relationship between the three elements.

Figure 1.1 The Dynamic Triangle (Montessori, 1912)



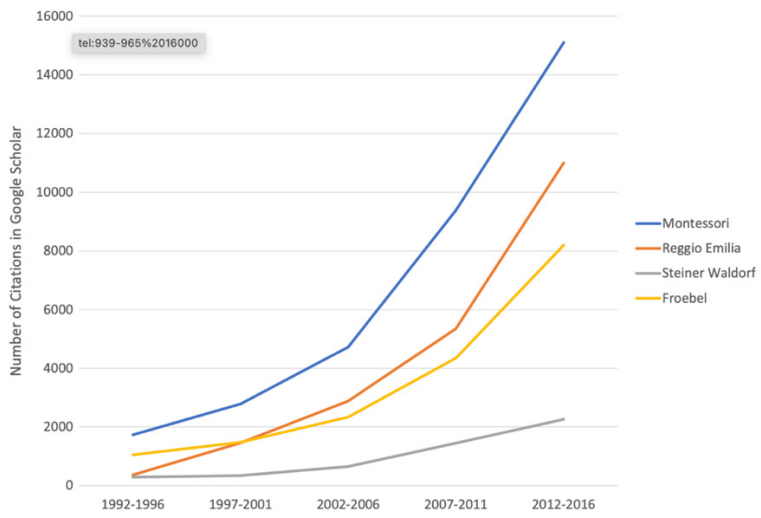
Montessori worked to create a house for the children in the tenements of Rome. In this place she wanted to create a place where "children have a house of their own' (Montessori, 1912, p48), a place to learn skills for living, to learn academic concepts, to gain understanding of the world around them, to empower them and to find themselves, with an unobtrusive adult guiding them and observing them to learn about their individuals needs and development. In Malawi, through this research, the process of collaborative action research (CAR) offered an opportunity to create a place for the children where a "new generation goes forward to meet the new era" (Montessori, 1912, p48). Exploring Montessori philosophy and practice, teacher training and empowering the child in Malawi in their own learning, we continue develop knowledge about the Montessori method, in a different place and a different era, with a developing community. Montessori wrote, "For several years I have done battle for an idea concerning the instruction and education of man, which appeared the more just and useful the more deeply I thought upon it. My idea was that in order to establish natural, rational methods, it was essential that we make numerous, exact, and rational observations of man as an

individual, principally during infancy, which is the age at which the foundations of education and culture must be laid" (1912, p4).

Montessori developed what she described as a method for children (Montessori, 1912), by observing children and learning from them. Bringing about educational change in the classroom is most effective when the teachers and the children themselves own and manage the change (MacNaughton & Hughes, 2009), just as Montessori advocated the task of the child to develop themselves and to contribute to the cosmic plan (Grazzini, 2020). For Montessori, her education did not mean the traditional 'transfer' of some set skills and or knowledge. Instead, she encouraged teachers to look at the child's potential, their interests and support their innate journey to reaching their full potential (Montessori, 1946/2012).

The education sector is looking for understanding of other approaches to education, as is evident through the increased number of google scholar searches (Fig 1.2). This is driven by the sector searching for ways to support children's education through different philosophies of teaching and learning.

Fig 1.2. Numbers of google scholar searches (Google scholar, 2016)



1.10 A journey around my thesis

As alluded to in the introduction to this Chapter, my thesis is held together by the three elements of the dynamic triangle (Fig 1.1) as they thread their way through all the Chapters.

The bite size chunks of contextual information introduced in this Chapter are built on and developed further in Chapter 2 which sets the scene and offers in-depth discussion of my own interpretation. In this Chapter, I have used only Maria Montessori's own writings to support my interpretation of her method.

My own development of knowledge was a lynch pin to the research design and the collaboration that it was built around. To support this understanding and to develop a critical approach to my own funds of knowledge (Moll et al, 1992) I carried out an in-depth search of the literature. Chapter 3 is a detailed survey of Malawi, starting from an international and national angle, to appraising its history to finally narrowing down to the rural Community. As an early career researcher, I am committed to ensuring that the Malawian community can rest assured that whilst the global standards and indicators are important my focus is on their community and its children. In terms of children's rights to access early childhood education and care provision I support Pence & Nsamengang (2008), along with Ejuu (2013) and raise regard to the African child being tailored to be a "global child". I am aware of the risk of homogenization and devaluation of traditional practices (Kagan, Britto, & Engle, 2005; Ali et al, 2021), and this is explored through the literature discussed in Chapter t3. Chapter 4 creates an in-depth discussion about the Montessori method; the environment; the child and the teacher using a wide cross-section of source material. The link between sustainable education, SDGs and a cosmic education is also discussed in this Chapter, which draws to a close with a short section bringing Chapter 3 and 4 together in collaboration.

My project is built on the philosophical assumptions of interpretivism and social constructivism, the foundation for these assumptions is discussed in Chapter 5 which concludes with the development of a theoretical framework which includes perspectives from Montessori, culture and reflection. CAR was my methodological choice that enabled the development of collaborative methods to gather data which are considered further in Chapter 6. It was evident that I would have to embrace the challenge of working in an unfamiliar cultural context (Ford & Kea, 2009; Wood, McAteer & Whitehead, 2018), this took me on a journey of reflecting on and drawing influence from critical theory, in particular, decolonisation, feminism, genderism and whiteness theory. CAR places value on knowledge, analysis, and efforts of local people (Parsons & Harding, 2011). These theoretical perceptions are expanded in action in Chapters 7 and 8 and although they were not central to my work, I became aware that I was viewing my work through the lens of a white westernized female in a developing country, researching in an "othered community" (Osgood, 2020).

Chapter 7 explains collaboration in action, offers insight into how the co-researchers learned from each other, sharing funds of knowledge (Moll et al, 1992) to co-construct (McAteer & Wood, 2018) Montessori practice relevant to the cultural context and traditional practices rather than taking a westernized model and delivering it (Wood, McAteer & Whitehead 2018; McAteer & Wood, 2018; Ali et al, 2021).

Collaboration is demonstrated further in Chapter 8, where the themes found through ongoing analysis are discussed using the Authentic Montessori Elements list developed by Lillard & McHugh (2019a; 2019b) as a benchmark to evaluate the variations between their framework for authentic Montessori and the findings of my research. This enabled me to analyse my findings and provide evidence to answer the research question. This Chapter includes photo narratives developed in collaboration with the teacher and child researchers and were a rich source of data.

Conclusions from the research are drawn in Chapter 9, pulling together the threads of my research to enable me to answer my main research question. I offer insight into the strengths and limitations of my research and express my contribution to both the Malawian and Montessori Community. This is based around the development of a transferable framework to support the inclusion of the Montessori approach and to decolonize (McAteer & Wood, 2018; Osgood, 2020) the Montessori training and increase accessibility for marginalised communities. There is knowledge to be taken from established Westernised curricula and approaches to learning but nurturing and protecting cultural contexts is fundamental in creating a culturally responsive pedagogy (Ladson-Billing,1995), which is established towards the end of the final Chapter of this thesis. Finally, I revisit my interpretation of the Montessori approach to demonstrate my own personal philosophical journey.

1.11 Chapter summary

I built the research project around the concept of collaboration and recognition of a different culture as a lens through which to view the research to investigate how the Montessori method needs to be reconsidered in a Malawian context. I have offered a short insight into the research which acts as a signpost for my thesis. The next Chapter sets the stage through a personal lens, opening the gate for the rest of the research journey.

Montessori's writings have been translated from Italian into English and consequently there are inconsistencies in terminology such as adult or teacher; method or approach; triad, trinity or triangle; practical life or activities for everyday living and foundations or pillars. The language used in this thesis acknowledges the reading I was doing at the time and the terminology predominantly used by the authors at that point. However, in the conclusion I have settled on my own terms to reflect my own understanding and interpretation of the theory.

Chapter 2 Setting the scene

"This is education, understood as a help to life; an education from birth, which feeds a peaceful revolution and unites all in a common aim, attracting them as to a single centre. Mothers, fathers, politicians: all must combine in their respect and help for this delicate work of formation, which the little child carries on in the depth of a profound psychological mystery, under the tutelage of an inner guide. This is the bright new hope for mankind."

(Montessori, 2007a, p15)

2.1 Chapter introduction

This Chapter is designed to set the scene underpinning the research, grounding the project in a personal and community frame. This is the first Chapter to be with the three elements that thread through the research: the child; the environment and the adult. Starting with an explanation of how own pedagogical beliefs have developed it goes on to explore my understanding of 'the child' and 'childhoods'. It then develops discussion on my personal interpretation of the Montessori Approach and concludes with a closer look at the community context of the early years centre in Malawi.

2.2 My own pedagogy

On reflection, my early research experiences, although less formal, were tools I used when deciding to become a teacher. When researching theories of childhood and a more child-led approach to learning and early years development, I discovered Montessori's observation of children during her research, which gave her further insight into their nature (Montessori, 1946/2012). The foundations on which this research is built is the Montessori Method of Education, and as such, it is vital to create a contextual picture. This Chapter has been written positioning 'I' in the centre, giving an insight into the Montessori approach through a lens of self-reflection and my own experiences (Brookfield, 1995). It will portray my interpretation of the Montessori approach using the original literature attributed to Montessori herself that I have read and used over the last 24 years in the development of my own pedagogy.

Montessori (1946/2012) built her ethos around the adult in the environment acting as a researcher who continually observes and evaluates the children (Montessori, 1946/2012). I believe this grounding of the Montessori approach, and the actions of the adults, empowers the child to lead their learning, care for their environment and research their own self-motivated development. My pedagogical belief has evolved over the last 24 years and continues to be shaped by the research I carry out. With foundations deeply rooted in the Montessori philosophy, and with some further influence from Dewey, Steiner, and Reggio, I have been led to unearth the fundamental foundation on which I have built my pedagogical perspectives; the theories founded on the freedom given to the child to allow him to be both explorer and researcher (Wisbey, 2015).

There are many differing definitions of pedagogy. This term still does not enjoy widespread currency in the United Kingdom, despite being commonly used elsewhere in Europe and in many other parts of the world (Allen & Whalley, 2010). It has been used for years to describe the science of teaching; Montessori herself included it in the title of her first book 'A Scientific Method of Pedagogy' (Montessori, 1946/2012). Thinking and theoretical research behind how children learn goes back as far as Plato and the Ancient Greeks and this knowledge will continue to develop as we learn more. An individual's set of pedagogical beliefs is personal and will have been constructed by the knowledge and dominant discourses encountered during their development and there will naturally be connections between the teacher's basic values and beliefs, and their own teaching practice (Malm, 2004).

Through research and learning, based in the main on theories developed by Froebel (Courthope-Bowen, 1903), Montessori (1946/2012), Steiner (1996), Reggio (Thornton & Brunton, 2010) and more recently Te Whariki (Te One, 2003), my pedagogical perspective is based on the certainty that childhood is a unique period in time, where children should not

be coerced into learning led by adults, but should be given the freedom, time and space to follow an already pre-defined path of discovery and development. Crain (2000, p17) suggests that "most teachers are not content to treat children as children, with their own needs and ways of learning. Instead, they try to instil adult knowledge as quickly as possible." We live in a politically driven society which can drag young children into premature, precocious development in an unbalanced way dominated by adult agendas (Leach, 2013) rather than giving them the opportunity to flourish in their current developmental journey.

There has been a fundamental foundation on which I have built my pedagogical perspectives; a teaching method focused exclusively on the child (Montessori, 1946/2012). Montessori (1988, p ix) wrote "Education which consists mostly of direct teaching often impedes rather than helps natural human development", this quote on its own sparked my interest, and then reading on Montessori wrote;

> "*It has been said that the early years are useless for the transmission of culture; therefore, the first part of life is disregarded. But those apparently useless years are the most fundamental, for during that period an astounding phenomenon takes place: the creation of a human psyche and the development of human behaviour. The child learns to function independently, to manipulate, to walk, to talk, to think and to direct himself through his will. This process takes place not because adults teach but because the child creates" (Montessori, 1988, p ix).*

Self-reflection has played a fundamental part in discovering how I view the child, and the importance I place on the child. It is through self-reflection that I can identify how my pedagogy has evolved and what some of the influences are that have been fundamental in how I view the child and the importance I place on the child. Hence the inclusion of this short sub-Chapter in my thesis to locate my position.

Central to this research is the child and how their development is understood and affected by the introduction of the Montessori method into their educational environment enabling me to gain a clearer understanding of the child in the Montessori environment, the role of the

learning environment and the role of the adult in drawing these two elements together. The starting point is to investigate and evaluate the ideology and theoretical conceptualisations of the child and childhood, and to offer an understanding between the discourse of these two fundamental elements of the research. The child participating in the research is the child from Malawi and the cultural conceptualization of child and childhood may not resonate with the 'universal' definition of the child (Abebe, 2019, p3), but is unique to the cultural child involved in this research.

Children perceive the world differently to adults, in its simplistic form they see things from a different height, but they also have a fearless approach to exploration, learning and challenging themselves; their opportunities being diverse within the discourses of childhood (Smith, 2014). Their understanding of who they are and their place in the world means they are susceptible to both positive and negative emotions. Moreover, the context which surrounds the child affects the development of their persona, their skills and their self-esteem, playing an active role in who they will become (Whitebread, 2007). Montessori advocated a respect in the child, for those around them, the environment and for themselves (1946/2012), she discovered that "children possess different and higher qualities than those we usually attribute to them. It was as if a higher form of personality had been liberated, and a new child was to come into being" (Standing, 1998, p39). Montessori had a romantic view of childhood, although this was contradicted in the language she used in her writing, which may have been due to the times she was writing in. Her own view of childhood was influenced by the fact that she did not have the opportunity to raise her own child and her own experience of a catholic upbringing.

2.3 The child and childhood

The concepts of child and childhood vary cross-culturally and, hence, need to be unpacked (Abebe, 2019). There are a wide range of definitions of the child and cultural differences of what is expected of childhood. Deconstructing the cultural and social meaning of child and childhood creates an improved understanding in the context in which children are raised. Children are the central element in my research, and so to understand the values that surround the roles and positions of the child in their society and its implications will support understanding of the child in a research context (Abebe, 2019). In order to know and understand the child, we must understand their childhood thus showing respect for their agency. The historical and cultural influences of both concepts, their meanings, and contextual interpretations (Jenks, 2005) laid the foundation for my research.

Interestingly, to look forward, we often need to first look back into history as it is key to forming a foundation on which to build present day theoretical perspectives (Savahl, 2010). Historically there is no single context of the child or childhood, there is a lack of first-hand source material and a reliance is on representations that have been left behind but cannot be validated because the originators are no longer here (Cunningham, 2003) and in general terms these came in forms such as official records, visual creations and literal accounts given or created by adults (Heywood, 2001), thus presenting an adult interpretation. Although, in the very least, these forms gave us an insight into the varying historical childhoods.

2.3.1 Childhood

Childhood is the state of being a child, in its simplest form it is a biological period of development from conception to fully functioning adult. In its more complex form, it is an everchanging and multifaceted concept, of not just the biological but also cultural discourse

of the early years of life, community experiences, political influences and health conditions with varying interpretations throughout history (James & James, 2008). It is periods of time in a child's life that is determined by distinct life events (Abebe, 2019). These life events are sometimes defined by responsibilities given to the child, some symbolic, some actual (Abebe, 2019). For centuries, theorists have attempted to define the what, the why and the wherefore of childhood its natural form, its reason for being and its place in society. Haring, Sorin & Caltabiano (2019) suggest "childhood is an adult in social and cultural construction, developed in the Western world" (p2); interestingly, Abebe, (2019) when describing African childhood writes "practices connected to childhood exemplify how children are defined in relation to members of their family and community" (p3). I have used both these explanations because, although we view childhood in practice as different across the world, these descriptions evidence that the influence of those practices, the driving forces behind childhood experiences worldwide are the same; a world that is shaped by its distinctive social, political and cultural contexts. Childhood as a social construction varies from country to country and from community to community and also within those communities. Indeed, as Norozi & Moen (2016) argue "not all societies in the world have the same concept of childhood, which proves that childhood is neither universal nor natural'' (p75). Childhood has been researched through different frameworks in the past, it has been argued traditionally that theoretical views of childhood are rooted in developmental and social theory, Savahl (2010) goes as far as to claim that within this theoretical framework "children are typically perceived as immature, irrational, incompetent, asocial and a cultural" (pii), forming a judgmental ideology of the child, without discourse with the child, and in turn generating some of the contemporary social discourses on childhood (ibid, 2010), contrary to the theories of a constructivists view of childhood and the belief that childhood is constructed through their experiences and relationships.

Children perceive the world differently to adults, only the child can guide us through his childhood (Montessori, 1946/2012). However, each child will have different experiences through which to view the world and different cultural practices through which to experience childhood. Qvortrup (1994) suggests we should consider this time as a number of childhoods rather than a childhood. James and James (2008) reflect on the importance of considering the cultural and social contexts of the child as this will impact their childhood experience. Aries (1962) was one of the first to argue that childhood was not fundamentally innate, and his explanations have been questioned in relation to the cultural, social, and historical constructs of childhood, which are formed by community, society and education (Montessori, 2007b, James & James, 2008; Graham, 2011).

Over the course of centuries there has been no real consensus over what childhood is. When arguing for the rights of the child at Congress in as far back as 1937, Montessori questioned people who described childhood simply as "little more than a stage to pass through on the way to adulthood" (2007c, p73). This view supported by Piaget who advocated that children were little adults and through his work as discussed further in Chapter 4, argued that childhood was a particular time of human development. Jenks (1996) suggests that "despite a long cultural commitment to the good of the child, and more recent intellectual engagement with the topic of childhood, what remains perpetually diffuse and ambiguous is the basic conceptualization of childhood as a social practice" (1996, p.2). Most importantly we should recognise what Montessori herself affirms; 'learn about childhood from children and be amazed at the discoveries we make" (Montessori, 2017, p28).

2.3.2 The Child

The ideology of the child and how we view children today began to form in Western economies around the 17th and 18th centuries. Currently, and more pragmatically, the United

Nations Convention on the Rights of the Child UNCRC (1989) defines the child as a person under the age of 18, although the concerning element of this definition is its lack of detail in making distinctions between the different ages of children, babies, toddlers, teenagers, and adolescence. Depending on the culture in which the child is growing up will define these distinctions, Abebe (2019) argues that maturity of the child cannot be defined in numerical age only. The age when you are no longer a child, but an adult, varies between cultures and countries, hence why these international policies are argued to be imbued with a particular ideology of "a once localised, western construction of the child" (Stephens, 1995).

When defining the child, James & James (2008) describe the physical and mental development, as well as psychological and social development, simply as being less developed in children. Abebe (2019) states that the African child is no longer a child once he knows the difference between good and bad, he details the numerical age of the child being between 6-7 years (p6).

Theory describes a child that is on a journey to becoming a full human being (Montessori, 1946/2012; Qvortrup, 1994; Woodhead & Faulkner, 2008; Corsaro, 2011). Qvortrup (1994) goes so far as to say that there is nothing mysterious about children, that they are human beings not human becoming's and that children are considered in need of protection on their journey to adulthood (Uprichard, 2008). In contrast Qvortrup (1994) outlines that the child is part of the social construct of society and thus holds the future in their hands. To do this they need the freedom to make their own judgments with independence from adult influence.

2.3.3 Who are the children?

"Children of today are custodians of tomorrows world" Boakye-Boaten, (2010, p104). This is a bold statement, placing pressure on the child that they are a custodian over something they have little influence over at a young age, a responsibility that is not deserved. Whereas,

in Wordsworth's words, (which were often used by Montessori), the child is the father of the man (Montessori,1946/2012) and she contends that the experiences the child has in the early years will inform and influence the man they will become.

Children must be understood within their own cultural and social context. Boakye-Boateng (2010) argues that "children are social beings whose world is constructed within a historical and a cultural frame of reference" (p105), any endeavour to universalize the concept of the child, can cause a misconception of the context of the child and their world. Montessori (1946/2012, 1992, 2007a, 2007b) outlines the view that children have the ability to adapt to the community and the world around them. They are not predisposed to a particular culture or language, they absorb what they hear and experience, they are astutely culturally aware "in man's case, we are not dealing with something that develops, but with a fact of formation; something non-existent has to be produced, starting from nothing" (Montessori, 2015, p. 20), although this could be interpreted to support the view of some theorists of the child being a blank slate (Aristotle), this was not what Montessori was describing, she was explaining the starting point from which she believed the child would actively build themselves when surrounded by the right conditions for development and learning. Young children's capabilities for adaptation are vital for the adaptability of society and humanity (Montessori, 2007b). The views discussed seem to agree that culture is a learned process, it is how a child builds up a fund of knowledge" (Moll, 1992). Onwauchi (1972) concurs with Montessori (1946/2012) maintaining that in every society, regardless of the level of social development, all children are born with the innate potential of mind and body, a pre-determined path of development (Montessori, 1946/2012) although, Onwuachi (1972) rationalises his view by explaining that children are socialised through the numerous established structures through which they absorb the cultural behaviours of the society to which they belong, which could be argued as a cultural inference, whereas Montessori (1946/2012) explains that children are

driven to construct themselves, they are innately driven by their unique developmental urges and use experiences to achieve independence, and this does not necessarily mirror what is taught to him through the culturally enforced institutional structures.

It was suggested by Montessori, (2015) that during childhood, children have a sensitivity to diverse human cultures. This is the time to sow the seeds of learning, of culture and of science, the sense of belonging is deep-rooted in the child along with an innate interest in global civilization. Reflecting on childhood in Africa, Boakye-Boateng, (2010) suggests that it has been against adversity and obstacles that Africans have, with community cohesion, fought to maintain a cultural and society perception of the child and childhood.

2.4 Ideology of childhood

Montessori had a romantic view of the ideology of childhood, although in many ways her writing contradicted this in her use of language, when using terms such as the deviated child and the normalized child (Montessori, 1946/2012). Her view of childhood, it could be argued, was influenced by the times she was researching in, or it could be attributed to the fact that she did not have the opportunity to raise her own child and her own catholic upbringing (Standing, 1998). Through deconstructing scientific discourses of childhood, theorists have indicated how ideology can be used as taken-for-granted meanings about children (Savahl, 2010, pii). Ideology is based on social, historical, and material constructs of childhoods, interpreted through a particular time and place.

2.4.1 The Ideology of the "Malawian Child"

For the Malawian child this can be argued as a combination of tribal, minority and social structure (James et al, 1998). The principle of the ideological child is a concept built on the relationship between the child and the adult in the society. The discourse of the minority child

challenges the power relations that is inherent in contemporary society, developing the notions of hopelessness and vulnerability.

2.4.2 The Ideology of the "Montessori Child"

The Montessori ideology of the child can be summed up; to support the unfolding of the potential of children following their natural path of development. It celebrates the uniqueness of the individual child and to trust the developmental path that the child will follow, to eventually construct himself.

2.5 The historical context of Montessori

The Montessori method was a legacy left behind by Italian educator, Maria Montessori (1870-1952). A method developed through observation and research of children and motivated by Montessori's desire to learn more about the children, how they learn, and how adults can support their development. It is founded on Montessori's belief in the child's natural desire and curiosity to learn and to find out why and how things work. She developed her unique methodology and theory of child development, which she defined as a scientific education (Montessori, 1912). Her goal for the child was the development of the complete human being, oriented to their environment and adapted to their place and their culture. This development was to be supported by a carefully created learning environment that was loyal to respect for the freedom of the child and for the spontaneous manifestations which contribute to the personality of the adult (Montessori, 1912). It was to educate the human potential through a cosmic education (Montessori, 1946/2012).

Through observation and a scientific approach Montessori developed a unique method of educational practice to support her philosophy and theory of child development; a child-led approach to education. Montessori shared her knowledge through her many writings and

international lectures given over a period of 50 years. Her writings have been translated into the many languages of the world and these original writings are still used today by teachers, parents, students, and academics.

Over the past 100 years there has been much international interest in Montessori's work (Trabalzini, 2011) and her pedagogical approach. Educators used the materials she developed and her approach to help teachers reach a wide range of children and promote their independent learning and growth. After the publication of her first book, the Montessori message spread beyond Italy and across other continents (American Montessori Society, 2018, online), with schools being opened particularly to follow the Montessori Approach and others adapting their approach to fit with their existing understanding of children. With more educators wanting to bring the approach into their classrooms, international interest in teacher training grew and lectures were well attended (American Montessori Society, 2018, online). Today, there are approximately 20,000 Montessori schools serving children from birth through 18 years of age in at least 170 countries worldwide (American Montessori Society, 2018, online). The Montessori Approach, with over 100 years of practice, is renowned worldwide as an educational approach that helps children achieve their fullest potential (AMI, online, 2018).

Montessori's study of educational anthropology provided her with a sound understanding of the work of great grandfathers of education: Plato, Aristotle, Comenius, Rousseau, and Pestalozzi. Itard and Seguin were influential in her own understanding and development. Having studied their work in London and Paris they inspired the development of the Montessori learning materials and the development of Montessori's conception of the favourable environment, which in turn gave rise to this unique pedagogical approach.

To look ahead at Montessori's influence on the research carried out for this thesis, we must

first look back. Montessori was initially one of the first women to qualify as a medical doctor in Italy graduating from the University of Rome medical school (Kramer,1976). To begin with, her specialism was psychiatry and paediatrics. She spent time working with children deemed to have intellectual disabilities and it was during this period that she began to make her initial discoveries, through observation, about how children learn and that in order to learn, these particular children did not need any medical treatment, they needed a particular way of being educated; the education of the senses (Montessori, 1946/2012). Montessori claimed this to be her first breakthrough in scientific pedagogy and this approach "helped abnormal children to be educated" (Montessori, 1946/2012, p8). In 1900, she began to develop her theories when she was appointed director of an Orthophrenic School for developmentally disabled children in Rome, where she established her principle further that was to "inform her later work of educating the sense first and then the intellect" (Kramer, 1976, p76).

In 1907 Montessori set up the first Casa de Bambini (Children's House) for 3–7-year-olds in the slums of Rome. At this point it became obvious that central to Montessori's work is the child, a child that she viewed initially in a very particular way; she was noted to describe the children she first observed in the Casa De Bambini as "little vandals" (Standing, 1998, p37). She quickly recognised that the children needed to not only grow physically strong, but that they must also grow their spirit (Montessori, 1965), a foundation on which she began to build her approach on. Over the early 1900s Montessori nurseries and schools developed throughout Italy.

During the 1930s and 1940s Montessori lived a more nomadic lifestyle because of her falling out with Mussolini because of the differences between Montessori's mainly pacifist ideology compared to Mussolini's fascist ideology (Trabalzini, 2011). She visited many different

countries including India, Spain, the United Kingdom, and the Netherlands. Whilst travelling she continued to give lectures about her philosophy and approach to education. Montessori passed away in the Netherlands in 1952, aged 82, where she had established the headquarters for the Association Montessori Internationale (AMI). The headquarters are still based there with AMI training centres located around the world.

2.6 Personal interpretation of Montessori

There are critiques of Montessori and her method of education, these views are acknowledged in the literature review Chapters later in the thesis. The aim of this sub-Chapter is to put into context my interpretation of her own writings and my own pedagogical construction, as it is the pedagogical foundation on which this research is built.

Through her scientific approach to her research, Montessori began to develop an understanding of how children learn, which in turn gave rise to the development of an educational method, "a method founded on the child himself" (Montessori, 1946/2012, p7). A method of education that would be delivered in an environment that would support human beings to reach their full potential. Over time her ideas and the development of a curriculum evolved into a method that had three essential collaborative elements: the child, the environment, and the teacher, known as the dynamic triangle (Fig 1.1) which became the threads of my research. While observing children in the Casa De Bambini, Montessori continued to develop the theories behind her "method of scientific pedagogy" (Montessori, 1946/2012, p7). Montessori stated, "it is a method founded on the child himself… by following the child and his psychology" (1946/2012, p7). Through development of dedicated materials, the specific training of the teacher and a carefully planned environment, Montessori sought to foster the child's natural desire to explore and to develop their independence. She challenged the traditional role of the teacher, defining their role instead as an observer

(Montessori, 1965), a facilitator or a guide rather than one who imparts knowledge. She advocated that children are given the freedom to learn (Montessori, 1965) at their own rate and following their own unique path of development. She went on to explain this in the second of the 1946 London lectures "the role of the adult is objective not subjective" (Montessori, 1946/2012, p7), based on our "ability to interpret our observations of those phenomena which originate in the child himself" (1946/2012, p7). The natural, spontaneous development of the child is observed and interpreted by the teacher thus informing them of the current development of the child and supporting their needs going forward. Observation was at the heart of the scientific approach Montessori took and the basis of all her research; "It is impossible to observe something that is not known; and it is not possible for anyone, all at once, by a vague intuition to imagine that a child may have two natures, now I will try and prove it by experiment" (Standing, 1998, p36). Montessori worked extensively with the teachers in her first two schools in Rome, observing with them and training them, eventually conducting her own Montessori training.

Using observation as a method through which to gain knowledge throughout her research, the basis of Montessori's findings argue that children develop in a unique way, a very different way of thinking from the early 1900s. She professed that children learn and develop in several distinct stages, and that children's self-construction is a natural development, which guides them towards self-directed learning (Montessori, 1946/2012). Montessori believed that education of the child begins with, and is, exclusively centred on the knowledge of the child and that the learning environment is one which is carefully prepared by the adult and is centred around the way children naturally learn. The adult should provide an environment in which the child lives and learns; offering a wide variety of stimuli based on sensory experiences and a hands-on approach to learning (Montessori, 1946/2012). The partnership between the three main elements: the child, the environment and the teacher create an

environment that will give opportunities for the child to follow his interests and innate aspirations to learn. The environment needs to be prepared to meet the child's individual needs, while the teacher observes, and the environment provides. She encouraged teachers to view each child as unique and to create an environment, which enables and supports the development of the whole child, allowing them to travel the mysterious journey towards the creation of tomorrows intelligent and divine man (Montessori, 1965).

2.6.1 The Dynamic Triangle

Fundamental to Montessori's method of education, and this research project, is the dynamic triangle (Montessori, 1946/2012). Fig 1.1 is an illustration of the interplay between child, teacher, and environment, demonstrating the ability of the three elements creating a platform for the optimum learning and development of each child. The teacher's role is to prepare the favourable environment, which includes a range of activities that have been derived from Montessori. The knowledge needed to create the environment to meet the unique needs of the child will come primarily from observation, the most important element of the teacher's role. Montessori went so far as to say that a "teacher incapable of observation could not teach" (Montessori, 1965, p15). Once the teacher understands the journey the child is undertaking, they can then guide the child through the environment on a learning path designed to support their intellectual, physical, emotional, and social development. This is achieved through active exploration, freedom of choice and independent learning.

Adults working with the Montessori approach need to understand the three elements of the Montessori dynamic triangle, (Fig 1.1) and how they entwine to create the foundation of the approach. These three elements are discussed again in the main literature review, but I will discuss them here from the positionality of my own interpretation of Montessori text.

2.6.2 The Child

"The child is capable of developing and giving us tangible proof of the possibility of a better humanity. He has shown us the true process of construction of the human being. We have seen children totally change as they acquire a love for things and as their sense of order, discipline, and self-control develops within them. The child is both a hope and a promise for mankind."

(Montessori, 1999a, p.31)

The central element to the Montessori approach is the child and an understanding of their development. Montessori had her own unique perspectives of the child's development; my understanding of this perspective is detailed in this section. She believed that children developed in certain planes, each one of these planes having a particular reason for being and having characteristics that support the development of the child. She gave each of these planes of development a specific name (Table 2.1).

Table 2.1 Planes of development

First Plane; 0–6 years. A Period of Transformation
Second Plane; 6–12 years. A Period of Uniform Growth
Third Plane; 12–18 years. A Period of Transformation

2.6.2a 1st Plane of Development: The Absorbent Mind

The 1st plane of the development is the most pertinent for my research. In the seventh lecture, in 1946, Montessori described the first plane of development as that of "the absorbing mind" (Montessori, 1946/2012, p51) in comparison to that of an adult which she described as a "mind that elaborates" (ibid, p51). The absorbing mind, or absorbent mind as it came to be known, is a time between the ages of 0–6 years. 0–3 years is termed the spiritually embryonic stage when infants form their personality. Between 3–6 years of age the toddler is said to be in a social embryonic stage identifying the child's socialization into society with its social conventions as well as growing awareness of the needs of others.

During the 1st plane of development children acquire language, create order, categorize the world around them. Through concrete exploration they train their senses and begin to experience the world, and the people in it, for the first time. This development is individual, although all children follow the same path but at a different speed. "The nature and the workings of the absorbent mind are full of mystery" (Standing, 1998, p108).

2.6.2b Sensitive Periods

Montessori determined that children make choices according to their interests during their first plane of development, which determine the child's needs. Montessori maintained that some of these interests had a biological basis, she is referring particularly to the unique natural development in the child's language and movement, citing their sensitive periods as tangible evidence of a set of internal guiding instincts necessary to unique development (Montessori, 1946/2012). Montessori called these special interests, "sensitive periods" (Montessori, 1966, p.38). Montessori advocated that happiness in the child who is self-fulfilled in being offered opportunity to follow their own developmental path will support the child in reaching their full potential, whilst explaining that it is not for us to know what is happening inside the child, this she said, "is the secret of the child" (Montessori, 1998a, p73).

2.6.3 The Environment

"The Children's house is the environment which is offered to the child that he may be given the opportunity to develop his activities. This kind of school is not of the fixed type but vary according to the financial resources at disposal and to the opportunities afforded to the environment"

(Montessori, 1965, p12)

To enable the children to fulfil their development potential and gain as many learning experiences as possible the adult needs to understand the child. Using this knowledge, they then create an environment filled with experiences to meet the child's needs. The environment

is an intrinsic element of the pedagogy and how it is prepared evidence the commitment of the adult to the needs and interests of the child. Understanding the child and how their holistic learning takes place is important as there is a direct link to the attributes needed to create an appropriate learning environment for the child to learn in; an environment that is culturally, academically, and socially relevant and supports all aspects of the child's social, emotional and physical needs. In this regard she writes "we must create an attractive environment and into this environment we must put everything that is good for the mind, along with an affectionate and understanding person" (Montessori, 1946/2012, p114). The environment needs to provide the very young child with the opportunity to be energetic and to be resourceful in their learning, to discover themselves and discover others because "the environment is a part of life and life cannot exist without the right environment" (Montessori, 1946/2012, p225).

To support the child on this journey of self-discovery Montessori described the need for the right environment. Montessori considered it as a key factor in independent child led learning. "We must help children from the very beginning. We must give them the right environment because they have to adapt themselves to a strange new world" (Montessori, 1946/2012, p109). Montessori called this the favourable environment, an environment that would offer opportunities for the development of the potential of the whole child as support them in being an active agent in their own learning. Children need an environment, as described by Montessori in the thirtieth lecture in 1946, as somewhere "whereby their bodies and minds can be active in an environment that contains many motives of activity" (Montessori, 1946/2012, p215), an environment that supports the holistic learning which takes place for children in those early years of 0–6. There are three key elements to creating this effective learning environment, all of which have the child at the centre: the physical; the emotional and the social.

2.6.4 The Adult

"An ordinary teacher cannot be transformed into a Montessori teacher, but must be created anew, having rid herself of pedagogical prejudices. The first step is self-preparation of the imagination, for the Montessori teacher has to visualise a child who is not yet there, materially speaking, and must have faith in the child who will reveal himself through work."

(Montessori, 2007a, p252)

The teacher's first and main role is as a custodian of the environment, to prepare it and organise it to meet the learning needs and interests of the children, promoting independence. "We must help the child to act for himself in developing independence, will for himself and think for himself; this is the art for those who aspire to serve the spirit" (Montessori, 1999b, p69). The motivation for the teacher is on supporting and guiding the children, not on an ability to teach. Through her role as an observer and through watchful observation and then thoughtful planning Montessori teachers remain continually aware of and knowledgeable about the innate learning path of the child. "The teacher becomes the keeper and custodian of the environment" (Montessori, 2007a, p277-81), through her knowledge of the children around her the Montessori teacher develops an ordered environment to meet the needs of the child. An environment created to serve the inner motivation of the child which is manifested in the spontaneous choices the child makes. Choices that the teacher will observe and where their fundamental objective is to follow the child as they embark on their innate journey of learning and development.

When writing about the role of the adult, Montessori said "The teacher of children up to six years of age knows that she has helped mankind in an essential part of its formation… she will be able to say; "I have served of those children, and they have fulfilled their development, and I have kept them company in their experiences" (Montessori, 2007a, p.259).

2.7 The Foundation in the rural Community

The Foundation is located on a site based in a rural area that relies on agricultural activities. It runs a nursery and school which provide an early years education centre and a primary age activity centre, alongside health and community engagement projects and a medical centre. Both centres support the education of the vulnerable children from local, rural villages (Fig. 2.1). These children represent a small proportion of the estimated 1 million orphaned children in Malawi; over half of these are AIDS orphans (Malawi NSO & ICF Macro, 2011). Neuman et al (2014) argue that such living in more rural locations puts children at-risk to adverse developmental outcomes.

Figure 2.1 Rural Malawi

The founder identified that educating the youngest children was critical for not only improving livelihoods but also strengthening communities (Founder interview, 2016). The ECD programme in Malawi is centred around a Community Based Model (CBM) and has been identified as one of the more successful implementers in the developing world (Chapter

3). Together with her teaching staff, she began exploring different ways to educate the children equipping them with skills to drive change and be part of creating a sustainable community (Founder interview). The Foundation was looking for ways to include the Community in this Charity based school and are positive that they are already making a difference not only for the children but also for the staff of the school and the community it serves (Founder interview). Neuman et al (2014) identify that in acknowledgment of the benefits of investing in the early years of life and in response to demand from parents and communities, several different ECD models have been tested in Sub-Saharan Africa to support ECE, with the "community-based model" becoming the preferred delivery approach (Neuman et al, 2014, p82).

The Foundation's vision, and strategic plan for education, is modelled on the SDGs and The United Nations Convention on the Rights of the Child (UNCRC). With 3 articles of particular interest: the right to life, survival, and development (article 6), the right to freedom of expression (Article 13), and the right to education (Article 28) (UNICEF, online, 2018). The Foundation sought to create an early childhood educational setting with a strong, relevant life-skills based curriculum, based on a sense of Community. For the teachers, the long-term goal is the opportunity to gain formal Montessori qualifications that will enable them to become trainers themselves to support the Community and development of the school. The hope is that to support sustainability they in turn will be able to provide training opportunities for other early childhood teachers in Malawi, following the Montessori philosophy. A view supported by Gallimore and Goldenberg (2001) who documented that children may learn best when school learning is centred on patterns of expected behaviour and language absorbed in the home and community.

The importance of understanding the cultural expectations of the community highlights the need for a holistic education for the children, supporting development of their mind, body, and skills (Neuman, 2014, UNICEF, 2018). This, in turn, can give the children autonomy, raised self-esteem, self-belief and the ability to problem solve in their daily lives. Thus "education for children would allow them to acquire the knowledge, skills, values and attitudes required not only to become successful individuals but also productive members of the labour force, good parents and responsible citizens" (Seppo, 2014, p1.1). In essence, the stakeholder's intentions are supporting the future of the children of the community.

One of the concerns of the current teaching that has been raised by the community chiefs is that the children of this rural area are not being given the opportunity to learn specific trade skills (Research diary, 2016) such as sewing, carpentry, brick making and laying which will support local sustainability, interestingly taking us back to the pre-colonial ethos of a gendered education (Adeyemi &Adeyinka, 2001; Chirwa & Naidoo, 2014), but with a more gender inclusive approach, this is discussed further in Chapter three. This supports Malawi's need for skilled labour, "there is a huge mismatch in Malawi between available skills and the skills demanded in both the public and private sector; and there is a general lack of technical, vocational, entrepreneurial and "hard" skills that are essential for the productive sector" (Seppo, 2014). There is a balance between the needs of the Community, business sector and that of the individual, children need to learn skills that match their future needs; Pakkala argues that if we get their education right, it could lift hundreds of millions out of extreme poverty and contribute to enhanced prosperity, stability and peace" (UNICEF, 2014). This can be supported through the Montessori environment. One of the key elements of the Montessori ethos is the activities for everyday living (Montessori, 1946/2012). In a Montessori classroom the child observes and participates in activities of everyday living which promotes increased knowledge and independence through real life-experiences.

Gaining such skills will support their inclusion within their community and society. These activities are cultural and specific to the child's time and place and will create foundations on which the child can develop further learning.

The Montessori method is not unknown in Malawi. There are a small number of Montessori nurseries in Blantyre, Malawi's second largest city, attended predominantly by ex-pat children due to the fees demanded. The Foundation trustees, both in the UK and in Malawi, have explored other ways to support the children to learn and they believe that the Montessori philosophy can achieve a cultural approach to learning that will help the children achieve the best they can. Hence, the trustees are committed to the implementation of the Montessori Method.

2.8 Chapter summary

In this Chapter I have written from the heart my pedagogical understanding of the Montessori Method, using Montessori writings as the direct source. It was important to me that the reader of this thesis had an insight into my interpretation of Montessori, before delving into the details of this research project. This is not to say that this will be my final interpretation. My continuing experience in practice with children in my own nurseries, the experiences and knowledge I gained through the research and the opportunities my role at the university offers me to deepen my research and my knowledge will continue to support the development of my pedagogy. Although my knowledge will develop, and my thinking will change, I ardently believe that the foundations will remain firmly rooted in the dynamic triangle.

I took the opportunity in this contextual Chapter to offer a more personal insight into the Malawian Community who participated in the research through the eyes of the Community, the Foundation and local policy, and in Chapter three this context will be explored with a

critical rhetoric.

My aim in penning this Chapter was to create a foundation on which the research was built, it is a starting point from which my journey progressed and was necessary to write in this way to enable understanding of the road travelled and the action taken in the research.

Chapter 3 Literature Review

Not only can imagination travel through infinite space, but also through infinite time; we can go backwards through the epochs and have the vision of the earth as it was, with the creatures that inhabited it."

(Montessori, 2019, p. 10)

3.1 Chapter introduction

This literature review is developed over Chapters 3 and 4 and explores, as a foundation, the elements of the dynamic triangle in Malawi, although as will become evident, there is little research in this field at a Malawian level, meaning that literature from sub-Saharan Africa is used to help build a cultural context. Then through the lens of the Montessori philosophy and influencing theorists, the review will turn to literature to analysis the elements with a Montessori context as a focus.

The essence of the literature review is built around the focus of the Dynamic Triangle, supporting the linked threads of the triangle and the interplay between the three main elements: the child; the environment; the adult.

The aim of this Chapter is to set out a contextual and critical literature review of education in Malawi both past and present, setting the scene of the research context. It begins by giving an overview of the Malawian story. It then provides a short insight into the past and present of the Malawian community context, before exploring the educational environment. It takes a view of the Malawian child, internationally, nationally, and locally. The chapter ends by discussing the role of the adult in the community and the educational environment.

3.2 A Malawian Story

The aim of this research is to explore the development of an early years Montessori educational approach in rural Malawi, and consequently understand the journey that Malawi has taken to shape the current education system, which is fundamental to create a foundation for the research. Included is discussion around western influences and the importance of indigenous traditions (McAteer & Wood, 2018). Taking a broad approach initially I explore the international and national aspects of the Malawian literature. I then narrow down to education in Malawi during the pre-colonial period, colonial period, post-colonial period and decentralisation, seeking to identify the influences on the pinnacle of this Chapter the current ECDE programs and practices, with an appreciation of the educational successes and failures (Lamba, 2010). The very concept of 'education' is contested, and it has different meanings depending on the cultural, historical, and political context of the country; as described by Adi & Cleghorn and several other authors, "education is connected to systems such as the economy, the political system, the legal system, the family, as well as belief or religion" (2005, p5).

3.3 The Environment

3.3.1 An International View

As touched on in the main introduction to this thesis, Malawi is one of the countries that signed the Millennium Development Goals (MDG) (UNICEF, 2003). These were replaced by the Sustainable Development Goals (SDG's) (United Nations, 2015). In 1990, the World Conference on 'Education for All', in Thailand, launched a global movement to provide basic education for all children, youths and adults. Ten years later, the 2000 World Education Forum, led member governments to commit to achieving basic education for all by 2015, through the Millennium Development Goals (MDGs) (United Nations, 2000, online).

September 2015 saw the announcement of 17 Sustainable Development Goals (SDGs) building on the MDGs.

The expansion of early childhood education, in response to UN Sustainable Development Goal 4 for Education (United Nations, 2015) (Table 1.1), means that promoting children's learning and increased knowledge of curriculum and pedagogy is in demand world-wide and is a focus for marginalised countries and this directly affects early years education (ECE).

Although there is no formal definition of what ECE is, learning outcomes are considered a vital factor of quality and permeates much of the new 2030 Agenda (United Nations, 2015). The quality of Education provided has become almost identical with learning outcomes within international policy discourse (Winthrop et al. 2015; World Bank 2018) and there is a growing interest in research designed to find out how to raise learning outcomes (Snilstveit et al. 2015; Evans and Popova 2016), with several different approaches being used (UNESCO 2004; Tikly and Barrett 2011, Neuman, 2014). There are, however, critiques of UNESCO. Archer (2014), for example, claims that the post SDGs vision for global education skills is misleading and that a more holistic approach is needed that will balance quality inputs, processes and the diverse contexts in which they will operate, Pramling-Samuelsson & Siraj-Blatchford (2014) concur with this view writing that ECCE provision is increasingly considered by policy makers in an holistic way; integrating care and education along with health, safety and play provisions in preschool settings, in the home, and in the wider community. This is in contrast with common assumptions that ECCE programmes should be targeted at children over the age of three, and include organized 'school readiness' learning activities (UNESCO, 2012b, p63)

With an estimated population of 18.6 million people in 2019, and expected to double by 2038 (World Bank, 2020), the country has a huge need for a stable education system. 54 percent

of the total population is under the age of 18 years (ICEIDA, 2012, p.12). A good education policy that sees an increase in young people enrolled in school is expected to have a bearing on poverty in the long run (Dunga & Sekatane, 2013), although this is questioned by Kadzamira & Rose (2003) who suggest that the introduction of FPE has not alleviated the reduction of poverty goals.

In October 2008 the Youth/Children's Manifesto (2008-2014) was submitted. The aim of the manifesto was to offer advice to future government on "what they should do" (Children's Rights Information and Documentation Centre, 2008). Part of this manifesto focused on education; it celebrated the introduction of free primary education in 1994 (Barnett, 2018) and the net result was a considerable increase in the number of children enrolled in schools to 51% (World Bank, 2009), however, it also recognised the challenges that it raised, the need for government to increase the number of trained teachers, build more schools, provide more learning resources, etc. The primary enrolment numbers had risen from 1.2 million in 1991 to 4.8 million in 2016 but this has fallen to 3,297,346 million (Malawi Government, 2019).

The ever-growing data and monitoring of Malawi contribute to what national and international policymakers signify as a 'learning crisis' (cited in Berry et al. 2015; Winthrop et al. 2015; World Bank 2018). The changes in policy are generally driven by the international community along with commitment to the SDGs, although if you consider the analogy championed by Luke (2011) that policies are epic stories to be told, full of narratives, problems to be solved with a start and end, offering an alternative way to view reality (Moss, 2019), it begs for consideration that policy making is an art rather than a reality. Yet, the concept of policy change is central to the 2018 World Development Report, "Learning to Realise Education's Promise" (World Bank, 2018). It refers to the "many faces of the learning crisis" (World Bank, 2018, p16), the report goes on to suggest that the low levels of learning

outcomes in the developing world are at the source of inequities and widening gaps in opportunity and contribute to shortages of skilled labour for future employment (World Bank, 2018, p16), making direct reference to Malawian policy.

Malawi has a unique history influenced by a colonial power that ensured the availability of an unskilled labour force for its interests in southern Africa (Seppo, 2014). Its current administration was developed, with the influence of its past agencies. Malawi's long history against what could be termed as an assault from other cultures and international interference, has given rise to many secret community organisations (Boakye-Boaten, 2010) and loss of "indigenous knowledge and ways of knowing" (Pence & Shafer, 2006, p3). The survival of many communities is because of the bonds created by these secret organisations and the protection, they offer their people. Boakye-Boaten (2010) argues that this cultural resilience will be the foundation on which survival of these Communities rest, along with the education of the more isolated rural Communities and possible survival of indigenous and cultural knowledge (Pence & Shafer, 2006). Under colonial rule, a quality education was in the main accessible only by the rich and powerful, yet there has been a growth in the attainability of higher education in the post-colonial period (Mann, 2012). However, it appears that changes are being driven by the current Malawian Government (Sharp, 2009). Although there has been a focus on inclusive education policies by the post-colonial state, it is argued by some, that education remains the privilege of the few, not the right of the many, and seen as a way for the dominant population to assert class, culture or lifestyle status (Abdi and Cleghorn, 2005), although by others it is considered that many post-colonial African nations, including Malawi, have come a long way in terms of accessibility to education (Seppo, 2014).

To better understand what the term 'holistic education' and 'quality education' mean in cultural and socio-economic terms, it is important to understand the journey that education has made in Malawi historically, and up to the current day.

3.4 The Historical Context

3.4.1 Pre-Colonial Period

Malawi education in pre-colonial times was, like in many other African Countries, purely traditional or indigenous (Adeyemi & Adeyinka, 2002), and developed and influenced over time by natural and environmental contexts. The main, innate outcomes of pre-colonial education was essentially based on intellectual, physical, and attitudinal training (Adeyemi & Adeyinka, 2002) to support children into becoming useful adults in the Community. Lowe (2018) contends that all elements of indigenous education for survival were learned from the family or from the community. Although this was before terms such as 'gender appropriate' had been determined, Chirwa & Naidoo (2014) contend that the role of pre-colonial learning and teaching was to ensure boys and girls learned and developed skills that would enable them to carry out roles required by the Community in which they lived. Examples of these roles for boys would be farmers, warriors, blacksmiths, community rulers and other occupations seen fit for the male dominant culture of the time; for the girls their education was to prepare them to be a wife, a mother, and a homemaker (Chirwa & Naidoo, 2014). Thus, as argued by Oluniyi (2013) developing skills and enabling the acquisition of indigenous knowledge and could be termed as an education derived from the culture and indigenous roots of the Community. This concept meant that the specific gender role that they were educated for in turn prepared the child for the responsibility they were to have in their community, an ideology that Mwale (2002) contends needs to be re-considered as genderism, to become one which is apposite to the current African situation. An ideology that Myers

(1999) asserts ECD education could overcome. Chirwa & Naidoo (2014) state the case that this traditional indigenous driven education meant "that children developed a sense of obligation towards the community and grew to appreciate its history, language, customs and values" (p337). This naturally and socially driven education system as described by Wyse (2008) as a "holistic education that had accumulated over generations" (p3) could be reasoned as a more appropriate education, particularly for more rural communities, than the often-capitalist driven education of today (Abdi & Cleghorn, 2005). This is perhaps one of the greatest attributes of indigenous education, as opposed to Western education, which is argued to alienate young Africans from their traditional cultural heritage (Adeyemi and Adeyinka, 2001; Abdi & Cleghorn, 2005; Parsons & Harding, 2011; Chirwa & Naidoo, 2014). A culturally relevant education (Ladson-Billings, 1995), it could be argued would empower their culture and weave social responsibility into the very core of both the education and their educational experiences (Dei & Asgharzadeh, 2005). Pence and Shafer (2006) support the argument that the importance of the indigenous knowledge of post-colonial times as being the roots to providing an "economic and moral system" (2006, p1) on which to build current knowledge and education systems.

3.4.2 The Missionary Period of Colonial rule

The missionary period is linked to the earliest years of colonial rule and in many ways the foundation that influenced some elements of colonial rule, not least education. Several authors have argued that Malawi's present education system was born out of the works of early missionaries, (Pence & Shafer, 2006; Lamba, 2010; Chirwa & Naidoo, 2014) and notably, Robert Laws of the Free Church of Scotland, who in 1875 opened the first school at Cape Maclear in Southern Malawi (Galimoto, 2008). The main commitment of the missionary schools was – in the missionary's eyes – to 'civilise the primitive and pagan natives' by teaching them Christian values (Chirwa & Naidoo, 2014, p338) with the main

themes of the education programme being reading, writing and arithmetic and if required by the community some would teach technical skills. Banda (1977) made the case that "intellectual development for the Africans was not one of the missionaries' objectives" (p.48), a view supported by Chirwa & Naidoo (2014) who maintain that the missionaries merely "wanted to evangelise Malawi" (p338). Banda (1977) went even further claiming that their aim was to "purify the African's way of life, whilst keeping them simple" (p49). Contrary to this, Lamba (2010) suggests that the missionary approach merely generated an anti-western education sentiment among people, particularly in central Malawi; he went on to challenge those white privileges had to be safeguarded through an appropriate curriculum for the Africans (Lamba, 2010). There were disparities between the missionaries themselves in what the role of the school and education was and the missionaries who wanted education to go beyond fulfilling the objective of evangelization and provide vocational training, as well as the disputed point that the imposed education across Africa was part of the colonialist vision to control the indigenous communities (Owen & Kalingaa, 2014).

By 1900, mission stations were established in most parts of the country and education became one of the major activities of missionary work (Galimoto, 2008). Thus, the necessity and importance of the creation of the Department of Education in 1926, to bring about a form of partnership working, as recommended by the Phelps-Stokes commission. It was considered that the missionaries had more influence than the colonial government (Galimoto, 2008), creating a division in the purposes of education. The colonial government's aim for the missionaries being one of economic gain and domination (Abdi and Cleghorn, 2005) in contrast to the Christian aims; although Tangri (1968) contends that both the missionary education and the colonial government education was affecting traditional Malawian edict.

3.4.3 Colonial Rule

Malawi was under British colonial rule from 1891 to 1964, this period was called the 'British Protectorate of Nyasaland'.

The colonial Government's aim in education was to provide a small but efficient structure to fulfil the clearly identified goals of the country, such as national development (Chirwa & Naidoo, 2014; Katenga-Kaunda, 2015) and also contends that another aim was to "dehumanise the natives" (p4), while as discussed above, the missionaries held on to their original and main goal to "Christianise' the country" (Chirwa, & Naidoo, 2014, p339), resulting in some difference of opinion. One of the most difficult contexts for colonial educators to understand was the close links between the spiritual, social, and material aspects of traditional indigenous education (Lamba, 2010). It has been suggested that the goals of colonial education were that of personal hygiene, use of the environment, home life, use of leisure time, literacy and numeracy and moral development and religious life, whereas the goal of indigenous education was to fully prepare children to survive the challenges of their future lives (Lamba, 1984; Chirwa & Naidoo, 2014). It has also been suggested that institutionalized education reflected the structural needs of colonialism to maintain existing structures of dominance (Abdi and Cleghorn, 2005).

From the early 1920s the native Associations (Lodge et al, 2002) were constantly questioning the failure of colonial educational facilities for Africans (Lodge et al, 2002). Education remained a primary focus of the missionaries with the number of missionary stations continuing to increase in the country (Chirwa, & Naidoo, 2014).

In 1926, according to the 1961 Nyasaland Annual Education Report (cited in Chirwa & Naidoo, 2014), the government established a Department of Education with the focused role to co-ordinate missionary educational activities and was in direct response to the failure of

attempting to implement direct rule over chiefs and the headman (Lodge et al, 2002). The recommendation memorandum proposed by the Phelps-Stokes commission that brought about the change was entitled "Education Policy in British Tropical Africa" and was adopted in 1925 resulting in the creation of the Department of Education so bringing together the educational work of the colonial government and the missionaries but by the early 1930s this policy was already being challenged.

Secondary education was introduced in 1940, which brought with it a turbulent time for primary education. The requirements of access to secondary education resulted in a change in the primary curriculum to become an "academic-elitist" (Chirwa, & Naidoo, 2014, p339) with a very British foundation and little appreciation of cultural contexts. Meanwhile, African Associations petitioned for direct representation in education policy and in 1944 the Nyasaland African Congress (NAC) was formed linking African Associations, Independent churches, and groups of other educated Africans to try and influence policy (Lodge et al, 2012) to bring about change to the education of their children from this "imported curriculum" (Chirwa, & Naidoo, 2014, p339).

After the Second World War and the rejuvenation in the 1950s of NAC which was to become the Malawi Congress Party (MCP) the tide began to turn towards decolonisation. With Banda at the helm, the MCP marched to a convincing victory in the 1961 Nyasaland elections and along with it the granting of independence on 6th July 1964 (Lodge et al, 2012), which would bring with it more change for the education systems.

3.4.4 Post-Colonial Rule

Malawi became independent of British rule on 6th July 1964. Thirty years after independence the Government of Malawi had a highly centralized Government, representative of the Government of today (Thomas, 2017). Post-colonial rule sees the main role of shifting power

from Western to that of non-Western, and ideologically, postcolonialism seeks to profoundly question the assumption that Western forms of knowledge and culture are superior to non-Western forms (Sharp, 2009; Katenga-Kaunda, 2015) and it has been argued that "Western colonialism, has in fact left its mark on today's de-colonialised world" (Sharp, 2009, p74), for example, English is the main language used in the education system, and not 'Chichewa', which is the national language (Katenga-Kaunda, 2015). Children are only taught in Chichewa for Standard 0-4, they are then taught in English; Lamba (1984) argues that there is a demand to be taught English, as it is seen as key to progression. Aside from this, Kabwila-Kapasula (1995), cited in Chirwa & Naidoo (2014) contend that the now independent Malawi is in real need of an education curricula that would enable its people to meet the needs and challenges of this new era.

Once independence was embedded it was identified that the education systems inherited from the colonial government did not address the need and the challenges of the new Malawi. As Chirwa & Naidoo (2014, p339) argue that "the country needed agriculturalists, carpenters, engineers, social specialists, community workers, teachers, nurses and construction workers" to enable Malawians to support the socio-economic and environmental needs of their own country, so in effect developing human capital to in turn support economic capital; a theory that is dominant in today's economic world.

The commission known as Johnson-Survey Team (Winter, 1965) alleged that the education system in Malawi was imported, excessively academic, deadly passive and addicted to rote learning (Kabwila-Kapasula cited in Chirwa & Naidoo, 2014). Hence, the new independent government tried to change the colonial educational system to address its own educational policies. By 1973 it had become evident that there remained a distinct discrepancy between the new educational system and the needs of the Country, this resulted in the launch of the first educational plan (Chirwa & Naidoo, 2014).

Even after the revision of the education system in an attempt to meet the objectives "a high proportion of children still dropped out of school due to a lack of school fees" (Moyo, 1992, p280) and pupil-teacher ratio remained high. The objectives continued to be the foundation for the next education development plan (1983-1995) which aimed to restore fair access to primary education for all communities, but still at a cost with attendance and dropout remaining a challenge. In 1994, the new democratic Malawi government championed the introduction of free primary education (FPE) (World Bank, 2009), which resulted in a 51% increase in pupil numbers (World Bank, 2009). This policy was introduced on the basis that poor people were being excluded from school, and that with free access to primary education, it would open a way for them to acquire some education and probably offer a way of escape out of poverty (Chimombo, 2005), although as Thomas (2017) argues that "despite the advantages brought about, such as increased enrolment, there was subsequent unbearable strain on the limited resources (human and financial) of the education system (p86) especially at Standard 1 (Lowe, 2018) where enrolment was at the highest, with a consequence of overcrowding and a perpetuation of high pupil-teacher ratios, resulting in a lowering of quality (Kadzamira & Rose, 2003; Lowe, 2018).

3.4.5 Decentralisation

In 1998 the Malawian government embarked on a decentralisation policy to work as a driving force in strengthening operational efficiency and ensuring accountability of resources (Government of Malawi, cited in (Kufaine & Mtapuri, 2014). Other objectives included the creation of a democratic environment and institutions, the mobilisation of the masses for socio-economic development and more localised autonomy (Sineta, 2002; Government of Malawi 1998). Decentralisation of different forms had existed in the past both under colonial rule and within Banda's one-party state (Mamdani 1996; Olowu and Wunsch 2004 cited in

Barnett, 2018). There has been a slow reform to decentralisation (Chiweza, 2010) attributed to the lack of drive from central government and the poor capability at district level (Chiweza, 2010). Decentralisation also meant transferring the responsibility of early years and primary education to the districts, rather than being held by central government, so effectively a passing down of policy for implementation. Although, Barnatt (2018) argues that complete devolution to the districts never really happened, as "central government continues to hold significant power despite primary education being devolved, in principle, to each of the thirty-four Districts" (p17). As O'Neil & Cammack (2014) maintain, the challenge of supporting the infrastructure and the distribution of supplies is necessary now more than ever in Malawi's devolved Government structure, particularly in rural Communities. This is particularly evident in the education sector that suffers from a lack of resources such as textbooks to the supply of teachers and as O'Neil & Cammack argue, the failure of the infrastructure is reflected in the education sector outcomes, "such as low rates of school completion and deteriorating exam results" (2014, p vi). This in turn puts more pressure on local Government as there is a lack of educated people to take on the responsibility of organising the demands of decentralisation. Lane & Murray (1985) and McGinn & Welsh (1999) argue that decentralisation is a continuation of what was being done by somebody at a higher level but is now being done by somebody at a lower level, "the basic definition of decentralisation may be the transfer of decision-making authority, responsibility and tasks from the higher to a lower organisational level" (Kufaine & Mtapuri, 2014, p765). Consistent with Chisholm's (2005) argument that policies can circulate between levels, moving down from the international to the national and back to the regional, being reshaped in each stage and process to suit local circumstances, has had an influence on the development of Malawian education (Chirwa & Naidoo, 2014). Despite embarking on decentralisation, Malawi remains one of the

least developed countries in the region (Seppo, 2014), with still one of the highest levels of poverty worldwide.

A starting point to increasing human capital is to alleviate poverty through education which as the literature argues, is one of the main challenges that decentralization is struggling to address (O'Neil & Cammack, 2014; Seppo, 2014). To increase human capital, you first have to expand and extend educational opportunity and achievement. The drive for human capital is continuing to be influential today and is supported by many including the World Bank, UNESCO and the OECD (Moss, 2019). In contrast Moss (2019) argues the validity of what he terms a dominant discourse in ECE which is amplified by global influences, he calls it 'the story of quality and high return' and describes the analogy as the main plotline in the narrative of human capital theory (Moss, 2019). Gillies, 2011 argues that human capital theory "lays considerable stress on the education of individuals as the key means by which the individual accrues material advantage by which the economy as a whole progress" (pp 224-225). In Malawi where the education system is already stressed out by a multitude of variables, such as a lack of teachers, lack of resources and declining budgets, many of which were caused by decentralisation, the pressure of supporting the economic development of the country through human capital theory also relies on the assumption that individuals will seek to maximise their own economic interest (Tan, 2014, p1)

The education system in Malawi is run through an education central office. It has thirty-four education district offices responsible for running primary school education and early years centres in the district, three-hundred and seventeen education zones which are responsible for primary school monitoring and supervision, and schools which are responsible for teaching and learning (Kufaine & Mtapuri, 2014). In a broad context, education is coordinated around three main categories: basic, secondary, and tertiary (Thomas, 2017). The system is known

as a 3-8-4-4 system: 3 years of pre-primary, eight years of primary covering standards 1 to 8 where students on completion can attain their primary school leavers certificate of education (PSLCE). Secondary education covers the next four years and the final four years are university education.

3.5 Early Years Education and Care

3.5.1 An International Influence

The period around 1990 marked significant changes for children and for ECD internationally. On November 20, 1989, the Convention on the Rights of the Child (CRC) was formally adopted by the UN General Assembly; signing started on January 26, 1990, with 59 countries signing the document that day, Malawi being the 64th country to sign on 2 January 1991. It had been "ratified more quickly and by more countries than any previous human rights instrument" (UNICEF, 2001, p.1).

The CRC is significant in Malawi because in sub-Saharan Africa it is estimated that 61% of children under the age of 5 have their development compromised due to a lack of early stimulation and learning opportunities (Neuman et al, 2014). If you add to this the poverty and the malnutrition they face, the outlook for these children, it could be argued, is challenging. Young children's well-being, both physically and psychologically, can be argued to be interdependent. Thus, by supporting the development of both, is a pro-active way of preventing personal, social, and educational difficulties for the children in their adolescence (CRC, 2006). Early childhood is seen on the international stage as an important period of a child's life (CRC, 2006). A child between the ages of 0-6 years is in the most significant of all human periods of growth: physically, emotionally, and cognitively. They are also at their most influential (Montessori, 1946/2012; CRC, 2005). The opportunity for an education in the early years of a child's life, in developing countries such as Malawi, is

becoming recognised as a foundation for future educational achievement, health and wellbeing (OMEPUK, online, 2020), building both short and long-term benefits for schooling and adulthood. “The child’s future personality is determined to a large extent by the learning capacity and values orientation of their first five years” (Kholowa & Maluwa-Banda, 2008), with their culture, gender, living conditions, family and care arrangements and educational experiences being the main influencers (CRC, 2006).

Part of Malawi’s challenge to meet international outcomes is to cope with a high percentage of children who enter primary school with no educational preparation or foundation for learning. Worldwide experience has evidenced that the early years of a child’s life are crucial (UNICEF, 2017), “The growth and then environmentally based pruning of neuronal systems in the first years support a range of early skills, including cognitive (early language, literacy, math), social (empathy, pro-social behaviours), persistence, attention, self-regulation and executive function skills (the voluntary control of attention and behaviour). Each of these skills, measured in early childhood, are predictive of school success and completion, as well as higher earnings, active participation in communities and society, and reduced odds of delinquency, crime, and chronic and non-communicable disease. Later skills – in schooling; in employment; in family life – build cumulatively upon these early skills.” (Sustainable Solutions Development Network, 2014). An investment in early childhood care and development not only transforms a child’s prospects but makes a significant difference in a country’s development (UNICEF, 2010, online).

The global influence and the SDGs are helping to increase awareness and bring about some change in developing countries, particularly Malawi and it is evident the affect globalization has, not just on education, but also on early years education. Chisholm (2005) holds that the concept of globalization and its relationship to national education systems has enjoyed

considerable prominence (p 79). According to Chisholm, globalization and international influences have led to increasing convergences of ideas and practices (including those of education) across national contexts (p 7). Thus, the agenda for education is increasingly being set globally (Dale and Robertson, 2002; Chirwa & Naidoo, 2014). However, while the concept of globalization might explain the convergence of education and curriculum ideas across national contexts in the intended curriculum, it cannot explain differences in implementation (Chirwa & Naidoo, 2014, p337) and the opportunity to deliver creative early years environments in which the youngest children in rural Malawi can flourish.

Malawi currently has a multisector approach to ECD, centred in the MoGCSW, with implementation at the district level by district social welfare officers. In recent years there has been great progress in Early Childhood Development (ECD) laws, policy, and guidelines development, including the National Policy on Early Childhood Development (ECD) (2006); National Social Support Policy (2012), which has a link with other policies including ECD; National Strategic Plan for ECD (2009-2014), National ECD Operational and Accreditation Guidelines (2012). These policies all make up the National Development Curriculum and all aim to ensure that Malawian children are given the opportunity to survive, grow, develop and participate in line with the CRC.

3.5.2 The National Context

There is little research available that directly relates to the early years education environment in Malawi, although (Kholowa & Maluwa-Banda, 2008; Neuman et al, 2014: Bakilna et al, 2016) have carried out some of the more recent work. Currently early years education is non-compulsory and not readily available to all communities in Malawi. Many of the evaluations referred to are reports produced by the World Bank and are more statistical, but by setting the scene of early years education I hope to paint a picture of the early years environment that

Malawian children are currently part of.

Early years childcare is not a recent phenomenon in Malawi (Munthali et al, 2014) and research suggests that in the early 1950s some missionary primary schools enrolled children for two years before they were due to start primary education at around 6 years of age (Kholowa & Maluwa-Banda, 2008). The first officially recognised ECD centre was opened by the Church of Central Africa Presbyterian in Blantyre in 1966 (Kalyati, 2006) as a few working women in urban areas needed specific care for their children, there then continued a steady increase in the number of centres, mainly in Blantyre (Kholowa & Maluwa-Banda, 2008). The celebration year of 1979 for the International Year of the Child saw the opening of more district pre-schools. By 1980, 24 districts had registered a pre-school (Kholowa & Maluwa-Banda, 2008). In 1989, three districts; Mzimba, Salima and Chikwawa piloted the first Community Based Childcare Centres to offer opportunity to children in rural areas access to ECD (Munthali, 2014); unfortunately, these centres were not sustainable due to disagreements over Community involvement (Kholowa & Maluwa-Banda, 2008). Towards the end of the 1990s Malawi witnessed an increase in the number of Community Based Childcare Centres (CBCCs) due to the growing numbers of orphaned children as a result of the HIV and AIDS epidemic (Kalyati, 2006). The government used the CBCCs as places to manage the orphaned children and encouraged Communities to form their own centres (Kholowa & Maluwa-Banda, 2008) as part of a national strategy. These centres then became a launch pad from 1999 for UNICEF to develop a new approach to ECEC called "Early Childhood Care for Survival Growth and Development" (Kholowa & Maluwa-Banda, 2008; UNICEF, 2015). This programme was to support not just early years education, but to also take a more holistic approach to educating parents and caregivers as well. In the past, the many early years centres were privately run and fee paying (Kholowa & Maluwa-Banda, 2008); this new initiative supported by the Government and UNICEF were to be community

based with an expectation that the communities would resource the centre by way of payment (Munthali et al 2014).

As a result of the introduction of the community-based centre, there effectively became two approaches to early years care and education in Malawi. The Early Childhood Development Centre (ECDC) which tends to be the fee-paying centres, many of which are located in the more urban areas and then the Community Based Childcare Centres (CBCC) which are located in more rural areas and are designed to support the problems of health and child-care (Kholowa & Maluwa-Banda, 2008; UNICEF, 2015). Currently, there are a large number of community based and managed centres all over the country. As previously discussed, many of these are in rural locations (Kathyanga, 2012; Munthali et al, 2014) and are often managed by the community elders and supported by CSOs and NGOs as donors (Kathyanda, 2012; O'Neil & Cammack, 2014). The types of successful, sustainable, and effective community-driven development programs and services have been identified as those including strong communities, regular monitoring and evaluation, community contributions and local government involvement (Dongier et al. 2002; Kathyanda, 2012), indeed, Kathyanda concluded that "the government of Malawi has made great strides in implementing ECD policy in CBCC in rural areas" (2012, p101), particularly with encouraging community leaders to ensure that young children attend the CBCC and the parents and carers understand the importance for the child.

Mansuri and Rao's (2004) meta-evaluation of CBCC confirms that the level of social capital matters but also argue that "community-based development seems likely to be more effective in more cohesive and better managed communities, evidence also indicates that better-networked or better-educated groups within a community may be better able to organize and thus benefit from most projects" (Mansuri & Rao's, 2004, p. 31) and Kathyanda (2012)

contends that until there is a district level body monitoring the CBCCs and ensuring they are meeting the required standard, they will struggle to develop an improved practice and to uphold consistency of care. The CBCCs role is to support the holistic development of the child, offering not only early years education but also nutritional education and health services. Munthali et al go further to say that they "should provide a provision of services such as essential health care, community integrated management of childhood illnesses, psychosocial care and support, water and sanitation, nutrition and stimulation and play" (2014, p3). Yet, with the minimal support that the CBCCs procure from government (Kathyanda, 2012), the resources and supply chain of human capital required to provide the extra services to support the complete holistic development of the child is not sustainable and they are at risk of only the minimal requirements being met. With some investment to address some of the challenges of lack of food, lack of training for staff, unmotivated staff and poor learning environment a more sustainable program would be developed. As found by Kathyanda (2012) many communities are finding ways of overcoming some of these challenges, but often at the expense of other areas such as administration, record keeping and supervision.

CBCCs, acting as ECD centres, are playing an important role in Malawi despite the challenges that are being experienced in their management (Munthali et al, 2014). To date there are no studies that have been conducted to establish the impact of CBCCs and ECD centres on children's later outcomes, but the Government of Malawi supports the centres based on results from other sub-Saharan countries, which have demonstrated that ECD programs prepare young children for enrolment in primary school and that many of the benefits of ECD centres are realised through improved enrolment and schooling achievement of ECD graduates (Van der Gaag & Tan, n.d; Ministry of Gender, Children and Community Development and UNICEF, 2009).

Some authors, (such as Thomas and Thomas, 2009) have argued that Early Childhood Care and Education should not become an integral part of the education system and policy, until under-resourced poorer countries can adequately sustain primary and basic schooling. However, the Munthali et al (2014) study shows that the costs and sustainability of ECD centres and CBCCs can be managed by the Communities they serve, although this view is contradicted by Neuman et al (2014) who argues that the sustainability of CBCCs is a challenge, and continue to question not just the financial resource, but whether they have the Community resources to keep the centre open on either a temporary or a permanent basis. They also identify the challenge of training staff in Malawi, which is difficult to access and is not cheap to attend.

In 2012 the Ministry of Gender, Children and Social Welfare (MoGCS) introduced "The Early Childhood Development Programme (ECD): Monitoring and Assessment Guide" to assist in the setting up and implementation of the Early Childhood Development Programme. This guidance sets out an accountability system for Early Years Centres in Malawi. According to Nutley et al (2007) many governments have set out to analyse policies and programs to determine what works and it could be argued that the ECD monitoring programme (Ministry of Gender, Children and Social Welfare, 2012) is another policy that may or may not be meeting its objective. In support of this view the World Bank (2015a), in their SABER report, rated Malawi's implementation, and monitoring and assurance of ECD policy as "emergent," with some of the laws enacted but not implemented, and while reputable policies provide a solid basis for implementation there is a necessity to support them through a principal law specially directed at ECD policy and delivery.

Malawi is considered to be one of the countries in Africa with the most extensive network of ECD centres. The centres comprise of CBCC's, pre-schools and day care centres (Yallow et

al, 2012). The highlight now being on ECD, such as the establishment and running of CBCCs, is based on the knowledge that children experiencing early exposure to environments that promotes the development of their basic skills, attitudes, behaviours and values that will last for their lifetime (Yallow, Hamilton, & Watkins, 2012). The ethos behind the development of ECD centres directly aligns itself with the foundations of the Montessori Approach.

In Malawi, a community-based management system calls for communities to be involved in decision-making, particularly around procurement of materials for the operation of community-based childcare centres. However, in the absence of accountability mechanisms district assemblies fail to involve local communities and procure materials without involving them (Ministry of Gender, Children and Social Welfare, 2016).

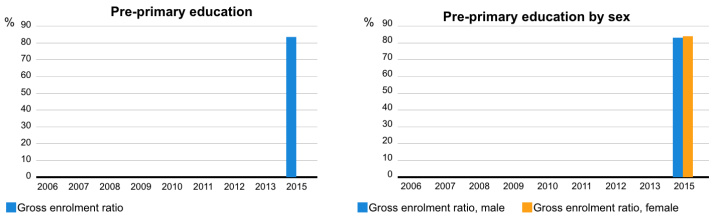
The ECD programme (Ministry of Gender, Children and Social Welfare, 2012) promotes school readiness, in Malawian terms, and acknowledges the importance of early childhood education opportunities it offers, and in doing so increases the prospect that children will complete the education cycle through to higher education. They advocate that children who have been in the ECD programme become more "productive in socio-economic development and have better opportunities to lead a better quality of life" (Ministry of Gender, Children and Social Welfare, 2012, p3). This view is supported by Dunga & Sekatane (2013) who advocate that the "link between education and poverty reduction is highly accepted especially where children from poor households have access to education" (p213). In a more recent study carried out in the United States, Chaudry & Wimer (2016) argue that although poverty is an important indicator of societal and child well-being, it goes beyond this; they go on to say that "Poverty and low income are causally related to worse child development outcomes, particularly cognitive developmental and educational outcomes" (Chaudry & Wimer, 2016, p1). The ECD program has been developed in Malawi in response to such studies. The

introduction of the program evidences the understanding that to improve outcomes for children, early intervention works best, and this in turn will raise the level in primary schools.

The ECD program is also viewed as an opportunity to improve outcomes for children and to reduce the burden on parents to care for their young children and participate in other productive endeavours (Ministry of Gender, Children and Social Welfare, 2012). This is supported by Heckman (2006) who wrote that economic analysis has shown that the best rates of return on educational investments in human capital are derived from successful pre-school programs. The importance of optimizing pre-school education is evident from both economic and development perspectives (Heckman, 2006, Blair and Raver, 2016). Not in the least, it is the fundamental right of every child as enshrined in the Convention of the Rights of the Child (UNICEF, online). It is generally agreed that ECD programmes give children the best opportunity to develop during this fundamental period of their lives (UNICEF, n.d, online). Individuals who experienced poor early development suffer a loss of approximately a quarter of the average adult income per year. This not only affects the individual, but also their family. These knock-on effects affect learning and earning and make up 10.3% of GDP in Malawi (Negeri, 2016). In its most basic terms, all education supports economic growth. An educated labour force is more adaptable and can learn new tasks and skills more easily and will be more creative thinkers (Sawhill et al, 2006).

Although there are no reliable data sources UNICEF report that over 1 million children in Malawi benefit from ECD Services (UNICEF, n.d, online with approximately 14,800 caregivers delivering support to early years children. Most children who benefit from ECD services are normally orphans or the most vulnerable (UNICEF, n.d, on-line). The most recent enrolment Figures relate to 2015 and can be seen in Fig 3.1.

Figure 3.1. Pre-primary Education participation



PRE-PRIMARY EDUCATION	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gross enrolment ratio (%)										
Total	...	...	...	...	...	83.58	...	...	...	...
Female	...	...	...	...	...	84.02	...	...	...	...
Male	...	...	...	...	...	83.15	...	...	...	...
Net enrolment rate (%)										
Total	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...
Male	...	...	...	...	...	...	...	...	...	...

UNICEF go on to detail five strategies that going forward they feel will help to support and provide more opportunities for the youngest and most vulnerable children of Malawi (Table 3.1) to access early years environments.

Table 3.1 Strategies for early years access in Malawi

1	Support initiatives to create broad civil society partnerships to monitor implementation of early childhood policies, especially access, equity and quality.
2	Scale up Community Based Childcare Centres (CBCCs).
3	Develop an outreach and parenting programme model for children under three years.
4	Put in place legislation, regulatory frameworks, standards, and implementation guidelines to ensure that the early childhood development policy works.
5	Ensure that Early Childhood development services are accessible to all children and their parents through parenting education and support programmes.

ECD programmes in Malawi are directed by the National Policy on Early Childhood Development adopted in 2004 and published in 2006 in the document National Policy on Early Childhood Development (MoWCD, 2006). The structure should exist at a community,

district and national level for implementation and the "policy and institutional framework for ECD should be clear and well-articulated" (Ministry of Gender, Children and Social Welfare, 2012). This could be argued that in the rural areas there are little resources to create an ECD centre or have the skills necessary in the localities to even make a start. Many of these areas are reliant on charity help. The ECD programme itself (Ministry of Gender, Children and Social Welfare, 2012) is clearly structured and comprehensive and includes:

- Tools for Caregivers
- Tools for Mentors
- Tools for Parent Educators
- Tools for Supervisors

These monitoring tools are designed to "institute a system of routine data collection, management and analysis for evidence-based planning and decision making" (Ministry of Gender, Children and Social Welfare, 2012).

The early years, especially the first 1,001 days, are crucial for lifetime health, learning, and productivity. Particularly for the most vulnerable children and families, ECD is a high-return investment (Bakilana et al, 2016). As discussed above, few Malawian children get preschool experience. It is approximated that only 28 percent of children entering primary school have had preschool experience (MoGCS, 2015); and only 39 per cent of children aged 36–59 months have attended early childhood education, with large variations by socioeconomic characteristics (MICS, 2014). Most CBCCs are volunteer-run by untrained caregivers and chaired by a community-based organization and are only open for a few hours a day. Some also receive nongovernmental organisation support, such as the school where the research was carried out. The quality and reliability of services to children vary greatly. A 2011 survey of CBCCs in 4 districts found only 53 percent of those listed in the government registry were operational during unannounced visits (Neuman et re. 2014). Another challenge for early

years centres, particularly in rural areas, is the difficulty of finding educated caregivers and teachers. A baseline study of 199 CBCCs reported that one third of CBCC caregivers lacked Primary School Leaving Certificates and less than 40% had received specific training on early childhood development (World Bank 2015b).

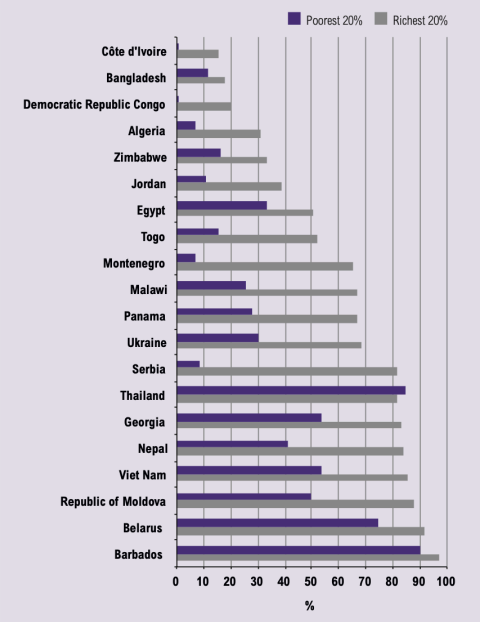
3.5.3 The Current Picture

The current education policy, which was introduced in 2001, is argued to echo much from the past (Lowe, 2018) and has been built on, recognizing the importance of the indigenous nature of Malawi and its cultural heritage. The key features which have changed, are the following: Outcomes Based Education, Learner-Centred Pedagogies, Indigenous Knowledge and Continuous Assessment (Chirwa & Naidoo, 2014, p340). They are all deemed to be the quality foundation or the human technology (Moss,2019), that education is formed on. These policies with their major plot lines (Moss, 2019) tell a narrative of promise for a better education offering an opportunity for better educational outcomes and improving individual opportunity (Lowe, 2018) resulting in development of human capital (O'Neil and Cammack, 2014). The policies are a narrative of relationships between early intervention and human technologies, to support better outcomes and profit in human capital (Gillies, 2011), which is directly underpinned by human capital theory and the Heckman equation that argues that education increases human capital due to the development of knowledge and skills, which in turn produces productivity and higher earnings, resulting in global market success.

It is difficult to get the very latest early years statistics, but figures released in the 2016 UNICEF report referring to Malawi's education record paint a grim picture, meaning that as a country, it is a long way from achieving a high level of human capital. The foundation of which can be linked to low attendance at Early Years Centres (UNICEF, 2016). In Malawi it

is estimated that only approximately 30% of 3 and 4 year old children access early years education from the poorest regions and 70% in the richest regions (Fig 3.2), which in turn has an impact on primary education in the country (Ravishankar et al. 2016).

Figure 3.2 Malawi Education record 2016 (UNICEF global databases, 2016)



Malawi is a developing country in need of economic growth, currently ranked 174 of 189 on the Human Development Index (United Nations Development programme, 2020, online). It was identified that approximately 85% of the population reside in rural areas, which often means it is harder to access education because of the distance to be travelled to the nearest school. Within these communities' livelihoods are dependent on activities centred around agriculture, and as a result, children are required to help on the farms instead of attending school (Ravishankar et al, 2016). It is contended by some that the future of Malawi and the education system needs to increase social, historical and culture knowledge on which a relevant and sustainable Malawi can be built (Abdi and Cleghorn 2005; Pence & Shafer, 2006; Lwanda & Chanika, 2017), so moving from a teacher-centered pedagogy to a student-centered pedagogy (Abdi and Cleghorn 2005).

The SDGs incorporate some evidence-based approaches including positioning Early Childhood Development (ECD) at the crossroads of health and early education, emphasizing ways to improve quality of education across levels including Early Childhood Education (ECE) and more notably at a community level.

3.5.4 Community View

Although the emphasis in many papers in relation to Malawi seem to be focused on educational preparation there are also arguments for the importance of children's social competence and community cohesion. Three studies are particularly useful for my research as they were based in rural Malawi. In a study carried out by Kambalametore, Hartley, and Lansdown (2000) they found that Malawians in a rural context highlighted basic life skills (running errands, carrying water, grinding maize), a curiosity to learn, being social with peers, understanding community and social conventions, and pleasing parents as important amongst children aged 4–5 years old. In Gladstone et al's study (2010), during a discussion on important milestones for young children, both the professionals and the villagers noted manners and obedience, social duties, feeding and toileting, playing, community roles, and intelligence.

The challenge of delivering a quality early years environment in rural areas of Malawi remains prominent, with sourcing of materials, training staff and attendance of the children being the main barriers. In Malawi, a community-based management system calls for communities to be involved and an increased participation of the communities (Rasmussen, 2016) in decision-making, particularly around procurement of materials for the operation of community-based childcare centres. However, in the absence of accountability mechanisms district assemblies fail to involve local communities and procure materials without involving them (Ministry of Gender, Children and Social Welfare, 2016). This leaves many

Community-based centres unable to provide an environment conducive to supporting the learning and development of young children.

3.5.5 The rural context

To use literature to explicate the early years learning environment experienced in the rural area in which this research was carried out was a challenge due to the lack of validated research material and I am fearful that in explaining it I would seem to some to devalue it. This is not the purpose at all, the literature that is available has driven the discussion up to this point to be more policy based. This section is related to the teaching environment in rural Malawi, is derived from policy documents but is also drawn from personal experience, as there is a lack of research and evidenced based material.

The community, in which the research was carried out, strives to educate, and support the development of its early years children but they are impeded by a lack of Government support and resources. Due to being in a rural location it is difficult to procure resources, such as food, materials and supplies (Ministry of Gender, Children and Social Welfare, 2016). The lack of qualified teachers with the appropriate knowledge to create a rich learning environment often means that rural CBCCs, such as this one, stop running (Neuman et al. 2014) or must look elsewhere for help and support. Many ECECs, including the ECEC I carried out the research in, then turn to support from iNGOs, who then drive the education forward in a way that ensures sustainability for the iNGOs and who are influenced by their own core vision for education, with many working towards local ownership and participation from the Community (Rasmussen, 2016).

If you consider the challenges faced in setting up CBCCs in rural Malawi, they were all related to a lack of materials and supplies: lack of food (82 percent), play materials (59 percent), teaching materials (56 percent), building (48 percent), and dishes/utensils (46

percent). It becomes even more evident why support from outside of the Government is needed. Trained observers who visited rural CBCCs found that most consisted of one room with a lack of chairs and/or mats for children to sit on (66 percent), a lack of child related displays (72 percent) and little or no labelling with words in the environment (79 percent) to aid in language development (World Bank, 2015). Almost half owned footballs and only a very small proportion had any other form of outdoor play equipment. There was evidence of soft toys in the indoor environments in over half the centres visited and there were books in the indoor environment in around one third of the centres (World Bank, 2015b). It would be easy to make an assumption from these figures that the early years environment in rural Malawi is one that is ill-equipped, thus the experience for the children would not be conducive to supporting development, in contrast to this Munthali et al (2014) argue that "despite the fact that most CBCC premises and structures fell short of the standards laid down by the CBCC profile, the activities and services provided were mostly to the book. Children were provided with nutritious foods and subjected to play that stimulated their cognitive and mental development" (p1). Munthali et al (2014) do not go into much description of the play reported but do give an overview (Table 3.2), arguing that the process of play and learning is supporting children's development, whilst they concur with the World Bank analysis that CBCCs were poorly equipped. Looking at the data it is evident that singing, storytelling and spiritual activities that do not need resources other than that of an adult to all intense and purposes are the most popular activity. These are also activities that could be easily culturally relevant and informed.

Table 3.2 Common daily activities done by children in CBCCs (Munthali et al, 2014)

Type of activity	*% of CBCCs that have this activity*
Painting and drawing	54
Pasting	13
Clay modelling	74
Singing	99
Story telling	90
Puzzling	12
Free play	94
Rope skipping	67
Sand and water	23
Spiritual activities	90
Other activities	34

It could be argued that there is still either the residue of missionary influence or an expectation of current westernised influence that a CBCC should look like or feel like a setting found in westernised countries, a notion alluded to by Munthali et al (2014). Moss (2016) shared this view and argued that ECE can easily slip into a discourse of westernised expectations that are driven by an 'audit society' (p10); he goes on to describe the globalisation of local and culturally specific discourses. Yet, it has long been considered that community-based approaches are more culturally appropriate and sustainable (Rasmussen, 2016), a philosophy also argued by Ladson-Billings (1995) in her outline of a culturally relevant pedagogy.

Nonetheless, as described by Riddlell & Nino-Zarazua (2016) the basics of support to education comprise what could be termed 'first order' educational requirements such as classrooms, teachers and instructional materials. They go on to say, however, that educational outcomes are profoundly influenced by a range of critical and less easily measurable factors such as: the nature of the curriculum, the effectiveness of teacher training, the appropriateness of learning materials, school location, school and teacher amenities, the mentoring, supervision and leadership of heads and teachers, the status and respect afforded them by the local community and its involvement in the school. These are all areas that will be considered in the development of the 'introduction of Montessori' project itself and this research.

The NGO is keen to provide a community based educational experience for the children that is a sustainable and quality education, which in the past has not always been the focus of NGOs work in Malawi. Recent studies suggest that aid has contributed to positive educational achievements over the past decades (Birchler and Michaelowa, 2016), it remains difficult to quantify the impact of aid on education outcomes for several reasons. Part of the problem has been the focus on the impact on school enrolment and attainment rather than on measurements of education quality (Ridell & Nino-Zarazua, 2016) and in this case student and staff well-being.

It is commonly agreed that as CBCC continues to develop in rural Malawi (Munthali et al, 2014, World Bank, 2015b, Rasmussen, 2016) there needs to be an awareness of the challenges that lie ahead in order to sustain this Community based model, which can create a foundation on which to build future knowledge and continue to support the development of young children and families in rural communities.

3.6 The Child

As previously noted, there is little research in the field of children and childhood at a sub-Saharan African level and even less at a Malawian level. It can be argued that the Malawian ideologies are mixed in content and influenced by both early historical, settler and westernized views and the cultural roots of the country, often in conflict with each other.

3.6.1 A few statistics

It is estimated that there are 8,621,751 young people and children under the age of 15 in Malawi. Of these approximately 1.4 million are under 5, with 1.2 million living in rural areas (Countrymeters, 2019). School-age children (ages 5-19) make up 39.5% of the total population in Malawi, although more than 6% of children are still not attending primary

school (The World Bank, 2019). 49% of children aged 3–5 are enrolled in Community Based Child Care Centres (The World Bank, 2019).

The concept of Childhood has undergone tremendous transformation, especially in sub-Saharan Africa (Boakye-Boaten, 2010), and will continue to do so due to the ever-changing socio, economic and political contexts of sub-Saharan Africa. For the child in Malawi, and in a very formal anonology, the Children and Young Persons Act (Cap 26:03 Laws of Malawi), which was enacted in 1969, and still stands today, does not have one definition of a child, instead, it acknowledges a child as a person below 14 years of age with a young person being defined as a person below the age of 18 years (UNICEF, 2019). The act focuses on justice, childcare and protection.

3.6.2 A cultural perspective

The Malawian child has a rich culture to absorb and a history of traditions, that are often mis-interpreted by Western society. Children who are born and raised in rural Malawi are the focus for this literature review, as this is the situational context of the children who were involved in the study. Onwauchi (1972) maintains that the children of indigenous African societies are educated through the daily processes of life in their traditional customs and values. They learn stories of traditional tales and myths, the elders instil a moral ethical code of behaviours and social relationship, often aided by religious customs and ceremonies, and a continuum of spiritual ideas are established. “These spiritual ideals lay the foundation for the respect which the indigenous Africans have for their political institutions; the love, respect and obedience which the children must show their parents and elders” (Onwauchi, 1972, p.242).

Children in Malawi are presented with many challenges to their natural course of development (UNICEF, 2017) ranging from lack of knowledge or opportunity within the

family, to supporting their parenting role, poor nutrition, poor health, little access to early education and no protection within their communities (UNICEF, 2017). Challenges of these types will delay and affect, what is deemed to be normal development in the early years of a child. Today, children in Malawi continue to experience many challenges, among other things, "high prevalence of diseases, high mortality rates, high prevalence of HIV, high incidence of malaria cases, limited access to maternal health services, low institutional capacity, inequitable access and utilization of Essential Help Package services, inefficiency of the health care system, high prevalence of health risk factors, inadequate supply of essential drugs, and inadequate health infrastructure" (MDGS II, 2011-2016, p. 41). In addition to these challenges, there is also a lack of training for most caregivers and pre-school teachers, in early childhood development (Kholowa & Maluwa-Banda, 2008). The situation makes the youngest of the children vulnerable, especially when you consider that "early school learning also improves children's health and nutritional status" (Munthali et al. 2014, p2).

As discussed above, the first 1001 days are considered crucial for a life-time health and development (Bakilana, 2016); this describes the child from conception to the age of two. The children participating in the research are 1 years old and above. It is agreed that the first three years of development of the child are fundamental, and that "in general early cognitive development is one of the major factors that determine" a young child's education (Munthali et al. 2014, p1). UNICEF (2017) describe early childhood development in Malawi as "the physical, cognitive, linguistic, and socio-emotional development of a child from pregnancy through the first years of life" (online).

Of utmost importance to the strategic plans for education is the views and the involvement of the Community. Understanding the cultural expectations will ensure a holistic education for the children. A stakeholder engagement project was carried out with the adults of the

Community, to ensure the stakeholder expectations were understood (Pick, 2017). The parents in the Community of the school noted two main important outcomes for their children; the first being the importance of English as a spoken language, which in itself was interesting if you acknowledge the research of Gallimore & Goldenberg (2001) who documented that children may learn best when school learning is centred around patterns of expected behaviour and language absorbed in the home and community and the second being a culturally relevant curriculum that will prepare their children for future schooling and helping in the home supporting the acknowledgement that different cultures have different expectations of the role of the school in their community and the role of the teacher within the school (Wu & Davidson, 1989; Heath, 1994; Yamauchi & Tharp, 1995; Schonleber, 2006). In essence, the stakeholder intentions were supporting the future of the children of the Community, but we must also recognise the individual needs of each child alongside that of the more articulate stakeholder and give them a voice.

3.7 The adult

It is difficult to critically reflect on the role of the adult in Malawi in a literature review. Early childhood education, as discussed earlier, is still a relatively new concept in Malawi, although its significance is becoming more evident within academic circles (Kholowa & Maluwa-Banda, 2008). There is not currently, a recognised professional role for the early years' teacher in Malawi, it is a role generally adopted by Community members, particularly in the more rural areas of the Country. Teachers in Malawi generally use a more command and task teaching style (Ngware, Mutisya & Okteck, 2012), which does not foster critical thinking in the children (Ngware, Mutisya & Okteck, 2012), in contrast to the Montessori teaching philosophy where the teacher prepares an environment and allows the child to lead their learning (Lillard & McHugh, 2019b). Although Oketch (2012) argues that there is little

evidence to prove that active learning has a direct influence on children's outcomes. It must be considered that other elements affect children's outcomes including teacher motivation and attendance in the classroom (Ngware, Mutisya & Okteck, 2012).

Malawi has one of the most severe teacher shortages in the world, equivalent to 2% of the global teacher posts vacant (UNESCO, online, 2013/4). Although these statistics relate to primary teacher shortages, this has a direct impact on Early Years in Malawi. Kadzamira's (2006) study notes that low salaries, coupled with other poor working conditions in Malawi cause widespread teacher discontent so teaching is regarded as employment of the last resort. If there is discontent among the teachers at the foundation this could be a barrier to successful change. Introducing and implementing a new approach to education will hinge on the teachers' attitude towards work, their interest in what they are doing and the reflection of their own identity.

Teachers who are waiting for a Primary posting tend to fill many of the Early Years positions that are available in the Early Childhood Centres. This results in a high turnover of teachers, as they leave once a posting is secured. There is notable concern in academic circles with regard to the educational methods normally used in developing countries, principally rote learning by children who are expected to be passive receivers of knowledge, are mostly ineffective (Richmond, 2007). Richmond (2007) goes on to argue that for developing countries to progress, they need to develop their teacher's knowledge of critical thinking skills, to identify and question operating assumptions and planning. This would ensure that teachers taking up positions in early years centres would be better equipped to work with the younger child.

The Teachers Union of Malawi (TUM) produced a code for teachers, as a result of a study carried out by UNESCO (TUM, online, n.d). The study noted concern that there is currently

a trend in Malawi of 'lowering standards of teachers and teaching itself' (TUM, online, n.d). It went on to list its concerns, the two most notable being:

1. There is general deterioration of teacher's morale
2. There are inadequate teaching and learning materials.

This trend has a direct impact on the recruitment of teachers and in the work they do once they are in the classroom.

Community volunteers run many of the Early Years centres in Malawi (UNICEF, online, 2010). The advantage of this is that they have a cultural and contextual understanding of the skills needed by the children of the Community that they are caring for and educating, they are bringing their personal lens of social-cultural understanding to the classroom (Pirbhai-Illich & Martin, 2020). The Community teacher, if trained through local programmes could be an asset to the setting as they will be rich in cultural funds of knowledge (Moll et al, 1992) and envision the culture that is integral to the Community in which they are working (Pirbhai-Illich & Martin, 2020). Pirbhai-Illich & Martin, 2020 through their findings stress the importance of these cultural literacies in local pedagogical practices. There is a drawback to Community volunteers, due to lack of training for the majority of caregivers and pre-school teachers (Kholowa & Maluwa-Banda, 2008), children are being educated by teachers who in the main are uneducated themselves (Kholowa & Maluwa-Banda, 2008), this is an area that needs to be addressed and is directly affected by the lack of funding for early years in Malawi and the lack of significance attached to the importance of early years teachers. There is increasing research suggesting that teacher reform needs to be culturally relevant and generated from within the communities (Tharp & Gallimore, 1988; Datnow, Stringfield, & Costello, 2005). The early years system could be increased significantly if everything is being run and managed by community members, whether that be providing meals for the children,

fundraising for the CBCC and engaging in parent's education. There still remains the challenge, however, of training the early years teachers, the cost of that training and the accessibility of the training. Currently the training is the responsibility of national and district governments (Messner and Levy, 2012).

It is becoming evident that the adult in the rural Malawian classroom is from the community, empowered by their cultural understanding and knowledge, with access to some form of training (Schonleber, 2006). Schonleber (2006) maintains that teachers and members of the community want to create their own models with the appropriate supporting materials, culturally congruent pedagogical practices, and ongoing training. Datnow, Stringfield and Costello (2005), debate that just inserting a new set of strategies into an old model is not enough. Instead, they suggest the aim of school reform ought to "challenge . . . social constructs of ability, race, and language" (p.198). A view supported by Ladson-Billings (1995), who developed theory around culturally responsive pedagogy (CRP). As part of her research, she showed that culturally responsive teachers have five characteristics: "they believe that all students are capable of academic success: they view pedagogy as an art: they see themselves as members of the community; they see teaching as a way to give back to the community; and they hold the belief that teaching is pulling knowledge out and that the curriculum is therefore created and shared by teacher and students" (Pirbhai-Illich & Martin, 2020, p55).

There are further potential advantages of the community-based model. Community-based services do not typically involve expensive construction of facilities or the hiring of formally qualified teachers, however, the MoGYCS (2003) argue that because pre-primary classes often use existing facilities (i.e., schools) and sometimes trained teachers, the care and education provided is of a good level. Conversely, if primary schools are already

overcrowded and qualified teachers are scarce, such as in Malawi, then ECE is secondary in priority to primary education. There is a drive in Malawi to include ECD concepts on Teacher Training Programmes (MoGYCS, 2003). If this were to become the case then a more focused training towards ECD would ensure a natural increase in the quality of ECE teachers in the classroom, alongside a recognition of the differing culture in Malawi, with particular emphasis on the socialisation of children and local expectations about the role of school and the teacher in that socialisation process (Tobin, Wu, & Davidson, 1989; Heath, 1994; Yamauchi & Tharp, 1995; Schonleber, 2006).

The role of the early years' teacher in the classroom, as discussed above is a somewhat new phenomenon and with that in mind, the role of observation, assessment and teaching would be viewed with caution. Support for the early years teacher in Malawi regarding assessment can be accessed through the Early Childhood and Development: Monitoring and Assessment guide. A guide that is a tool kit for ECD teachers and coordinators, it is effectively a tick box exercise and does not address the knowledge and understanding of the early years teacher completing it. The guide also does not alleviate the fact that there is the absence of a comprehensive operational plan and a systematic training program for ECD coordinators, head teachers and teachers of preschools (MoGYCS,2003), it could be considered that the role of training and development should be taken up to a community level. Whether we are considering traditional early years teacher training or a more culturally led training program within the community there is an importance in the teacher's understanding of early years child development. Yet again, there is the need to recognise the westernized and missionary influences in teacher training and in early years as argued by Munthali et al (2014) and as discussed in other elements of this literature review in relation to areas of the dynamic triangle, the child, and the environment. It is also considered that community-based approaches are more culturally appropriate and sustainable (Rasmussen, 2016). Supporting

this view Ladson-Billings (1995) developed her theory of a culturally responsive pedagogy with three primary goals, two of them being cultural competence and socio-political consciousness (Brunold-Conesa (2019).

The adult's awareness of the community and having a belief that they are extracting knowledge and creating a curriculum that is developed through collaboration between the teacher and the child (Ladson-Billings, 1995), contributes to a strong community foundation (Brunold-Conesa, 2019). The teacher's role is to conceptualise how culture is developed Pirbhai-Illich & Martin (2020) in the environment supported by the notion of funds of knowledge (Moll et al, 1992). All adults involved in the early education of the children will view the world differently, having had a different positionality (Moss, 2019). The adults involved in my research all had innate individual differences, which will mean they will have different ways of viewing early childhood education and their role as an adult in the classroom (Moss, 2019).

3.8 Chapter summary

It is inarguable that political, social and economic factors have shaped curriculum change and development in Malawi in recent times (Lwanda & Chanika, 2017), and are one of the main influential factors in shaping educational change and development of the early years teacher. Westernisation has wielded changes in the education systems that have resulted in a loss of indigenous knowledge (Hollos, 2002) from educational frameworks. How a person interprets their life, and their future actions (Moss, 2019) is directly affected by their education, along with their future opportunities and life chances (Abdi and Cleghorn 2005). It is considered that the adult understanding the Communities indigenous foundations can then develop an educational framework that responds to these foundations (Brunold-Conesa, 2019).

It became evident whilst doing a search of the literature that in comparison to other disciplines, research on education in rural Malawi was more difficult to source. There are few papers focused on this, which is surprising considering the importance emphasised on this at an international level by the SDGs. Although by far the hardest Chapter for me to write, it was the one that offered the greatest learning journey for me and allowed me the opportunity to develop my knowledge of a community that I knew little about. There are many challenges and barriers to offering a rich, early years learning experience for children in rural Malawi. The statistics detailed paint a picture of a country struggling to meet outcomes placed on them by the international community. With the challenges of the sheer size of the population and variations on contextual demographics, implementing a national policy is difficult, consequently a more community based, and community relevant approach may be more effective. The Montessori pedagogy, as discussed in the next Chapter, is explored as an approach to education to enable the school in Malawi to overcome some of these challenges.

Chapter 4 Literature Review

"Scientific observation has established that education is not what the teacher gives; education is a natural process spontaneously carried out by the human individual and is acquired not by listening to words but by experiences upon the environment. The task of the teacher becomes that of preparing a series of motives of cultural activity, spread over a specially prepared environment, and then refraining from obtrusive interference. Human teachers can only help the great work that is being done, as servants help the master. Doing so, they will be witnesses to the unfolding of the human soul and to the rising of a New Man who will not be a victim of events but will have the clarity of vision to direct and shape the future of human society."

(Montessori, 1999b, p3)

4.1 Chapter introduction

Starting from a Global perspective, this Chapter will journey around the dynamic triangle: the environment, the child, and the adult (Fig 1.1), exploring the literature and interpretations of Montessori's work. Starting from a review of global research influences, consideration is then given to the definitional interpretations to develop an overview of the limited literature about Montessori research. The Chapter ends with a review of cosmic education and sustainability, followed by a summary to draw together Chapters 3 and 4.

4.2 The Montessori Approach

Montessori did not protect her work or name through copyright; thus, its implementation can vary widely (Lillard & McHugh, 2019 a & b) and as Montessori herself was constantly experimenting and researching, the principals and practices of the method subsequently evolved over time (Lillard & McHugh, 2019; Trabalzini, 2011). Montessorians worldwide all differ slightly in their interpretation of Montessori's writings, both in their understanding of theory and approach to practice. Through this review, and the subsequent research Chapters, I attempt to develop understanding and identify the true seeds of the Montessori approach from which a culturally relevant Montessori approach can grow.

4.3 Global research influences

As discussed in Chapter two, Montessori developed the basis of her methods in the early 1900s. It seems only right in this introduction to recognise the very early critics of her methods as they had a direct influence on the future of the Montessori method as a more mainstream accepted method of education. There has been negative and positive interest in her work both during her lifetime, and beyond. Although very influential in Italy at its inception and due to Montessori's friendship with Mussolini, her method was supported by the Government in the 1920s, before its popularity waned as did the friendship with Mussolini (Trabalzini, 2011). Charlotte Mason (1842–1923), opposed Montessori's use of scientifically designed didactic materials, arguing instead that children should be exposed to the great work of the masters (NAMC, 2013). Very relevant for this research was Charlotte Buhler (1893-1975) who argued, contrary to the writing of Montessori, that children under the age of 5 were not able to absorb any form of culture (O'Donnell, 2013), although Montessori argues that these views were because other researchers were concerned with external activities rather than an inner understanding of the mind (Montessori, 1999b). One of the most influential critics of the method was Kilpatrick (1914) who discredited her work in his book to such an extent that it halted interest in the Montessori method in America (O'Donnell, 2013). Cossentino (2009) ascertains that Montessori's core concepts discussed in this Chapter were not entirely new, she argues that "they would have been recognizable to an audience familiar with the philosophical ideas of Rousseau and the pedagogical theories of Pestalozzi, Froebel, and Dewey. What was new, and remarkable, was Montessori's direct appeal to practitioners and parents rather than academics" (p521). Research was building slowly with some indicating positive outcomes for children in relation to social-emotional and cognitive development and a number of studies showing indifferent outcomes (Lillard & McHugh,

2019a), although as Lillard & McHugh (2019a) also argues these indifferences could be because of a variation in implementation of the Montessori method.

There are very few books written by Maria Montessori herself (Stephenson, 2013). The books that she did write or have been written, have predominantly been published by Association Montessori Internationale, and are anthologies of the lecturers given over her lifetime. During her lectures, Montessori takes the opportunity to promote the importance of the three main focuses of her research, experimentation, and teaching: the child, the environment, and the adult. There are 10,000s of schools around the world that align themselves to Montessori (Lillard & Hughes, 2019a), but as implementations of the method differ, Lillard and Hughes (2019a) argue that it is becoming difficult to define what the method in practice looks like. In this literature review I will present what is known about Montessori and her method of education and examine research about the method.

There is limited peer reviewed research into the implementation and effectiveness of Montessori early years education (Lillard & McHugh, 2019) globally, although importantly, the method is growing (Lillard & McHugh, 2019) in Malawi. Most research to date is centred around American experiences. Association Montessori Internationale (AMI) has been the most proactive of all the Montessori organisations; they actively promote children's rights throughout the world, irrespective of race, religion, and political and social beliefs. They currently manage various initiatives providing educational solutions for the delivery of quality Montessori education in challenging situations mainly through outreach work (AMI, online. 2018). There is a division of AMI called Educateurs sans Frontières (EsF) who work with governments, organisations, communities, families, and individuals to further the rights, education and welfare of children around the world. They state "EsF is committed to transcending borders in order to serve children through innovative education initiatives using

Montessori principles and practices" (EsF, online, 2018). EsF documents a few projects on the implementation of Montessori. Their work in seven small government schools in Thailand was notable and in 2010 a small evaluative project was carried out to monitor intellectual and basic skills (EsF, online, 2018).

There has been some extensive research done by Vicky Colbert and the Fundación Escuela Nueva (FEN) in Colombia whose goal is to "drive large scale social change through providing quality education and creating a sustainable global community that supports continuous learning" (FEN, online, 2018). Although not Montessori specific, the philosophy behind the education program can be aligned with Montessori education. Escuela Nueva is an educational model designed by Colbert et al (EsF, online, 2018) in the 1970s to improve the quality, relevance and effectiveness of rural multi-grade schools in Colombia. Using simple, fundamental strategies, the children actively learn and participate in their education. They also carried out studies in Vietnam, (Parandekar, 2017), looking at enhancing the quality of their schooling aligning the program implementation to learning outcomes in Colombia (Hammler, 2017) and Escuela Nueva's impact on social interaction in Colombia (Forero, 2006). One of their most recent on-going innovations has been the monitoring and evaluating students' non-cognitive behaviours in Colombian schools (Fundación Escuela Nueva, 2018, online).

4.4 The Environment

The Montessori prepared environment is designed to enable the child to find themselves, in a place appropriate to their developmental level (Leonard, 2015), a place where he feels a sense of belonging and can flourish. A place where the children work towards gaining independence, and she coined the phrase "help me to help myself" (Montessori, 1965).

These elements are important as they link to the attributes needed to create an appropriate

learning environment for the child to learn in. An environment that is culturally relevant (Ladson-Billings, 1995), academically relevant, socially relevant and supports all aspects of the child's developmental needs. The early years is a transitional period in a child's life where they are likely to begin experiencing greater autonomy and less reliance on adults as they prepare to enter formal schooling. To create an environment that fully empowers the child in his learning and meeting the challenges of learning, an adult must be willing to stand back for those extra few seconds to understand how this learning and activity contributes to children's development and identify the positive outcomes that can be attributed (Sandseter, 2009) to learning and development.

Lillard et al (2017) describes a quality environment as one that develops the whole child, by giving the child the opportunity to learn through age-appropriate socio-emotional and cognitive skill-building opportunities, although there is discussion amongst Montessori researchers such as Lillard et al (2017) to define what is termed as high-fidelity or low-fidelity Montessori environments, and as such the interpreted pureness of the environment provided. In a more recent paper, Lillard & McHughes have created a definition of authentic Montessori (2019a; 2019b). Lillard et al (2017) evidenced that "over time the Montessori children fared better on measures of academic achievement, social understanding, and mastery orientation, and they also reported relatively more liking of scholastic tasks" (Lillard et al, 2017, p1), when exposed to a high-fidelity Montessori environment, this evidences some development and is contrary to Katz (1992) who expressed concern that Montessori places too little emphasis on children's social development. One of the newer spoken terms used currently in early years practice is executive functioning, including skills such as flexible thinking, memory, problem-solving and planning, "Providing the support that children need to build these skills at home, in early care and education programs, and in other settings they experience regularly is one of society's most important responsibilities" (Povell, 2017, p29).

4.4.1 The Social Environment

Underpinning the Montessori philosophy of the prepared environment is the link between the classroom environment and the home environment, the link between teacher and parent, the social element of the classroom. To learn effectively, Montessori insisted that children, teachers and parents or carers must have a link with each other for the smooth running of the whole learning process (Goren, 2005). Montessori described a prepared environment that would allow the child to explore and experience purposeful activities within the learning environment (Montessori, 1946/2012).

Montessori advocated an environment that emulated the home, the family and the community, creating an environment of social cohesion; a social place where children will thrive (Montessori, 1946/2012; Lillard and McHugh, 2019a). The basis of this community was the three-year age groupings, working with interrelation to her developmental theories; children grouped 0-3 year; 3-6 years and 6-9 years (Ansari et al, 2016; Lillard and McHugh, 2019a). Montessori argues that social cohesion is to nurture the bonds of social life, that by segregating children by age is inhuman and inhibits development of the child (Montessori, 2007a). There have been a number of studies looking at this type of peer learning, commonly known today as vertical grouping (Ansari et al., 2016; Justice et al., 2017; Wang and Su, 2009; Wisler et al., 2002). Montessori's view that children in these vertical grouped environments support each other; older children support younger children, they show respect for each other and show an interest in what each other is doing (Montessori, 1946/2012). Yet International research on the benefits of mixed-aged classrooms varies (Ansari et al., 2016; Justice et al., 2017; Wang and Su, 2009; Wisler et al., 2002), although peer learning is strongly supported (Lillard, 2005). Studies that report adverse outcomes from mixed-aged classrooms (Ansari et al, 2016) were those that engaged in whole-group teaching, quite different from Montessori education, which provides individual teaching (Bailey et al, 1993).

It is argued that research that supports vertical groupings at the preschool level highlight the beneficial opportunities that younger children have, to watch and imitate their older peers (Bailey et al., 1993). Montessori education that allows for vertical grouping provides children with this opportunity in abundance.

4.4.2 The Physical Environment

The most important element of the physical environment is that it must be befitting the child, offering purpose and reality (Montessori, 1946/2012), with furniture and equipment to fit the child (Elkind, 1983; Lillard and McHugh, 2019a). There should be both an indoors and an outdoors environment, that enables the children the opportunity to flow between them "so the children may be free to go and come as they like, throughout the entire day" (Montessori, 1964, p80; Lillard and McHugh, 2019a), an element of early years practice which in the UK is now deemed to be best practice. Montessori emphasised the importance of access to the outdoors to enable exposure to nature, plants and animals, fresh air, and sunlight (2007b). In fact, recent research shows that children would prefer to choose caring for animals and plants over toys (Lillard, 2019). A slightly larger than normal main room should have space for child-sized chairs and tables, and room for the children to work on the floor on mats and be able to move freely without disturbing each other (Montessori, 1964). It should be filled with things of natural beauty that will "interest the child" (Montessori, 1964, p82), but the décor should be neutral in colour, as should the physical furnishings. These basic principles around the physical environment should be the same in Montessori environments worldwide, the difference being the cultural elements driven by the children's interests, social context and community context, Brunold-Conesa (2019) claims that this cultural responsiveness of Montessori pedagogy is what secures the universality of the Montessori environment.

Created around a carefully prepared environment, the Montessori method offers children the opportunity to explore a complex and interrelated set of hands-on materials across major topic areas that will interest the child (Lillard et al, 2017). As modelled by Lillard (2012), when I refer to Montessori materials, I am referring to the physical apparatus, for example, the Pink Tower and Broad Stair and when I refer to activities, I am referring to, for example, table-washing and the Silence. (Lillard, 2012, p380).

It is considered that the main foundation of the Montessori curriculum is the accessibility of activities available to the children which replicate everyday living, these should be culturally relevant (Montessor1, 1965). She noted that children loved using miniature objects to engage in real activities; activities they see performed by the adults in their culture. Montessori classrooms provide many of these opportunities to practice skills for life. Turner (1992) raises the concern of the cost of creating a Montessori environment and the effort to keep it clean and complete. It could be argued that so long as this area is kept culturally relevant (Ladson-Billings, 1995), and is responsive to the children's learning needs (Ford & Rea, 2009; Brunold-Conesa, 2019), the children will see the importance in the area, care for it and for themselves. It must also be considered that in many cases and in my own experience with locally relevant sourced material and help from the community, the cost is minimal.

4.4.3 The Montessori Activities

Montessori designed several very specific didactic learning materials, which are always available to the child in the Montessori learning environment. These materials provide learning opportunities for children, in the main between the ages of 2–6 years (Isaacs, 2015, p135).

The curriculum contains a network of teaching materials interconnected across all areas of learning and development (Lillard, 2019): sensorial, numeracy and maths, literacy and

language, creativity and knowledge and understanding of the world. The foundation of the learning materials for these areas are the specially designed didactic activities. Each piece of didactic material isolates a learning concept, whether this is the use of sense, such as touch or chromatic, learning number names and quantities, word building and writing or names of places around the world. The materials are numerous and carefully designed, Montessori was specific when describing them as "being determined by quality and quantity, through experimental research, we ensure the means really necessary for physical development" (1965, p72), thus offering insight into the role of the didactic learning materials themselves, and inferring an importance and focus on the Montessori materials, this is in contrast to the philosophical foundation Montessori also advocated with regard to the role of the environment in supporting the child's development (Trabalzini, 2011) and the importance of this environment being responsive to the environment in which the child lives, values Montessori (1946/2012) argued are inherent in Montessori education. This is a view supported by Brunold-Conesa (2019) who reasons that the Montessori approach allows opportunity for the child's unique individualisation of their skill sets and interests, but also regarding their cultural and ethnic backgrounds. Of course, this will also depend on the differentiation of the Montessori education offered by a school or setting.

Montessori supported the process of learning to be one of self-direction with freedom of choice and in an environment recognisable to the child (Montessori, 1946/2012) allowing opportunity for Montessori schools to develop environments that meet the need of the child it serves. The first book Montessori penned was in 1909, "II Metodo della Pedagogia Scientica". This was the first time she put into writing her experiences of developing her method, she would re-write this work, twice more, in 1913 and 1926. Montessori did not write down many detailed descriptions of the specific Montessori materials or how to do the specially formulated presentations to go with the materials, and generally shared this through

the teacher training courses that she ran (Montessori 1913/2013 & 1946/2012), these have then been translated and interpreted over time.

How the foundations of the Montessori environment is interpreted in the current day and then created from these teachings is a focus of current research in which studies reveal that Montessori environments should not be diluted with supplementary activities and additions to create extensions and modifications, fuelling the discussion between the definition of high and low-fidelity Montessori environments (Lillard et al, 2017; Lillard & Heise, 2016; Lillard, 2012; Rathunde and Csizszentmihaly, 2005). These studies argue that they provide evidence for the efficacy of fully implemented Montessori, although it could be argued that there is little detail in the studies of all the elements of full implementation. Lillard & Heise (2016) examined three Montessori classrooms that contained supplemental, non-Montessori materials like commercial puzzles and games. These supplemental materials were removed from two of the three classrooms. Children in the classrooms from which the supplemental materials were removed grew significantly more in early literacy skills and executive function that their peers in the classroom with the supplemental materials, Lillard (2012) concluded that mixed results on outcomes from previous Montessori research could potentially be explained by the fidelity of Montessori implementation. Yet there was no discussion or evidence of other fundamental foundations to Montessori practice such as vertical grouping, 3-hour work cycle, cultural influence, free flow, adult to child ratios, all elements that would have impact on the outcomes for children measured.

There remains conflict between different Montessori organisations as to the purity and the authenticity of delivery and the fidelity of the curriculum materials (Rathunde and Csizszentmihaly, 2005; Culclasure et al, 2018; Culclasure et al, 2019; Lillard, 2017; Lillard & Heise, 2016). Lillard & McHugh (2019) developed what they argue is the authentic

Montessori environment contains a complete set of Montessori materials, appropriate for the age of the child, no more and no less. Montessori (1998) also advised the importance of having only one of each activity to support the children's discipline and their understanding of courtesy and respect for others. Contrary to these interpretations Katz (1992) argued that the very fact that children in Montessori classrooms have access to the same curriculum materials all year round encourages a "too narrow" (p185) learning environment.

The prerequisite of the specific materials in a high-fidelity (Lillard, 2012) Montessori classroom that has been agreed upon by several Montessori collaborators, although at this point Lillard (2019) does not define who the collaborators are. According to the National Centre for Montessori in the Public Sector (NCMPS), other Montessori practices that represent a high-fidelity Montessori program incorporate mixed-aged classrooms based on Montessori's theory of human development, classrooms managed and run by a single, trained head teacher accompanied by a non-teaching classroom assistant, a classroom composed of "no fewer than 24 students supervised by two adults", and a three-hour uninterrupted morning work cycle and a two-hour afternoon work cycle for older children (NCMPS, 2016).

If there is agreement on the authenticity of delivery and the use of high-fidelity Montessori materials, then to achieve the best results for children, there must then be consideration of the cultural irrelevance of both delivery and materials. While much of this attention given to the issue of the fidelity of Montessori practice may be considered unduly hagiographic, given her promotion of intercultural respect and Cosmic education, it is considered extremely unlikely that Montessori herself would have been inconsistent in her practice. There is currently no significant research that measures the influence of cultural elements influencing Montessori environments.

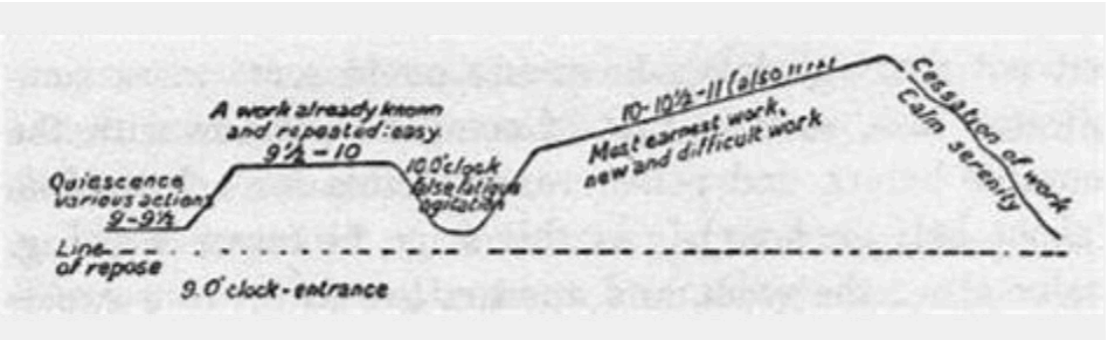
Being culturally responsive (Ford & Rea, 2009; Brunold-Consea, 2019) can have relevance to several different contexts (Ford & Rea, 2009), in this case the relevance is identified in the influence and the knowledge that supports the development of a culturally responsive environment. A barrier that is ever present in the Montessori environment is how expensive they are to purchase. There is also consideration of importance of these materials in creating what is deemed to be an authentic or high-fidelity Montessori curriculum (Lillard, 2019). If there is a backing for high-fidelity curriculum materials (Lillard, 2017; Culclasure et al, 2018; Culclasure et al, 2019) then creating high-fidelity Montessori environments in rural areas of Malawi would be difficult for the very reason discussed above, but also due to the recognition of cultural variation (Rambusch cited by O'Donnell, 2007). Certainly, as Povell (2009) discussed at length, variation of the method to respond to the local culture was instrumental in reviving Montessori education in America when it was re-introduced in the 1960's by Dr. Nancy Rambusch (O'Donnell, 2007).

Montessori advocated the cultural diversity of her environments by the very fact that she believed children are a symbol of the future and as a hope for mankind (Montessori, 1998a). The Montessori curriculum and activities provided promotes intercultural understanding through its foundations of cosmic education, this is discussed further in Chapter 4.5 and the recognition of the fundamental needs of man supporting empathy in young children (Brunold-Conesa, 2019). Through the creation of a culturally relevant environment that supports children's knowledge of intercultural understanding children will innately learn an appreciation of differences with respect (Gay, 2019), although Brunold-Conesa (2019) argues that there is still work for teachers to do to cultivate understanding and reflect the notion of difference (Gay, 2019) in the authentic teaching curriculum.

4.4.4 The Emotional Environment

Framing the physical and social environments is that of the emotional environment, to support the self-discipline, concentration, and self-regulation. Central to the emotional environment is the notion of a three-hour work cycle (Montessori, 1946/2012), although she appeared flexible around how and when the work cycle was scheduled (Lillard, 2019). In some cases even described a work cycle as long as eight a.m.– six p.m., with preparation for lunch etc all being included in the work cycle (ibid, 2019). To support this notion Montessori described the curve of work (Fig 4.1), where children journeyed through simple absorption for short periods of time, false fatigue, and deep absorption for long periods of time. During this time, they do not have a traditional break, they can choose to snack when they feel the need. This break is not needed to give the children a rest and a chance to move as is the case in traditional classrooms, but simply to meet the need for refreshment, as the Montessori environment allows for continual movement by the child.

Figure 4.1. Curve of Work (Montessori, 1965)



During this time children are free to make constructive choices whilst exploring their personal interests. The child has the freedom to follow his own innate learning path, to move around the classroom and make their own learning choices. They can work, relax, socialise, (Leonard, 2015) and independently manage their time. To facilitate this freedom, the practitioners need to trust and respect the child (Isaacs, 2010). Giardiello (2014) describes it

as an environment in which "freedom is more akin to self-discipline, and not under the direction of a teacher but, rather, a self-correcting pedagogy" (p83). Allowing for this self-discipline and opportunity to concentrate without interruption for long periods of time, afforded by the three-hour work cycle, supports the child's journey to normalisation (Montessori, 1946/2012; 2007b; 2002), enabling them to make the most of the prepared environment and to be able to contribute productively to their community. Piaget (1971) discussed the child's ability to assimilate the new information from their experiences and integrate this with previously developed concepts to help them understand their world and generalize knowledge, supporting Montessori's ideology that a normalised child will be able to assimilate and make sense of their place in their world. Aubrey et al (2000) claim that it is part of the human condition to try and make sense of our world.

4.5 The Child

It seems only right to begin this section with the reference to the child within the context of the UNCRC (1989), recognizing that the convention defines the rights of the child, but more importantly that 40 years before the convention was adopted Montessori had already framed the view of the child as a citizen, as a dignified human being with a right to live and be protected. "Whatever his social background, whatever his racial origins, whatever his birthplace, the child must be recognised as a citizen" (Montessori, 2007c, p68).

4.5.1 Montessori psychology of learning and development

The child is the central element in the Montessori approach to education. She advocated children as active learners with an "intrinsic motivation and innate knowledge of how to develop themselves" (Lillard, 2019, p941). Montessori attributed her vision of child development to William James, describing that it can be related to the metamorphic stages of a butterfly (Montessori, 2017) that develops in stages with each stage being different. She

went on to explain that for this innate development to happen there needed to be two other conditions, the support of an adult who does not interfere and offers the child the opportunity to explore and concentrate on necessary work in a natural environment (Lillard, 2019).

Within Montessori philosophy, the child "should be our primary concern and the labours of science need to centralize the child as the child is the foundation of and the key to mysteries of humanity'' (Montessori, 2007c, p62). Montessori professed that children learn and develop in several stages (Table 4.1), that they are richly gifted with powers, sensitivities, and constructive instincts (Montessori, 2007c). The children's self-construction can be nurtured through investigation with self-directed activities in an especially prepared environment (Montessori, 1946/2012). To best gain a full picture of the psychology of child development from a Montessori perspective it is useful to also analyse the work of Piaget (1959), although researching at different times, the two theorists had very similar views of how a child's intellect developed, they are in a way interwoven and each develops the others theory. Piaget, Vygotsky, and other constructivists understood the stages of development so carefully laid out by Montessori (Povall, 2018). Both theorists believed that children go through stages of development that predispose them during this time to a particular way of learning and both support the view that in the early stages sensory learning was an important foundation to the development of the intellect. Piaget (1959) concurred with Montessori's findings around the 'unconscious' and 'conscious' development of children's thinking and learning skills. Piaget and Vygotsky wanted to use her method as a bridge for constructive accomplishment (Moll, 2004).

Montessori's philosophy on how children develop and learn was unique, although it can be argued that it is closely aligned to that of Piaget. After observing children both scientifically and with philosophical reflection (Giardiello, 2014) Montessori documented (Montessori, 1912) two fundamental elements, known as 'Planes of development (Montessori, 1946/2012)

and ‘Sensitive periods’ (Montessori, 1946/2012).

4.5.2 Planes of Development

Montessori established that there are four distinctive planes of development that every child must pass through on their journey to adulthood. During these distinct periods of time children show characteristics that are unique to each six-year plane (Isaacs, 2012): Birth–6 years (Table 4.1), 6–12 years (Table 4.2), 12–18 years (Table 4.3), and 18–24 years. During each of these planes she hypothesised that children and youths are drawn to different activities and skills that will meet their developmental needs at that time and if they are provided with the correct opportunities to explore and practice these skills, they will develop to their full potential. (For this research the focus of the study has been on the first plane of development).

4.5.2a The first plane of development

The first six years of life and the first plane of development is distinct by the physical and psychological growth and development of the child, along with their innate drive of exploration (Table 4.1). Montessori called this plane of development the Absorbent Mind (Montessori, 1946/2012), it is divided into two sub-phases. The first, the spiritual embryonic phase (Montessori, 1946/2012), is the period of early childhood, and an unconscious period of development. During this phase the child develops physically, the immune system of the child will be fragile thus making the child susceptible to illness. The second being the social embryonic phase (Montessori, 1946/2012) and here the child is considered psychologically, to be a more concrete thinker, absorbing everything around them and noticing even the smallest of details. Montessori believed that during this phase more learning takes place than in any other phase, it is the point at which the foundations for all future learning are put in place. The child has many developmental needs during this phase as they begin to acquire language, they progress cognitively, and they become stronger as their motor skills develop.

They will start to emulate the adults in the environments, at home, at school and out in the community. They will begin to understand the world around them, making sense of it and will start to have expectations of it. Montessori also considered this time was the fundamental phase when there were emotional needs. The child will crave love, acceptance, respect, understanding, warmth, and protection. They will need security, order, and as much freedom and independence as they can handle, along with the opportunity for socialisation. Children in their first phase of development are constantly absorbing and making sense of the world around them. Understanding the physical, psychological, emotional, and intellectual needs of the unique child enables us to best meet their needs in the Montessori, cultural and community environment. Montessori advocated for the freedom of children to develop naturally following the manifestations of their natural development (Montessori, 1965, p16), it is at this point that links can be made between Montessori's theories of child development and the intrinsic drives known as human tendencies.

Table 4.1 The First Plane of Development

1st Plane of Development 0 – 6 years Absorbent Mind	
Sensorial explorers – building intellects by absorbing every aspect of their environment	
Sub-phase 0 – 3 **Spiritual Embryonic**	**Sub-phase 3 - 6** **Social Embryonic**
Overall tendency of attainment of independence, co-ordination, concentration and order	Overall tendency of refinement of independence, co-ordination, concentration and order
• (Unconscious) absorbent mind enables acquisition of enormous amounts of information and development of essential skills with no apparent effort. • Egocentric drive influences the child. • Learns unconsciously through manipulation of the environment. Constantly absorbing impressions, without knowing what they are doing and without willing it to happen. • As soon as the child can grasp with their hand, sensory learning begins through the hand, the instrument of the brain.	• Child has learned to walk and talk. • Language development is becoming more refined. • They are becoming more socialized with awareness of others. • Can learn new skills through deliberate effort if they cater for the child's inner drive for independence. • The child begins to intentionally act on their own. • Conscious intelligence begins to develop when the hand becomes the instrument of the brain. • The child begins to innately work on the construction of their own self. • Sensitive periods become prevalent, enabling the child to concentrate on developing a particular skill when the need and interest is strongly present.

Table 4.2 The Second Plane of Development

2nd Plane of Development	**6 -12 years**	**Childhood**
Conceptual explorers – development of powers od reasoning, abstraction and imagination.		
Sub-phase 6 – 9 **The age of instruction**	**Sub-phase 9 - 12** **The age of study**	
Overall tendency of development of reasoning, abstraction, imagination as well as socialization and moral justice	Overall tendency of refinement of reasoning, abstraction, imagination as well as socialization and moral justice	
• Stable period for the child physically, mentally and emotionally. • Memorisation of factual cultural information of particularly interest. • The child becomes aware of themselves in relationship to the contextual community (in relationship to others) • They gain a need for group identity (herd instinct) as the main social characteristic. • Examination of rightness and wrongness of social interactions.		

Table 4.3 The Third Plane of Development

3rd Plane of Development	**12 – 18 years**	**Adolescence**
Survival explorers – seeking to understand their place as individuals in society		
Sub-phase 12 – 15 **Puberty**	**Sub-phase 15 – 18** **Adulthood**	
Overall tendency of development of trust, self-expression, analytical thought, commitment, and responsibility.	Overall tendency of refinement of trust, self-expression, analytical thought, commitment, and responsibility	
• Stability fades with puberty • A phase of great physical, mental and social transformation – marks the end of childhood. • The child physically grows very rapidly and becomes very emotional. • Montessori compares the phase of adolescence to that of a toddler, because of the erratic mood swings and concentration levels.	• Young adult is very vulnerable, very impressionable and full of ideas. • They attach themselves easily to 'good causes' - high ideals and wishing to help others • Drive for independence is as strong as in the first phase. • If thwarted by adults; possibility of flight into fantasy (like a toddler)	

4.5.3 The Human Tendencies

As early as 1907 Montessori demonstrated through her schools that it was the factors of human nature which created the foundations for child development (Stephenson, 2013). Montessori suggested that the human tendencies are innate human traits, characteristics that are predetermined, they are closely aligned to the sensitive yet take on a different direction in each plane of development (Stephenson, 2013). Understanding them is relevant to the

research as Montessori believed that irrespective of culture or race, all children follow these patterns of behaviour (Montessori, 1946/2012). She did not write about them in detail herself but seemed instead to focus on the absorbent mind and sensitive periods as they were more directly related to how children learn. They have been written about and defined in more detail by Mario Montessori, her son (Montessori, M,M (1956 & 1976) and by other Montessorians (Polk-Lillard, 1996; Lillard, 2005). For the reasons described above, these human tendencies link directly to the Malawian child in the cultural context of this research, how they develop depends on the conditions around the child, the society, the culture, and the education, they have a vital role in forming the personality and individual cultural adaptation (Stephenson, 1996). Barrameda (2020) argues that the human tendencies offer the practitioner a framework on which to study the child's natural development; "human tendencies are the characteristics, which allowed the human being from his first inception on earth, to become aware of his environment, to learn and to understand it' (Stephenson, 1996, p13) and Barrameda (2020) goes further to contend that the human tendencies drive the child to survive and adapt their development to their environment. When they are born each child enters an unfamiliar environment created solely for them. The child will naturally find a way to build knowledge of this environment through their experiences, so long as they feel secure and protected in it "this natural way was through the human tendencies" (Stephenson, 1996, p10). Montessori originally named seven human tendencies (Table 4.4). Each tendency does not necessarily link or lead onto the next one, they will manifest themselves differently within a child and innately develop, dependent on the environment surrounding the child and their needs to survive and develop.

4.5.4 To reach their full potential

It is the development of the child, to a point, that human tendencies urge the child towards the creation of a unique personality. The tendencies guide the child to satisfy basic human

needs, those for survival. They drive the child to ensure their fundamental needs are met both for physical safety and the needs for psychological safety (Stephenson, 1996). Montessori, M, M argued that "these human tendencies can either be assisted or thwarted as they motivate an individual's behaviour. This carries important implications for child rearing, education at every stage of development, and for the organization of social life and that knowledge and understanding of them forms part of the basis for an education which is designed to assist the optimum development (preservation) of each individual" (1956, p 18 – 20).

To reach their full potential Montessori believed that the child needs to be independent, autonomous and have freedom to learn at their own pace. The human tendencies are what drives the child on their journey to fulfil their potential. Barrameda (2020) reminds us that all human beings have the tendencies in common, they have existed since man began and will remain forevermore. All children will manifest the tendencies in their own unique way (Barrameda, 2020) depending on their environments and cultural backgrounds and they will need freedom of autonomy to support this unique development. Research has indicated that human beings have a basic need for autonomy (Ryan & Deci, 2001). Montessori encouraged children to work and build their own foundations for learning and development, she advocated a respect in the child and their human personalities, trusting them to know their own innate path of development. The environment facilitates independent choices the child makes daily, including periods during the day when the child leads their own learning. Independent learning is described in several different ways, the most common being "self-regulated learning" and "personalized learning". The varied use of terminologies and phrases all portray comparable themes and practices, including children understanding their learning; being motivated to take responsibility for their learning; and working with teachers to

structure their learning environment (Montessori, 1946/2012; Candy, 1991; Gorman, 1998; Bates and Wilson, 2002; and Perry et al, 2006). Montessori advocated that these theorised concepts of human tendencies were the genetic gift we are born with, and she suggested that they make us uniquely human. She argued that how these unfold will depend on the conditions in the child's life, which makes the understanding of them important to the foundations of the research. Montessori went explained that human tendencies manifested in the child as periods of innate learning and development which she termed as sensitive periods (1912), unique windows of opportunity that a child moves through in their first 6 years of life (Table 4.4), although Giardiello (2014) writes that the term was first coined by geneticist Hugo De Vries (1901).

4.5.5 The Sensitive Periods

Montessori suggested that it is during the 1st plane of development, when most of the sensitive periods become established, creating those first and most important foundations. The child experiences a series of windows of opportunity, Montessori defined them as "a special sensibility which a creature acquires in its infantile state, while it is still in a process of evolution" (Montessori, 1966, p.38). If these periods are not nurtured, they will disappear meaning the child misses out on important parts of their development as the skills will no longer come naturally to them (Isaacs, 2012). When a child experiences a sensitivity, the children are drawn to a particular element of the environment (Lillard, 2005). Montessori (1988) described the child as having a creative aptitude, and a potential energy that enabled them to create a mental picture from the world around them. They construct many acquisitions during the sensitive periods, which place the child in their world in an intense manner.

The main sensitive periods that Montessori wrote about include movement, language, social,

order, refinement of the senses and small objects. Montessori claimed that these sensitive periods were manifestations of the human tendencies; unique windows of time when children can learn a certain skill. These dispositions listed (Table 4.4) are essential to support the child's independent learning. It is suggested they are more likely to be found in a child who is comfortable in themselves (Montessori, 2007). It could be argued that the independence and the absorption of knowledge gained in their early years supports the child's positive self-image, sense of achievement and sense of belonging.

Table 4.4 Linking Human tendencies to sensitive periods

Human Tendency	**Link to Sensitive period**
Communication	Language Social
Movement	Refinement of movement
Exactness / Precision	Order Refinement of movement Refinement of the senses.
Orientation	Refinement of movement
Exploration	Interest in small objects
Order	Order
Abstraction and Imagination	Social Refinement of the senses Order
Concentration	Concentration
Self-preservation and self-development	Social Refinement of movement Order

Montessori developed the concept of the sensitive period during her observational work carried out in the early 1900s and today paediatric neuroscientists are supporting her hypothesis (Lillard, 2005; Lillard & Else-Quest, 2006; Cossentino & Whitescarver, 2012). Specifically, paediatric neuroscientists have studied and documented the effects of Montessori pedagogy on children's neural development (Lillard & Else-Quest, 2006;)

Fogassi, 2016). Currently, pediatric neuroscientists "accept that certain sensory experiences must occur by a certain age for the corresponding sensory areas of the brain to develop optimally" (Blakemore & Frith, 2005, p.26) but that these sensitive periods are not rigid or inflexible.

Montessori linked this sensory learning experience directly to the first plane of development, indicating that a child's brain requires sensorial exploration (Montessori, 1946/2012) and she developed sensory materials that would enable the child to refine their senses (Lillard, 2005). Her insights are supported by more recent research which considers the importance of stimulating a child's neurological development and suggests that children need opportunities to interact with their environment through the concrete use of the senses; visual, tactile, olfactory, gustatory, and auditory (Cossentino, 2007; Fogassi, 2016), enabling them to develop to their full potential. Paediatric neuroscience also highlights the importance of aligning sensory learning to child development (Fogassi, 2016).

4.6 The adult

4.6.1 The role of the adult

Montessori believed that most adults have a distorted attitude towards children, in her opinion adults tend to consider themselves far superior and give themselves so much authority that the child does not stand a chance against them. Her interest in Pestalozzi contributed to her stance that a teacher's role is not just intellectual but should also touch the heart of the child (Montessori, 2002). Montessori argued the importance of trained adults to carry out the training of new teachers (1946/2012), yet although they maybe experts in the delivery of the Montessori training and equipment, they may not be experts in the cultural context (Turner, 2016). She advocated the role of the adult to be present for the child; emotionally, mentally, and physically, to support them (Lillard & McHugh, 2019b), yet previously and in contrast

Katz contended that Montessori teachers can seem to be distant and cold in their interactions with children. The teacher allows the child to lead the way (Lillard & McHugh, 2019b), on their journey to reach their full potential, she wrote that a teacher's job was complete when "the children are now working as if I did not exist… I have helped this life to fulfil the tasks set for it by creation" (Montessori, 1967/1995, p. 283).

It is human nature to endeavour to further skills and knowledge. This is achieved by participating in new-found activities and tasks; the adult's role is to support this progression, as a guide rather than as a teacher and allow the child to show them where they are in their development and their learning journey (Lillard, 2019). Montessori discussed the role of the adult providing opportunities for the child to investigate and problem solve, she spoke of the need for a 'new teacher' (Standing, 1998, p297). She claimed that the adult in the environment was not there to teach but to 'direct the natural energy in the children' (Standing, 1998, p297), 'the teacher teaches little and observes much, and above all, it is her function to direct the psychic activity of the children and their physiological development. For this reason, I have changed the name of the teacher to that of 'directress' (Montessori, 1965, p174), to enable the adult to be knowledgeable about the child and to support them in their natural interests and their innate, individual development. To be able to do this to the best of their knowledge and ability, the teacher needs to understand the community around them and the culture of that community. They need to understand how that culture is conceptualized in the classroom (Pirbhai-Illich & Martin, 2020) and built on the foundations of home and family, from their funds of knowledge (Moll et al, 1992). The description of Montessori's 'new teacher' (Standing, 1998, p297), the director or directress, was challenged by some in the Montessori Community (Loeffler, 1992), arguing that it implies that the adult is in control of the child, yet in Montessori teacher training the directress is taught how to observe and guide the child,

with emphasized importance to the partnership between the directress, the school, the family and society (Trabalzini,2011). Trabalzini (2011) goes on to explain that Montessori professed that it was the materials of learning that supported the child's learning and not the instruction from the adult. She went on to explain that the materials should be in the child's hands not that of the adult.

In contrast to this Trabalzini (2011) explains that knowledge of the correct use of the didactic materials has become an important attribute of the Montessori directress and their training. Montessori cited this ability as an "important task" (Trabalzini, 2011, p145), but I would argue that it is one task of many the Montessori adult has to carry out. The list of Montessori materials is impressive, when you consider when she designed them, yet Katz (1992) described them as too narrow with not enough choice. Each piece of material requires a lesson to teach each isolated concept, Montessori described this lesson as "a call to attention and at the same time, an offer of an object which the teacher demonstrates the use of or gives the name of" (cited in Trabalzini, 2011, p146). Lillard (2019) explains the importance of the teacher's role in the timing, exactness, and content of the presentations of the didactic material, along with guiding the child towards the appropriate next activity or material presentation.

To enable the Montessori directress or director to guide or facilitate the child's learning, one of the most important roles they have is to observe the children and document their learning journey and development. The knowledge gained from observation underpins all the work that the child is guided towards (Macleod-Brudnell & Kay, 2008) and the environment that is prepared, not only to ensure that everything physical is in order but that each individual child's special interest, spiritual needs and developmental needs are met (Montessori, 2007b). To observe and understand how this learning and activity contributes to children's development and identify the positive outcomes that can be attributed (Sandseter, 2009) to

learning and development, is a skill that can "only be acquired through experience" (Montessori, 2002, p152). This is explained further by Montessori (cited by Trabalzini, 2011, p146) "observation is to observe the humanity in its awakening to intellectual life". Montessori wrote of 'delicate insights' (Montessori, 2002, p152) needed for treating children individually. The primary role of the adult in a Montessori environment is to use this skill to provide learning opportunities and experiences through setting the physical and intellectual environment. Siraj-Blatchford & Sylva (2004) concur that a planned, orderly environment that allows children the freedom to move around and use their initiative to access resources is an important aspect of effective pedagogy, supporting the counselled belief that Montessori's work has influenced educational theories more than is sometimes realized.

However, there are some who would argue that adults create children's environments to facilitate the kinds of play adults consider suitable, a process of subtle control, which gives the illusion of freedom (Canella, 2002), this illusion of freedom and adult managed environment falls short of being able to meet the true individual needs of each child and their developmental needs. Enforcing caution on the child can put real limitations on children's play (work) and therefore on their development (Leach in House, 2013) as they are beginning to organise and classify information, experiences, and concepts (Isaacs, 2010). Yet the positive aspect of autonomous challenging of children in their learning and its benefits (Gill, 2012) still receives little recognition, as does the child's ability to assess and manage their own learning. To challenge children the adult needs to know how to step the child outside of their comfort zone. This is rooted in sustained shared thinking or recognizing the "zone of proximal development" (ZPD) when observing the child and making links through the development of learning dispositions, which Carr (2008) argued "shape the interactions children have with others – people, places and things" (p108). This underlines the importance

of the adult in having a socio-cultural understanding of their community and their teaching in the early years classroom (Rogof, 1993 & 2003) to support the child's learning.

Povall (2017) argues that Montessori's view of the adult's role in the classroom is comparable to contemporary adage that they should be "the guide on the side as opposed to the sage on the stage." (p47). She goes on to argue that in these contemporary times "more teachers need to understand and provide hands-on experiences for children to assimilate and accommodate new knowledge" (2017, p47), in contrast to the whole class, rote-teaching that is still prevalent in today's classrooms all over the world. Povall (2018) argues for "child-centred learning, as an insight fundamental to the principles of the Montessori Method" (p46). The knowledge base of the adult is important, as discussed above, the importance of their funds of knowledge is inarguable (Moll, 1995) and of relevance, particularly considering Montessori's commitment to moral and social education (Montessori, 1989). To fully understand how to prepare the Montessori learning environment, preparation of the teacher is fundamental. It should include knowledge of the curriculum but also spiritual and moral self-preparation. Aside from this, Trabalzini (2011) wrote of the importance of having knowledge of their community and the wider world, as children do not exist without society (Montessori, 1989) and the teachers plays an influential role in society.

4.6.2 The Preparation of the teacher

The starting point for the preparation of the teacher begins with them "creating themselves anew, having rid herself of pedagogical prejudices" (Montessori, 1963, p86). Cossention (2009) articulates that to become a Montessori teacher the adult must orientate their understanding to her philosophy toward childhood and human development. The teacher training relies on the scripts from these lectures (Turner in Loeffler, 1992), along with the teacher or trainer's interpretation of these writings, which it could be argued could have

shifted the historical understanding of her writings. Lillard (2019b) gives an overview of the in-depth nature of the training to become a Montessori teacher, advocating it as necessity. She describes a five-month programme, including over 180 hours of lectures on the philosophy and concepts and more than 50 hours to learn the role of the materials and the presentations and 50 hours of material practice in the classroom (Montessori, 1946/2012; Lillard, 2019B). Katz is critical of the intense teacher training, warning of Montessori teachers who become "pre-scripted and pre-scribed" (Katz, 1992, p185). Although Montessori encouraged practice and exploration with the materials (Standing, 1998) by the children, it could be argued that the teacher training has become so prescribed, and that this opportunity should be offered to teachers in training to deepen their understanding. Montessori teacher training should be delivered in the same way you would encourage a Montessori child to explore and discover (Gang, 2020). In her own explanation Montessori suggests training on observation, as the teacher must be able to "recognise the ephemeral phenomenon of concentration when it occurs" (Montessori, 1946/2012, p226) to enable the teacher opportunity to understand how the child learns and follow the child's needs. As part of the training, teachers prepare a reference book, including a write up of the presentations, lectures, and illustrations (Lillard, 2019). Cossentino (2009) described the training regime as "old school" (p522), she went on to state that the "aim of these courses is not development or construction, but transmission" (p522), in contrast to Montessori who felt the courses were not enough for the complete preparation of the teacher (Lillard, 2019). Montessori explained that the teacher may require a "long period of training to change her spirit and give it another form. This comes with practice, contact with children and experience (Montessori,1994, p104).

The early years is an element of time in a child's life when there is less reliance on the adult whose role becomes that of a guide rather than a teacher. The children begin to identify with

themselves and become more autonomous as they move through life. It is a starting point and a time where they begin to build foundations for learning and their future development. To enable this to happen the child needs to work in an environment, which fully empowers them in their learning, and prepares them to meet the challenges ahead of them. Once the child is settled and happy to separate from the adult in the environment, the adult needs to stand back for those extra few seconds, to not interfere (Montessori, 1946/2012) but instead gather information via observation and so play their role in the creation of a cosmic learning environment.

The Montessori teacher needs to recognise the child as a human being (Standing, 1998, p298). Montessori makes it quite clear in her writings that being an adult working in a Montessori environment is not just a question of studying child psychology, she explains that the "first essential is that a teacher should go through an inner spiritual and moral preparation" (Standing, 1998, p298). She will need to be calm, patient, and humble; she must know how to restrain her own impulses and to learn how to carry out her tasks with delicacy (Montessori, 2002). She acknowledges the importance of the acquisition of culture (Standing, 1988). Montessori and her own acquisition of culture would come later in her experiences, initially her cultural experiences were all rooted in Italy, but once she embarked on her travels and particularly from the influences in India her acknowledgement of cultural understanding became more prevalent. It is also detailed that in 1926 she toned down some of her writing at the time to gain a foothold in the culture of the day (Trabalzini, 2011), acknowledging her understanding of culture empathy.

4.7 Montessori a culturally responsive cosmic education

This section throws an extra thread into the weave of the thesis as I have noted that cultural pedagogy is an important unsung element of the Montessori approach that is weaved through

the Montessori curriculum through cosmic education. The global reach (chapter 4.3) of Montessori schools and its influence in a multiplicity of cultures is argued to be an element of it culturally responsive pedagogy (CRP) (Brunold-Conesa, 2019). Yet I would argue that as a Montessori community we have much to consider within the development of our environments and culturally responsive curriculums to truly call it a CRP, not in the least the agreement of the authentic foundations (Chapter 4) that will support a truly cosmic education. In this section I will draw together the literature that I believe supports understanding of how cosmic education supports CRP.

I believe cosmic education to be one of the most important pillars of Montessori's philosophy, and it is not one that is often addressed in teacher training. On initial reading this can appear to be a deep notion, and one she wrote about eloquently but not extensively. She also attributed a Cosmic education to the second plane of development, whereas I would argue that due to societal impact younger children today are more exposed than ever before to the Cosmos and to the reliance of all things on each other.

As discussed in chapter 4 Montessori advocated for a method of education for children based on both her scientific observation of children and their development and her conviction that children are the hope and potential for all mankind (Brunold-Conesa, 2019). To support this human potential and man she wrote of the need for adaption (Montessori, 1946/2012), every living thing will need to adapt to survive, to do some work in the environment which is useful to that environment (Montessori, 1946/2012). To work with usefulness in the environment it first needs to be relevant, responsive, understandable, and achievable to the child. These basic principles around the physical environment should be the same in Montessori environments worldwide, the difference being the cultural elements driven by the children's interests, social context, and community context.

Brunold-Conesa (2019) claims that the cultural responsiveness required of Montessori pedagogy is what secures the universality of the Montessori environment. Cultural responsiveness links directly to the child's understanding of their place in the community and thus in the world and this understanding is developed through a cosmic education. Looking back at chapter 4.4.3 I argued that so long as the environment prepared for the child is culturally relevant (Ladson-Billings, 1995) and responsive to needs of the children that are accessing it (Ford & Rea, 2009; Brunold-Conesa, 2019) the children will gain an understanding of the environment and their place and importance in it. This cosmic purpose (Montessori, 1946/2012) of the child begins in that first plane of development, from the very moment they begin to move with a purpose (Montessori, 1946/2012). Once an understanding and vision of this purpose is understood by the child and observed by the adult, it will be better nurtured and directed (Montessori, 1946/2012).

Through the creation of this culturally relevant and responsive environment that supports children's cosmic purpose a knowledge of intercultural understanding children will innately develop (Gay, 2019) I agree with Brunold-Conesa (2019) who argues that there is still work for teachers to do to cultivate understanding of cultural relevance in the learning environment and curriculum.

There are many indirect aims within the Montessori curriculum that can benefit children in the first plane of development. Montessori maintained that education holds the key to promoting children's sensitivity to and appreciation of a multicultural world. I believe this appreciation starts with an understanding of their own culture and community. In turn this understanding will result in a worldview conducive to understanding and working with people of other countries and cultures (Brunold-Conesa, 2019). In preparing the culturally responsive

environment adults must understand the culture the community the school or setting serves (Ladson-Billings, 1995; Ford & Rea, 2009; Brunold-Conesa, 2019). It is no matter where in the world you come from, whether it be the UK, European Cultures, Western contexts it could be argued that the influences will vary and the responsiveness of the environment and the curriculum will differ, along with the cosmic purpose (Montessori, 1946/2012) of the children that use the environment.

Ladson-Billings (1995) outlines 3 main goals to culturally relevant pedagogies as: student learning; cultural competence, and socio-political consciousness. As part of her research she outlines how education can address goals of a culturally responsive pedagogy: Positive perspectives on parents and families; Communication of high expectations; Learning within the context of culture; Student-centered instruction; Culturally mediated instruction; Reshaping the curriculum and the Teacher as facilitator. Brunold-Conesa (2019) argues that all of these characteristics are compatible with the Montessori approach, some being inherent some being thorugh connections made by the Montessori teacher and their willingness to hear the personal truths of diverse voices from our community and beyond (Oesting and Speed, 2019).

Montessori's innate understanding of cultural relevance was due to her extensive travel, as she formed a global perspective (Leonard, 2015), knowledge she then used to develop her philosophy of cosmic vision, cosmic plan and cosmic education. Grazzini (2020) argues that she began to develop her notion of cosmic vision as far back as 1935. At the foundations were the cosmic ideas of Froebel, his appreciation of the children and their love for the environment, giving the child a feeling of belongingness in their world. Montessori developed this further during her time in India where, through a unique collaboration with her son Mario they "matured and defined cosmic education" (Trabalzini, 2001, p167), firstly

through observation of early years children and then with older children. In 1950 at UNESCOs headquarters in Paris, Montessori was introduced as the founder of a new education (Montessori,1998a). During this visit she was invited by the UNESCO's department of education to offer her vision as to how a better international understanding could be achieved, one of the objectives she mentioned was a focus on cosmic education (Montessori, 1998a), intrinsically linking cosmic education to that of a sustainable education which I believe is built from the cultural context of the Community being served, in this case Malawi.

The three cosmic elements are clearly described by Grazzini (2020), the *vision* as understanding the world, the *plan* is the agents at work including the child and the *education* and the operational aspect of the cosmos, creating understanding of the task in hand of the child agent to contrast themselves, their cosmic purpose (Montessori, 1946/2012). Grazzini (2020) argues that the cosmic element does not imply "contestations, rebellion or breaking free of given patterns" (p20) on the contrary it argues "unity and order" (p20). Montessori spoke of children, carrying the future of humanity with them and that they are the hope and the promise for mankind (Montessori, 1999a), intrinsically suggesting that as global agents they have the highest investment in their future and the younger the child the greater their stake in the future (Pramling-Samuelsson & Siraj-Blatchford, 2014). Montessori penned the notion of the child being a citizen of the world and the importance of fostering their understanding of the cosmic plan (Montessori, 1998a). She introduced the idea of a cosmic plan as to frame the ideology that there is an interdependence of all living things on each other (Trabalzini 2011), recognising the real bonds between interdependence and social solidarity (Grazzini, 2013).

Understanding of this interdependence is supported by the sharing of knowledge in nurseries, schools by educators, family, and society, helping the children to comprehend the world and their place in it (Trabalzini, 2011; Grazzini, 2020) forming a culturally relevant foundation (Ladson-Billings, 1995; Ford & Rea, 2009). There is a recognition in Montessori teacher training of the importance of teachers understanding the cosmic plan, that in turn would enable them to create an environment that promotes cosmic education (Grazzini, 2013). The willingness to learn from and relate to the cultures around them enables the teacher to understand their own worldview and that of the children (Ladons-Billings, 1995) this in turn would help to create a relevant CRP.

The depth and range of what cosmic education is weaves a complex web of interwoven threads, each thread takes the child on a journey of construction of all the aspects of their knowledge in relation to every other living form of those around them (Raimondo, 2018). The aspects include history, the cosmos, civilisation, cultures. Cosmic education will take the child on a journey of interconnectedness that forms the foundations of awareness. The Montessori prepared environment gives the child opportunity to explore and learn about the Universe, not only on a global level, but also on a complex level (Grazzini, 2020). Children make meaning through the construction of understanding (Moss, 2016), this construction is supported by a cosmic education, giving children the opportunity to consider their place in a global society, their place in their local society, their place in the natural world and what it means to be a human being (Moss, 2016; Dahlberg et al, 2013). Cosmic education offers a diverse approach to cultural understanding, from the whole to the detail, a specialisation of knowledge and integration of a plan of culture (Grazzini, 2020).

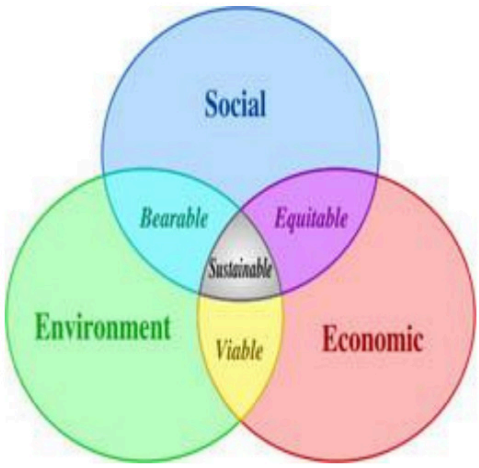
The cosmic plan is generally a focus at the heart of the primary curriculum and specific to the needs of the child in the second plane (Chapter 4.3.2) of development. The notion of

interdependence is woven within learning about the world through history, geography, nature and science. Yet the child starts the journey of their cosmic task in the first plane of development and can easily be identified as early as 2 years of age (Honegger, 2019) and thus sits firmly in the early years' environment. The child has agency from the moment they are born (Honegger, 2019) which is fostered through their first experiences of care and respect, this creates the foundation on which the child will embrace their cosmic task of the creation of self. Indigenous cultures underpin the principles of the Community and of human life, arguably in the case of Malawi this was before the influence of colonisation. Katz has deep views about child experiences that support the development of understanding in the first plane of development; shared in a presentation she gave in 2012, one of her most poignant points was her belief that one of the main principles of a curriculum should be to help children to make better, fuller, deeper and more accurate sense of their own experiences up to the age of 6 from a developmental perspective a major learning goal has to be to help them make sense of their own first-hand experiences and of their own environment but at the same time help them to acquire a lifelong disposition to make sense of those experiences (Katz, 2012, 21:00-23.08) strengthened by their links to the cultural context.

Viewing Montessori's writing through a modern lens and adapting the language can help in making links between her lecturers and the SDGs (Chapter 1.5) and the current drive for sustainability, global unity, and the child's role in achieving this through their own experiences. They focus on education to lead the child along the path to a more sustainable future (Luff, 2018). Montessori recounted that belief in the power of the child drives education in supporting the child to develop a capacity for a better way of living (Montessori, 1998a). It can be argued that the work of the Montessori is supported by what are known as the three pillars of sustainability, often referred to as "interdependent and mutually reinforcing pillars". The pillars are social development, economic development, and

environmental protection (Fig. 4.2). The task for early childhood educators is to develop curriculums and pedagogic foundations that are sustainable in terms of the 3 pillars (Fig 4.2) (Siraj-Blatchford & Brock, 2017) creating a meaningful and promising future for children and the planet (OMEP, online). Boyd (2018) argues that children, as young as 3, experience social justice in Montessori classrooms offering innate involvement with the 3 pillars. If we ensure the learning environment the children are experiencing is responsive to their needs and their culture, we are ensuring that the foundations they will build from will be relevant to their community, their understanding, and their achievements (Ladson-Billings, 1995; Ford & Rea, 2009).

Figure 4.2 Pillars of sustainability (OMEP, online)



SDG 4.7 (UNESCO, 2015), suggests that all learners participate in sustainable education that promotes a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development. The promotion of global citizenship through peace studies has been a major objective of the Montessori approach and is integral to and links together different curriculum areas at the preschool (Brunold-Conesa, 2019). Montessori's social constructivist environment affords opportunity for a community

of learners supporting each other in co-constructing knowledge (Boyd, 2018) and creating community cohesion. It can be argued that one way to do this is through activities for everyday living. Children respond to each other, and they naturally respond, with empathy, to those around them. As they explore with the activities of everyday living that create links to home and their communities through cultural relevance, they gain a sense of belonging and interconnectedness to the Community. This area of the Montessori curriculum encourages children to take responsibility for themselves and for their environment and innately increases children's knowledge of what it means to consider interdependence (Grazzini, 2020) and sustainability (Siraj-Blatchford & Brock, 2017). and the world around them.

Grazzini goes on to explain that through cosmic education children develop a cosmic vision which "encompasses both space and time; in other words, the children learn to understand the world both in its evolutionary development and in its ecological functioning" (2010, p112), others have described it as "The consequence is the activation of an education tending toward universal cooperation, toward the affirmation of democracy, of peace, toward the construction of a new world" (Raimondo, 2018, p249). Montessori identifies cosmic education that affords the children an opportunity to explore the cosmic task of developing themselves (Grazzini, 2013). To support this foundation of learning we must recognise the importance of the teacher's knowledge of their community (Ladson-Billings, 1995) and their place in the world. Montessori reminded us that "the fundamental principle in education is correlation of all subjects, and their centralisation in the cosmic plan" (2019, p82). Through the freedom to explore and acquire knowledge, children can deconstruct "the whole" down to "the detail", re-explore each detail to then reconstruct for completion. Montessori described this as a cosmic plan for culture (2019) and can be likened to the work of Sen (2013) who argued that teachers and children are "agents who can think and act" (p.2). Children are

actively engaged in the construction of their social and cultural practices (Pramling-Samuelsson & Siraj-Batchford, 2014). As children acquire intercultural sensitivity and understanding, they also develop ability to have appreciation of differences and to respect those differences (Gay, 2019).

Montessori focused her initial research on disadvantaged children with a social agenda (Giarediello, 2014), to explore the ideas of everyday child agency (Abebe, 2019). She had a strong belief that through education of the child and the formation of their personality, there would be a chance of social change, giving children the tools their need to promote socio-political consciousness (Ladson-Billings, 2019) supporting her own notion that education can alleviate social, cultural, civic, environmental, and political problems, thus developing mankind (Brunold-Conesa, 2019). This enables communities to work towards achieving achieve the sustainable development (Boyd, 2018). To enable this, we need to provide children with historical, educational, and environmental experiences that uphold their cultural identity, making them agents of history (Kohn & McBride (2011), but that also offers opportunity for the children to understand others around them and their place in their community and the global community (Style, 1988, Boyd, 2018). Children do not just need school to learn they also need the world around them (Leonard, 2015). Boyd (2018) argues that children need opportunity to develop skills such as creativity and divergence rather than focusing on the final assessment outcome, she goes as far as to claim that this is a dominant feature of Western early childhood. Montessori understood that grounding the child in the world around them will give them a deeper understanding of nature and its interdependencies, she recognised children's innate connection with nature (Boyd, 2018) this grounding, when collectively absorbed with other languages, cultures and religions is fundamental to understanding the global society (Leonard, 2015). In looking at today's anti oppression agenda in the context of the globalized way of life it is the recognition of children's home

cultures, languages and traditions which need to be embraced and recognised. Although access to cultural grounding is easier now than when Montessori first considered the notion, the danger is that this access can pave the way for a more hegemonic globalisation and the loss of the local and culturally specific discourses on which children's agency needs to be built (Moss, 2016). Today's child needs to be adaptable; the world is in rapid change and through their education they need to be prepared to use their local and cultural grounding to reach out into the world beyond (Leonard, 2015). The environment the child creates (experiences) and the relationships they develop with nature and man, are the significance (the foundation for) of a cosmic education (Stephenson, 2013), offering them rational insights that will steer the future of human society (1999b).

Creating a culturally responsive environment (Brunold-Conesa, 2019; Ladson-Billings, 1995), will better enable the child to understand the interdependence of all living things for the future of the human race. Today, although we are still following Montessori's lead, it is feasible to argue that the cosmic plan as Montessori may have envisioned it, is today different and no longer persuasive (Crain 1992; Leonard 2015; Grazzini, 2020). As Montessori herself advocated, knowledge and science progress and so must our thinking and our practice. The role of Cosmic education currently remains to be about passing on the detail to enable the child to build the whole (Grazzini, 2020) and supporting the child in creating a picture of interdependence, but we now must bring thinking up to date as cosmic tasks of everything individual are now different to bring about the whole.

I believe Montessori's vision, if she were here to share it today, would be one of change, collaborations, solidarity, care, interrelationships, and sustainability. Cultural and social outcomes of ESD are a focus of early childhood curriculums being addressed in early childhood initiatives (Pramling-Samuelsson & Siraj-Blactchford, 2014), building on the

knowledge that ESD must start in the early childhood years (Feine, 2012) and requires multidisciplinary and interdisciplinary teaching (Raimondo, 2018) within local, global and culturally specific discourses.

I see cosmic education as cultural responsiveness and community collaboration at work. Adults need to be responsive to children and the cultural community to inclusively support the preparation of the environment and enable agency. They need to be inspirational to the child, embrace sustainability and the child through an unhurried early childhood learning experience (Boyd, 2018). The message really is for us to embrace our cosmic task which is underpinned by the principles of respect, interconnectedness, global citizenship, and solidarity. All of which should be a part of education from the earliest age because the child has an agency from the moment of birth – we need to foster the principles of care, solidarity, and respect through first-hand experiences. These are the principles of human life as advocated by most cultures, particularly in indigenous cultures before they became influenced by the colonization.

The children are the future; they are responsible for the future; through cosmic task they will find their place in life. To enable the child in their role it is important that we create an education system that helps them to fulfil their full and individual potential, preparing them for the future (Montessori, 2007c; 2008).

4.8 Chapter summary

In this Chapter I have detailed the facts that are clearly communicated in Montessori's writings and have critically reflected on the 3 elements of the Montessori triangle; the environment; the teacher and the child. I have discussed cosmic education in a stand-alone section, this is to address the literature about cultural and community understanding linked to

the task of the child and the adult in the Montessori environment which would result in the creation of a cosmic vision (Grazzini, 2020), through a culturally relevant cosmic education.

Lillard (2019) argues that through the unison of the 3 elements the child is set free, supporting Montessori who maintained that for children to reach their potential they need "an environment which will not stop their creative activity. We must give children freedom and relaxation from the continuous direction of adults" (Montessori, 2008, p.78). Turner (2016) concurs that the environment should be prepared in such a way that the children have the freedom to explore, having ownership and a dedication to individual learning that will enable them to reach their full potential (Montessori, 1946/2012).

It is evident through the review of the literature that Montessori had a unique understanding of the child and a revolutionary vision to shape children's education, by ensuring that the child's needs are appropriately met to support their development, in a carefully prepared environment. Yet there is some contention around the authenticity of the Montessori environment, and how that implementation differs (Deb, 2019). I argue that there could also be a shift in meaning due to the many translations of her original text, this is obvious in the many papers included in this review and in its simplest of forms is evident in the many ways the adult is referred to (adult, teacher, directress). There is a much more coherent agreement around the Montessori philosophy on child development and that of the actual role of the adult in a Montessori environment. Since Montessori developed her method, knowledge has increased and as her method evolved while she was alive, the method will continue to evolve if it is to truly support the needs of the child and the world in which they are to live, although as Lillard rightly argues, we really do not know how Montessori herself would have done so (Lillard, 2019). I have argued in the literature that the teacher training has not evolved with the evolution of our understanding and the international way in which we work. Montessori

wrote “I have studied the child. I have taken what the child has given me and expressed it, and this is what is called the Montessori method” (Montessori, 2007, p2). With this in mind, and as the literature has highlighted, we need to continue to study and observe the children, in their different cultural contexts to learn more about how the environment should respond to the children (Brunold-Conesa, 2019) and their cultural context (Ladson-Billings, 1995).

4.9 Bringing the literature review together

This short summary is to draw together the two main foundations of my research project; ECD in Malawi and the Montessori Approach on which the main review of literature has been focused on, as they are the most relevant. My own pedagogy is discussed in Chapter one, as part of the scene setting element of this research project, reviewing the literature throughout the project has developed knowledge and my own funds of knowledge are more informed (Moll, et al 1992). Chapter one also gives an overview of my own very personal interpretation of the Montessori method, to ensure the reader has a clear understanding of my Montessori position. In a way, researching the literature throws a more clinical and academic cloak over the driving force of my passion.

I began both Chapters by reviewing the concepts of the environment, not because I see this as the most important element of the triangle, but because I see it as the broadest. Having taken both International and National views before discussing the heart of the project; the Community. It was important to explore the historical events and influences which have had an effect on education in Malawi as this gives a sense of self and belonging to the project. The Montessori method is steeped in historical influences that Maria Montessori experienced as she carried out her anthropology studies (Trabalzini, 2011). I developed the literature around the child in Malawi, their cultural contexts and the view of the Montessori child’s development and agency. The child is an enigma (Montessori, 1946/2012) and an unknown

quantity which the literature review has attempted to unravel and lastly the adult, not because they are the least important, but because they are the custodian of the environment and the creator of the environment which they will develop to support the needs of the child. The review considers the aspects of training for the Malawian adult and focuses on strategies for their development. Increasing their knowledge and understanding of Montessori's aspirations of the role of the adult to complement their cultural knowledge and teaching foundations. A common thread runs through both Chapters, supporting the theoretical framework of my research literature about funds of knowledge (Moll et al, 1992) and a culturally responsive pedagogy (Ladson-Billings, 1995). Both theories are discussed further in the findings and discussion Chapters. The literature enabled me to design a research project that would thread together the 3 elements of the dynamic triangle (Fig 1.1) while acknowledging the cultural context in which the research took place. It also became evident that the fidelity of the implementation of Montessori (O'Donnell, 2008) and the research design would frame further discussion and challenges. How this was achieved is discussed in the next Chapter.

Chapter 5 Research Methodology

The study of the child… may have an infinitely wider influence, extending to all human questions. In the mind of the child, we may find the key to progress…"

Montessori, 1988, p. 3

5.1 Chapter introduction

The aim of this Chapter is to consider the methodological foundations of the research, including the paradigms and the theoretical perspectives that informed the research, as well as the ontological and epistemological perspectives. Although this Chapter is set as though the methodology was created and then the CAR carried out, in fact, in practice the methodological literature, the methodology and the eventual theoretical framework developed over the course of the project and are all very closely entwined. These developing methodological foundations have steered my work as a researcher, and, as Creswell (2014) suggests, I have also been affected by my own historical, cultural, and philosophical values.

5.2 Signposting the methodology

Starting with a discussion concerning the philosophical assumptions (Guba & Lincoln, 1994; Creswell, 2014) of my study, I will next discuss the framing of the research and the development of my own viewpoint and understanding. Montessori philosophy has helped to frame the research methods and methodological commitments. The final design developed from a combination of the theory underpinning my research. My own contextual experiences, professional positioning, and decolonization of knowledge (Wood, McAteer & Whitehead, 2018) informed the final theoretical framework. This Chapter preludes the next two Chapters, which set out the research methods and the research in action; they will explore how the research framework developed and concretely created a connection between the research and the underpinning theoretical framework.

5.3 Philosophical Assumptions

5.3.1 Paradigm

Constructing knowledge through research is to inform understanding of the world (Gibson, 2017). My position in the research (Chapter 6) and my own beliefs, philosophical position and values guided my choice of paradigm and informed the research framework (Crotty, 1998). As pointed out by Pring (2000), a researcher will decide on their personal philosophical position about their study, informed by their assumptions, as discussed above, and their "general philosophical orientation about the world and the nature of research" (Creswell, 2014, p6). There are generally three main paradigms considered in research, that of the positivist, the realist, and the interpretivist (McNiff & Whitehead, 2011), all founded on different assumptions and requiring different methods and procedures to gather data, although Glesne & Peshkin (1992) argue that there can be a compatibility of methods between the two approaches. A positivists paradigm views reality as single, tangible, and verifiable (Gibson, 2017), that inquiry is value free and the known and the knower are independent (Lincoln & Guba, 1985), generally aligned to a more quantitative approach and concerned with documenting things that are not directly observable, removing the researcher from the research (McNiff & Whitehead, 2011). Realism is more generally associated with scientific enquiry, it suggests that reality is independent of the mind, it takes a factual approach to research (Lincoln & Guba, 1985). Whereas, chosen epistemological approach of interpretivism considers research as objective (McNiff & Whitehead, 2011) and takes a more subjective view, with consideration that realities are multiple and constructed (Gibson, 2017). Interpretivists view the knower and the known as interactive (Lincoln & Guba, 1985) and this is generally considered a more qualitative approach to research, with meaning situated in language and culture (Gibson, 2017) which aligns with my research.

My research, which was carried out as an exploration of the lived experiences of teachers and children in Malawi, was conducted as a naturalistic enquiry, this approach focuses on the lived experiences of people in a real-life setting (Lincoln & Guba, 1985). The research was developed within an 'interpretivist paradigm' (Gibson, 2017). Interpretivism's starting point is the belief that realities are multiple and socially constructed (Gibson, 2017). Interpretivism argues that people construct and interpret their environment and themselves in ways that are shaped by the cultures in which they live and inform their values (Swain, 2017). The cultural context in which the participants in my study are situated informed the how, what, and why of the teachers' choices that steered the research and was supported by the cultural relevance (Ladson-Billings, 1998), enabling the participants to take control of changing the narrative of their own lives (Wood, McAteer & Whitehead, 2018). Moreover, as I was drawing on both pre-existing methodological ideas, as well as developing new insights into Montessori in practice to develop a culturally responsive Montessori pedagogy (Ladson-Billings), I brought together old and new knowledge to inform the research, placing the individual and what they know into a social situation of the Montessori classroom. Interpretivists argue that we cannot understand the how, what and why of peoples' choices and characteristic ways, without grasping how people interpret and make sense of their world – in other words, acknowledging the distinctive nature of their beliefs and attitudes (Gray, 2014; Wood, McAteer & Whitehead, 2018).

Through documenting patterns of relationships and experiences and then attitudes and behaviour, interpretivists suggest that relationships are contingent and diverse, and I set out to document this through observation and a qualitative approach to design and analysis (Gray, 2014).

It would be wrong to continue here, without my own interpretation of how Montessori considered her own research, when she talks of her 'first experiments' (Montessori, 1946/2012, p7), she described her methodology of scientific pedagogy, a method of science that was applied to pedagogy' (Montessori, 1946/2012, p7). Indeed, she named her first book 'A Scientific Method of Pedagogy as Applied to Child Education in Children's Houses' (1912). Jones et al, 2019 argue that Montessori's original work "does not provide the procedural details and empirical support required for today's scientific standards" (p17), although, they do acknowledge the difference between todays reporting and rigour and that of the early 1900s. However, as noted by Giardielle (2014), there is an undeniable dualism (Pring, 2000) in Montessori's writing; she talks of a scientific method, but when writing in her book 'The Discovery of the Child' (2007b) there is a philosophical reflection in some of her opinions. Jones et al (2019) contend that as Montessori's main goal is to observe behaviour this is not necessarily research but evidences base naturalistic inquiry. Montessori herself argues that by sharing a spirit with the teachers and the children, rather than scientific techniques, we are supporting the foundations of development, thus, as described by Giardielle (2014) evidencing a "retreat from positivism" (p83). and thus, a journey towards interpretivism. The observational qualitative techniques (Jones et al, 2019) advocated by Montessori are now deemed reliable and transferable (Smith & Connolly, 1980; Jones et al, 2019).

Some interpretivists argue that to understand social action, there is a need to investigate what the action means to people that it directly affects, allowing the researcher to better understand the subjective experiences and capture different perspectives of the participants in their own natural and cultural context (Al Riyami, 2015; Wood, McAteer & Whitehead, 2018*)*. Interpretivism does have implications for research because as a researcher, I need to adopt an exploratory orientation, one that tries to learn what is going on in particular situations, and to

arrive at an understanding of the distinctive orientations of the people concerned (Gray, 2014), at the same time the researcher should acknowledge their position within the research, and the influence they would have in shaping its development and its outcomes. This is discussed in more personal detail in Chapter 6. However, Al Riyami (2015) argues that interpretivists cannot get this insider view that they are aiming for because the moment they join the group, they are influencing the atmosphere of the group one way or another which can compromise objectivity. Although, I would argue that the collaboration element of my action research promoted an equalised relationship between myself and the co-researchers (Chapter 6.3); built rapport and the foundation of funds of knowledge (Moll et al, 1992) built credibility which is supported by Patton (2002) who argues that the researcher is less likely to be able to influence the atmosphere in a naturalistic setting because it would be familiar to the participants and be situated within their funds of knowledge (Moll et al, 1992).

5.3.2 Ontological Commitments

Ontology, the study of being, is customarily related to the researcher's values and beliefs and are influenced by our "view of ourselves in relation to others" (McNiff, 2017, p39). My own research experience was one of constructing knowledge with the community and in real time. As such, I understand knowledge to be constructed within the participants reality (Guba & Lincoln, 1994) and I understand that people live with and experience multiple factors that influence the construction of self, through social experiences and exploration. This is opposed to the positivist paradigm that assumes that a single reality exists and can be measured (Lincoln & Guba, 2000: Creswell, 2014). The development of the research design around CAR assumed my approach of negotiating values and forms of learning with others (McNiff, 2017) and from others. Of valuing indigenous voice, community, relationships, equality and social justice (Parsons & Harding, 2011). The methodological values that underpin my

research are strongly linked to those of the Montessori approach and her philosophy relating to social responsibility, of the cosmic task of human beings (Grazzini, 2020), although she differentiated between the task for the child and the adult, one similar connectiveness is that of the child's manifestation within their own community and culture and the adult's role in providing an environment to support this manifestation.

Montessori's approach of studying human action and their interaction with the world around them enables the construction of meaning and understanding (1965). This approach enables the observer to look for situated cultural and historical "interpretation of the social world" (Crotty, 1998, p67), studying the construction of reality, supporting the ontological stance of this research of what it means to know and what knowing means (Gray, 2014) according to the individuals' experiences (Moon and Blackman, 2017). In this case the experiences of the co-researchers being Malawian and constructing their knowledge of Montessori, and for me, being a Montessorian and a researcher and constructing my knowledge of Malawi.

My research employed interactive ways of investigating and valuing peoples' perceptions and attitudes, how these are shaped by the Malawian cultural contexts (Wood, McAteer & Whitehead, 2018) and how they inform the co-researchers actions, taking an interpretivists approach, encouraging the use of situated meaning (Gibson, 2017).

5.3.3 Epistemological Commitments

Understanding the epistemological perspective of the research should enable an eventual clarification of the research design and how to frame the research (McAteer, 2013; Moon and Blackman, 2017). My preferred epistemological approach was that of social constructivism, where "equally valid accounts of the world can and do exist together" (Gray 2014, p20); and as the purpose of the research was to gain a deep insight into the worlds of the children, teachers and the environment as they were collaborating in the research, this seemed like an

important approach. My positionality within the research, "the 'I' in relation to other "I's" (McAteer, 2013; McNiff, 2017) was a consideration and is discussed in more detail in Chapter six, although in relation to my epistemology, it is important to acknowledge the underlying understanding that everyone interprets, and thus constructs, knowledge differently. One of the foundations of Montessori philosophy is cosmic vision supported by a cosmic education (Chapter 4.5) which supports knowledge in how we understand the world; understand the 'I' and our place in the world and the construction of self. Consequently, it was important to understand the I, as the researcher as well as the Montessorian 'I', and my role in shaping the research; more so than that of the co-researchers, because I was leading the research, introducing the methods, selecting the data, and developing analysis of the data to develop the research design, which is discussed in detail in Chapter 6.

My research required appropriate design methods that work within the cultural context of the research, in this case Malawi (Wood, McAteer & Whitehead, 2018). Perspective-seeking methods that create qualitative data are more commonly linked to an interpretivist paradigm and a constructivist approach (Gray 2014). Respect for the importance of hearing the voices of those not usually heard was paramount and central to my research, with particular emphasis on collaboration (McNiff, 2017). I adopted a social constructivist epistemology (Creswell, 2014) as it seeks to interpret the voices of others, enables others to develop their own meanings and adequately addresses the theoretical context of the research. It also seeks the empowerment of all the researchers, giving opportunity to full collaboration not just as receivers of knowledge. The constructive epistemological approach enabled me to embed culture as integral to the research, because I consider that identities are situated within the research domains and are "historically, politically, spatially and socially contextualised" (Pirbhai-Illich & Martin in Bamber, 2020, p55). It is important at this point to consider the role of the Montessori philosophy as an identity that created the foundation on which the

research is built, and as discussed above journeyed towards the interpretivists position through taking a constructivist approach towards the development of her methods (Montessori, 19462012).

5.3.4 Montessori as a constructivist

Montessori's approach of studying human action and their interaction with the world around them is the belief that children use their environment to construct individual meaning and understanding (Montessori, 1946/2012), it could be argued they are taking a constructivists approach (Gibson, 2017). Although, Montessori herself speaks of a 'scientific' approach to her research and describes the adult as a scientific observer involved in the child's environment, Trabalzini (2011) suggests that Montessori was a scientist in spirit, not in mechanism. Indeed, Giardiello, (2014, p83) describes someone who is able to perform tasks, not just in this scientific spirit, but also to align with moral constructs, evidencing further Montessori's "constructivist leanings". Furthermore, Elkind (2003) suggests that Montessori (1946/2012 and 2007a) advocated that the child is constructing the environment through their own activity as they use their hands as instruments of the brain, to construct memory, construct understanding and the power of thought and in going through this process they ultimately construct themselves, you can read further about this element in Chapter four. Moreover, she argued that this construction came from interaction with nature and the surroundings, and that this construction is a natural growth, the mind constructs images from information gathered and it is ordered, as this is necessary for the construction, she describes this as a natural phenomenon (Montessori, 1946/2012, p194).

Contrary to the constructivist view that I believe can be attributed to Montessori that individual meanings are innate (Montessori, 2007a), Creswell (2014) argues that meanings are not etched within the individual, nevertheless if we consider the Montessori philosophy

it could be argued that although she did not explicitly take a constructivist approach her philosophy and methods provide potential for the interaction with, and construction of, meaning from the environment in a way that is consistent with this theoretical paradigm (Elkind, 2003; Ultanir, 2012). If you then go one step further and aligned with research carried out by Elkind (2003) who has argued that both Montessorians and constructivists put the child at the centre of a community, you then consider the social element of her approach. This approach is supported by the vertical grouping of children in the classroom advocated by Montessori, this in turn creates a social support network and a community network (Trabalzini, 2011) you then get an overlap into social constructivism (Jones, 2017). Montessori's theoretical roots were responsive to social and cultural transformations of her time (Pope-Edwards, 2006), she celebrated the uniqueness of children as agents with a task to bring about change, she looked for a way to understand the world and the human in it (Kohn & McBride, 2011; Grazzini, 2019). Her responsiveness to the child, the teacher and the environment coming together in collaboration dovetails with culturally responsive pedagogies (Ladson-Billings, 1995) and social construct.

5.4 Methodological Commitments

Methodology is the "strategy, plan, process of design" (Crotty, 1998, p3) foundation underpinning the research methods. My research took an action research approach as defined by McNiff (2017). This is underpinned by my belief that all people have agency (McNiff, 2017). McNiff (2017) argues that the "process itself is the methodology" (p46), my commitment to action research is to develop a process of action cycles which was designed in collaboration with co-researchers in Malawi. They participated in the process of the research and decisions as they happened (McNiff, 2017). The aims of the action research were to demonstrate "relationships of influence" (McNiff, 2017, p47) whilst bringing about change in collaboration with the co-researchers.

The methodology is strongly influenced by the emphasis on the research to gain an in-sight into understanding the context of the study and my co-researchers. The co-researchers had their own funds of knowledge to share (Moll, 1992), alongside my own. We then collaborated to interpret this new knowledge, bring meaning to it, and inevitably it raised more questions. As previously alluded to, methodology and methods in CAR are very closely entwined, due to the very nature of the way the research story evolves and how knowledge is contracted through the action (McNiff, 2017).

My epistemological approach of social constructivism enabled me to gain an empathetic understanding of how the participants constructed their new knowledge through taking a qualitative approach to my research. As my field work was situated in Malawi, I became part of the lived-in experiences of the teachers as we learned new knowledge, introduced and adapted the Montessori approach into the classroom (Creswell, 2014), in comparison to a UK based study where I would have been constructing knowledge from a more stable knowledge base within my own comfort zone. My ontological and epistemological assumptions supported action research and the use of qualitative methods (Creswell, 2014: McNiff, 2014) to enable the involvement of the co-researchers in telling their story and developing their knowledge. Gray (2014) argues that using a qualitative methodology in a natural setting is central to meaningful discovery. In her own research Montessori placed an important emphasis on the use of observation (Montessori, 1946/2012; Lillard & McHugh, 2019) in the real situation as a pedagogy of giving voice, acknowledging that children and adults are co-constructors of meaning.

5.4.1 Action Research

The interpretivist qualitative paradigm and social constructivist methodology underpinning the research (Guba & Lincoln, 1994; Creswell, 2014), are central to the methodological procedures (Guba and Lincoln, 1985) and the research and action that would take place over the course of the study.

Action researchers are usually considered to be social constructivists (MacNaughton & Hughes, 2009; McNiff and Whitehead, 2011) with Kurt Lewin (1951) is arguably one of the earliest adopters of action research (McNiff, 2017). He based his theory on his findings that when people act and experience change, they have the capacity to reflect on change and adopt new actions and he suggested that we are influenced by the constructs around us, and we make sense of things in our mind. Different action researchers differ in their understanding of the detail of action research (McAteer, 2013) but there is general agreement that it is a cyclical process that involves phases of reflecting and action (MacNaughton, 2009; McAteer, 2013). It is particularly well developed in educational contexts and is distinctive in that participants or in this case co-researchers, research their own understanding compared to traditional research where the "professional does the research on the participant" (McAteer, 2013; McNiff, 2017, p10). There are several different approaches to action research, which McNiff argues are legitimate. The approach the researcher chooses will depend on their positionality (Chapter 6) within the research and the critical perspective they take on key issues (McNiff, 2017), such as terminology, role of the participant and the way of finding things out. Whatever your positionality action research is about understanding practice, being able to articulate philosophy and to take action to develop practice (McAteer, 2013; McNiff, 2017).

Action research is growing rapidly in its use within the field of educational research. Its increasing popularity means it is now "more widely accepted as making important and serious contributions to the knowledge base of early childhood" (Pascal & Bertram, 2012, p1) although there is a need to continually respond to a constant and sometimes reasonable professional critique of the robustness of our participatory methods (Pascal & Bertram, 2012, p1). My research celebrated the co-researchers voice, respected their unique individuality, and trusted their commitment to lead their own learning journey, empowering them to bring about social change, but this worked best through transparent collaboration.

However, there has been some strong critiques of action research methods (Pascal & Bertram, 2012; Stringer, 2014,) not in the least that it can be subjective if rigour is not in place (Kock, 2005) and data can be affected by power relations, particularly in research with others (Wood & McAteer, 2017; McAteer & Wood, 2018; Osgood, 2020; Pirbhai-Illich & Martin, 2020). These elements are discussed in Chapter 6.

The theoretical perspectives that weaved through the theoretical framework supported my view that people have agency (McNiff, 2017). I am committed to empowering people, giving them a voice and the freedom to think for themselves. This way they shape their own futures. To underpin this value collaboration became the strength of this project, hence my methodological approach of CAR. CAR offered an opportunity for the researcher and the participants to co-construct the emergent design of the research study as it developed to bring about educational change and generate new knowledge (Mac Naughton & Hughes, 2009) to take into a sustainable future.

5.4.2 Collaborative Action Research (CAR)

CAR has developed out of action research and is argued to be a specific, methodological, and rigorous form of practice-based research. It emerged out of a growing discourse within social

sciences about reflective and engaged practice (Carr & Kemmis, 1986; McNiff, 2017), with a focus on working in collaboration with others. CAR is argued to be a member of the action research family that is used to bring about professional change (MacNaughton & Hughes, 2009) as opposed to other family members, including participatory action research that bring about social change (MacNaughton & Hughes, 2009). It promotes professional growth through working together with co-researchers who can initiate change and generate new and deeper thought (MacNaughton & Hughes, 2009) and supported my exploration to generate data to inform my research question. CAR uses a variety of data gathering methods that can be carried out by both researcher and co-researcher such as field experience, reflexivity (research journal), observation, collaborative conversation, questionnaires, and child tours (Appendix 14). Some argue that, all action research is collaborative (Kemmis & McTaggart, 1998), because if left by themselves participants can just reinforce what they know (McNaughton & Hughes, 2009). My research was collaborative by its very nature of the reliance on the sharing of funds of knowledge to develop the research practices in a culture environment new to me.

5.4.3 Montessori and action research

However, while the concepts of CAR are often debated in contemporary research, it is notable that Montessori developed her educational approach by observing children and working with teachers and families; together they constructed what today we know as the Montessori method. As a result of her findings, she took action to make change to the environment, to the role of the teacher and to the teaching materials (Montessori, 1946/2012; Montessori, 2002). Indeed, in her inaugural address, delivered on the opening of the second Children's House in 1907, Montessori spoke of the importance of collaborative working between children, teachers, and families to create an ideal learning environment.

5.5 Theoretical Framework

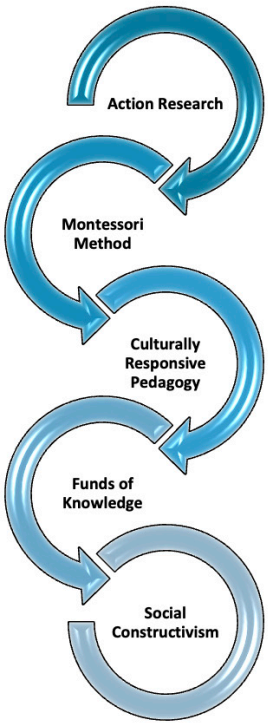
The development of the theoretical framework was a bumpy road due to the difficulties in making sense of the confusing terminology (Crotty, 1998). There seemed to be perplexity between a theoretical framework and a conceptual framework, current usage of the terms is "vague and imprecise" (Jabareen, 2009, p51) and the phrases are often used interchangeably (Varpio et al, 2020). Grant & Osanloo (2014) describe the theoretical framework as the "blueprint" (p12) of a thesis that provides the "grounding base" (p12), they argue that a theoretical framework is developed from existing theory. I have used existing, well considered theory on which to build my research design and on which my literature review was based.

All research needs a theoretical framework on which to build the study (Dickson et al, 2018). The framework enables the researcher to challenge and make sense of theories on the world around us and enables connections to be made. Initially, the development of a single theoretical framework seemed logical, as explained by Grant and Osanloo (2014) as it consists of theoretical principles, constructs, concepts and tenants of theory, in the case of my research Montessori. However, as the design of my research developed, it became apparent, as argued by Crotty (1998), that there was an array of theoretical perspectives and methodologies to be considered, this offered a challenge for me as a researcher. The theoretical framework should connect all philosophical and theoretical aspects of the research (Grant and Osanloo, 2014). There is interrelationship developed through the theoretical framework, between the different theories (Crotty, 1998: Gray, 2014), the theoretical stance of the researcher and the methodology pillars of the research, allowed me to consider the research questions, whilst ensuring empowerment and involvement of the collaborators (Brown & Perkins, 2019) of the research in Malawi. There are continuous challenges

concerning research and innovation in ESD in Africa and there has been "Inadequate ESD research and innovation both in academic institutions and among other stakeholders" (Yao et al, 2014 p4). My research offers opportunity to carry out research and share knowledge (Moll et al, 1992) and skills for sustainability for further research in the cultural context.

The initial theoretical framework that I considered was that solely of the Montessori method, in particular the Dynamic Triangle (see Fig 1.1); a framework which constitutes a structure in which detailed study can find its appropriate place (Kahn, 2020). As the project progressed, although the theoretical influences of the dynamic triangle became clear and continued to thread through the literature review and on into the action research, it also became evident that there would be further theoretical, epistemological, and philosophical influences (Fig 5.1), that would influence the research.

Figure 5.1 Theoretical Framework



Funds of Knowledge (Moll et al, 1992) and Culturally Relevant Pedagogy (Ladson-Billings, 1995) weaved into the foundation on which the research knowledge was built (Fig 5.1). This exploration was fundamental in my own understanding as to how the Montessori theory of the dynamic triangle became stronger and more in-depth when supported by Funds of Knowledge (Moll et al, 1992) and Culturally Relevant Pedagogy (Ladson-Billings, 1995). The foundation of the theoretical framework (Fig 5.1) enabled a making sense of the Montessori method in this cultural context.

5.6 Chapter summary

The philosophical assumptions I have made of interpretivism, and social constructivism justify the methodological choice of action research (Gray, 2014), and the methods that are to be discussed in the next Chapter. I have researched a few philosophical views around methodological approaches and have framed my discussion in this Chapter in a way that enabled me to fill my own 'grab and go bag' (Crotty, 1998). I have created a theoretical framework on which to build my research project that supported "indigenous research philosophical assumptions about the nature of reality, knowledge, values, and methodology" Chilisa & Tsheko (2014, p223). This process supported the view of Crotty (1998) that there is an interrelationship between the theoretical stance eventually adopted, the methodology and the methods used that values the cultural community as knowers (Chilisa & Tsheko, 2014) and respects their funds of knowledge (Moll et al, 1992).

The subsequent Chapter goes on to develop a more in-depth discussion of the action research design and the methods used to gather data.

Chapter 6 Interweaving CAR and the methods

I began my work like a farmer who has set aside good seed and who is offered a fertile field in which to sow it. But it turned out otherwise. I had hardly scratched the clods when I found gold instead of grain: the clods hid a precious treasure. I was like Aladdin with the lamp in his hands, not knowing that it was a key to hidden treasures. At least my work for those children brought me a series of surprises. (Montessori, 1988, p. 139).

6.1 Chapter introduction

It was a challenge to define an order that made sense for creating these three entwined Chapters, as they are so closely aligned. I took the decision to first discuss the methodology in Chapter 5, this then created a foundation on which to continue to build on CAR, the methods and consideration influences their choices in this Chapter and then I will finally draw all this together in the action in practice in Chapter 7.

This Chapter will elaborate further on CAR, building on its introduction in Chapter 5; showing the inter-relationship between the methodology and the methods. Although CAR is viewed as a methodology in my research it closely aligns with methods. This relationship was the foundation on which the collaboration research triad (CRT) was developed (Fig 6.1) and is the reason why there is further discussion drawing its links together with the methods chosen in this Chapter. I discuss trustworthiness, positionality and reflexivity which were pivotal consideration in my research due to cultural context and coding analysis will draw this Chapter to a close.

The very fact that each phase of action enabled the collaborators to make sense, evaluate and then inform the next action in both research and practice, supported the notion of the evolutionary nature of action research. I consider and discuss reflexivity and positionality of myself and the co-researchers as they are placed in the research, this includes critically reflecting on the child's role in the CAR. Clearly, due to the contextual nature of my research,

ethical concerns played a fundamental role in the research design and informed the reflexive considerations (Musgrave, 2019) and this is discussed as part of this Chapter.

My initial choice of research methods and data analysis were informed by my social constructivist approach and this Chapter discusses my choices, and how the methods developed during the research cycle. I explain my perspectives and how literature has supported my research design. Discussion focused on coding and analysis will draw this Chapter to a close.

6.2 Developing the research question

Taking a social constructivists approach, supported by a framework of collaboration and reflection, I have had the opportunity to extend and adapt Montessori's experimental framework "for experimental science is always a science of observation even when the phenomenon is caused by the experiment so that it may be carefully observed; one goes to the habitat of the organism and attempts to not disturb it in order to see exactly what it does" (Montessori, 1965, p13) by merging the foundations of the Montessori approach with a collaborative approach and qualitative methods. The research design brought together the Malawian cultural context and the Montessori environment to generate data through a collaborative approach and the qualitative methods traditionally associated with the social sciences, and in particular an interpretivist approach.

The starting point of the research is to be clear about what you are hoping to do in the project (McNiff, 2017). Creating a plan for action research and developing the questions can be challenging, finding the right way to voice the change in practice and enabling me to find out what I want to know (MacNaughton & Hughes, 2009) was at times frustrating. The first

question was refined between phases one and three (Research diary 2017). The main research question I took with me to Malawi during the initial research design was:

How does the Montessori ethos and method work in the Malawian cultural context?

By phase three I had redefined the question to be:

How do we reconsider the Montessori Method to support cultural collaboration and learning in the Malawian context?

In addition, there were a number of sub-questions, and these were developed in collaboration with the teachers and children as the action research took place, as discussed in Chapter 7. During phase three of the research, I explained to the co-researchers about the research project, and we discussed the element of CAR that is driven by the desire to make a difference (MacNaughton and Hughes 2009). I had several topics that I initially wanted to explore through the research, and I initially presented some sub-questions for consideration that were developed around these topics: the development of the teachers, the learning about the child and tracking children's learning, the child in the environment and what changes might be needed to the environment and finally to question what is important about the Montessori approach.

Over the phases of the research the questions developed to:

- *How do we develop cultural understanding and knowledge to support the Montessori environment?*
- *What are the important Montessori foundations the teachers need to know to build their Montessori knowledge and understanding to support children's learning and development?*
- *How does the Montessori method support the child's engagement with the environment?*
- *How can we gather data on the children and their innate desire to learn?*

6.3 Who were the collaborators?

Collaborators are the participants in the research. They are the adults and the children who I carried out the research with. Throughout the project the collaborators were given different titles, these are detailed in Table 6.1.

Table 6.1. Collaborators in the research.

Term	Description
Co-researcher	Describing all the participants participating as co-researchers as a whole group in the project.
Teacher-researcher	Describing only the teaching staff participating in the reseach project.
Child-researcher	Describing only the identified 10 children participating as co-researchers in the research project.
Child participants	Describing all the children in the nursery and school, who had all had consent to participate and were observed in the environment.
Adult-researcher	All the adults, both professional and teaching, involved as participants.
Malawian team	Describing the professional and teaching adults participating research team that live and work in Malawi. A term they chose to describe themselves.

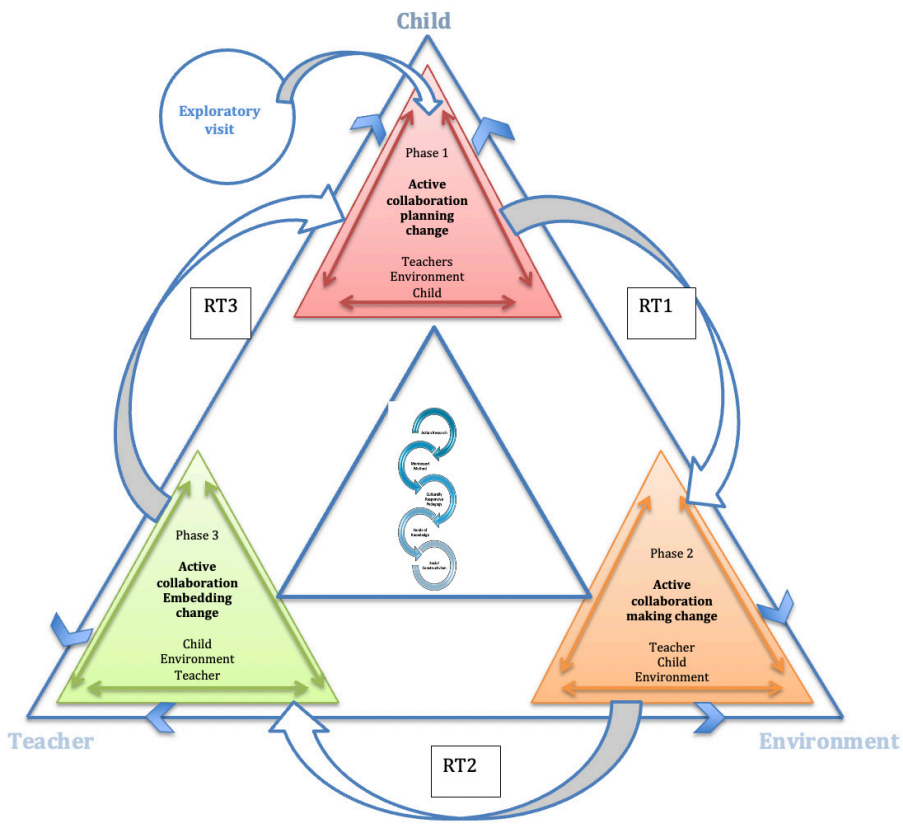
Although observed often as individuals in action within the social construct of the dynamic triangle (Fig 1.1), the collaboration enabled opportunity for the co-researchers to construct an understanding of their knowledge and their behaviours. whilst ensuring empowerment and involvement of the participants as collaborators (Brown & Perkins, 2019) in the research. The children and the teachers in the school were co-researchers and were unique individuals. 10 children collaborated in the research as child-researchers, but all the children were active participants. This is CAR because it entailed working with others (MacNaughton & Hughes, 2009). Kemmis and McTaggart (1988) are more explicit on this point, “The approach is only action research when it is collaborative, though it is important to realize that action research

of the group is achieved through the critically examined action of individual group members" (p5).

6.4 The collaborative research triad (CRT)

I will begin by explaining how the action research cycle (Fig 6.1) evolved and was co-constructed from the knowledge and experiences of all the collaborators, through giving a brief chronological overview.

Figure 6.1 Collaboration Research Triad (CRT)



The CRT action cycle framework (Fig 6.1) developed over the course of the research (MacNaughton & Hughes, 2009; McNiff, 2017). It began with an exploratory visit to the school in Malawi, where I had the opportunity to talk to the teachers and the CEO of the

Charity (Chapter 1) about the research process. On my return to the UK, I applied for ethical approval, before seeking participation consent from the Malawian team and organising the Montessori training programme for the teachers (Chapter 7). The field work took place over the two years, in collaboration with the Malawian team as identified in the CRT. The role of each of the collaborators is discussed above and in Chapter 7 and brings together the theoretical pillars of the research. Each phase of the research was a form of active collaborative change:

- Phase one – Active collaboration planning change.
- Phase two – Active collaboration making change.
- Phase three – Active collaboration embedding change.

The co-researchers, detailed in the inner triangles of the CRT, are listed in the order within each phase dependent on the level of involvement and influence that it was considered they had on the data collected and the changes being made. The people being the most involved being at the top. This was a negotiated position that at some points in the research was obvious, yet in others we held discussion to decide. At one point it even became a chart on the wall, that constantly changed evidencing the fluidity of involvement of the co-researchers in action research. The final placement became a reflective decision of mine.

Reflection was an important element of the project, to support the developing knowledge of all the co-researchers, including myself. At the end of the first phase, we discussed the need to have an action plan to keep us on track and focused. We felt that due to the unreliable internet, post and phone the possibility of the lack of contact between the phases of research was likely. This extra element of the research cycle became known as the Reflective Transition Phase (RTP). During the RTP I carried out review of feedback from the co-researchers on the data gathering methods; deeper analysis of the data; reflection on my

research diary and the thick description to support interpretation (Geertz, 1973; Schwandt, 2001) of the data that was generated from this. For the co-researchers this was a time to embed the use of the data gathering methods and their own knowledge. The methods of data gathering, developed through the three phases of the CAR, began to link directly to the three collaborative elements of the dynamic triangle (Fig 1.1). As the research project developed, the collaboration research triad (CRT) was created (Fig 6.1), but at its heart was always the theoretical framework.

6.4.1 CAR in my research practice

The personal experiences and funds of knowledge (Moll et al, 1992; Chesworth, 2016) of the co-researchers were the starting point for inquiry and were central to the development of the research project (Winter & Munn-Giddings, 2001) and influenced the theoretical framework. Building cultural, research and educational relationships was central to my study and directly affected by my positionality and that of the research (Chapter 6.2.3 & 6.2.4). Historical and social perspectives relating to education, culture and childhood were drivers in my research and the rationale behind using action research is my belief in social construction of knowledge. I recognised the importance of involving participants in bringing about change, ensuring that we understand each other's place in the world (MacNaughton & Hughes, 2009; McNiff, 2017).

As my research developed through each phase, elements of educational relationships co-existed, it could be argued that at many points they merged, to develop the co-researcher relationship, hence understanding those relationships were crucial to the outcome of the research. Educational relationships are often intercultural and how the co-researchers and the participants relate to each other, is influenced by the "socio-historical and political contexts of those engaging'" (Pirbhai-Illich & Martin, 2020, p57). Indeed, through CAR, a deeper

understanding developed improving our understanding of our different cultural identities (Martin & Griffiths, 2014). Respecting these relationships and identities through each phase of the research supported greater engagement and empathy, which in turn developed knowledge and created valid CAR. The theoretical framework (see Fig 6.1) identifies the cultural context of Malawi and my own approach to research woven through a collaborative element, enabling the children and teachers to share their knowledge and contribute to the development of their experiences. This worked alongside the phased method of CAR. As the teachers and children explored, acquired knowledge, and developed skills they informed the next phase of the research, and gave us a basis for action. The cultural knowledge that the co-researchers brought to the research (Wood, McAteer & Whithead, 2018; Ali et al, 2021) drew together these three elements of the dynamic triangle (Fig 1.1), creating a cultural foundation of cohesion on which to build the research. The practical framework, the CRT (Fig 6.1), developed over the course of the research and was developed in a large part by the literature that was explored because of the collaboration during the RTP. The collaborative nature developed through the CRT created direction for the literature to be explored by myself and the co-researchers to support the development of our knowledge. Ideas for change, development and research came from all the co-researchers who had critically reflected on their own practices and funds of knowledge (Moll et al, 1992). These practices and the knowledge were considered openly during collaborative conversations (Chapter 7), one of the main features that developed during my research, and which became an important contribution of new knowledge. It was then through the action we brought about equitable change (MacNaughton & Hughes, 2009). One element that is important to note is how the children influenced change and conveyed their ideas and further explanation of this is in section 6.5.1. The Montessori approach offers children freedom and autonomy to lead their own learning. As the environment changed to meet the needs of the children and their voice

was given agency, they influenced the data gathered and the methods used, hence their role as co-researchers cemented.

6.4.2 Trustworthiness

Trustworthiness is discussed at this point as it was an influencing factor on the design of the research and the transparency of the methods used to ensure honesty and depth (Burgess, et al, 2006, p.62). Guba (1981) highlighted four trustworthiness concerns (Table 6.2) and highlighted some strategies for managing the questions raised (Anney, 2014) when considering the multiple realities of the research.

Table 6.2 Guba trustworthiness concerns (Guba, 1981)

1	How can a researcher establish confidence in his/her findings? Or how do we know if the findings presented are genuine? (Truth value concern)
2	How do we know or determine the applicability of the findings of the inquiry in other settings or with other respondents? (Applicability concern)
3	How can one know if the findings would be repeated consistently with the similar (same) participants in the same context? (Consistency concern)
4	How do we know if the findings come solely from participants and the bias, motivations or interests of the researchers did not influence the investigation? (Neutrality concern).

Trustworthiness needed to be established (Guba & Lincoln, 1994) as an overarching criterion, but as added later by Lincoln and Guba (2000) authenticity is also key. As a qualitative researcher, working within a constructivist paradigm I endeavoured to establish rigour across four criteria: “trustworthiness, credibility, transferability and confirmability” (p.28) ensuring that my research would stand up to scrutiny (Shenton, 2004; McNiff, 2017). Taking a reflexive (McAteer, 2013) “collaborative, open-ended, situation-specific” (Zuber-Skerritt & Fletcher, 2007, p.423) approach (McAteer, 2013) underpinned the notions of trustworthiness

and authenticity. Framed by the development of the CRT (Fig 6.1) that could be creditably transferred to another setting (Shenton, 2004) to support cultural continuity and sustainability.

6.4.3 Reflexivity and positionality

Musgrave (2019) suggests that reflexivity is a key ingredient to ensuring quality educational research, as it helps to make identifying the factors that inform and shape our research, as well as motivate us to carry out the research (Musgrave, 2019). Over time there have been many interpretations of reflexivity, although there does seem to be agreement that reflexivity is to do with self-awareness (Oates, 2019) of the researcher applying the same critical frame to themselves as they would to their research methods and analysis. This is supported by Oleson (2005) who suggests that reflexivity is not just mere reflection, it demands a steady and uncomfortable assessment of interpersonal knowledge, reminding the researcher that we must examine how our self is part of the account of the research (Musgrave, 2019). As researcher I have my own story, a story to tell about myself and about my work (Ladson-Billings, 1995). "Who I am, what I believe, what experiences I have" (Ladson-Billings, 1995, p470) are what define me as a researcher, how I research and what I research and not least, the location of my position and how this would influence the design and outcomes.

The positionality of the research recognises the role of action research in acknowledging researchers, teachers, and children as co-constructors of meaning and that 'new understandings are the result of a unique set of dynamics created when particular individuals interact in particular settings" (Freeman & Mathison, 2009, p.1; Wood & McAteer, 2017).

As my role as a researcher was central to my project, I was constantly reflecting on social processes, with reflexive awareness. I was aware of how my personal experiences could inform the data and influence the interpretation (Punch, 2003). This is supported by Sultana

(2007) who states that "how we reflect on our position in our research influences methods, interpretations and knowledge production" (p376). Although these arguments support the view of the importance of the reflexivity of the researcher, enabling understanding, interpretation, and motivation in relation to the research, it could be argued that there is a danger of the researcher "addressing their reflexive motivation in a superficial and ultimately meaningless way (Musgrave, 2019, p15). I considered that reflexivity and positionality for this research was an important consideration and I also wanted to ensure the voices of the 'funds of knowledge' of the co-participants were empowered (Moll et al, 1992; Chesworth,2016) and in "acknowledging and seeking to understand my influence on the research" (Cohen, Marion et al, 2011, p225) and I needed to look through a critical lens at the position of the 'I' and the potential power (McAteer & Wood, 2018) that I could hold within this collaborative space as a western academic. A fundamental element of creating equilibrium in power relations was the collaborative conversations (Fig 6.4). They offered a safe environment for exploration of power relations to create, through funds of knowledge (Moll et al, 1992), an equitable sharing of knowledge and decision making. They were not without their challenges, firstly and most importantly in the understanding of all the co-researchers about how this time and space could be used and how safe it really was. They were developed initially as an extension to original interviews and questionnaires, which were to be carried out by me individually. This did not work because of the language barrier and the power relation element. The one day I was observing a circle time in the classroom and saw how the conversation built between the teacher and children and the support they offered each other in drawing out knowledge and understanding. I realised that this is something that could be re-enacted between the adult-researchers to enable support for each other.

At first the adult-researchers were reserved, mainly because of the hierarchal nature of the adults' positions within the foundation and my deemed role as the white knowledgeable person. Over time trust developed and the collaborative conversations became an open forum for discussion, knowledge sharing, responsiveness to culture, reflection, and analysis. These collaborative conversations were time of real equilibrium between the research team where our funds of knowledge (Moll et al, 1992) were given equal respect and our self-reflection was celebrated.

Through the collaborative conversations I gained a better understanding my personal reflexivity involved questioning my own personal assumptions. I recognise that positionality defines what we know, and that reflexivity is what we do with that knowledge. To better understand the personal influencers of my research and to locate my position in the research (Punch, 2003; Oleson, 2005; Musgrave, 2014; Oates, 2018) was important and was in a large way challenged through my literature review. As I stepped into the unknown cultural context of Malawi, I tried to review my position in the research during each phase, in a critical yet reflective way, while trying to consider the perspectives of all the collaborators in the research. Writing in my research journal with reflexivity as a focus enabled me to maintain a more critical view of my research, almost as if writing it down allowed me to break down the emotive barriers and view my positionality in a more articulate way.

It became evident as the research progressed that my positionality in the research was fluid, it was never fixed but situational and culturally dependent. For example, before I started my field work, I had developed a research plan and a training plan around the notion of what I would do and what I knew. On arrival to the field, it became apparent that I would have certain knowledge on which to build the project, but I would need to draw on the knowledge of the co-researchers to develop more appropriate ways of how, whilst still ensuring I was

accountable for my position and what was my responsibility (McNiff, 2017). My changing position in the research process impacted each phase of the research, from the initial construction of the research design, through the data gathering and analysis culminating in the arrival of conclusions. I found myself to be positioned differently in each phase making it difficult to define the emic and etic sides of the process. Although, whether inside or outside of the social group, we developed a "community of learners" (Ladson – Billings, 1995, p163).

Collaboration with the co-researchers enabled their funds of knowledge (Moll et all, 1992) to become more visible to me and this had an impact on the literature and the research and as alluded to above in turn influenced the theories that underpinned the theoretical framework. Moll et al (1992) defined the concept of funds of knowledge as being based on the premise that people are competent and have knowledge of their own life experiences. My funds of knowledge had a direct impact on my positionality in the research and the methods I used, as alluded to above. The impact from the co-researchers in Malawi was effective when adaptions were made to research as their funds of knowledge (Chesworth, 2016) influenced how the project was eventually carried out in their cultural context, for example in the way we adapted some of the data gathering tools and carried out the teacher training.

As an action researcher, I also used the opportunity to draw on critical theory such as postcolonial theory and critical whiteness theory (MacNaughton & Hughes, 2009). Owing to the lingering historical context of colonialism that can still be seen within the Malawian society's definition of what is considered 'civilized' and what is not. Katenga-Kaunda, (2015) suggests that everything that is considered "*Zachizungu"* meaning "European" and "White" is usually considered to be upper class and of a status that most people strive to attain in Malawian society (which essentially supports the notion of the power of the white man). Power differentials (McAteer & Wood, p1) are very visible in Malawi and were evident in

the school, I believe because of the involvement of the iNGO. This cultural legacy initially informed the perception of the co-researcher towards me, as the white imparter of knowledge. This was a challenge that I had to reflect upon (Chapter 7), and I worked to overcome some of the power imbalances, to ensure collaboration, but even by the conclusion of the research there was still work to do (McAteer & Wood, 2018).

However, I am also aware that as researchers we can never describe something as it is, no matter how much reflexivity we bring to the process, we can never objectively describe reality as it exists, although exploring and reflecting on the different aspects and perspectives of the research, using a reflexive approach to positionality, informed and enriched my research.

6.5 Collaborative Action Research with Children

Giving children a voice of their own, as advocated by the UNCRC (1989) rather than through an adult, has been a popular sentiment used to support children's participation in research (Kanyal, 2014), yet often in educational research they are neglected, even they are deemed to be central to it (Declercq et al, 2011). CAR with children is argued by some to be challenging but Clarke (2004) suggests that it is "a methodology which plays to young children's strengths rather than weaknesses – their local knowledge, their attention to detail and visual as well as verbal communication skills" (p.153).

Yet there is tension among researchers, some arguing that there is no need to use specific child friendly methods (Christensen and James, 2000), and suggestions that what is needed is participant friendly tools, rather than child friendly tools (Punch,2002). The cultural context of this research was fundamental in the research design, acknowledging the view of Christensen and James (2000) that the methods designed ought to be suitable for the cultural context, not just child friendly. Through collaboration with the co-researchers, we identified methods that met the needs of both the culture and the child, these developed over the three

phases of the research through reflection on their use and usefulness. Such a balanced and inclusive approach resonates with Montessori, respecting each child as an independent individual with understanding of themselves, their environment, their needs, and their interests. Montessori teachers are encouraged to follow the path the child leads them along (Montessori, 1946/2012), which they do with dedication and, just as it facilitates children's learning, this approach facilitated the research, enabling me to construct knowledge, "it is no accident from which the men and women of today are constructed… but if we knew how human beings had been built, we would better understand them" (Montessori, 1946/2012, p4).

Yet, allowing children to participate fully, can pose a problem, particularly when you include the collaboration between the two other elements of the research: the adult and the environment. Morrow and Richards (1996) contend that "the biggest ethical challenge for researchers working with children is the disparities in power and status between them" (p.98), as children are normally reliant on adults and adults view this reliance as part of the natural order (Qvortrup, 1994). Montessori advocated the empowering of children with the ownership of their environment, this notion supported the research and the collaboration to create some form of equality. The emphasis was on co-researchers, "to provide an equality of status" (Freeman & Mathison, 2009, p.60).

6.5.1 CAR with children in my study

Seeing the child as a competent researcher of their own experience and understanding their family culture, was vital to my research and ensured we employed "a range of methods which are fair and respectful" (Morrow & Richards, 1996. p.91) and were appropriate to the child's age and level of understanding, thus enabling the child to participate fully. I was aware of the limitations of my cultural understanding of the context of the children's lives. I learned from

and developed the research from the children's funds of knowledge (Moll et al, 1992) adopting a role that aligned more to observing the participation and behaviour of the children (Freeman & Mathison, 2009). Throughout the research process I critically reflected not just on my own role and understanding but also on the use and choice of the methods (Punch 2002) by the child participants and the child-researchers. The construction of the knowledge gained in this research is linked to the social and cultural experiences, with opportunity for the children, to tell alternative narrative in their own way and in response to their positionality in the research (Moss, 2019), a notion that underpinned my research, but that created ethical issues for consideration in each phase of the research.

6.6 Ethical Considerations

Ethical issues are important in all research and the ethical decision-making process was a major element in developing foundations and an understanding of the contextual importance of my research. It is important to include the details of the ethics process that I went through at the start of my research journey as it had a significant bearing on the research methodology and the subsequent design decision. Gaining informed consent has been a challenge to researchers for many years (Hodgkin & Beauchamp, 2019) and Aaltonen (2017) suggests that the notion of informed consent remains fundamentally problematical. My research is working in collaboration with two vulnerabilities: children, and participants with language barriers. Hence, informed consent needed to be accessible to both groups; the children, and the Chichewa speaking parent and was the start of forming trusting relationships. Alderson also makes it clear that "gaining the participant's' informed consent to carry out the research is part of building trust in the relationship between yourself and the research participant" (Alderson, 2004, p.277).

It was soon after the initial ethics application was made that essential reflection started to take place. The University ethics panel returned my application twice with further questions. At the time this was a cause for frustration but, on reflection, this rigour was necessary, and approval was eventually gained (Appendix 5).

As my research was based in Malawi, consideration of local customs was fundamental. It is still recognised that the village chiefs are central to the schooling in their villages (Watkins & Ashforth, 2019). The village chief acted as overall gatekeeper and it was necessary to secure her verbal permission to carry out the research in her village. This was secured in phase one (Chapter 7).

6.6.1 Informed consent

The points for consideration initially raised by the panel particularly focused on the Malawian element of the research, especially around issues of informed consent (MacNaughton & Hughes, 2009) and it was clear that I needed to consider the cultural aspects of the project in a far more in-depth manner. I recognised that informed consent is carefully associated with the ethical principle of ensuring "respect for persons" (Brooks et al, 2014) as respect for the individual is a foundation of the ontology and epistemology of the research. Reflecting on the ethics of informed consent from the participants in Malawi, raised a few issues including concerns about the language barrier, power relations (McAteer & Wood, 2018) and the involvement of the children in the research, alongside other cultural considerations. I had to ensure that my language was plain and understandable (MacNaughton & Hughes, 2007). Initially, we held a village meeting with the parents/carers, village leaders and teachers to discuss the project and answer any of their questions. I was supported by one of the English-speaking teachers who translated for me to the native language, Chichewa. I kept the language I used jargon-free (MacNaughton & Hughes, 2009). The teachers had informed me during

the scoping visit that this has proved to be the most effective way of meeting with the parent base and having a forum session. Due to the education level of most of the villagers, the Charity stated that they would prefer verbal consent to be accepted from the parents, but that written consent would be possible from the village leaders/elders. I handed out, and explained, the participant information sheet (Appendix 3) which had been translated into Chichewa (Appendix 4). All translations, both verbally and of the documents, was carried out by the senior administrator of the school, who was a research academic from the University of Malawi and understood the research process. This ensured the protection of research nuances were not lost in translation. For rigour and consistency consent was gained from the iNGO CEO/Founder. Assent was sought from the children, acknowledging the importance of both parent and child (Hodgkin & Beauchamp, 2019). This was done verbally during a circle time shared between the child-researchers, teacher-researchers, and me. These terms are defined by Coyne (2010) as "consent referring to a person's voluntary positive agreement whilst assent refers to a person's acquiescence" (p228), whereas Green (2012) suggests that gaining consent from parents is when they agree on behalf of themselves and their child and/or assent is gained from the child themselves.

6.6.2 Ethical concerns in conducting research with children

Much has been written and discussed about "doing research with children" (Christensen & James, 2000; Lewis & Lindsey, 2000; Morrow, 2001, MacNaughton & Hughes, 2009; Ellis & Belchamp 2012). Informed consent dominates these discussions (MacNaughton & Hughes; Coyne, 2010; Ellis & Belchamp 2012; Aaltonen, 2017). Recently the British Educational Research Association (BERA) (2018) suggested researchers need to ensure clear ethical practice. Hodgkin & Beauchamp (2019, p21) advise "in the case of participants who have capacity, age or other vulnerable circumstances that may limit the extent to which they can be expected to understand or agree voluntarily to participate, researchers should fully explore

ways in which they can be supported to participate with assent in the research". In such circumstances, researchers should also "seek the collaboration and approval of those responsible for such participants" (BERA, 2018, p15), for example a gatekeeper.

BERA (2018) go on to discuss the importance of ensuring children who can form their own views should be able to express those views freely when the topic affects them. As discussed above parents/guardians gave consent on behalf of themselves and their children to allow collaboration. The children's assent was gained verbally during circle times, as this was a safe environment for the child.

It was important that the children felt empowered throughout the research. The circle times with the children were particularly important so that I could feel assured that the children could "understand all the information being communicated, how able they were to process the information and how well they could express their own views" (Ellis & Beauchamp, 2012, p48). Circle time was a group discussion the teachers held every morning with the children in the school. We dedicated one of these circle times to talking to the children about the research. Before participating in this circle time with the co-researchers I led other circle times with the children, so they were used to me being part of their classroom environment.

The well-being and contentment of the children always remained a priority for me, recognising that although children may be able to assent to participate, that such assent was not a final state, rather "an ongoing process" (Alderson, 2004). There is also the consideration that with the research being carried out in Malawi, the children could be considered as vulnerable as Ellis and Beauchamp (2012) ascertain, "young children with communicative or emotional difficulties can make the research process more challenging" (p48), particularly when gaining assent and as researchers we must ensure "the same rights and responsibilities between the participant and the researcher" (p48). In this cultural context there was

consideration in weighing up the impact of the research against the risk to the vulnerable children (Forster & Eperjesi, 2017), although this risk was deemed to be very small because of the school community involvement. Those who conduct research with children must constantly consider the ethical dimensions of their work; they should question what they are doing and search for the limitations of their methods and interpretations in an attempt to accurately present what the children are doing and saying (Einarsdottir, 2007; Ellis & Beauchamp, 2012) and particular attention was given to the cultural aspects of the Malawian Community when evaluating the social, academic and developmental benefits of the introduction of the Montessori approach.

Action research with children brings with it challenges, particularly when working with early years children some of whom may be under three (Smith, 2014) and non-verbal. It is recognised that children are not a homogenous group and that variables, in this case the participants age, culture, and gender could be a limitation to the data collected and to their understanding in what they are participating (Alderson & Morrow, 2004). I explored ways of collecting the data and informing the children, through the literature review and discussion with teacher-researchers. By developing a range of creative methods of data collection (Clark & Moss, 2001) I tried to give the children an opportunity to understand and participate as fully as possible and I recognised that they are sophisticated and credible commentators on their own lives (Christensen & James, 2008; Kellett, 2010) and I acknowledge the importance of their participation.

6.6.3 Privacy and confidentiality

As a researcher I had an ethical duty to protect participants from public scrutiny (Kellett, 2010) and their confidentiality needed to be respected (Smith, 2014). I tried to ensure that the teachers were made fully aware before the research commenced of their choice, as to whether

to participate in the research. While working with young children raises a series of ethical predicaments, perhaps the most important ethical considerations centred on the protection of the participants' privacy, and preservation of confidentiality and it can be a complicated matter (MacNaughton & Hugh, 2009), although Cooper and McNair (2015) argue that complexity can be made simple, and the levels of confidentiality can be agreed by the stakeholders. As I was working closely with the iNGO charity that works internationally, there was a risk that individuals and the organisation might be identified in the outputs. This was particularly a consideration with the photos, as they are difficult to retract once they are shared. However, although no family or children's names were used initially in reporting the research, the children are in the photos and during phase three consent was sought for their use in a wider context from the gatekeeper and parent/carers. Although it could be argued as unethical, I also discussed this with the children during a circle time and they were excited that their photos would be shared (Research diary, 2018). Moreover, initially, the research outcomes were shared with the collaborators in the research to gain their agreement. The co-researchers and the iNGO, have approved my request that the outcomes and the contribution for knowledge can be shared. It is confirmed that as the doctorate is my work, I will be in control of what can be shared by the iNGO.

Due to the nature and location of the research it was important to consider issues relating to the power imbalances that could influence the research, (McAteer & Wood, 2018), for example, in the way that some participants might feel indebted to the iNGO. There was also a recognition of biases in terms of power, which needed to be corrected in research in terms of who the gatekeepers of knowledge were (Grant et al. 1987), for example some of the children were orphans with no formal carer, this was the case for two of the children; the Charity acted as gatekeepers for these children.

It is acknowledged that the researcher often has power over the researched (McAteer & Wood, 2018). The consideration that adults have power over children is indisputable and has significant bearing on the control they exercise over children and how their views are collected and analysed (Kellett, 2010; McAteer & Wood, 2017). Through collaboration with the children (as co-researchers) and the creative triangulation of their views and experiences (with those of the teachers and me as researcher), l tried to ensure that there was an 'equality of voices' in my project. 'Reflexivity should be a central part of the research process with children, where researchers critically reflect not only on their role and their assumptions but also on their choice of methods and their application' (Punch 2002. p.323), this reflexive approach was also considered in relation to the context in which the research took place. Einarsdóttir (2007) suggests that those who conduct research with children must constantly consider the ethical dimensions of their work and question what they are doing and search for the limitations of their methods and interpretations to accurately present what the children are doing and saying.

6.7 Gathering Data

My research approach gave me an opportunity for full collaboration with the stakeholders, facilitating (MacNaughton & Hughes, 2009; McNiff, 2017; McAteer & Wood, 2018) a sharing of knowledge of how the environment can be developed and used by the children and the teachers in the Malawian context. Based around the insightful and the mysterious psychology of the child, research methods were sensitively chosen. By observing the development, listening to the voices, and respecting the construction of the child, the teachers, and the environment, I found out how to best research and develop practice in this cultural context.

6.7.1 Choosing my research methods

Choosing the right methods for the research was paramount to the success, trustworthiness, authenticity (Guba, 1981; McNiff 2017) and validity of the research (McAteer, 2013). Qualitative methods are traditionally associated with the social sciences, and in particularly the interpretivist approach. Aligning with the chosen methodology, a CAR project was constructed with people, groups and situations to journey through the action (McNiff, 2017). I planned a variety of methods which seemed to be the more appropriate tools to study and collaborate in a variety of practice realities. Increasingly, the importance in acknowledging the advantages and disadvantages of all research methods had been stressed through supervision, collaboration and ethics (Chapter 6), eventually I combined the methods to best support the answering of the research questions and the knowledge base of the co-researchers (Thomas 2013, Teddlie and Tashakkori, 2008).

The research included the use of both primary and secondary data sources. There was consideration of a mix of multi-sensory research methods in the design to allow more children to participate of varying ages and development levels, thus creating opportunities to enable the collection of as much data as possible. The data gathering methods were discussed and decided in action between the researcher and the teacher-researchers and the child-researchers. Changes were made through the phases of the research (Table 6.3) as a result of reflection and collaboration. The Table below outlines an overview of the range of data collection tools that I used for my study, more detailed information on the individual data gathering methods can be found in Appendix 14 and the tools have been critiqued in Chapter 7 as the research in action story is told and the changes to the tools were made. Although you can see simply by viewing Table 6.3 that the number of tools reduced as the research progressed.

Table 6.3 Data Collection tools development

Data Collection Tools used
Phase 1
Questionnaire for teachers (one of the teachers translated if required)
Parent meetings (with a translator)
Semi-structured group meetings with teachers(to become known as Collaboration conversations)
Individual teacher meetings
Observational photographs
Research diary & field notes
Introduction of ongoing weekly face time meetings with teachers, once I was back in the UK
Introduction of Whatsapp for transtion phase
Multimedia tours with children
Informal conversations with chidlren
Child tracking and assessment (V1)
Phase 2
Questionnaire for teachers (one of the teachers translated if required)
Collaborative Conversations
Observational photos
Research Diary & field notes
Multimedia tours with children and conversation
Involvment tool kit (V1)
Child tracking and assessment (V1)
Individual Child Observation and Assessment
Facetime Meetings
Phase 3
Questionnaire for teachers (one of the teachers translated if required)
Collaborative Conversations
Observational photos
Research Diary & field notes
Multimedia tours with children and conversation
Environmental involvment tool kit
Individual Child Observation and Assessment
Parent Meeting

The methodology supported the choice and use of the chosen research methods (Crotty, 1998, p3) which were the backbone of the research, to help address my research questions (McAteer, 2013). Action research is a "data-driven approach" (McAteer, 2013, p63) and the questions I ask of the research were fundamental to frame the project (Swain, 2017). The research questions are the "path to knowledge" (Gadamer, 1989, p365) and I hoped to gain an understanding of how the impact of the introduction of Montessori is supported by the interplay between the teacher, the environment, and the child. Many qualitative researchers see the beginning point of their research as the question, whereas McAteer (2013) noted that the reflective processes required for developing action research questions over the action cycle can give shape and direction to the study, although she does argue that the questions are "vitally important for getting the research off to a good start" (p63). This was certainly the case with my research and the initial research question changed as my knowledge developed, to eventually become "How do we reconsider the Montessori Method to support cultural collaboration and learning in the Malawi context?" and this change influenced the methods of data gathering.

6.7.2 Methods of data gathering

Data gathering methods develop over the cycle of action. My research project was predominately qualitative (McAteer, 2013) due to the nature, the context and elements involved in the research (Gladstone et al, 2009). There was a mix of quantitative data gathering methods used such as the Likert questionnaires (Appendix 8 & 28), which enabled the creation of graphs and a simple measurement of responses and themes, as McAteer (2013), proposes there is a drive in many early researchers to produce graphs and charts. These we used in collaboration with the other qualitative methods. I concur with McAteer's view that the use of qualitative and quantitative as descriptors of data types rather than as research approaches (p64). The final data gathering methods used (Table 6.4) acknowledged

the importance of enabling opportunity to "capture concepts and perspectives from different cultures, and provide language" (McAteer & Wood, 2018); Gladstone et al, 2009, p347).

Figure 6.4. Final data gathering methods: Detail

Data Gathering method	**Details**
Questionnaire / Interview form for teachers	All the teacher-researchers that have chosen to participate in the research were offered the opportunity to complete a questionnaire, either in groups or individually with support from the researcher and a translator (the senior administrator of the school). The questions helped to inform the research, ascertain a starting point on teachers' ideas and understanding of the Montessori methods and evaluate the feeling of well-being of the teachers. In gaining further understanding of the point that we are all starting from, and how knowledge and understanding developed. The questionnaires (Appendix 8 & 28) included closed questions; some using a Likert scale; some using dichotomous questions; and open questions and were completed with supported discussion.
Collaborative Conversations	These developed over the course of the three phases of research. They were derived from the initial interview schedule and as a result of bring equilibrium between the adult researchers. They were based on a circle time analogy normally used with children and adapted to us as adults, the development of this particular tool is discussed in detail through Chapter 7. There was no need for a formal translator as the English both spoken and understanding was of a good level. The adult researchers also supported each other with language if needed.
Observational photos	Phone cameras were used by the adult-researchers and the child-researchers to capture moments in time that would build a pictorial narrative of the research journey,

	of cultural and social contexts and changes in the collaboration elements. The photos and videos were time stamped making them more confirmational as a tool. The use of this tool is discussed further in detail in sub-Chapter 6.6.3.
Research diary and field notes	As the researcher I kept a diary and field notes, recording my learning and experiences. This has proved to be an important source for me.
Children's multimedia tours with conversations	The child-researchers were given the opportunity to tour their environment with support from adult-researchers and the short question guide (Appendix 29), They used cameras and camera phones (Chapter 6.6.3). The children had charge of the camera and, assistance was given when the child asked. The child-researchers had opportunity to talk through their multi-media tour of the environment. They were given the opportunity to tell the story of their pictures, giving the opportunity to the child-researchers to use the photos as a tool to enhance discussion. There was flexibility of holding these individually or in small groups. These conversations were recorded in note form. There was a teacher-researcher present at these conversations as a translator is they were carried out by me.
Environment involvement tool kit	After some discussion during phase two we also introduce the use of the Leuven scales (Appendix 12 & 13) for involvement (Laevers, 1994a; 1994b). The development of this tool is discussed further in Chapter 7.
Individual child Observation and Assessment	After some discussion between the researchers, it was decided that the teachers and the researcher will make observations of the ten named child-researchers. The tool developed from the initial complicated child assessment tool) used in phase one (Appendix 26) to the more

	simplified tool (Appendix 18). The records for these were mapped to the Malawi Early Childhood Development Monitoring and Assessment Guide (2012), the main recording tool can be seen in Appendix 26. This was to ensure the ongoing Malawian context is respected and to give credence in Malawi to the research. Over the three phases of the research this tool developed alongside the Environmental involvement toolkit. This is discussed further in Chapters 6.6.4 and 7.
Parent Meeting	A parent meeting was held during phase one and phase three. This was led by the teacher-researchers with my support. The teacher researchers translated for me where necessary. We also used these meetings to gain parent consent for the more in-depth involvement of the ten named children.

Using multiple methods of data gathering needed constant reflexivity on the part of the whole research team as "participation does not simply imply the mechanical application of a method but is instead part of a process of dialogue, action, analysis and change" (Pretty et al, 1995, p.54). Indeed, as O'Kane (2000) suggests, successful use of participatory methods "lies in the process rather than simply the methods used" (p.129). Moreover, it became evident over the course of the research that the range of methods used and developed through collaboration with the co-researchers, did much to redress the power balance between the co-researchers (Chapter 7) and ensured full collaboration and opportunity to create data (McAteer & Wood, 2018). It is also worth noting that as the research cycle progressed and the data gathering tools were influenced by the teacher-researchers, their use became two-dimensional, as both a data gathering tool for the research but also a tool for the teacher-researchers to use going forward to support assessment and reflection in practice.

The development of data gathering, and analysis was based on the theory of observation advocated by Montessori (1946/2012) and adapted so the role of the observer and the observed was fluid and changeable. To enable the co-researchers to use all the data gathering methods effectively, their knowledge and skill base was developed during the collaborative conversations (Chapter 7), particularly focused on understanding of the Montessori philosophy of observation (1946/2012), as well as using photographs, videos, and Leuven scales of involvement (1994b).

6.7.3 Using photographs and video in research

The decision to use photos and video was embedded in the field during phase one. The child-researchers in Malawi were excited about using a phone that took photos and it quickly became evident during this phase that it would support understanding and reflection of the Malawian team of what was interesting to the children. The adult-researchers also took photos to record moments in time, observations of children and of their developing environment to support the data gathered. This became a particularly useful tool during the RTP.

Using photographs and video has become more common as a methodological tool in social research as data generators (Schwartz, 1989; Anney, 2014; Tinkler, 2014). It is argued that researchers need to have some notion of how viewers treat and understand the photographs, but also under what instruction the photographs are taken (Schwartz, 1989). Using photos does open up the debate on how the photo is analysed and interpreted by the researcher (Tinkler, 2013; Anney, 2014). There is a danger that the researcher can conceptualise them in relation to their own views and influences. Although often considered a work of art (Schwartz, 1989), the photographs were used in my research as a medium through which an additional voice could be given, in order to address some of the language barriers and because, as Morrow & Richards (1996, p. 97) suggests, researchers need to "find ways of eliciting

children's opinions and experiences" offering young children a way to take part in research on themselves. Using the lens of a camera gave us, as adult researchers, a window into their world (Winton, 2016). We were able to talk to the children about their photos and this offered understanding.

Tinkler (2013) defends the use of photographs as a way of using collective memories to shape identity and evidence a study of social and cultural life. During the study, photographs became a popular tool used by all collaborators in the research; the children, the teachers and me. Unexpectedly, they also gave me an insight into the changing environment. The analogy of 'a picture is worth a thousand words' was never truer than in this research study, as they created an image seen through the eyes of the child or the teacher. The image taken was in front of them, at the moment in time that they wanted to capture, whether it be of the material world or the social world (Tinkler, 2013). When it is light a picture can be recorded onto a film and fixed permanently (Montessori, 1946/2012), the same picture would be recorded at the same time by any number of people with a different camera, it is a fixed moment in time. Yet Goldstein (2007) warned us to consider that a photo does not depict what the eye sees, or the brain perceives, as this process is mechanical and planned. Although I would argue in the case of my research, photographs were taken spontaneously in the moment without planning, effectively constructing meaning of what is around them, taking photos to create their own narrative or lived in experience (Winton, 2016, Castleden et al, 2008) and realities (Morrow & Richards, 1996). Winten (2016) argues that in the field of social construction the photograph can offer a way of seeing collaboration between the observer and the observed. The child-researchers in my project used cameras and took their own photographs, a method that has been used extensively by Clark & Moss (2001, 2004 & 2005) for identifying important things in their school (Clark, 2004). Photographs also offered an opportunity for

the teacher-researchers to reflect on the ways that children think about their school (Einarsdóttir, 2005).

For the children-researchers using cameras brought with it an exciting new skill. Once it had been accepted that a child may be an expert in their own experience, then the use of a camera provided a way to document a world viewed and experienced by the photographer (Freeman & Mathison, 2009, p.110), namely that individual child. I supported the camera tours by accompanying them with questions (Appendix 29) as this would support the collection of consistent data. To support credibility (Anney, 2014), I was able to timestamp many of the photographs and added timers to the video footage.

6.7.4 Leuven Scales

I decided the use of the Leuven Scales (Laevers, 1994a; 1994b) could be a positive source of data collection and were a consideration during the scoping visit and were introduced during phase two (Appendix 12 & 13). I was reticent initially due to the knowledge base of the Malawian team as potentially being a barrier to the successful use of the scales but simplifying the data gathering tool and a morning of training overcame this and we eventually developed one adapted to the environment (Appendix 12). Laevers (1994) explored children's levels of involvement as an indicator of children's involvement and quality learning environments. He found that learning environments that promote high levels of child involvement are quality environments, (Laevers, 1994; Pascal and Bertram, 1995). For definition and clarification in this research, involvement is termed as a period of time that can be recognised by the Malawian team as concentration and active participation (Pascal and Bertram, 1995; Laevers, 1994).

Involvement is measured by using Leuven scales by observing the strength of the indicators depicted on a Likert-type scale ranging from one (lowest concentration) to six (highest concentration). Involvement is reflected in the success of the environment in engaging children in sustained and focussed activity (Jackson-Barrett & Lee-Hammond (2018), alongside the attainment of new knowledge, skills, and dispositions (Laevers, 1994; Pascal and Bertram, 1995; Jackson-Barrett & Lee-Hammond, 2018). The foundation of the emphasis of the scale was to use the observation to measure concentration, this was beneficial for my research as high levels of involvement lead, in the end, to high levels of child development and deep level learning (Laevers, 1994; Pascal and Bertram, 1995). It is argued that this concept in turn improves outcomes for children (Laevers, 1994; Pascal and Bertram, 1995).

6.8 Data coding and analysis overview

Analysis for interpreting data (MacNaughton & Hughes, 2009), is a way of organising the data. McAteer (2013) reiterates the importance of immersion in the data throughout the research cycle with the eventual aim of analysing the data to make sense of the findings and connections with theory. The action research nature of the project required ongoing reflection and analysis, as it happened in the real time of the research cycle. Whilst the interpretivist framework of my research in turn supported the inductive nature (Gray, 2014) of my research, data generation and analysis, it is argued to be not as strong as some other strategies (Gray, 2014, Swain, 2017). However, due to the context of my research it provided a more simple and understandable approach through which to evaluate the findings with input from the co-researchers. In Chapter 7 and 8 I draw together the findings and discussion to create a more informed discussion and to deepen the knowledge on the data gathered (Mac Naughton & Hughes, 2009).

The methods of data analysis and coding were selected to support the aims and the context of the research, to help me consider how the Montessori approach was considered in a Malawian context, the procedure was adapted from the thematic analysis model of Peel (2020). Notably, for my research, I was interpreting the data (MacNaughton & Hughes, 2009) rather than carrying out an analytical process. I chose to use economical coding (Table 6.5) and analysis strategies (MacNaughton & Hughes, 2009) to enable me to analyse the data quickly. These were easy to manage and understandable by not only myself but also the Malawian team, which enabled them to be part of the critical process of data analysis.

Although the overarching analysis and findings for this project are drawn together at the end of the research process, as discussed in Chapter 7 & 8, there was an organic level of small note analysis and economical coding strategies (MacNaughton & Hughes, 2009) used during and after each phase; however, during the process of the research we termed these strategies, on the run coding, as the co-researchers explained that this was exactly what we were doing. Action research data coding and analysis often happened 'on the run' (MacNaughton & Hughes, 2009, p175) as the conclusion of each phase informed the development of the next phase. This was necessary to inform ongoing development of the data generation tools and to inform the ongoing action that supports the next phase of the research cycle. This process enabled me to identify changes during each phase of the research involving the co-researchers, it gave the opportunity for ongoing reflection and confirmation of findings. This method simply consisted of continual comparison of the qualitative data, the tracking of obvious themes and identification of frequently used terminology, key phrases, and phraseology.

Table 6.5 Economical Coding and analysis strategies (Mac Naughton & Hughes, 2009)

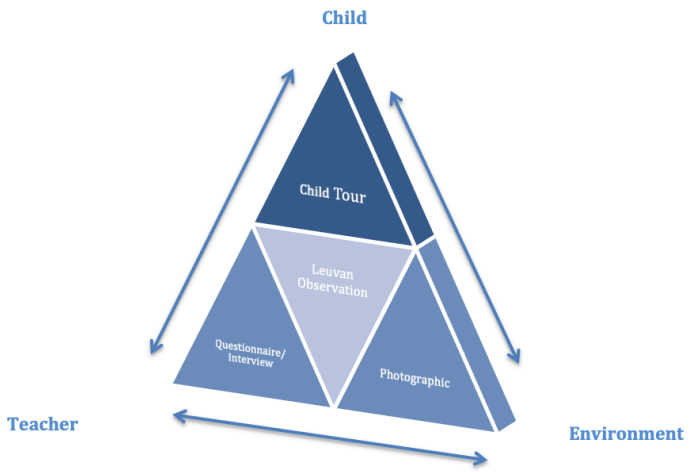
Coding Strategy (On the run & in depth)	**Foci**
Colour coding	Settings, actions, speech, text, processes, structures, relationships
Key terms	Presence and absence of key Montessori and children development terminology
Analytical Memos	Development of terms and power effect. Development of broad themes.
Form of analysis	**Foci**
Thematic analysis	Major themes and categories, the dynamic triangle
Exemplars	Vignettes of major themes
Narratives	Photographic narratives to form a coherent story

The data from the discussion groups, collaboration conversations, questionnaires and children's narratives (tours and photographs) were initially interpreted using small note slimming (MacNaughton & Hughes, 2009), this approach uses a framework developed by Gladstone et al (2009) that allowed for the "use of topic headings and main themes and concepts arising from the data gathered to systematically classify and mapped and then place it into groups" (Gladstone et al, 2009, p348). The groups were the 3 elements of the dynamic triangle. This resulted in the creation of several mind maps (Appendix 23) that were thematically based and linked to the authentic Montessori framework (Lillard & McHugh, 2019).

The photographs taken by the research team added an element from which to draw themes and to evidence change through the median of pictures. This enabled analysis and narrative through picture narratives. For example, I identified the theme of child led interest through four forms of data: collaborative conversation, questionnaire, observation and (Golden Learning Moment 7.2).

The eventual aim of the analysis was to illustrate the connectivity of the themes to the Montessori approach, the importance of the themes in bringing about change and the possible usefulness of the research to the future development of the Montessori approach (Gladstone et al, 2009). Finally, there was a final triad model of data gathering methods (Fig 6.2) which formed a rigorous framework for data collection which could be used in any cultural education context. Triangulation theory also allowed for the main elements of the project; the child, the teacher, and the environment to collaborate with influence. This triangulation was then framed by my research diary.

Figure 6.2 Collaborative data triad



Throughout the use of the constant comparative method and network analysis, 'thick description' was employed, as a way of achieving external creditability (Geertz, 1973; Lincoln and Guba, 1994; Creswell & Clark, 2011) in contrast to thin description, which is described by Holloway (1997) as a "superficial account and does not explore the underlying meanings of cultural members." (p.154).

More particularly in this research, it is as a way of creating a personal account of the researcher's experiences of cultural and social context, thus providing meaning about people, place, actions, and words (Geertz, 1973; Schwandt, 2001) giving voice to their experiences

of cultural and social context (Ali, 2021). It is not simply about gathering detail, but also about describing social action, interpreting meanings, circumstances, intentions, and motivations (Schwandt, 2001). Thick descriptions can provide ample context of the developing themes and exploring the relationship between those themes (Creswell & Clark, 2011) enabling someone outside of the culture being studied to make sense of the behaviour. For this research, it offered a method of analysis that supported connection of data (Maxwell, 2013; Mac Naughton & Hughes, 2009), which is discussed in more detail in Chapter 7. The continual reflection on my own positionality within the research context also enhanced the empirical realities as 'thick description' became an on-going production and analysis cycle of knowledge production.

The final element of the data analysis was based on identifying themes of authentic Montessori (Lillard & McHugh, 2019b). My review of the literature in Chapters 3 and 4 identified contradictions of what authenticates a Montessori prepared environment, the cultural accessibility of the prepared environment, and the preparation of the teacher. These are discussed in Chapter 8.

6.9 Chapter summary

Exploring methodological perspectives, the nature of theories and their relationship to practice and effectiveness in practice laid the foundations to the research design as a whole (Brown & Perkins, 2019) and the creation of the CRT (Fig 6.1). Moreover, the cultural context of conducting research in Malawi meant that innovative methods needed to be considered (McAteer, 2013), discussed and negotiated with the collaborators in the research, drawing on their funds of knowledge (Moll et al, 1992; Chesworth, 2016). Gaining an understanding of the conceptualisation of their own culture also enabled me to build up my own cultural literacy and this increased my understanding and awareness of the position of

‘I’ and the co-researchers influence over the methodology (McAteer & Wood, 2018). Developing an understanding of the socio-cultural and educational literacies of the co-researchers was just one step towards completion but was not sufficient, the physical environment was also an influence, and these were the two main factors that steered my research towards a qualitative methodology, enabling collection of in-depth descriptive information (Galdstone et al, 2009).

At the heart of this research is the child, as Montessori (1946/2012, p4) suggests, the child is an “enigma, an unknown quantity”, and “It is the unknown child whom we must know in the future” (Montessori, 1946/2012, p4), to understand how they learn enabling us to continue to advance education techniques that support their development and that of those working with them. It was important to develop our knowledge for a purpose of empowering the child through rigorous and valid research. Conducting research with the child I needed to consider “their place in society” (Montessori, 1946/2012, p3), understand them and resonate in Montessori’s belief that the child works towards the “construction of man” (Montessori, 1946/2012, p3). Montessori regularly spoke of the importance of understanding the experiences of individuals and of considering these experiences (Montessori, 1946/2012). She argued of the importance of creating a science through which to study the child’s work; to study the construction of the human being through the child who, through their own activity constructs both mind and body (Montessori, 1946/2012, p3).

The proceeding Chapter details the methods and the research in action. It develops a narrative of the research from the exploratory visit through to the final phase of the project.

Chapter 7 The Research in Action

Even when helping and serving the children, [the adult] must not cease to observe them, because the birth of concentration in a child is as delicate a phenomenon as the bursting of a bud into bloom. But [the adult] will not be watching with the aim of making [their] presence felt, or of helping the weaker ones by [the adults' own strength. [They observe] in order to recognize the child who has attained the power to concentrate and to admire the glorious rebirth of [their] spirit.

(Montessori, 2007a, p.248)

7.1 Chapter introduction

Chapters 5 and 6 have set the methodology assumptions framing my research and the methods used to gather the data. This Chapter and the subsequent Chapter dovetail each other to bring together the research in action, the influence of collaboration in bringing about change, the analysis, findings and discussion. The nature of action means that writing up at this point is done in a multiplicity of ways and not in a traditional thesis format (MacNaughton & Hughes, 2009). In an ideal world I would be writing the next two Chapters with 10,000 photographs rather than 10,000 words. Instead I will include Photo Narratives and vignettes to tell a pictorial story and a narrative of the development of the main themes of the research project.

7.2 CAR in context

Collaboration in action influenced the actions that took place over the period of the three research phases of the research cycle. There was not a traditional pilot study for my research, meaning the research tools developed from one phase to another. The nature of CAR created an inevitable plan, and over the research cycle I followed the naturally occurring lines of inquiry. The actions were infomred by what the co-researchers did together, what we found together and how the changes developed from one phase of the action research to the next. We considered the data gathered, searching for themes to inform my findings (Cohen, Manion & Morrison (2007).

I have used thick description (Geetz, 1973; Schwandt, 2001; Creswell & Clark, 2011) as described in Chapter 6, through specific narratives to ensure clear interpretation of the accounts of the participants, giving voice to their experiences of cultural and social context (Ali, 2021). These narratives take a data gathering journey through each phase, they are focused on each element of the Montessori triangle (Fig 1.1). I include progression of each element of the Montessori triangle and how the children and adult's agency informed change (Kohn & McBride, 2011). I then go onto describe the themes as they emerged and through discussion make comparison, critically analyse, and respond to authentic Montessori as defined by Lillard & McHugh (2019a; 2019b). By drawing together the data collected and through the discussion I will answer the research questions, relate my findings back to earlier research and evidence how my research contributes to existing research and literature in the field of Montessori and teacher training.

Each Chapter will be shaped in the same way as the other parts of the thesis, acknowledging the three foundation elements threading through the whole thesis i.e. that of the Montessori Dynamic Triangle (Fig 1.1). I have colour coded the data; phase one – red; Phase two – orange and phase three – green. I have also included in each section what I have termed a 'golden learning moment', these moments are identfied as they created a spark for thoughtful reflection and development for me that opened up further research and change. Over the research cycle 1,272 photos were taken and 87 videos, each one telling a very unique and special story. For this thesis I selected the photos to evidence the developing themes running through the data and supported me in answering my research questions. The intial selection was done in collaboration with the co-researchers, who were given the opportunity to select photos that they considered represented the topic of the Photo Narrative we were building and ones they felt confident in vocalising. Each phase acknowledges the role and the positionality of the main collaborators in the project, the children, the adults and the

environment, in the order in which I have written the analysis of that phase. A number of terms were used to describe the collaborators in the research and are defined in Table 6.1. As discussed in detail in Chapter 6 researcher roles were pivotal and reflexive to positionality of the researcher during the action research.

7.2.1 The scoping visit

A scoping visit took place in December 2016 and on this initial visit I observed the teachers and the children in class, with the aim of learning about them and finding out what I may already know (McNiff & Whitehead (2011). The provision at this point had up to 200 children split between four classrooms:

- Classroom 1 Mathematics
- Classroom 2 Literacy and language (English)
- Classroom 3 Culture and the world
- Classroom 4 Outside play and sport

The children rotated during the morning between the four learning environments. A traditional form of rote teaching was used in the classrooms (Appendix 16). This form of rote teaching was proving difficult and challenging for the teachers to manage (collaborative conversation, 2016) particularly with the number of two-year-olds in the environment, who found it very difficult to sit still for the 45-minute teaching class and listen to what the teacher was saying (Research diary, 2017). There was a lack of physical and teaching resources, and the teachers relied on resources donated to the charity. During the scoping visit I introduced the staff to the Montessori method of education, and they appeared to be excited about using a teaching method that could be embedded into their teaching to support the learning of the children, their development level and the skills of the children.

Initial group meetings were held with the Malawian team enabling me to gage their understanding of the proposed project and their willingness to participate, the relevant

permissions were signed at a later date (Appendix 6). I met with the Chief of the Community to talk about the project, ensuring her understanding and to confirm Community cohesion. Halfway through this visit I managed to get time with the CEO of the Charity to interview her and this enabled me to get a contextual overview of the Charity and its vision.

7.2.2 The research cycle

I gathered data during three visits over a two-year period; each visit lasted two weeks. These two-week periods are defined as the phases of action of the research. The time between these phases is defined as the reflective transition phases (RTP). As previously explained each action phase was developed around the dynamic triangle (Fig 1.1) and created the foundation on which the theoretical framework (Fig 5.1) was developed. Critical reflection on the action kept the cycle of action moving, bringing about change in the subsequent research and in practice (MacNaughton & Hughes, 2009) and supporting the development of the CRT (Fig 6.1).

Phase one focused on the set up of the project and embedding the collaborative working. The children and the teachers in the school were the co-researchers, making them by nature collaborators, at this point a mutual respect began to develop through joint understanding and respect for funds of knowledge (Moll et al, 1992) of all the co-researchers. Phase two focused on development of knowledge and the embedding of the use of the research tools. The methodological approach taken through the CAR in this project was designed to encourage inclusive participation, ownership and increase understanding (McAteer & Wood, 2018; Mac Naughton & Hughes, 2009). In light of this, the third phase was about embedding new practice and empowering the Malawian team to do the final reviews and plan their way forward. Throughout the phases the positionality of the researcher 'I' and the co-researchers was a defining consideration and had influence on the research and the data generation. As

shown in the CRT (Fig 6.1) the order in which the co-researchers are listed, is created depending on the size of the role they played during that phase. During each phase of the research the methods used to generate data developed through this collaboration and in giving funds of knowledge a voice, as shown in Table 6.3, the methods became less in number and less complicated, as the research cycle progressed. This development I believe was also due to the positionality of 'I' in the research process and the empowerment of the Malawian team in the research process, as I took a less dominating role (McAteer, 2013), the Malawian team started to take more ownership over the decision making.

The collaboration with the co-researchers (MacNaughton & Hughes, 2009) during the research supported development of cultural understanding (Moll et al, 1992; Chesworth, 2016; Ali et al, 2021) and allowed for informed critical reflection to take place and created a platform for action and adaption of data generation tools. MacNaughton & Hughes (2009, p51) describe CAR as 'working with others', I would argue, through my experience with this project, that it is more than this, it is also about community, values, empowerment and respecting the more knowledgeable local other (Parsons & Harding, 2011). Singer & Wong (2018) are more explicit and relevant in their definition, describing a "collaboration of academics and practitioners, where practitioners are regarded equal partners with expert knowledge of the cultural context in which they work" (p126).

7.3 Introduction of the training

As discussed in Chapter 3 Malawian education is a challenge for many stakeholders in Malawi and my understanding of this developed through the literature review and was fundamental for ensuring I had a contextual understanding. The introduction of free primary education for all in the 1990s and the subsequent increased student enrolment created a huge demand for teachers that still exists today (Model United Nations, 2015). Nonetheless, the

challenge of training teachers in rural locations or getting trained teachers to placements and teaching jobs in rural areas remains a barrier. This was particularly the case for the iNGO, which was also affected by the economic demographics of the area. There was little or no money to support expensive training programmes.

As discussed in Chapter 2 and 4, Montessori is an education philosophy that reaches out worldwide, its international appeal has ensured that training providers have created ways to reach out around the globe. Montessori training in Malawi was first introduced by Maribeth Sexton, who arrived in Blantyre in 2010 and opened The Malawi Montessori Christian School. Maribeth delivers a variety of Montessori courses to enable local adults in Malawi to train as Montessori teachers through both her NGO early years centre and training centre. There were three main challenges identified by the iNGO accessing this training in Blantyre; distance, time and cost, hence the Blantyre option was ruled out. Distance learning was investigated but the main barrier to internet-based learning is the lack of electricity, which results in intermittent access to the internet at certain times of the year, this was considered an obstacle to the education opportunities for the teachers moving forward.

After much research and social media activity a Montessori Centre International (MCI) lecturer came forward and offered her services to run a level two Montessori training course with the teachers at the foundation. With the backing of MCI, a short course was adapted from one of their current courses and delivered (Appendix 27) to the teachers during the research cycles by both me, and the MCI tutor. Out of the nine adults that participated in the initial practical element of the course, seven completed with success.

7.4 The Collaborative Research Triad (CRT) in action

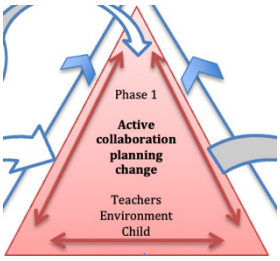
The first research process we participated in as a Malawian team was to develop the research questions. I had an idea of the topics, and I did use these to initiate the conversation. During

our first initial meeting as a research team, I introduced the project and we talked around the topics. I used this information after the meeting to develop the following research questions which were informed by this discussion, which in turn supported the data gathering process. These questions developed further over the cycle of action (Chapter 8.3).

- What knowledge will the Malawian teaching team need?
- How can training deliver Montessori knowledge?
- What type of observation and assessment will work?
- How will the children respond to independent learning?
- What will the children learn?
- What will the Montessori environment look like in Malawi?
- What are the important Montessori foundations?

I made initial observations in the classrooms, during the first couple of days. These observations were narrative observations (Appendix 15, & 16), they were useful in part to use for the Montessori teachers training, but also to inform the research, for data generation and to build up my own knowledge of the child-researchers and the teacher-researchers in their contextual environment.

7.4.1 Phase One- The action phase



Phase one of the research cycle focused on setting up the project, in collaboration with the teachers and the children in Malawi. The main elements of this phase were managing the ethics and consent, initial training of the staff, agreeing the methods of data gathering and researching the initial implementation of the Montessori education

programme. During this phase I worked with six teachers, three assistants and two other adults involved in the school in Malawi, who had, during the exploratory visit in December 2016 verbally agreed to the collaboration (Table 7.1). Three of the teachers had completed their first two years of government teacher training (DAPP, online, n.d), but due to the financial context of their families and with government placements in schools being difficult to access, they have not completed the final two years of teaching practice (DAPP, online, n.d), meaning they were not fully qualified. The teacher-researchers consent was formally sought at this point (Appendix 6). As a whole group they became known for the duration of the project as the "Malawian Team" a title they gave themselves. I explained the notion of confidentiality during the consent meeting and to support their understanding the child-researchers and adult-researchers chose their own pseudonyms, as they felt anonymity was a safe place for them to be. I was to discover later that this was to do with power relations as discussed below.

Table 7.1 The adult-researchers' details

	Psedonym name		Chichewa Speaking	English Speaking	Qualification Level	Details	Training Notes
1	Bomani	Male	VC	C	Community	Involved in all data collection and the day to day journey with the research.	Completed
2	Umi	Male	VC	C	Community		Completed
3	Asale	Female	VC	C	Community	The head teacher and the qualified teachers were translators for the children when required.	Completed
4	Abikanile	Female	VC	VC	Head Teacher		Completed
5	Chibale	Female	VC	VC	QT		Completed
6	Buseje	Female	VC	VC	QT		
7	Lin	Female	VC	VC	QT		
8	Madzimoyo	Female	VC	NC	Community		Completed in phase 3
9	Malawa	Female	VC	NC	Community Matron	Didn't do qualification	Informal attendance
10	Sekani	Female	VC	VC	Professional Staff	Were part of the reflection process, they met with me for overview meetings in each phase and acted translators for the parents and the staff when required	Informal attendance
11	Umi	Female	VC	VC	Professional Staff		Informal attendance

N*C = Not confident* *C = Confident* *VC = Very Confident* *QT – Qualified teacher*

It is significant at this point to clarify the discussion around positionality, not of me, but of the Malawian team, during this first phase it was notable how engrained the hierarchy was. I held an initial meeting with the teachers and the non-teaching participants who called themselves 'professional staff' (Research diary, 2016), for the purpose of naming in the research this is how they will be referred to, if not by their pseudonym. This meeting was held on the second day of phase one. This was the first time I saw a power relation challenge that I had not anticipated (Research diary, 2016). In the school the professional staff were viewed with authority over the teaching staff. During this meeting it became evident that the teaching staff were not talking freely (Research diary, 2016). I had anticipated this reaction towards me as I was effectively an outsider, and as discussed below and in Chapter 1 I had anticipated a power element around whiteness theory. This new component offered a new challenge that had to be overcome, as I was faced with power relations within the team, between the teachers and the professional staff (Research diary, 2016). It became evident over the course of phase one that this was due to the reporting hierarchy back to the CEO of the Charity. The use of pseudonyms helped to overcome this, and as equilibrium occurred, and a respect for funds of knowledge developed, the teacher-researchers were more comfortable, recognised the different knowledge and strength we all contributed, and became empowered by their participation and trust began to develop. This highlights the importance of attention to the detail of the process of participation (O'Kane, 2000), as discussed in Chapter 6, simply identifying a technique is not enough.

I had waded in during the exploratory visit with my Westernised approach to Montessori and of working with early years children. My learning during that visit and my subsequent research on my return to the UK, enabled me to begin to recognise the challenges of the many cultural differences and ideologies (Ali et al, 2021), this was not going to be a simple case of presenting a research project and carrying out the data gathering. There would be a position

of trust to gain and one of equality. It was important to balance my knowledge with local knowledge (Foucualt, 1977) and ensure that the collaboration was also inclusive (McAteer & Wood, 2018). As discussed in Chapter 1 I was aware of critical whiteness theory, although I had chosen to not make it a focus of the project, I had given it consideration as this I believe is what initially caused the wariness about my presence, and I wanted to do what I could to develop a level and respectful position from which we would all collaborate from. Decolonising (Osgood, 2020) my approach to the research agrees with my methodological stance (McAteer & Wood, 2018).

As alluded to above learning about funds of knowledge (Moll et al, 1992) helped to create equilibrium in the research team. In the second meeting of phase two I gave explanations of funds of knowledge (Moll et al, 1992) to the Malawian team, although at this point, I had not realised how integral they would become in the research and how children are driven by their own funds of knowledge. We discussed our communities, our lived-in experiences and our first-hand knowledge (Research diary, 2016), I made links between these and our foundations of funds of knowledge (Moll et al, 1992), that have been created by our life experiences, social and educational experiences, explaining that these will change and develop over the period of the research. We talked of the foundations of action research (MacNaughton & Hughes, 2009), maybe a step too far at this point, looking at the alarmed faces around me (Research diary, 2016) that appeared to be driven by the fear of the unknown. I had to explain further the drive for change, or rather that they were the drivers of change. The journey we were about to embark on, would be bumpy at times and at times we would break down; "the Charity car often broke down, so this made them laugh" (Research diary, 2016), and we may even have to turn around and start again, but also there will be times when "the research will go as planned" (MacNaughton & Hughes, 2009, p5) and that all these different scenarios are

OK, and that is why we will be the action in the research; this seemed to relax everyone in the room.

7.4.1a The Adult

During this two week visit the teachers were supported by me and a trainer from Montessori Centre International to introduce them to the Montessori approach to Education. This was informal training that was carried out through working with the teachers in their classrooms in the mornings, observing their practice, observing the children and role modelling practice. This was then followed up with more focused lectures in the afternoons concentrating on aspects of the Montessori Approach and I developed a bespoke training plan (Appendix 27).

In collaboration the teachers and the trainers were working together to develop their understanding of how to create a Montessori teaching environment (Photo Narrative 8.4). They were sharing knowledge about the difference of working and teaching in the rural Malawian context and increasing teacher's knowledge on how children learn and develop. The teachers increased their knowledge on the philosophy of how to use the early Montessori teaching materials and how to create a traditional Montessori environment.

Photo Narrative 7.1 Teachers participating in initial training

Alongside the training, I led group sessions with the teachers and other adults involved to discuss methods of data gathering that could be used for the project, this provided the opportunity to incorporate any ideas that they had for collecting information about the new things that they will be trying out and how the new methods of learning and teaching are working, with consideration for the Malawian culture and teaching context. After meeting with the teachers, I also made changes to some of the questions (Appendix 8) for the teacher's questionnaire for the next phase (MacNaughton & Hughes, 2009), to give opportunity for more quantitative feedback, as their understanding was better than their descriptive language, so alterations were made to the questions and the questionnaires were developed around a Likert scale design. This enabled me to gather data from the teachers in a less complicated manner and supported their understanding (McIntyre, 2008). Although this change and strategy were identified by me, I asked the adult-researchers what would help them in answering the questionnaires.

During the first week of phase one meetings were set up between the adult -researchers, me, the parent/carers, and the Community leaders to enable discussion about the project, draw out some initial data (Appendix 11) and to gain parent/carer consent for the child-researchers collaboration in the research (Appendix 2). With consideration of the cultural context of Malawi, seeking agreement from the Community elders was fundamental, they acted as gatekeepers for the Community and their consent was acquired (Ali et al, 2021).

My positionality as a researcher within the project and its importance throughout the phased approach was on-going, this is discussed in much more detail in Chapter 6.3.4. At this point, during phase one my role was very central to the project. I could be perceived to be the lynchpin currently bringing the elements of the research together and I played a very active role during this phase. I was aware that I was seen by the teacher-researchers as a more

knowledgeable person, as I was a Montessorian and from a Westernised country. This lens though which the teachers viewed me (Research diary, 2016), was discussed during the first research meeting. Although, as identified throughout the research project, I was only one part of the foundations of knowledge. It became evident very early on during this phase that I would be reliant on the teacher's cultural knowledge and understanding that they had to offer, and that I would empower their culture and weave social responsibility into the very core of both the education of the children and their own educational experiences (Dei & Asgharadeh, 2005; Ali et al, 2021), this is discussed in detail in Chapter 6. Although during this first phase the teacher's lacked confidence in their knowledge and what their collaboration in the project would really mean in practice, over the course of this phase we built up a mutual respect and the different knowledge we all had that would be important for the project (Research diary, 2016). It was apparent through the analysis of the data generated during this first phase that in the beginning there was an assumption that Western forms of knowledge and culture are superior to non-Western forms (Sharp, 2009; Katenga-Kaunda, 2015). As our individual funds of knowledge (Moll et al, 1992) were interpreted they became fundamental in challenging western superiority. Individual potential began to support the collaborative element and increased the confidence of the teacher-researchers.

During initial discussions, at the beginning of this phase I had given a brief overview, of the data gathering tools but to enable them to effectively collect data in a truly collaborative way they needed further knowledge shared of how to use the data gathering methods. There were considerations around the ideology of the child that was communicated by the teachers that I had not factored for. These views became apparent in early discussions with the co-researchers and the early coding of the data. The ongoing discussion focused on social structure and had a direct influence on the teacher-researchers opinion of the methods of data gathering we would be using with the child-researchers. Particularly evident was the teacher-

researchers changing attitude regarding the power relations between child and teacher. The Malawian team quickly became interested in the tools that could be used and what they could learn from them about the children, through watching the children using the tools. This enthusiasm (Research diary, 2016) gave me an opportunity to incorporate any ideas that I had initially planned, and then the Malawian team built on these for gathering data from the child-researchers. I noted (Research diary, 2016) that the Malawian team initially regarded the children more as participants than as co-researchers, as a result of the community social construction, but through the introduction of methods that empowered the child-researchers this barrier began to breakdown.

From the initial research meeting held at the beginning of this phase the teacher-researchers carried out initial assessment of the child-researchers, using the child tracking tool (Appendix 26), which mapped the Montessori method and the Malawian curriculum together. This was carried out to create a base-line picture of the child-researchers. This in-depth tracking tool could be used for each individual child, it mapped together the Montessori curriculum and presentations (knowledge provided by me) with the Malawi ECD monitoring and assessment programme (knowledge provided by the Malawian team). The feedback and issues identified by the teacher-researchers on the use of the tracker directly influenced the changes made to this tool (Appendix 18) and the way it was planned for use in phase two (RTP 7.5). This tool was used to track the children and I considered it important to generate data on the children both for the research and for the teachers. I soon realised this was viewing data collection through a westernised lens. It was also a tool that generated data on the child rather than with the child. When in use initially, this did provide some evidence of the child's progress in learning, although when I coded the feedback on the tool there were two highly frequent phrases (MacNaughton & Hughes, 2009) communicated by the teacher-researchers; time consuming and complicated, thus it became evident that I needed to simplify it.

7.4.1b The Child

Collaboration with the child was one of the focus aspects of the research project, along with giving the child a voice as a collaborator in the research, due to the social construction of Malawian childhood as discussed in Chapter 2. During the first collaborative conversation with the Malawian team, in-depth debates were held about the best ways of involving the children as researchers, rather than as participants. Sekani commented "research is something adults do who are from University, not children". I discovered this was a fine line to cross, and I had to be particularly aware of my naturally westernised views and my assumption of knowledge of others around empowering children. As discussed in Chapter 2 the perceived ideology of the child, held by the teachers and the way they conceptualised the children in the school influenced their initial reaction of giving the child a voice, in a community where children had a socially defined place in society. The co-researcher's knowledge of the children influenced how I developed the child-researchers data collection tools.

At this point there was also consideration of the selection of the number of child-researchers to track for the project, to ensure quality data gathering rather than quantity. There are over 200 children in the school, some with irregular attendance and some with cultural complications. Initially I had assumed that there would be a random selection of child-researchers from each age group to collaborate with the research. I was encouraged by the Malawian team to consider other aspects such as attendance (Appendix 22) family/contextual background and parental understanding. Eventually it was agreed that all the children would be given the opportunity to participate, as many of them were excited at the prospect of using cameras, working with 'Miss Michelle' and writing on paper and in books that were their own. Hence, although all the children had the opportunity to participate and use the tools, but ten child-researchers (Table 7.2) were identified, as their attendance was regular.

As discussed in Chapter 6, confidentiality can be complicated, and for my research confidentiality for the children was not possible due to the inclusion of their photos in this thesis, this was discussed with the children and their parent/carers. We created a child-researcher group with the ten children and part of the journey for this group was to choose pseudonyms for themselves, this was a special activity done during a circle time and gave me an insight into the children as they chose their research names and explained to me the meaning.

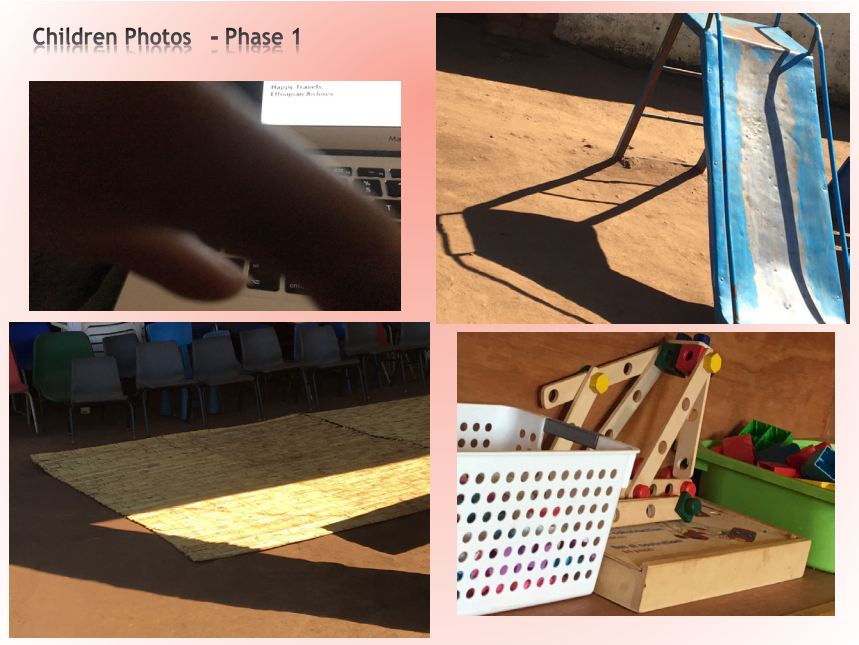
Table 7.2 Child-Researchers details

Pseudonym	Age	Sex
Funsan	4	M
Useni	5	M
Lizuiz	5	F
Zikomo	3	M
Akosua	3.5	F
Ngunda	3	M
Unika	4	M
Kuliraga	4	F
Teleza	5	F
Chisisi	5	M
Mesi	2	M
Mary	2	F

The multimedia (Chapter 6) tours carried out with the child-researchers were done using a camera or camera phone, the children also made videos of each other. The cameras and camera phones were introduced to the child-researchers during a circle time, this method brought with it lots of excitement, generally known as procedural reactivity (Lavrakas, 2008), but the children quickly got the idea of what they were doing (Research diary, 2016) even though none of them had ever seen anything like this before (Collaborative conversation, 2016). Using this method gave me the opportunity to see the environment through the child's eyes. I led the first tours with the children (Photo Narrative 7.2). It was at this point also that the language barrier became evident (Research diary, 2016), although I was amazed that we

never needed a translator. I role modelled for the children and took my own photos, using expression to demonstrate what made me sad and what made me happy (Research diary, 2016), there was randomness in the child-researcher's photos for this first phase. During the reflection of this tool, there was some contradiction in opinion identified, on a negative the theme of these contradictions was focused on the "ability of the children to carry out the task I asked them to do" (Lin, 2016), but on the positive there was acknowledgement that the "children learned this new skill quickly" (Chibale, 2016). During one of the collaborative conversations there was agreed understanding of how this method would enable the child-researcher to tell their story and "showing us" (Asale, 2016) "what they can do" (Bomani, 2016) and "for us to see their experiences" (Chibale, 2016), thus offering the children a way to take part in the research (Morrow & Richards ,1996) and through using the lens of the camera giving us as adult researchers a window into their world (Winton, 2016). The photo tours would be a pro-actively used data generation tool, to evidence the journey the children made through the three phases of the research. I was aware it was a tool that the children would not access when I was not there. This was discussed during the collaborative conversations (Research diary, 2016) and was an element that I had not considered when designing the research through my westernized lens. It was decided in collaboration with the Malawian team that it would be an experience for the children to use the camera. Over the phases of action the children became familiar with how to use the camera (Research diary, 2018).

Photo Narrative 7.2 The first photo tour carried out with Useni



7.4.1c The Environment

As a key element of the dynamic triangle (Fig 1.1), the environment also has a voice and plays a crucial role in the education of the children. This was a new phenomenon to the Malawian team; their view of the classroom was a very different one to that of the Montessori approach, and the notion of the environment being the third teacher. During this first phase key terms used to describe the environment were ‘a room’, ‘somewhere to stand and teach’, ‘a place for children to be taught’ (Questionnaire, 2016). This was an area where our cultural ideologies of the teaching environments differed, but this was also an area where I knew understanding of this context and the Montessori philosophy would develop over the duration of the research project and where knowledge for all of us would build. This is where the ‘I’ as described above had to become a ‘we’ and my positionality came under discussion during the collaborative conversations. The ‘I’ that had created a picture in my own mind of the environment that we would create and how it would be created had to quickly defer to the funds of knowledge (Moll et al, 1992) provided by the Malawian team, this empowered them

in a way that we became more equal, this was an element they could physically create as a team, with the children, using locally sourced items and their own creative skills, there is much more written about this in phase two, where the transformation became evident.

The teacher-researchers increased their knowledge about the Montessori environment through their training. During one of the collaborative conversations, we had discussed and researched the development of the environment. Concern was raised by Chilbale (2016) regarding the expense of buying the furniture and equipment that they saw through the training materials. I then facilitated a discussion around sourcing locally and looking at what the community and the environment around us can provide (research diary, 2016). Malawa (2016) suggested using a local carpenter to make some shelves and Lin (2016) suggested if he was given pictures of Montessori materials then maybe he could make those as well..

I made initial observational field notes (Research diary, 2016) of the classrooms as they were when I arrived, I took photos, the children took photos, and I observed the teachers and the children's behaviours and effective use of the environment. The data generated Photo Narratives (Chapter 7) that evidenced association between my interpretation of the photos and the teacher-researchers' reflections. The concurring themes that developed evidenced a shared story between the teacher-researcher views and the stories told by the photographs (Chapter 7). Although qualitative methods of research, the photos provided a rich narrative on which to build a foundation of development. Photos were taken by the teacher-researchers, and I developed them into a Photo Narrative to enable analysis. This analysis was supported by thematic analysis of questionnaires, Research diary and observations (Appendix 9, 11, 15, 16, 17 & 28). I observed the environment developing organically during this phase as the teachers' knowledge of Montessori increased. I observed the staff empowering the children as part of the process of cleaning and moving (Research diary, 2016). It was voiced during

the collaborative conversation that they were not comfortable with this initially, but the children, when given the freedom led the staff down a path of enjoyment (Photo Narrative 8.2) that was infectious, and on reflection afterwards the Malawian team said they would be including the children in this more often (Research diary, 2016).

7.4.1d Reflective Transition Phase One (RTP1)

The coding and analysis of the data collected through this first phase provided information to inform and support how phase two of the research cycle was actioned.

The adult researchers had discussed what needed to be considered for change during the last collaboration conversation and barriers and challenges were identified that had become evident during this phase to build into the action plan (Table 7.3). Lin (2016) mentioned how the teacher-researchers needed to observe the children and see how they use the environment in and what they are interested in.

To support deeper analysis and reflection during the RTP I had identified themes (Research Diary, 2016) during the two weeks in Malawi on the run (MacNaughton & Hughes, 2009). One particular recurring development of these was the 'semi-structured teacher interviews', they took a totally different form to expectation when the research project was originally designed. I had considered originally using a guided interview technique (Appendix 9) as semi structured interview is a popular data gathering method, on reflection I realised that it does lean towards "westernized assumptions and theories" (Chilisa & Tsheko, 2014, p223) which does not reflect the cultural context of the research, and the teachers were not comfortable being on their own in an interview situation. This supported my view of changing to a collaborative method and promoted the idea of "equality among the participants and emphasis on relationship building" Chilisa & Tsheko, 2014, p223) supporting my notion of

equilibrium. After the phase one experience the format would need to be changed in phase two based on the group circle discussion, we had been having in phase one, these were to become known as collaborative conversation, although I have used this term throughout to avoid confusion. This were guided by a new interview form (Appendix 10). The term 'circle time' was a very familiar term to the Malawian team as they were used to leading circle times with the children when they sat together to talk about topics and noted during the analysis as a term the Malawian team were comfortable with. This created a familiar feel during our meetings which seemed to empower the team, thus enabling them to support each other more, mainly from a linguistically and emotionally supportive perspective (Research diary, 2016).

As a team we had identified changes to be made to data gathering tools, new ideas of tools, some of which would have to be cleared for ethical approval, and tasks for the co-researchers to carry out before my visit in phase two and further reading and research work to be done and considered (Table 7.3). Detailed records of these ideas were kept in my field notes (Research diary, 2016) as they arose during the first phase visit and then discussed in detail during the last collaborative conversation. Most importantly was the collaborative decision to reduce the number of tools used and I felt that I had a better understanding now of how to manage the research project. One of these was an online data collection and observation tool to use, but due to the intermittent and unreliable internet, the Malawian team felt this would be stressful and not sustainable hence it was decided not to use this at all.

Between each action phase I created a changes and tasks Table to guide us through the period when we would not be together in Malawi and when contact could be difficult, due to intermittent and unreliable internet. This became known as the reflective transition phase (RTP). The feedback I received from the Malawian team remained positive during the RTP

1 and although internet and electricity were a barrier, some information was able to be shared via the WhatsApp platform.

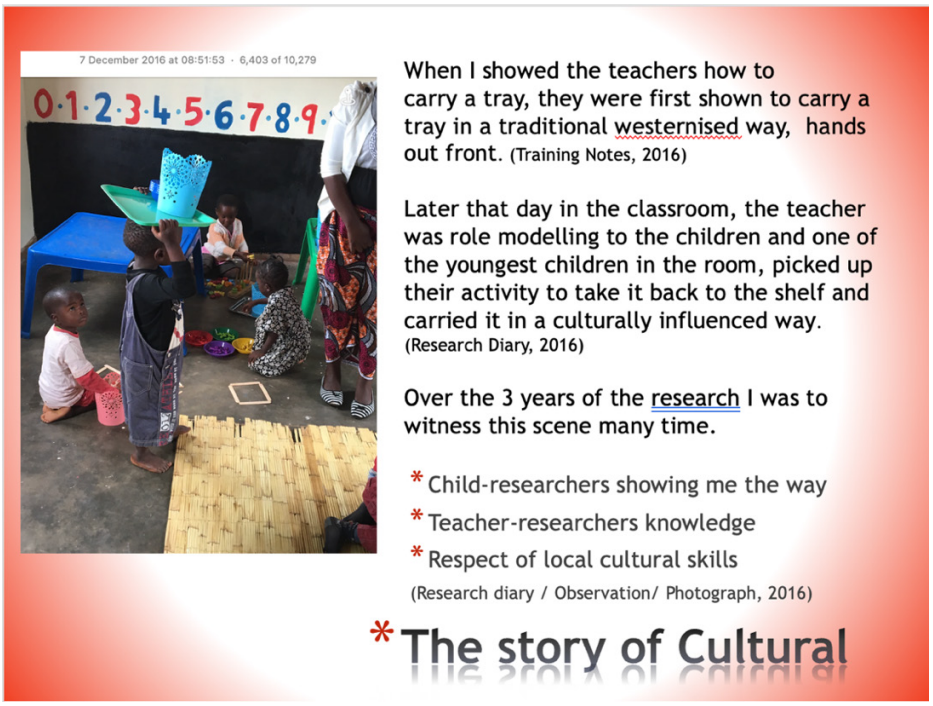
Table 7.3 Phase one RTP changes and tasks table

Changes to data gathering methods explored:
• WhatsApp, all the teachers were provided with phones when on site rather than facetime meetings, this was done as it was felt WhatsApp would work better with the internet connection available in Malawi. Permission required from ethics. • The paper child tracking sheets as a data gathering tool that are now mapped with Montessori and ECD to be finalised. • Children's tour questions created and would need to go to ethics • Make alterations to Group teachers interview schedule/ Questions for phase two and phase three • Develop one-one teachers questionnaire including simple motivation scale. • Children's interview schedule
Tasks to be carried out by Malawian team
• Is there opportunity for Primary school statistics? • Complete activity plans for activities in the classroom • Use current children's training and assessment tool.
Task to be carried out by me
• Develop the "Collaborative Conversations" paper framework • Meet with trainer to discuss training going forward. • Reading and research to be done • How to monitor the change in the environment. Is it just through photographs or are there other methods? • Funds of knowledge (Moll et al, 1992) • Cultural development of learning environments. • Leuven scales of involvement

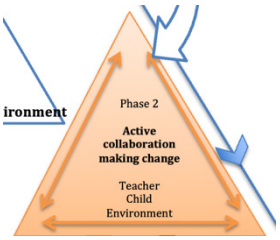
Teachers were also told about the opportunity to do some further complimentary formal Level two Montessori training. An independent Montessori trainer would deliver this from Montessori Centre International, London, enabling them to continue to increase their knowledge on the philosophy of how to use the early Montessori teaching materials and how

to create a Montessori environment. This opportunity was received with positivity by the Malawian team with all the teaching team asking to participate in the formal training.

Golden Learning Moment 7.1 The story of culture



7.4.2 Phase Two – The action phase



The starting point for **phase two** was the second research visit to Malawi. During this two-week visit, one of the research aims (Research diary, 2017) was to reflect on the teachers experiences and involvement, alongside the natural development of the environment. The second aim was to observe and discuss any reconceptualization of children's agency, and whether there was an empowerment of the child in their learning and as active participants in the research (James, 2009). The third aim was the delivery of the Montessori training (Chapter 7.2). The focus of the first collaborative conversation was to

reflect on the data generation from the first phase on both how the tools were used and the data itself, alongside the observations carried out by the Malawian team. Any adaptions made by the Malawian team and ideas that I had developed during the transition phase back in the UK were evaluated and decisions were made about the changes. During the first transition phase there had been intermittent WhatsApp communication. It had become evident that there had been some change and development in relation to all three elements of the dynamic triangle from a practice perspective (Research diary, 2017). I had hypothesised that an organic development of the Montessori Approach would have begun to embed at this point (Research diary, 2017), this had become apparent and is evidenced a number of times in the data generation. With the confidence of the Malawian team increasing, they were able, as the co-researchers, to make more informed choices and changes in relation to the research project, data generation and their work with the children. The data gathering tools used during this phase of the research are detailed in Table 6.4.

I found during this phase two visit I had even more time with the children carrying out informal conversations and doing further children's multimedia tours. Through the data analysis it became apparent that the teacher-researchers were particularly interested in "how long the children spend learning" (Chibale, 2017) and "what activity they like to use the most" (Lin, 2017). In collaboration with the co-researchers, we used the new Leuven based observation (Laevers, 1994) tool that I had developed (Appendix 12 & 13) as a result of phase one feedback (Research diary, 2017) and the analysis of the interim data generated. I used the tool initially to trial it and ensure I was happy with the way it worked, and if, as I had anticipated it generated useful data. The next collaborative conversation was dedicated to training the teachers on how to use this tool and it became an integral part of this visit and a rich source of data.

7.4.2a The Adult

The teachers were receiving formal training towards their level two Montessori qualification during this second visit (Appendix 27). This was provided by a trainer from Montessori Centre International. There was a focus on creating activity ideas, writing activity plans, and making physical activities for use in the classroom, from one day to the next. I noticed a real positiveness in the teaching staff as they developed activities in relation to their knowledge, what they could find in the local markets and what the children initiated through their own experiences (Research diary, 2017). The daily activity tasks were instigated by the trainer at this point and they proved a useful source of data for the research, to evidence understanding of the Montessori philosophy.

As a research team we worked together to review the individual children's tracking tool. We analysed the data generated comparing their developmental profiles with the teacher-researcher knowledge of the child, to ensure rigour and credibility of the recording with this new profile. We used the new involvement tool, reflecting on the data gathered and how useful it would be and to reflect; on the run, on the data gathered with this tool. At this point, it was identified that the Assessment and tracking tool was not working due to a difference in the knowledge base of each of the Malawian teachers, which interestingly is also a challenge we find in the UK. The intermittent attendance of the children also challenged the consistency of the information and timing of the data gathered, particularly with such large numbers of children in the classroom. We dedicated time during the collaborative conversation of the first week (Research diary, 2017) to developing a list of actual data that would be needed from the individual children's records, to inform a more simplified version. I decided to work on this during RTP2 and email it over to the teachers once it was finalised. It was agreed by all at this point that the teachers knew the children better and felt they could create a more

informed assessment of the children's development without using reams of paper (Collaborative Conversation, 2017). As mentioned above, the involvement tool was developed during RTP1 and was being used during this visit to Malawi (Appendix 12). It was becoming a more holistic tool, looking at the classroom as a whole and thus an easier tool for the teachers to manage. The version of the tool I was reviewing had written small note analysis on it and was taken back to the UK for development during RTP2 (Appendix 19 & 20).

In collaboration with the teachers, we reviewed the mapping of the Malawi National Curriculum (Standard 0) to the early Montessori curriculum, that had formed part of the original child assessment and tracking tool (Appendix 26). The teacher's funds of knowledge about the Malawian curriculum was fundamental during this exercise and how it works in practice. Although at this point this was withdrawn as a formal data gathering tool, it remained as a reference tool (Collaborative Conversation, 2017).

We held three collaborative conversations during this visit that involved discussing the research schedule and points that were initially discussed using the interview schedule in phase one. I had developed the initial teacher interview evaluation during RTP1 into a more comprehensive questionnaire because of feedback and reflection from phase one (Appendix 10). I also reworded the questions to eliminate any preconceived traditional Western ideas of child development (Gladstone et al, 2009) and western early years phraseology, keeping the discussion as open as possible and using my increased cultural knowledge from phase one discussions (Gladstone et al, 2009). We used this form during our third collaboration meeting and the completion, although carried out individually by each teacher, was discussed and supported as a group (Research diary, 2017). From a data gathering perspective this was an activity that now created more opportunity for richer and more relevant qualitative data from

the teachers-researchers.

As previously noted, during the two weeks of this visit the teacher-researchers were participating in level two training. The training took place after the school day. This timetabling worked well, as they were able to practice and reflect on the training the day after the session, enabling me to observe their transfer of knowledge into practice and identify themes of focus. This built a picture of rich data around the transferable elements of the teacher training and the innovations that were repeatedly used instinctively in the classroom. On the last day of this visit the teacher-researchers underwent a practical professional discussion assessment as part of the completion of their course. All the staff apart from two completed the assessment, one chose not to do the final assessment. A plan was put in place for further support for the teacher-researcher that did not pass the assessment, with opportunity to re-take in phase three, at which point they passed.

7.4.2b The Child

The natural role of the child as a child-researcher became more evident during this visit, this was particularly apparent in the way the teachers were involving the children (Research diary, 2017). The teacher-researchers were gathering observation data from the children's research role in developing the environment, they were using the photos to learn more about the children's understanding and trusting the child in communicating their needs in the environment and for themselves. I spent time with the children having informal conversations with them and carrying out further photographic tours. The children, who now appeared more used to the camera phone, were still a little snap happy, but the photos had more meaning behind them, and they showed a better understanding of the questions behind the camera tour (Appendix 29). I noted in my research diary (2017) at the beginning of the second week that the child-researchers were teaching the child-participants how to use the cameras.

During this research visit a considerable amount of time was spent observing the children and a significant amount of qualitative data was collected through the observations and photographs. The newly developed involvement toolkit had become more useful than I anticipated in relation to observing the children, "I am able to easily write how many children are working" (Abikanile, 2017), "I can see what the child is doing" (Buseje, 2017). We had one tool kit for each child-researcher to measure their involvement levels, but as I was using it, I also found myself adapting how I was recording information to map their movement around the classroom, how they used the different areas of the classroom and how they socialised (Research diary, 2017), generating different data than was originally expected. This also enabled me to widen the scope of the data gathered to include other child-participants. Over these two weeks I developed codes to use when recording in the tool kit, to allow for on the run'(Mac Naughton & Gray, 2009) data analysis. This resulted in the tool being adapted again in relation to information collected about the children. It now gave us a more social picture. It was notable during this phase that the children were influencing their learning environment in so many ways, practicing the skills they were learning in their own time (Research diary, 2017), "bringing things in with them in the morning to show me" (Buseje, 2017), this activity also generated child led learning opportunities and measuring the children's interests, time and space. It was proving to be a rich data generating tool.

7.4.2c Environment

The main focus for action during this phase was how the introduction of the involvement scales could be used as a tool to reflect on the classroom as a whole. This was a question that was raised and through analysis on the run (MaNaughton & Hughes, 2009) I developed the tool to enable a whole classroom overview. The teachers collaborated in the second adaptation of the involvement scales (Appendix 12 & 13), as in the collaborative conversation

by telling me what they would like to learn about the children and how they wanted to track the children's movements. Abikanile (2017) also noted that "it needs to be useful whether there are 20 children in the classroom or 40". Having used the tool to trial and evaluate it Chibale (2017) commented "I can see what my children enjoy doing and are spending time on". The classrooms were becoming more personal to the teachers who were taking ownership of their teaching environment, to meet the needs of the children they were working with. The changes in the environment were also evident in the photographs that were being taken (Chapter 8.2.1) by the teachers and the children. It was possible to see the transformation of the environment and the differences in each room.

Just before my return to the UK, we managed to organise a visit that I thought may encourage an even more in-depth embedding of Montessori knowledge and understanding in the Malawian team. The visit was to two Montessori early years centres. I had hoped this would enable the team to have a concrete experience of what we were aiming to achieve as it would enable the teachers "to see what I was trying to picture in my own mind" (Research diary, 2017). There were two Montessori nurseries that we knew of within a four-hour drive of the village, although they were city based, rather than rural, I still felt it would be beneficial. It turned out to be a trip that did not go well! Another cultural learning journey for me. Life in the city was so very different to life in the village where we were based. The trip was exciting for the teacher-researchers, but I had not anticipated how uncomfortable, maybe a Western interpretation, I would feel when we visited particularly one of the nurseries. The nursery was owned by a Montessori contact from Ireland. In my naivety, even at this point in the research, I was under the illusion that Montessori was consistent internationally. What I had not factored in was the differentiation that would be apparent due to the demographics of the stakeholders. Standing in a well-resourced, and westernised environment, we watched the children eat birthday cake and open lunchboxes full of types of food the Malawian team had

never seen before, it made me realise how huge the cultural divide was, even though the distance between the two schools was just four hours. The second visit, to a nursery in an area of the city with a very different demographic was more successful. The environments were well resourced from a Montessori equipment perspective as the setting is sponsored by a well-established Charity that shipped in equipment from America. Teachers themselves were able to converse with us about the development of the learning environment and we observed the teachers cooking with the children. The co-researchers took much away from this visit, and what they learnt from the teachers at this nursery was discussed during the transition phase and affected changes to the classroom, Lin who had earlier in this phase voiced her concern over children's learning said that she "now can see that the children can learn, but that the environment needs to be right" (Research Diary, 2017) .

7.4.2d Reflection Transition Phase Two (RTP2)

In the final collaborative conversation transition changes, tasks and reading were decided upon (Table 7.4). This system had worked well during the transition of phase one, as everyone had managed to meet their tasks and outcomes. The fact that the list was shorter this time, enabled me to hope that the research was falling into a manageable rhythm for all the researchers involved.

The new involvement tool that had been adapted again during this phase visit would need a little more expansion to allow for explanations and understanding of its use, which is why it was accompanied with extra information (Appendix 12 & 13). The questionnaires (Appendix 8, 10) that had been re-written during phase one transition for use in phase two and three seemed to work better and provided a rich source of data. I carried out the questionnaires and then did a small note analysis. I was able to measure the Malawian co-researcher's confidence in the knowledge they reflected through the statements in the questionnaire (Appendix 21).

One of the main reasons for focus and increased understanding on the importance of the environment was from the development of the Leuven scales, which showed the Malawian teachers in simple terms how many of their children were involved in learning and for how long (Fig 8.6). Lin (2017) alluded to this during a collaboration conversation when she talked about knowing what more of the children were doing and for how long.

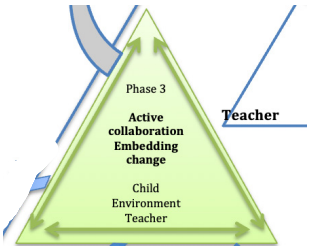
The teachers asked to have weekly meetings, during RTP2, to allow them opportunity to reflect on their week spent with me and share their experiences. These 'cyber gatherings' were to inform my observations and my Research diary, however, due to the lack of electricity and Wi-Fi in Malawi, these sessions only happened twice during the transition period and as a result it was decided to abandon them (Research diary, 2017).

Table 7.4 Phase two RTP changes and tasks table

Changes to data gathering tools suggested: • The paper child assessment that brings together Montessori/ECD to be simplified for ease of use. To create V2 • The teacher's questionnaires translations
Tasks to be carried out: • Teachers to work on written assignments and activity plans • Michelle to make small changes to the recording form for Leuven observations for individual children • Michelle to develop an environment involvement observation, based on the one she developed in situ in the classroom during this phase
Reading and research: • Development of the ECD • Read up on Malawi teacher training system

Golden Learning Moment 7.2 The story of the Mango

7.4.3 Phase Three – The action phase



Phase three was developed through my philosophy of encouraging ownership and increasing understanding. Considering this, the third phase has been about me stepping back as active researcher and taking up the position as a passive observer for the two weeks of this visit. This proved to be a very informative place to be as I felt as though I almost melted into the environment, and thus captured a truly unique picture of the daily rhythms of the school (Research diary, 2017).

The data gathering tools had both developed and reduced in number over the duration of the

research cycle (Table 6.3). This ensured the data by all the researchers involved was more focused. With less data gathering tools to use, this visit seemed less frenetic and pressured, giving me more time to observe and digest the changes.

Version two of the environment involvement tool (Appendix 13) had been developed further during the transition phase two (Research diary, 2017 & 2018) and was used by the Malawian team for some of the RTP2 and for the duration of this third phase visit. I also used it for my observations during this phase. This was useful data to track the involvement of the children during the session. I carried out environment involvement observations on all the classrooms and draw comparable data for all three rooms between phase two and three. One room showed the highest percentage increase (Fig 8.6). To ensure accuracy I set the boundary that for children to be classed as on task and involved they must be engaged at a moderate level (level 3), evidencing continuous activity (Fig 8.6).

The last collaborative conversation of this cycle was an opportunity to reflect on all three phases of the research.

We developed the research sub-questions to reflect the depth of knowledge the team now had:

Phase three

1. *How do we develop cultural understanding and knowledge to support the Montessori environment?*
2. *How does the Montessori method support the child's engagement with the environment?*
3. *What are the important Montessori foundations the teachers need to know to build their Montessori knowledge and understanding to support children's learning and development?*
4. *How can we gather data on the children to support their innate desire to learn?*

During the first collaborative conversation (2018) we discussed that we did not use the child tracking and assessment tool, yet Lin (2018) said "I know we have not made good use of the tracking tool, but I am going to use this for my class to track assessment, because it links Montessori approach and activities to the ECD it will be useful". As explained in phase two, we did not use the tool as the children's attendance is not consistent enough and due to the way, the research evolved the outcome measures for the children were not a focus. The observation tools as a group were discussed in detail. I wanted to reflect on creating a toolkit that the Malawian team could use consistently and would be easy to understand for any new teachers that joined the team. It also needed to be transferrable for another cycle of action research. From their reflection and feedback, I created a final data collection toolkit (Fig 6.2) around the dynamic triangle (Fig 1.1).

I spent time working with the children taking more photos and talking narratives. I spent much time during this visit observing the work cycle in all three classrooms, to gain an overview of the children, the teachers and the environment in practice and recording on the environment involvement observation (Appendix 17). Having analysed the data during the course of the research project I was better understanding it, and this made data gathering on the run (MacNaughton & Hughes, 2009) easier. During this phase my research journal and my camera became my right arm, as the data was rich and the outcomes not always what I expected. The threads of the theoretical framework (Fig 6.1) were also evident in the data that was being collected, in the actions in the classrooms and through the discussion in the collaborative conversation.

7.4.3a The Adult

The teacher-researchers were now working naturally with the data gathering tools, they were

comfortable in completing them and the collaborative conversations were a place of vocal harmony, enjoyed by all. They spoke of continuing to use the research tools to establish a more 'all-round understanding of the children's development and progress' (Research diary, 2018). The continual collaborative development of the data gathering tools to the final tools used for this phase demonstrated the power of collaborative research. The teacher-researchers used their increased knowledge and confidence to take ownership of the observation tools, adapt them and collect data that was useful for both their practice and the research.

Sadly, two of the teachers were leaving the school within a month of my departure after this third phase as they had secured teaching posts in state primary schools (DAPP, online, n.d). This is a common occurrence in Malawian early years centres as qualified teachers take up private jobs, many at iNGO centres while they are waiting for a Government posting. During one of the collaborative conversations, we talked about this situation as an ongoing challenge, and it highlighted the importance of actively embedded pedagogical philosophy (Research diary, 2018). This also highlighted the importance of the simplicity of the tools we used enabling newcomers to pick up the theory and philosophy underpinning the practice. During this phase teachers were happy to meet with me one- to-one and I used a new set of questions to guide this meeting (Appendix 28).

7.4.3b The Child

The new, simpler child tracking tool (Appendix 26) had been sent over to the Malawian team during RTP2 and they had been using this more proactively than the previous tool. Although as discussed above, we made the decision that we would not continue to use the tool for the research as measuring outcomes of the children at this stage was not a focus of the research. Although this is something that could be used as a data gathering tool in further research. Although, I was pleased to hear that the teacher-researchers would be using it to form a continual assessment of the children during their time at the school (Collaborative

Conversation, 2018).

I carried out final multi-media tours and narratives with the children as mentioned above, which proved to be very enlightening. In the main, this newfound confidence was because the children were now very familiar with and confident in using the camera and their knowledge of the expectations were now well understood. Children using cameras and taking their own photographs has now been used in several research projects with young children in their daily lives and identifying important things in their school (including, for example, Clark, 2004; Spyro, 2011; Anggard, 2013) and will also reflect the ways children think about their school (Einarsdottir, 2005). This was definitely evident during this phase and in accepting that a child is an expert in his/her own experience, the children seemed be freer with their use of the camera and were providing unique insights into their world enabling me to document what they viewed and were experiencing (Freeman & Mathison, 2009). One of my sustainability concerns is the continuing access to the camera, as it is acknowledged by the research team that this may not be something always accessible to the children. At this point we talked about verbal tours with the children. For the teacher-researchers language would not be a barrier going forward that they would have to overcome, so verbal tours would be accessible to them and could be carried out in a similar way to the photo tours.

The journey the children had voiced through tours, conversation and photographs is evident in the children's photo tours (Photo Narratives 7.3), these had been developed over my three visits in collaboration with the children and the final photos were added with their narrative during this visit. In comparison to the example of a child tour used in phase one (Photo Narrative 7.2), you will see below that the phase three tour taken by the same child, Useni, is much more focused and he was taking more meaningful photos, this was a common theme with all the photo tours taken.

Photo Narrative 7.3. Useni's final photo tour

7.4.3c The Environment

Still undergoing continual development, the environment has further changed since my visit in phase two, (Photo Narrative 8.4). Using the involvement observations, the teachers had identified what the children were using well and what they were interested in and were creating unique classrooms for the children. They had engaged more with local tradesman to have more shelves made, shoe racks made and to develop some Montessori materials (Photo Narratives 8.3 & 8.4).

I carried out the environment involvement observations in all three classrooms during this visit. This evidenced not only the children's engagement with the environment but also their engagement with each other. It was also during this phase that I began to analysis the data with a more in-depth approach. As discussed in Chapter 4, there are varied views over what is an authentic Montessori environment (Lillard & Hughes, 2019a) and although Lillard and Hughes "do not claim that their definition of authentic is superior" (2019a, p1), it does give

a starting point that is supported by research (2019b, p33). As part of the data analysis, I created a comparable list against the Lillard & Hughes (2019b, p33) Authentic Montessori Element list, from the themes that came through in my data analysis, this is critiqued in Chapter 8 (Fig 8.1; 8.2 & 8.5).

I was a passive participant in the research during this phase, a role I enjoyed. As alluded to above it enabled me to become part of the natural environment, giving me the opportunity to observe uninterrupted. Appendix 17 shows an overview of the notes from one of my observations, and how I fed back to the teacher-researcher, and we also discussed how they would support training going forward.

7.4.3d Reflective Transition Phase Three (RTP3)

On reflection I noted that during phase three of the action research cycle there appeared to be less to write in this action overview. I believe this was because much of the preparation was done in phase one and then amendments made in phase two. Ongoing data analysis had taken place over phase one and two with the teacher-researchers during the collaborative conversations and with the child-researchers during their multi-media tours and classroom observations, resulting in phase three being the most refined phase (MacNaughton & Hughes, 2009). As a research team we felt this phase was really working towards answering the main research question and the data gathered was meaningful (Research diary, 2018). It was almost as though the research had settled in as part of the school's daily routine and I was given the honour of observing it, just simply working.

As is often the case with CAR it can appear that there are no final conclusions, only further questions (MacNaughton & Hughes, 2009; McNiff, 2017). As is the nature of CAR and good active practice, research is on a recurring action cycle, with

On completion of this final phase of research the Malawian team were keen to continue to develop their knowledge and their teaching environment to support the children and it was clear that the project would not finish here, even though this part of the research journey is complete. I was confident on leaving Malawi that the work would continue (Chapter 9.11) and that the development of the Montessori environment would continue to happen in its own way. During our last collaboration meeting Lin suggested that "we should consider putting our classes into mixed age groups, then the older children can help the younger children, like they do at home"; it was agreed by the team that this was something they could maybe work towards (Collaborative conversation, 2018) and that the Malawian team would continue to build their funds of knowledge (Moll et al, 1994). They will create their own unique research cycle, they will hopefully continue to think-do-think and repeat (MacNaughton & Hughes, 2009) reflecting on different experiences and different knowledge influencing them to continue to develop their environment, their practice, and the experiences for the children.

Golden Learning Moment 7.3. The story of involvement

Phase 3 evidences the foundation threads of the Montessori philosophy. Particularly concentration and involvement created when children make their own choices.

In phase 1 I observed classrooms with nothing in them and children with little or no interest in their learning.

This photo represents observation made using the Environment involvement tool. There are 37 children in this classroom and at this point all 37 children were involved at Level 4 or above.

* Concentration and involvement
* Children's freedom of choice
* Teacher-researchers knowledge

(Research diary / Environment Observation/ Photograph/ Involvement Tool, 2018)

* The story concentration and involvement

7.5 Chapter summary

In this chapter I set out the research as it happened in reality (McNiff, 2014). I have taken a journey through each phase and explained how collaboration took place and influenced change. It is shown that at each point of reflection between the phases, how knowledge was deepened because of growing understanding of cultural, historical and educational understanding (Kohn & McBride, 2011; McAteer & Wood, 2018; Ali et al, 2021).

I have evidenced my role and active participation in the research and have shown how theory and methodological commitments influenced the research actions and developed a well-informed conceptual framework with the underpinning theory threading its way through each phase.

In the next chapter you will be taken on a journey of discussion and insight into authentic Montessori and how findings challenged some of these notions.

Chapter 8 Findings, discussion and insights

"The child who has felt a strong love for his surroundings and for all living creatures, who has discovered joy and enthusiasm in work, gives us reason to hope that humanity can develop in a new direction."

(Montessori, 2007c, p58)

8.1 Chapter introduction

This chapter dovetails with Chapter 7 which described the methods in action during the research cycle. I discuss in this chapter the coding and thick analysis (Geertz, 1973; Schwandt, 2001) of data gathered using the methods described in Chapter 6. I take the opportunity to evaluate the authenticity of the Montessori method in practice relating back to initial research, findings and existing knowledge. I discuss the findings of bringing theory and practice together and question assumptions that may have been made over time with regard to the Montessori approach.

8.2 Framing the discussion

Within the Montessori Community there are ongoing discussions around two topics: authentic Montessori and Montessori teacher training. Ramani (2020) has recently researched the core principles to support teacher training, which offers insight into questions the Montessori community is asking itself although much of the research around authentic Montessori has been carried out by Lillard with her peer academics (Lillard & Else-Quest, 2006; Lillard, 2012; Lillard, 2018; Lillard & McHughes, 2019a; 2019b; Lillard, 2019).

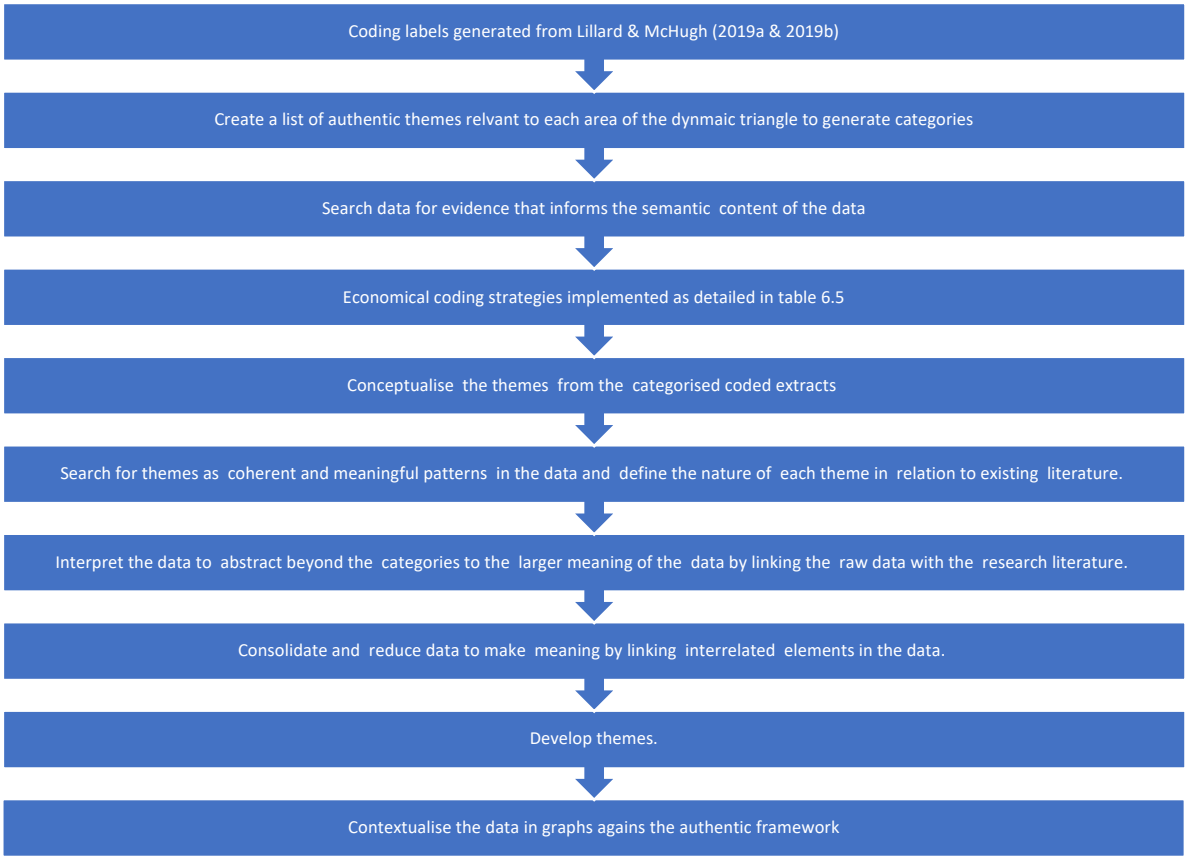
The discussion below is framed by the Montessori theory of the dynamic triangle as with the other chapters in this thesis. I used the Authentic Montessori Elements list developed by Lillard & McHugh (2019a; 2019b) as a benchmark to evaluate the data, themes and variations against. This enabled me to evidence my findings to answer the research question, which is

addressed in the conclusion and sub-questions which are addressed in this chapter. The sub-questions are:

- How do we develop cultural understanding and knowledge to support the Montessori environment?
- What are the important Montessori foundations the teachers need to know to build their Montessori knowledge and understanding to support children's learning and development?
- How does the Montessori method support the child's engagement with the environment?
- How can we gather data on the children and their innate desire to learn?

There are 3 main sections to the elements list (Lillard & McHugh., 2019a; 2019b): The Environment (Table 8.1); The Elements of the Teacher (Table 8.2); Child Outcomes (Table 8.3). I identified themes in the data gathered and then analysed and interpreted these findings. When deciphering the data and analysing themes I adapted the thematic analysis model of Peel (2020) I was aware that as I searched for these themes, I was doing so through a lens of my own pedagogical values, and this may have influenced my interpretation. Due to the exploratory and collaborative nature of CAR, the inductive coding and analysis method enabled focus initially on what the teacher-researchers were saying, on the descriptive research notes, and on the photographs to identify the underlying ideas and assumptions Appendix 21, 22, 23, 24). At times, this involved moving from the semantic content of the data extracts to recognise latent explanations that form the initial codes (Peel, 2020). I looked for the recurrences in the data, the frequency of actions and the sequences to support credibility and transferability. This method of analysis helped me to order and make sense of the findings in a methodical manner.

Fig 8.1 Illustration of analysis procedure (Links with table 6.5)



A picture is worth a thousand words, although an old English adage, it is appropriate in the case of this research and is a well-used technique of data gathering (Chapter 6) and supported the use of the other data gathering tools. An early theme that developed was about the use of the camera, coded words such as fear, unknown and excitement were evident (Appendix 25) and was a consideration when developing the use of the cameras, particularly with the child-researchers. I have used a small number of photos to show the development through the phases of the research. These photos were selected in collaboration with the co-researchers, we had many photos to use, and we negotiated and discussed why we were using the photos and what story we needed to tell. The photos chosen were ones that co-researchers were able to confidently narrate, including the child-researchers and ones that were considered a pivotal learning moment. For ease of identification, they are colour coded: red – phase one; orange

– phase two and green – phase three. Although not something that the co-researchers understood through personal experience, I explained the analogy of the traffic light: phase one – stop and look; phase two – prepare and get ready; phase three – go. The Photo Narratives were used to evidence the visible themes that thread their way through the research. I have used these as analysis tools to develop discussion for this project and to identify how the Montessori method developed through the research. I have used a form of triangulation to evidence the co-researchers understanding and strengthen the understanding of the importance of longitudinal ongoing observation and recording. As part of this triangulation of evidence I have used quotes from the teacher researchers, these quotes are written exactly as spoken. Montessori wrote "I have studied the child. I have taken what the child has given me and expressed it, and this is what is called the Montessori Method (Montessori, 2007e, p2), this statement was displayed on the wall in the teachers' room in Malawi, as a reminder to the research team of what we were doing. I have concluded the discussion by drawing together answers to the research questions.

8.3 The Environment

Threading through the ethos of Montessori is the role of the environment in empowering the child's independence, problem solving and individuality, and trusting the child to lead their learning. Lillard et al (2017b) describes a quality environment as one that develops the whole child, offering opportunity to follow their innate drive, guided by the human tendencies (Montessori. M. M 1976; Barrameda, 2020; Montessori,1946/2012) (Chapter 4.4.3), it should be an environment that is adapted to the nature of the child (Montessori, 1974).

The original teaching environment in Malawi was an abstract room (Photo Narrative 8.1) and was different to the one that I had in my mind to develop which was an "environment which is offered to the child that he may be given the opportunity to develop his activities"

(Montessori, 1965, p12). The Malawian team would develop an understanding of child agency and acknowledge that children can be a teacher of themselves and "not just receptacles of adult teaching" (Hardman, 1973, 87). It became evident during the collaborative conversations (Research diary, 2016) and after the initial coding and analysis of data gathered during this phase that this was a very different notion to the Malawian team who were used to being in control of the curriculum delivery that was planned on a daily basis (Research diary, 2016). When I asked, "What should we have in the classroom to teach children?" there were three definitive and recurring answers; books, a teacher and something to write with. One barrier that was identified by all the adult-researchers when asked about barriers to creating a teaching classroom, was the same word: money. This was a theme that would be instrumental to the creation of the new environment, as a barrier and as one that was overcome. Although the data identified that the financial context of this rural Malawian community would be a barrier to the creating the Montessori environment, I was able to share words that Montessori herself wrote, "this kind of school is not of the fixed type but to vary according to the financial resources at disposal and to the opportunities afforded to the environment" (Montessori, 1965, p12). Going forward from the first phase this barrier influenced the research, the data gathered, developed creativity in the environment development that had not been anticipated and impacted the findings (Research diary, 2016). I shared Montessori's description of a learning environment; "a real house, that is to say a set of rooms and a garden of which the children are the masters. A garden which provides shelter is ideal because the children can play or sleep under them and can also bring their tables out to work on or dine at. In this way they may live almost entirely in the open air and are protected at the same time from the wind and the rain" (1965, p12). What was this to mean in practice in this rural part of Malawi? Coding evidenced frequency in two themes

“impossible”, “material is hard to get” yet in contradiction to most teacher-researchers Asale wrote “most of this we could do if we want”.

The language to define the elements of the environment that Lillard & McHugh (2019) used was slightly different to that used in the literature review (Chapter 4). Where Montessori used the term physical, Lillard & McHugh (2019) have used the term prepared; social remains the same and where Montessori used Spiritual, Lillard & McHugh (2019) have called it the temporal environment.

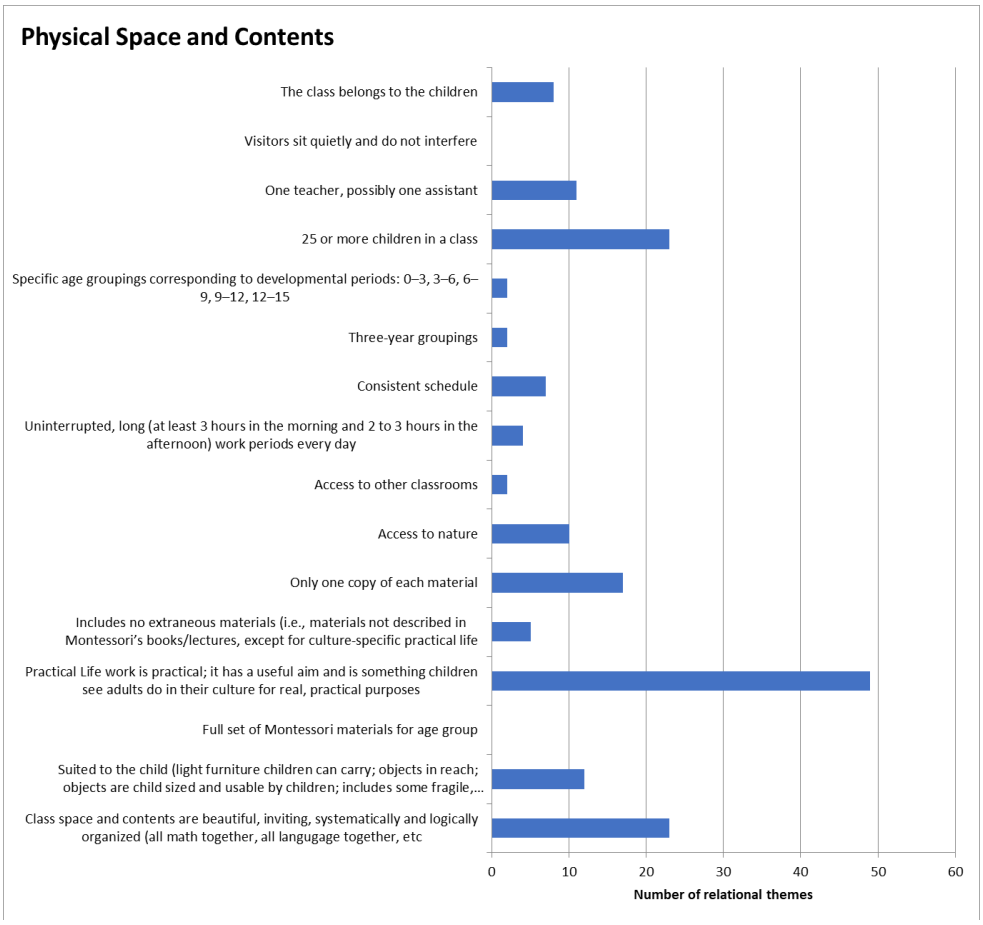
Table 8.1 Authentic Montessori Elements: The Environment

Prepared
Class space and contents are beautiful, inviting, systematically and logically organized (all math together, all langugage together, etc
Suited to the child (light furniture children can carry; objects in reach; objects are child sized and usable by children; includes some fragile, breakable objects
Full set of Montessori materials for age group
Practical Life work is practical; it has a useful aim and is something children see adults do in their culture for real, practical purposes
Includes no extraneous materials (i.e., materials not described in Montessori’s books/lectures, except for culture-specific practical life
Only one copy of each material
Access to nature
Access to other classrooms
Temporal
Uninterrupted, long (at least 3 hours in the morning and 2 to 3 hours in the afternoon) work periods every day
Consistent schedule
Social
Three-year groupings
Specific age groupings corresponding to developmental periods: 0–3, 3–6, 6–9, 9–12, 12–15
25 or more children in a class
One teacher, possibly one assistant
Visitors sit quietly and do not interfere
The class belongs to the children

(Lillard & McHugh, 2019b)

The data for the themed analysis (Fig 8.1) was informed by interpretation of the photos, from the collaborative conversations, my research diary, and the involvement tool, as discussed in Chapter 6 and 7.

Figure 8.2 Graph of thematic evidence from data analysis; the environment



8.3.1 Prepared

Class space and contents are beautiful, inviting, systematically and logically organized (all math together, all language together, etc)

At the beginning of phase one the classrooms were empty of furniture and were dirty as observed in the scoping visit (Research Diary, 2016) (Photo Narrative 8.1). The activity pictured below (Photo Narrative 8.2) of the classrooms being cleaned took place after a collaborative conversation in phase one (Research Diary 2016) and acknowledging the role of the Community in creation of the environments (Moll et al, 1992). This was a turning point

for the development of the classrooms, “the classrooms felt so clean it made me smile” (Collaborative Conversation, Asale, 2016). It was noted by the teacher-researchers that children were taking care in the classroom and using AEL skills in reality “they were sweeping with the brushes we made for them, doing something for real and taking their shoes off at the door and putting them on the rack the carpenters made” (Collaborative Conversation, Madzimoyo, 2016), this was represented strongly in the data analysis (Appendix 21 & 23). From the first phase the environment began to develop (Photos Narrative 8.1; 8.2; 8.3) through to phase three. Local carpenters-built shelving enabling the environment to be logically organised in curricula areas as shown in Photo Narrative 8.4. The culturally relevant (Ladson-Billings, 1995; Brunold-Conesa, 2019) activities were engaging. One of the first activities to be created for activities for everyday living was, as the children termed it, a maise mashing activity (Photo Narrative 8.4), this is a chore many of the children help with at home.

Suited to the child: light furniture children can carry; objects within reach; objects that are child sized to be used by children which includes some fragile, breakable objects

Montessori discussed the importance of resourcing environments for the child, as she was writing about and comparing learning environments. As cited by Trabalzini (2011) Montessori wrote about children huddled over adult height desks, behind closed doors, in comparison to the children participating in this research study that do not have desks to lean over or even chairs to sit on (Photo Narrative 8.2). There was room for the children to work on the floor on mats and to be able to move around freely (Montessori, 1964). Tables and chairs were not easily accessible in Malawi and contrary to Lillard (2019a), the children in Malawi preferred to work on the floor mats (Research diary, 2017), rather than at chairs and tables, there was reference to this 12 times in the analysis (Appendix 25 & Fig 8.1). If you consider the challenges faced in setting up CBCCs in rural Malawi, they were all related to a

lack of materials and supplies. Trained observers who visited rural CBCCs found that most consisted of one room with a lack of chairs and/or mats for children to sit on (66 percent), a lack of child related displays (72 percent) and little or no labelling in the environment with words (79 percent) to aid in language development (World Bank, 2015).

The data indicated that by phase three the environment was suited to the child in this cultural context (Photo Narrative 8.4), creating a place for the child, where they belong (Leonard, 2015), although throughout the phases it proved difficult in Malawi to source child size objects. This brings me to consider what is important in the environment, from a furniture perspective and to build on the authenticity of the environment (Ladson-Billings, 1995), but also to consider the assumptions of what was available to Montessori when she first began her work in Italy. The research suggests that there should be more emphasis on cultural consideration and building on the knowledge of the Community and the culturally dictated expectations (Brunold-Conesa; 2019). Montessori describes education as "a help to life, an education from birth" (2007c, p50), so it would seem essential that the environment is relevant, responsive and attainable to the child that is using it and the context in which they live (Ladson-Billings, 1994).

Practical Life work is practical; it has a useful aim and is something children see adults do in their culture for real, practical purposes

The Montessori environment in Malawi created opportunity for culturally related activities to be introduced (Photo Narrative 7.2 & 8.4), creating an understanding of reality for the children (Lillard & McHugh, 2019b; Montessori, 1946/2012). The environment is prepared to foster concentration and to offer opportunity for practicing life skills and exploration (Leonard, 2015). As the research project progressed, the data indicated that the teacher-researchers had developed an environment that offered texture, cultural experiences and opportunities for cosmic exploration (Grazzini, 2020; Brunold-Conesa, 2019; Lillard &

McHughes, 2019a; Leonard, 2015) (Photo Narrative 8.4). The data showed that opportunities to explore with practical life activities in the classroom were transferable enabling the children to participate in real life (Fig 8.7). This links to my understanding of what cosmic education is or should be for chidlren in the first phase of development. The environment was under continual development (Research diary, 2017), "every day I want to add something new for the children to find, this was easier to do now I knew I could relate it to their own lives" (Umi, Research diary, 2017).

One full set of Montessori materials per age group and includes no extraneous materials (i.e. materials not described in Montessori's books/lectures, except for culture-specific practical life

Equipping a Montessori classroom with the didactic materials whilst valuing the economic context of the Community proved to be the biggest challenge of the implementation of the Montessori method in Malawi. It is not possible to purchase Montessori materials in Malawi. The environment was indicative of the cultural context and community and cultural opportunities (Grazzini, 2020; Leonard 2015). For the research I took a complete set of Montessori materials to Malawi with me for my phase one visit. As alluded to previously, once I had arrived in Malawi, I realised that once I left, the materials would not be accessible and that neither foundation nor the community would be able to afford to purchase the equipment. I knew at this point I had inadvertently made a western assumption, and this could affect the equilibrium of power relations. To rectify this as part of the training we worked with the materials and focused on direct and indirect objectives showing the learning opportunities they provide for children. I took away the westernised focus on the presentations and developed learning around how these opportunities could be created with cultural relevance (Ladson-Billings, 1995; Brunold-Conesa, 2019). I turned the focus on other areas of the Montessori approach, particularly foundations of a cosmic education (Chapter 4). Lillard et al (2017b; 1946/2012) advocate the high-fidelity environment, with one full set of

Montessori didactic materials (Table 8.1; 8.2 & 8.3). Yet in the context in which the research was carried out this was not possible, due to lack of resources, lack of money and accessibility of the materials. To ensure sustainability of the method in Malawi, the research team found ways to ensure access to the foundations of the methods for the children and the teachers, by making their own materials and looking for ways to create opportunity to meet direct and indirect objectives (Photo Narrative 8.5; 8.6; 8.7; 8.8). The children were given opportunities to explore, study and acquire knowledge (Grazzini, 2020), not necessarily through the Montessori material, but through culturally accessible activities during this research. The research indicated children meeting outcomes linked to the authentic framework (Lillard 2019b), suggesting that certain adaptations in relevant cultural contexts (Brunold-Conesa, 2019) still enable children to develop knowledge and achieve.

The success measured in the children's outcomes (Chapter 8.4) and the way the teacher-researchers developed their culturally responsive (Ladson-Billings, 1995) environment (Brunold-Conesa, 2019). This raised for consideration that in the first plane of development the environment should be influenced by the culture of the children and the foundation principles of the Montessori pedagogy. Discussion should be more about what these foundation principles should be rather than the fidelity of the material and activities on the shelf.

Access to nature and other classrooms

In their normal everyday life, the children indicative of this rural Malawian Community have constant access to nature, to animals, household chores and jobs on the land. They appear to have an innate connection to their environment, although in a real-world way (research diary, 2017). There was no fluidity between classrooms, which would have been a benefit for the children and their cultural development (Montessori, 1998a), by phase three there was still

no opportunity for this flow between the rooms to happen. Abikanile explained that this is "because the children would just run around and not settle into a classroom" (Collaborative conversation, 2018), the other co-researchers agreed with her.

Three-year groupings with specific age groupings corresponding to developmental periods: 0–3, 3–6, 6–9, 9–12, 12–15

As discussed in (Chapter 3). Malawi culture identified with age specific classrooms. By amalgamating two of the classes in phase two (Research diary, 2017) we expanded one class to ages 4–6 years, but the others were still 2–3 years and 3–4 years. At the end of phase three the Malawian team had started to discuss the "mixing of age groups" (Lin, collaboration conversation, 2018) and this is something they are considering working towards. As pointed out, culturally, older children working with and supporting younger children is very usual in the Malawian Community and would be something quite normal for them in the classroom (Montessori, 1946/2012).

25 or more children in a class, one teacher, possibly one assistant. Visitors to sit quietly and not interfere

Registers were taken in all the classes for the ten-day period of each phase and the average class size was 17 children a day across all three classes (Appendix 22). Children's attendance was inconsistent, as they were often required to help at home to look after siblings, to work on the land or they just did not arrive for that day. This made it difficult to make a clear analysis with regard to how the classrooms worked with 25 or more children in the class (Lillard & McHugh, 2019).

During our first collaborative conversation we discussed the element of class size and vertical grouping (Research diary, 2016). At this point there were four classes, three inside classrooms and the outside classroom (Chapter 7.4). I did not make a change to this in phase one, but by phase two the Malawian team had changed their timetables and had amalgamated two of the

classes which created a larger group of children but gave broader age ranges of 2–3 and 4–6 in classes which meant that all the children and the teachers had a classroom base (Research diary, 2017).

The foundation relies on international volunteers helping in Malawi, the children are used to this. The teacher-researchers see visitors as part of the learning environment offered to the children rather than passive observers as Montessori defined them. I observed children proudly showing the visitors their classrooms and asking them to work with them (Research diary, 2017), the visitors in turn supported the children's development. This scored low in data analysis when considering it from a Montessori perspective, although I would consider this as rich resources for the children, hence this part of the analysis is conflicting.

8.3.2 Temporal

Uninterrupted, long (at least 3 hours in the morning and 2 to 3 hours in the afternoon) work periods every day and a consistent schedule.

In phase two there was realization from the teacher-researchers that the timetable they were still trying to adhere to was interrupting the work in the classroom. In her questionnaire Abikanile noted frustration in having to stop the children working to go out to play (2017) supporting the theory of uninterrupted and extended periods of time to be in the learning environment (Worth, 2010). Montessori advocated three hours (Montessori, 1946/2012). In phase three, uninterrupted time had been stretched to one and a half hours, still causing interruption and interference to the concentrating child (Montessori, 1946/2012) (Research diary 2018), making this a low scoring criterion of 4 (Fig 8.1).

8.3.3 Social

The class belongs to the children

The first challenge with the children's ownership over the environment as interpreted through a western lens was when we cleaned the classrooms with the children, a very common task in western Montessori classrooms. During phase one we cleaned the classrooms with the children (Photo Narrative 8.2), which was a cultural lesson for me as by the end of the day I was meeting with guardians who were concerned about the Malawian child labour laws. We had to increase communication with parents at this point and work on the notion of child ownership and the role they would play in their classrooms.

At this point it was evident that through organic growth a culturally relevant (Brunold-Conesa, 2019) Montessori environment was developing (Photo Narrative 8.3), which was "interesting for the child" (Asale, questionnaire, 2017) and was opening up the opportunity for ownership by the child. This ownership was being supported by the increased knowledge in the teacher-researchers who were supporting the children's involvement in their learning (research diary, 2018) and they were becoming active participants in the environments (Photos Narrative 8.19), but as the data shows (Fig 8.5), they are not yet confident masters of the environment (Montessori, 2017). Although I would argue that this was more about not verbalising understanding, and I witnessed times where the children were being empowered by phase three.

Towards the end of phase two the findings illustrated a fundamental change in the environment (Photo Narrative 8.2; 8.3; 8.4). Some local carpenters had worked with the team to make shelves, providing work for the local community. The focus on creating activity plans and making the physical activities for use in the classroom during this phase, was resulting in the Malawian team scouring the local markets for equipment to go on the shelves. This

organic growth of the environment was developing from the Malawian team becoming more confident in their knowledge and reflecting on their practice. This can be interpreted as funds of knowledge (Moll et al, 1992) amassed from the teachers increasing knowledge (Chesworth, 2016). It was also being directly influenced by their own cultural knowledge (Ladson-Billings, 1995; Brunold-Conesa, 2019) which in turn was supporting the children in making meaning of the sociocultural world (Chesworth, 2016). The findings evidenced that "the culture was beginning to form a foundation of the learning activities on the shelves" (Research diary 2017), therefore supporting my belief that funds of knowledge (Moll et al, 1992) create a foundation for engagement through responding to the children's social and cultural interests (Chesworth, 2016; Brunold-Conesa, 2019).

8.3.4 Photo Narratives: The Environment

Photo Narrative 8.1 The environment starting point.

Photo Narrative 8.2 The environment: Phase One

Photo Narrative 8.3 The environment: Phase Two

Photo Narrative 8.4 The environment: Phase Three

Photo Narrative 8.5 Montessori equipment Geometric shapes

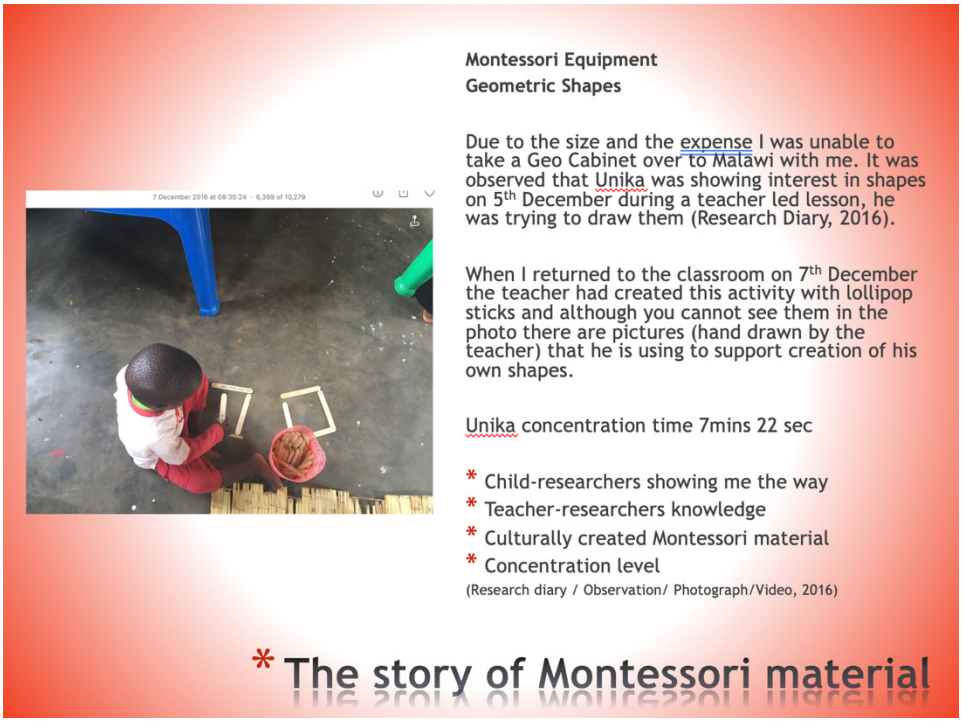


Photo Narrative 8.6 The story of the Montessori materials

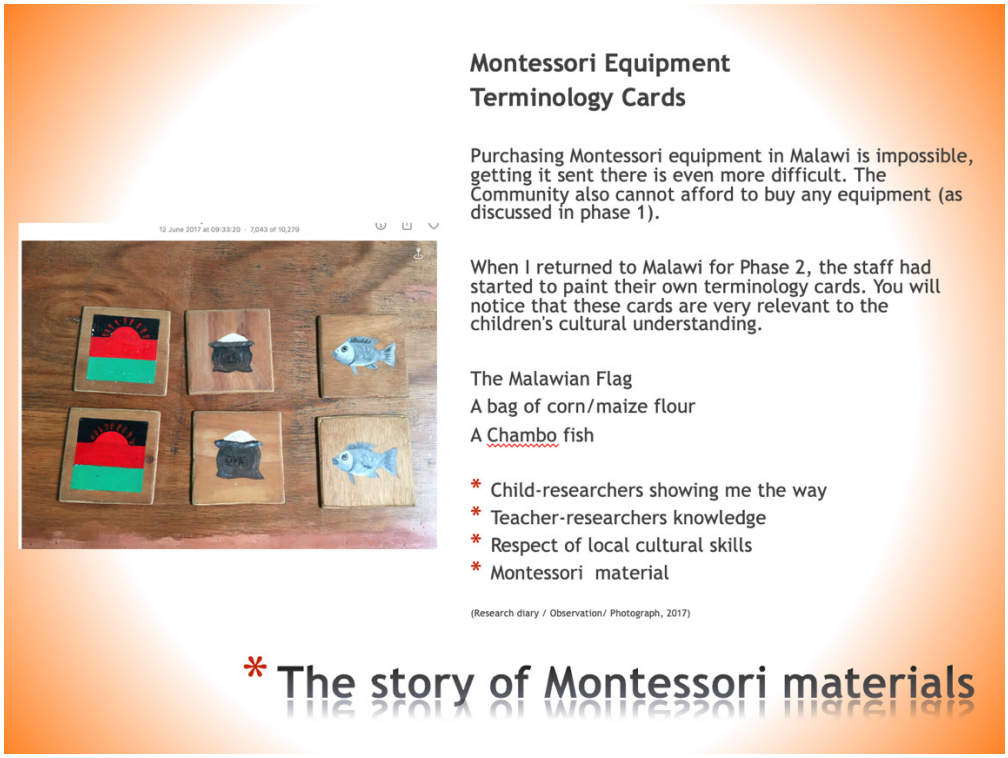


Photo Narrative 8.7 The story of the Montessori materials

Photo Narrative 8.8 The story of the Montessori materials

8.3.5 How do we develop cultural understanding and knowledge to support the Montessori environment?

The environment is co-created in collaboration between the child and the adult. I found this to be true, but I also began to understand through the data that it went deeper than this. The community is the heart of the school and they are proud that the children have access to it. Montessori created opportunity to create a culturally responsive environment (Kea & Ford, 2009; Brunold-Conesa, 2019) with cultural relevance (Ladson-Billings, 1995). Knowledge shared by the co-researchers (Moll et al, 1992) had supported the development of this unique environment. As discussed in Chapter 3 a study carried out by Kambalametore, Hartley, and Lansdown (2000) and Gladstone et al (2010) found that Malawians in a rural context highlighted basic life skills (running errands, carrying water, grinding maize) as important knowledge. My findings indicated that it was these activities and opportunities created in the

learning environment that increased both the children's curiosity to learn and concentration levels. They worked socially with peers, and it also offered opportunity to learn understanding of social conventions (Ladson-Billings, 1995; Montessori 2020).

Following the journey of the data gathered by researchers it was clear that although a full set of Montessori materials was introduced into one of the classrooms, the children's interest was naturally driven towards the familiar equipment and activities. The data implied that activities created by the teacher-researchers were the most used by the children, along with those made from natural material, particularly material the children were used to handling.

As explained above and in Chapter 3 the data gathered indicated that there was a challenge around resourcing the environment, not just due to accessibility of the specific Montessori materials but also the financial constraints experienced in the research cultural context. This was a challenge acknowledged by Montessori who suggested that "this kind of school is not of the fixed type but to vary according to the financial resources at disposal and to the opportunities afforded to the environment" (Montessori, 1965, p12), and from the first phase through to the third phase, this had influence and impact on the findings.

The environment created by the completion of phase three was one developed from cultural influence Brunold-Conesa, 2019 that encompassed the Montessori founding principles that support the notion of following and meeting the needs of the child. By the end of phase three it was evident that teacher-researchers felt confident in preparing the environment. (Fig 8.2). Montessori advocated children's houses being set up in different cultures and social contexts (Trabalzini, 2011). The findings evidence that when we built on this cultural knowledge of Montessori's theory of belonging and supported it through a cosmic education (Chapter 4) we developed an approach to children's education that prepares them for life (Montessori, 2020). In the environment created through this project there was an in-depth focus on the

area of practical life (or activities of everyday living, as it is sometimes known). When Montessori delivered her course in India in 1939, she made reference to the cultural importance of the environment and shared in her lecture on practical life the differentiation in the environment between a Montessori environment in Europe and that of the one developed in India (Montessori, 2020), she spoke of the "exercises of practical life as formative experiences, a work of adaptation to the environment" (Montessori, 1989, p114)

8.4 The Adult

The commitment of the teacher-researchers was significant in the implementation of the Montessori method. When I observed the teachers in phase one, the teacher-researchers worked in their individual classrooms, with groups of children of up to 30 (Research diary, 2016). They carried out lessons as detailed in the Malawian curriculum books, they were generally using demonstration and lecture style teaching (Photo Narrative 8.10) with all ages of children. These techniques contrast with the role of the Montessori teacher that are discussed in detail in Chapter 4. Montessori advocated that the adult has three duties to support the child in their task of development; "to prepare the environment, to set the children free in it, and, once children begin to concentrate, to observe without interfering in children's self-construction" (Lillard & McHugh, 2019b, p20). Through training and as co-researchers they did the journey themselves towards increased knowledge and understanding of not just the Montessori method, but of a better understanding of themselves (Research diary, 2018).

Table 8.2 Authentic Montessori Elements: The Teacher (Lillard & McHugh, 2019b)

Elements of the Teacher
Attractively dressed
Inviting and calm manner and voice
Presents material as very special, wonderful
Has prepared the environment
Has undergone rigorous training with personal transformation
Interferes only when needed
Observes a great deal
Shows humility and great respect for children
Appears aware of entire classroom
Shows warmth and understanding
Shows authority

Figure 8.3. Graph of thematic evidence of data analysis; the teacher

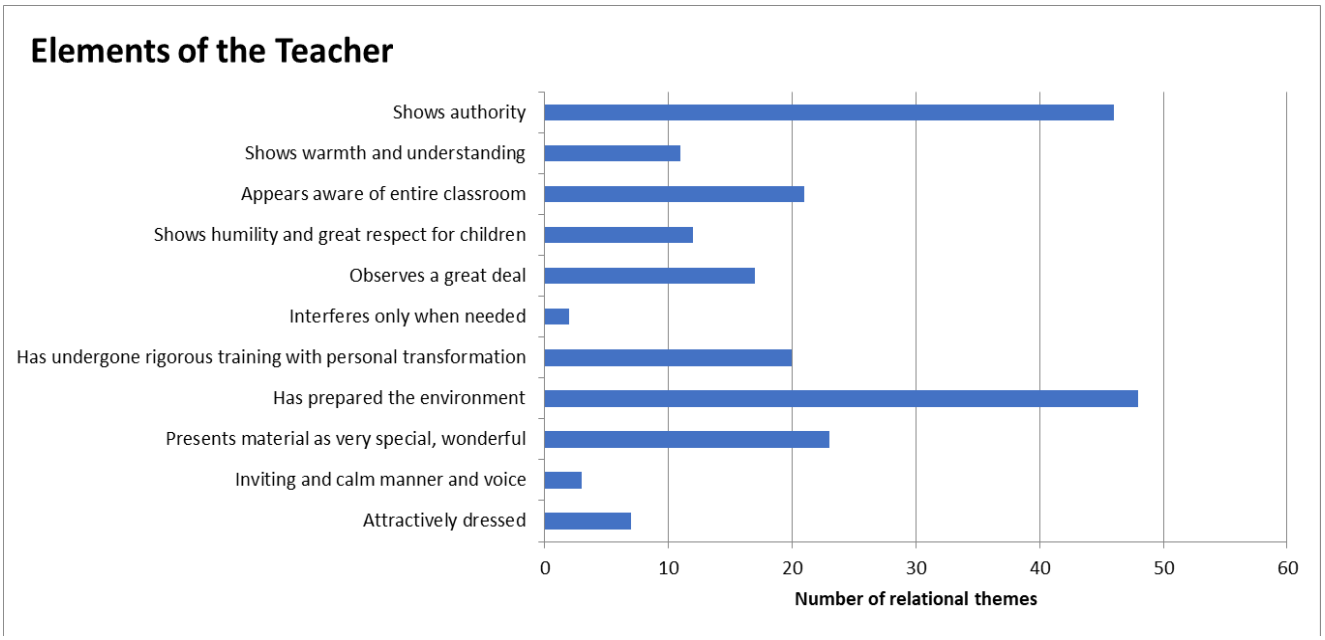


Photo Narrative 8.9 Teachers agents of change

8.4.1 Elements of the teacher

Has undergone rigorous training with personal transformation

At teacher training college in Malawi, the teachers are taught to deliver a curriculum and then instruct a large cohort of children (Buseje, 2018). One of the main challenges faced by the trained teachers and community members was to break down their pre-conceived and taught ideas of traditional teaching (Chapter 3), when developing their understanding of the Montessori approach to teaching. This was apparent in the data analysis, as one of the elements of non-interference by the teacher (Chapter 4) was the least evidenced (Fig 8.2). Yet, contrary to this, and as shown in the data analysis, the teacher-researchers recognised how the change to their teaching role had a positive impact on the children and on their own well-being (Fig 8.2). Their training was thorough, with knowledge taught in the classroom

supported by observation and feedback of practice (Appendix 25), in the last collaborative conversation in phase three Bomani asked if "we can do more training if we want to" (2018).

The focus on the adult in the Montessori environment is that of creating opportunities for discovery and self-learning, they encourage active learning, rather than expecting students to learn primarily from the teacher's direct instruction, this is where one of the main differences comes for the teachers in Malawi. It became clear that the teachers-researchers had embraced their Montessori training, their awareness enabled them to develop their classroom practice (Research diary, 2018). The data collected showed particularly strong themes in relation to observing, preparing the environment, respect for the children and awareness of the classroom (Fig 8.2). It was interesting to see the elements of the teacher training that were developing with the most strength in practice (Fig 8.2). Understanding and awareness of child development allows for a more unique and individualised approach to supporting children's learning, needs and differences (Povall, 2018). Madzimoyo commented that the training has "made such a difference to my understanding of working with young children" (Collaborative conversation, 2018) Abikanile shared that "although I am going to a teaching post, I am going to change the way I work with the children when I go to my new post" (Collaborative conversation, 2018). Lin (2018) summed up the views shared by the teacher-researchers in her comment on her final questionnaire: "when you told us that, what did you say, proof in the pudding, as Montessori said when the children no longer need you then you have created an environment for them, my children don't need me anymore, well that is what it felt like yesterday". 87% of the teacher-researchers felt they were confident to explain the Montessori method at the end of phase three, compared to 15% in phase one (Fig 8.3).

I identified the most naturally transferrable skills (research diary, 2017) and the organic growth of the Montessori teacher, whilst data analysing on the run (MacNaughton & Hughes,

2009). It was through this process that I was able to identify when I observed the point at which understanding fell into place. A focus of the training began to naturally embrace the role of a cosmic education and the findings indicated that this was creating a foundation in the classroom environment and was something the teacher-researchers understood and were able to transfer into practice. Bomani, when writing about cosmic education, wrote "it is as simple as the child needs to understand where everything comes from, where he comes from and then it will become important to him to care for" (Teacher training, 2017). Buseje described "even the youngest child can begin to learn how to grow, how the food helps to feed their family, a three-year old that finds wood and brings it to school for the kitchen fire so we can cook and can find peanuts on their way to school to start to understand about the food that is being cooked" (Teacher training, 2017). Malawa explained that "a child when he first drinks his mother's milk is surely learning from birth in his own mind what he needs to survive" (Teacher training, 2017). As the understanding began to develop about theory underpinning the Montessori prepared environment, there was excitement in the teacher-researchers (Research diary, 2017). Bomani commented "the children are much better behaved and busy, they are interesting". Asale shared that she "is learning more about the individual children every day" in contrast to Lin who mentioned that she was "unsure of the children having so much freedom, so they know what they should be learning" (Questionnaire analysis, phase 2, 2017).

Attractively dressed, with an inviting and calm manner and voice

Culture is rooted in tradition and expectations of behaviour. This element of the teacher role was guided solely by the teacher-researchers. Clothing has meaning and varies from culture to culture. The dress that the teacher-researchers wore was representative of themselves within the cultural context of the Community.

Presents material as very special and wonderful

The teacher researchers evidenced their understanding of the importance of the material in the way they thoughtfully made their own (Photo Narrative 8.5 – 8.9). At the end of their training, they were able to carry out presentations with care, precision, and respect (Research diary, 2017). Although not generally working with authentic Montessori material they were able to transfer their understanding of the presentation to other material and activities (Observations, 2017; 2018). Contrary to the importance placed on the Montessori materials, my study evidenced the importance placed on all activities due to the natural development of the environment, the activities for everyday living were a particular focus of care and attention (Research diary, 2017). Asale (Collaborative Conversation, 2017) spoke of the care she now took of the activities because "they were special to the children". Cultural knowledge influenced how we needed to consider how we used and worked with the activities and presentations. This is evidenced by one of the simplest of learning moments (Photo Narrative 7.1) which bought to light how the teacher training should be culturally relevant and not reliant on a westernised approach, in this case; how to carry a tray. It was at this point that I had to reflect on my own behaviour, that more reflection was required regarding what we used from the generic training material. I had to admit that even though my awareness of the culture difference had developed significantly, that no amount of reading and understanding can account for the occasional instinctive action. Thankfully, a child without knowing or judgement informed me of my lacking and provided me with one of my golden moments (Photos Narrative 7.1).

Has prepared the environment

As the training of the teachers progressed during this visit, they became more equipped with the Montessori foundation knowledge. With support this empowered the teacher-researchers to begin to create a Montessori teaching environment, within a Malawian context. An

environment very different to the one I had pictured through my westernised lens, before embarking on this first phase of the research. This organic approach to the creation of the Montessori environment proved fruitful for data gathering (Research diary, 2016; Photos Narratives, 2016; 2017; 2018) and throughout the research.

Deemed as the initial main task for the teacher (Lillard & McHugh, 2019b), the preparation of the environment is not just physical, as discussed above and in Chapter 4, it is also a spiritual and emotional task of the adult (Montessori, 1946/2012; Lillard & McHugh, 2019b; Grazzini, 2020). Although one of the more difficult elements for the Malawian teacher-researchers to understand in relation to teaching, they embraced the notion through self-reflection and discussion in the collaboration conversations (2017; 2018). An important recurring observation I made (Research diary, 2017; 2018) was that of how the adult was led by the child in the creation of the classroom, this then guided the training given to the teacher to ensure the learned knowledge of the adult was led by the child.

I observed practice in the classroom and supported the teacher's development and understanding of the creation of activities and the delivery of the material presentation during the collaboration meetings (2017). The data at this point developed two unexpected themes, but themes that in a way made sense and were directly a result of our westernised approach to the training. The findings supported the change in the environment as the teachers' knowledge increased. The prescribed Montessori materials afforded opportunity for learning that the teachers initially relied on, but as the project progressed and the teachers understanding of how children learned increased, they were offering the children more affordance for them to draw on their interests and create activities (Mango 7.2) to overcome the reliance on the expensive Montessori material. The language that I noted down in my research diary (2018) included so many positive phrases, there were two that particularly

reflected themes that have developed: Bonami shared "It is so natural to fill the shelves in my classroom with local activities that keep the children interested, that will help them at home and will be easy to keep it going" (Collaborative Conversation, 2018). Hence, the findings supported how the environment can support children in constructing meaning through their funds of knowledge and of their identity (Chesworth, 2016).

Interferes only when needed

As discussed in Chapter 4, non-interference is a foundation for supporting the child's freedom for self-construction (Lillard & McHugh, 2019b). As the data analysis shows this was represented only twice, the teacher-researchers found it difficult to sit back and preferred to be always involved with the children, their instinct to instructionally teach was strong, even in phase three "today three teachers stepped in and corrected the children working with material" (Observation, 2018). In support of Montessori's belief that the more children in the room with one adult reduced the opportunity for interference, one of my observations noted "Asale was alone with 22 children and during a 30-minute period she only stepped in to correct twice as she was busy supporting other children" (Observation, 2018). This allowed the children time to work in the environment, spontaneously without interruption.

Observes a great deal and appears aware of the whole classroom

Chibale wrote "I prefer to observe them, rather than tick lists, I know the child better" (Questionnaire, 2018). Montessori highlighted the importance of observing children, evaluating the observation, and supporting the child in their future experiences appropriately (Montessori, 1946/2012; Lillard & McHughes, 2019). As we were using different methods of observation for data gathering (Chapter six) teachers practiced this skill for both the research and for their practice. I had not considered how effective the researcher role would be in giving the teacher-researchers opportunity to practice and reflect on observation. This was an unexpected exploration opportunity for me as well as the teacher-researchers.

***Shows humility and great respect for children,* shows warmth and understanding with authority**

Teachers develop empathy, humility and respect for the children from getting to know themselves first and foremost (Derman-Sparks & Edwards 2009). I considered this an important element of the teacher training (Research diary, 2016; Teacher training, 2016). The change in the way the teachers worked with the children, was unmistakable as the research cycle progressed. In phase one the teachers tended to always stand up and talk down to the children sitting on the floor. In phase two and three they became much more part of the teaching environment, showing more humility and working with the children at their level (Photo Narrative 8.11 & 8.12). The children had the support of loving adults to guide them to achieve their goals; their voices are respected and considered, which empowered the child to act participatory and collaboratively with adults (Sorin and Galloway, 2006, pp. 13–21).

8.4.2 Photo Narratives: The Teacher

Photo Narrative 8.10 The teacher: Phase One

Photo Narrative 8.11 The teacher: Phase Two

Photo Narrative 12; The teacher; Phase Three

8.4.3 What are the important Montessori foundations the teachers need to know to build their Montessori knowledge and understanding to support children's learning and development?

The data indicated the importance of what adults need to know to be responsive in preparing the environment and the needs of the child (Ford & Kea, 2009). To enable the teacher to do this the research suggests that understanding of the cultural community is important (Moll et al, 1992; Ladson-Billings, 1995; Boyd, 2018; Brunold-Conesa, 2019). The journey of the data indicated that as the prepared environment developed, it steered the knowledge required by the teacher supporting their direct responsiveness to the child. As O'Donnell (2013) argues, this could be deemed as serving the child, rather than empowering the child. I would argue the teacher's role is to support the child on their own journey. This ascertains the role of the teacher and their ability to understand the principles of child development, to best support them in reaching their full potential.

Central to this understanding and knowledge is how the teachers are training. It became apparent as the research progressed that the training of the staff would be pivotal on the outcomes of the research. It was also apparent that a westernised approach to the training would not be appropriate (Chapter 7). Montessorians are brought together by our principles but as a Community we are very diverse in our approaches and this creates a richness in the environment. Yet my experience is that we do not develop this richness through the current training experiences. In practice during the research the colonised (Osgood & Mohandas, 2020) nature of the training was unmistakable and inappropriate for the cultural context. Through decolonising (Osgood, 2020) of the training and then eventually decolonisation of knowledge and of the curriculum teachers had the opportunity for creative learning. In turn this learning supported the development of an environment sympathetic to the child's cultural context.

Through analysis of my own research diary and my engrained colonisation of the training it was evident when I was initially designing the training that I had attached too much importance to the materials and the way we would share this academic knowledge with what I now understand to be a disregard of the spirit of Montessori. As I reflected on the data, I understood the need to put more emphasis on what I consider to be the foundations of Montessori: respect, freedom, solidarity, and exploration. Montessorians advocate the child as actor in their learning and not a receiver of knowledge. This same theory should be attributed to training the adult. It is evident in the data that by phase two, the teachers had developed an understanding of the Montessori pedagogy and had begun implementing it sensitively, influenced by their culture, with more confidence and passion. As the training decolonised (Osgood, 2020) the emphasis was less on the tangible material and more on the development of the teacher's knowledge through observing and supporting them to nurture the spirit of the child (Wolf, 1996) much in the way Montessori advocated teacher training to be, "not to be based on abstract bookish notions, but on the direct observation" (Trabalzini, 2011, p43). This has been supported more recently by Philip Gang who advocated that you cannot prepare Montessori teachers in a non-Montessori way (2020, p5).

A theme that became evident through the findings was that of the first phase of development. Analysis indicated that there needed to be more emphasis on understanding the child in this other cultural context (Brunold-Conesa, 2019) and how the prepared environment for children in the first phase of development would differ to that of the westernised child, it was noted that this needed to be addressed in the training. The collaborative process during all three phases of the research steered the training in the direction of acknowledging the natural formation of the child, developing their spirit, and supporting them in the here and now.

Supporting my conviction that cosmic education needs to influence the environment for

children in the first phase of development, the data evidenced that given opportunity by the teacher the child embraces values of their community and interest in the world around them, which is driven by their own interests (Boyd, 2018). Some of the team were becoming interested in the principle of cosmic education, Abikanile excitedly shared with me that she "really likes the cosmic education, it feels like Malawi and who we are matters" (Questionnaire analysis, phase 2, 2017).

It was noted during phase two (Research diary, 2017) that the staff had organically adapted the classroom methods to work towards creating what is effectively becoming a Malawian Montessori curriculum that was culturally appropriate and relevant. The teachers own experiences were influencing their practice and how they created their environment (Ladson-Billings, 1995). "I could tell which teacher-researchers classroom I was in, due to the personal touches" (Research diary, 2017). One teacher-researcher told me, on the same day I made this observation that "I love my classroom, I have had good ideas and the children are busy" (Chibale, Collaboration Conversation, 2017). This environment development continued as an on-going process by the teachers during the rest of the research project and beyond. They were overcoming the challenges of lack of resources in their own way and the practice was reflecting the environment they were creating; this was evident in the resources the co-researchers created themselves; such as the Spindle Box (Photo Narrative 8.8), cards and counters (Photo Narrative 8.7), geometric shapes (Photo Narrative 8.6) and the terminology cards (Photo Narrative 8.6). They were trying out the new methods of learning and teaching and were incorporating their experience of the Malawian context and culture.

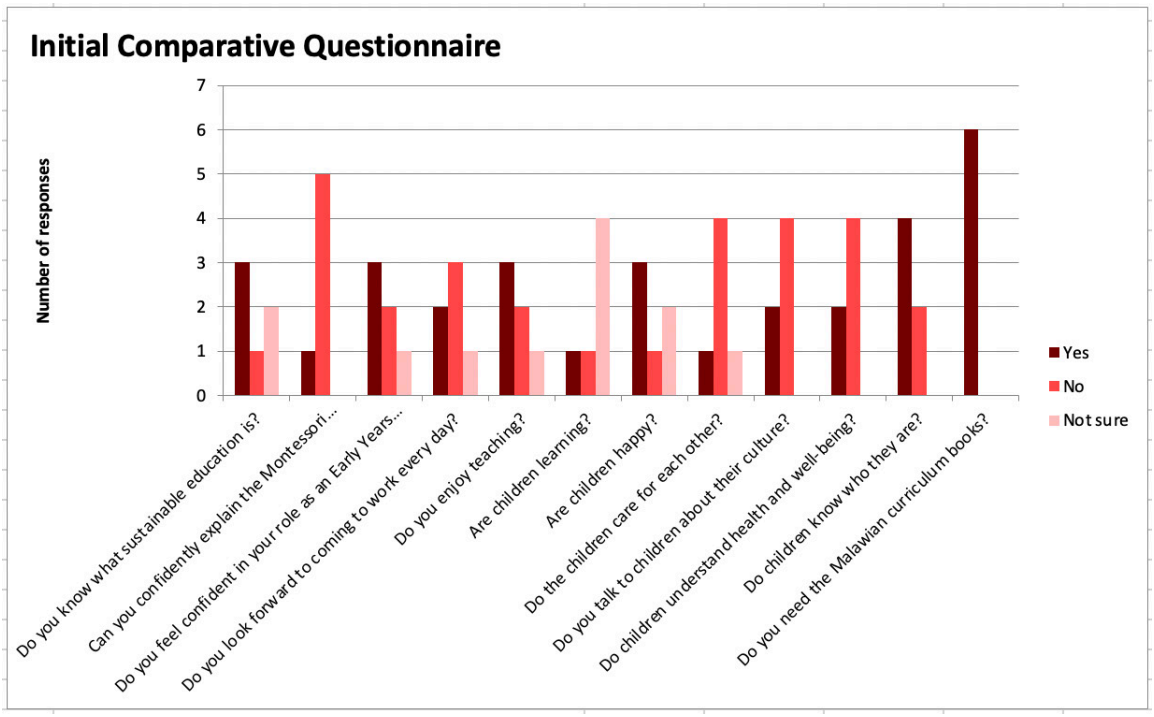
During the three collaboration conversations held during this final visit we reflected on teacher's experiences and the challenges, barriers, benefits, and successes of the project. One of the deepest comments that I noted down was from Lin "when you told us that, what did

you say, proof in the pudding, as Montessori said when the children no longer need you then you have created an environment that meets their needs, my children don't need me anymore, well that is what it felt like yesterday" (2018).

With the questionnaire used at the beginning of phase one and then again in phase three (Fig 8.3), I had the opportunity to gauge teacher-researchers knowledge against the start of the project in a very quantitative way, as well as using the longer questionnaire used in phase two and in phase three (Fig 8.4) to gain deeper qualitative data, focusing on the process and the meaning developed over the last two phases. Both creating comparative data that evidenced changing attitudes to teaching, increased knowledge of the Montessori method and increased well-being in the Malawian team (Fig 8.3 and Fig 8.4). One of the comments that really stood out for me was from Chibale who in phase one commented that she "no longer enjoyed teaching" (Phase 1, questionnaire, 2016) and in phase three she commented that she "enjoys teaching children, and it makes her happy" (Questionnaire, 2018).

Figure 8.4. Comparative data of phase one and three teacher questionnaire

Phase 1



Phase 3

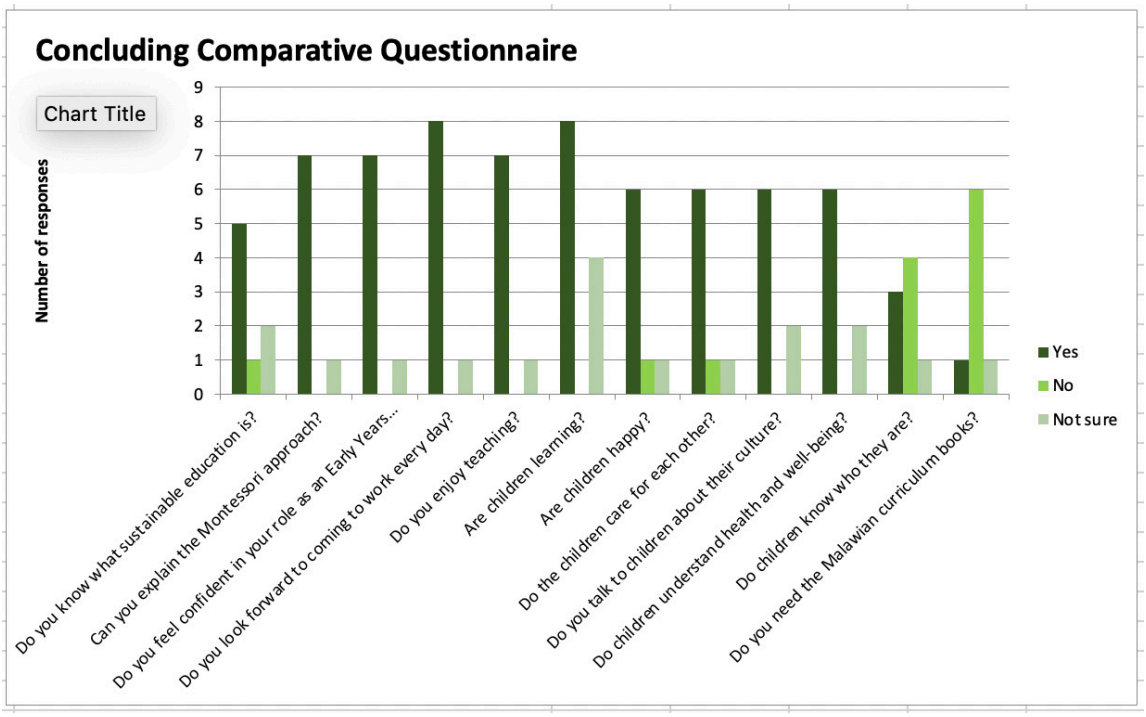
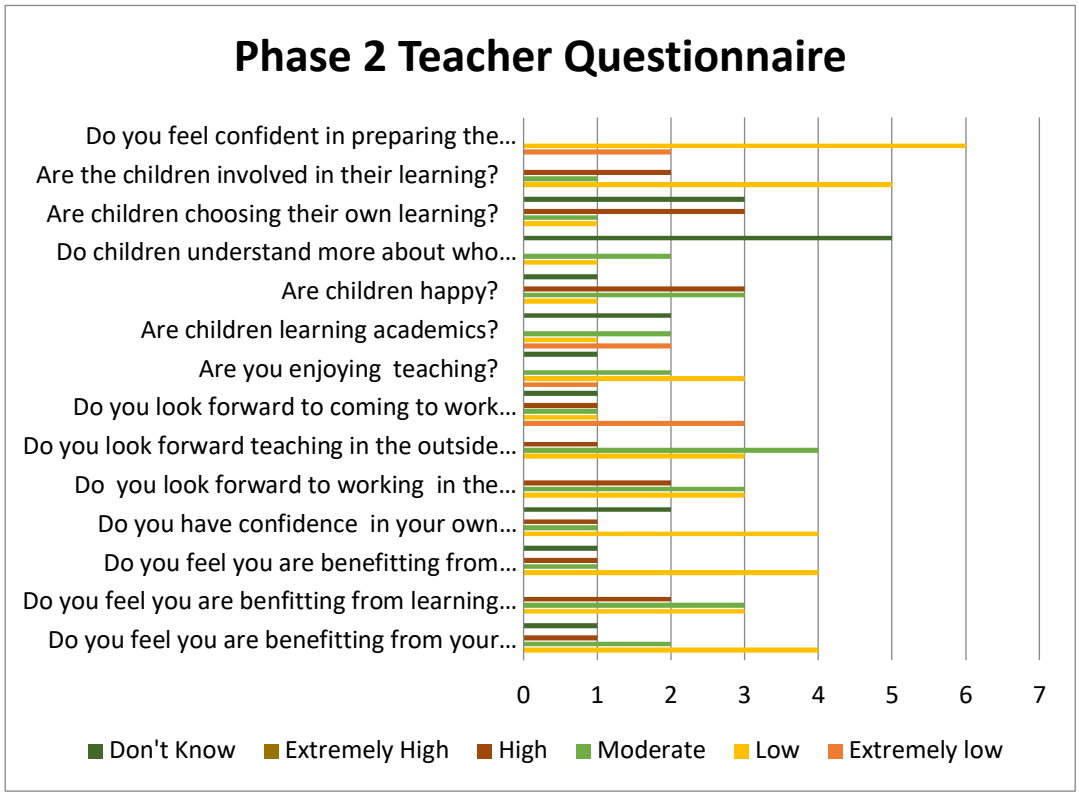
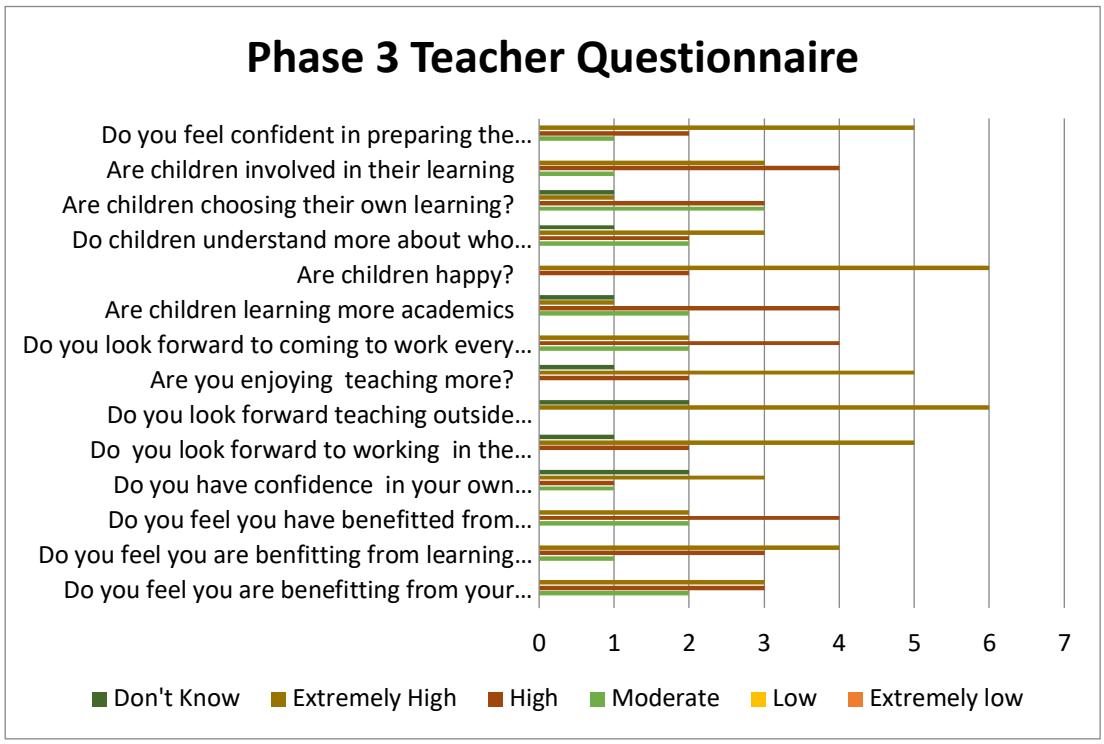


Figure 8.5. Comparative data of phase two and three teacher questionnaire

Phase 2



Phase 3



8.5 The Child

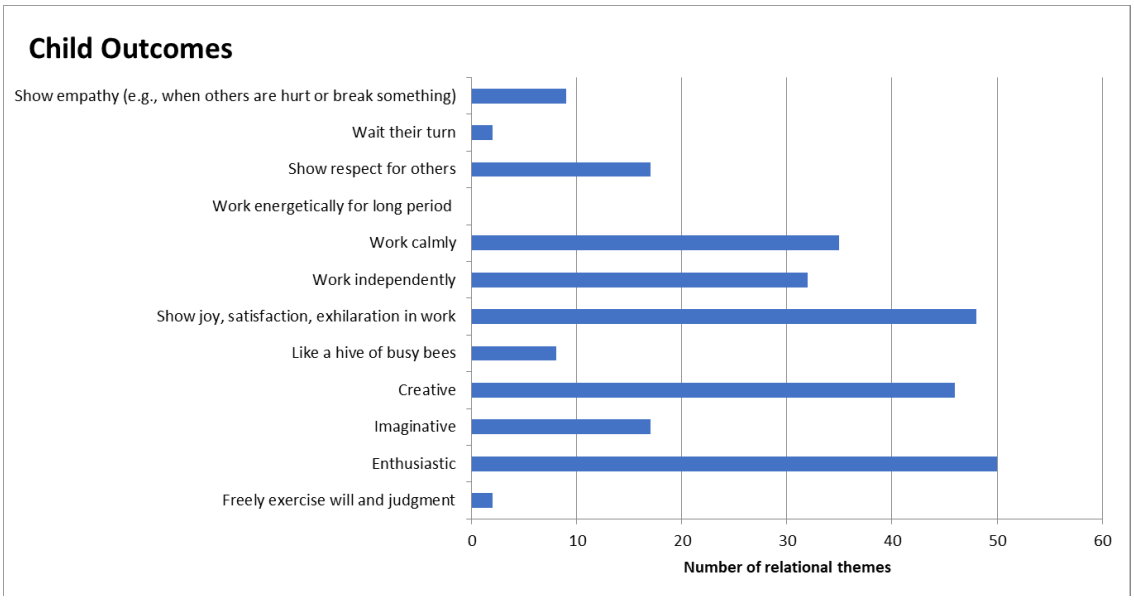
The child was central to the research, and I learned much about how they used the environment and what they could achieve in the environment as the research progressed. The teachers were also seeing the change in the children as they were taking more interest in the classroom "the child smiled to herself as she greeted the first child into the classroom, this is a job I normally do" (Collaboration Conversation, 2017; Photo Narrative 8.17). "From the beginning children demonstrate that they have a voice" (Rinaldi, 2001, p3) and through the Photo Narratives the children were given a voice.

It was illustrated during this phase that the children were influencing their learning environment in so many ways, practicing the skills they were learning in their own time (Research diary, 2017), "bringing things in with them in mornings to show me" (teacher G) that were then generating child led learning opportunities that were culturally relevant (Chesworth, 2016; Brunold-Conesa, 2019) and were interpreting the children's interests (Chesworth, 2016).

Table 8.3 Authentic Montessori Elements: The Child

Child Outcomes
Freely exercise will and judgment
Enthusiastic
Imaginative
Creative
Like a hive of busy bees
Show joy, satisfaction, exhilaration in work
Work independently
Work calmly
Work energetically for long period
Show respect for others
Wait their turn
Show empathy (e.g., when others are hurt or break something)

Fig 8.6 Graph of thematic evidence from data analysis; the child



8.5.1 Child outcomes

Freely exercise will and judgment

This was a difficult element to analyse empirically. Over the years of interpretation of Montessori writings from Italian to English, the meaning behind the word freely has become diluted, particularly when then adapted to Westernised curricula. Today, freedom is more about that of movement from inside to outside in a Western context, rather than the freedom to follow the inner drive to develop the will (Montessori, 1946/2012). By phase three the children were free to follow their interests and freely choose their learning (Research diary 2018; Photo Narrative 8.18). It was evident that this was supporting children's interests and in turn involvement in their learning (Photo Narrative 8.16; Fig 8.6).

Imaginative and creative

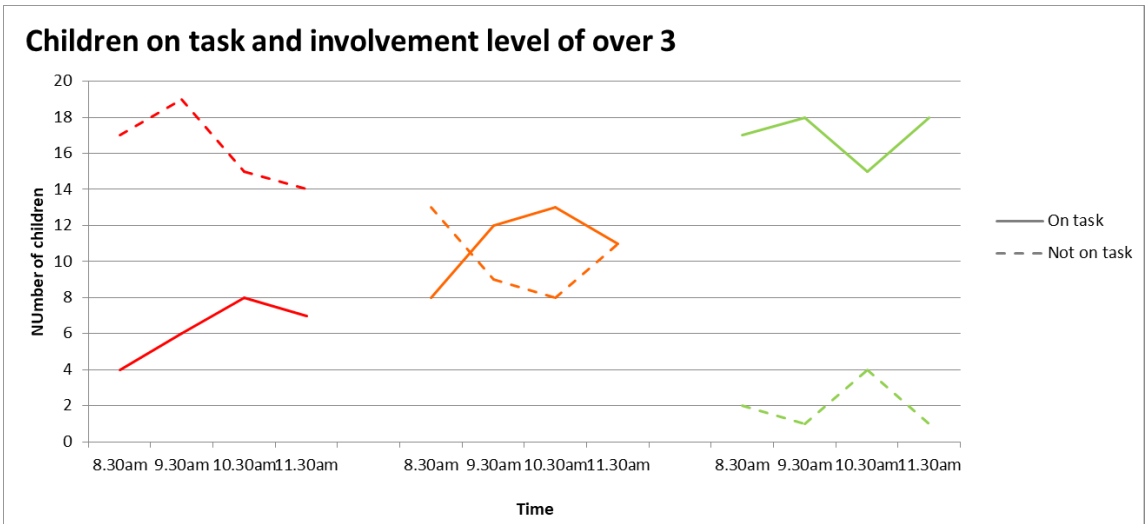
With fear of repeating myself this was another element difficult to analyse empirically. Lillard & Else-Quest (2006) argue that Montessori children are especially creative, they suggest this to be true when children are exposed to the right Montessori environment and they allude particularly to drawing, yet I believe that creativity is a process that children go through on

their journey to problem solve and develop ideas, whether that be art, maths, design or play. Montessori also links imagination to creativity to support the development of the intellect (Montessori, 1946/2012). Considering these points discussed, although I have drawn influence from these theories, I do not feel I had clear rigorous data to evidence findings about this element either way. Although this element was evidenced quite highly in the data, this came from two differing interpretations, that of artistic creativity and problem solving.

Like a hive of busy bees

During the research phases the children became more involved in their learning. It was clearly evident in the child on task graph (Photo Narrative 8.16; Fig 8.6) that over the period of the research cycle children's involvement increased with more children on task throughout the day, with almost complete turnaround from phase one to phase three of children not on task compared to children on task, supporting Montessori's view that "children left to themselves work ceaselessly" (2007e, p87) and Ladson-Billings (1995) who theorised that in a culturally responsive learning environment levels of involvement would increase. This was also evident in many observations of individual children. Photo Narrative 8.16 is one of many time-stamped observations showing the length of engagement of individual children. I acknowledge that there will be different understandings of what "on task" means and for this research, if a child was engaged in active engagement they were on task.

Figure 8.7 Child involvement



***Red* – Phase 1** ***Orange* – Phase 2** ***Green* – Phase 3**

Over phase 1, 2 and 3 (30 days). I observed one classroom at 4 points during the day. To be categorised as on task the children were over level 3 (Laevers, 1994b). The graph above is a representation of one day.

Show joy, enthusiasm, satisfaction, exhilaration in work

Outwardly, the data indicated that the children were engaged in their work. Analysis and interpretation of the Photo Narratives appeared to show that by phase one, more children were on task and involved in their learning, indicating satisfaction in their work. The teacher-researchers spoke of happy, smiling children (Collaborative Conversation; Questionnaire; Fig 8.3 & 8.4). The involvement tool (2017; 2018) also evidenced the increased involvement of the children in their learning, which is a sign of satisfaction and happiness. This supports Montessori's view that providing opportunity for spontaneous activity arouses joy and enthusiasm for work (Education and Peace, 2007a).

Works independently and calmly

Opportunities for independent working were alluded to in an increasing number as the research cycle progressed (Collaborative conversations, 2016; 2017. Research diary 2017,

2018). By phase three the data indicated that independent learning was happening naturally in all three classrooms (Photo Narrative, 8.13; 8.14; 8.15: 8.18; 8.19). Children appropriated their knowledge gained from the environment and role modelled by their teachers. Furthermore, children were taking ownership of their classroom (Research diary) and supporting each other. They spent more time using the activities and sharing and showing signs of self-regulation through concentrated work (Leonard, 2015).

Work energetically for long periods

Due to the school timetabling and the factoring in of the feeding programme for the children, it was not until phase three that I was confident that a longer work cycle was being implemented but this was not the case every day. I noted in my research diary during the phase three visit, that the children were happily concentrating for the longer session that had been allowed through the timetable (Research diary, 2018). The data gathered through the use of the involvement tool, evidenced children's concentration levels lasting longer and their focus on one activity had developed for longer periods of time.

Shows respect for others

One of the observations that I have previously discussed is that of the handshake (Photo Narrative 8.17). Earlier I portrayed this as a learning moment for the teachers, but it was also a learning moment for the children. A marked sign of respect that the children are taught in Malawi is that of the handshake and looking at people as you greet them, this was usually demonstrated by adults in a lesson yet not practiced (Observation, 2016).

Waits their turn

In the preparation of the environment, the teacher-researchers only ever placed one of each object on the shelves for the children to use. Over phases one and two I observed children (Research diary 2017; 2018) becoming used to waiting to use something another child was

using, whereas in phase one, I had noted how children had taken work from each other. Montessori advocated that this element would become a distinctive characteristic of a child in the prepared environment (2007a).

Show empathy (e.g when others are hurt or break something)

Photo Narrative 8.19 shows a child clearing up after a younger child had spilled the water from a pouring activity. This observation was made in phase three (Observation, 2018) as can be seen in the photo, the teacher-researcher is watching the child and after the work cycle and during the collaboration conversation later that day, she shared her surprise at this action, but also the joy of observing this unprompted task of the child.

8.5.2 Photo Narratives; The Child

Photo Narrative 8.13 The Child: Phase One

Photo Narrative 8.14 The Child: Phase Two

Photo Narrative 8.15 The child: Phase Three

Photo Narrative 8.16 The story of concentration and involvement

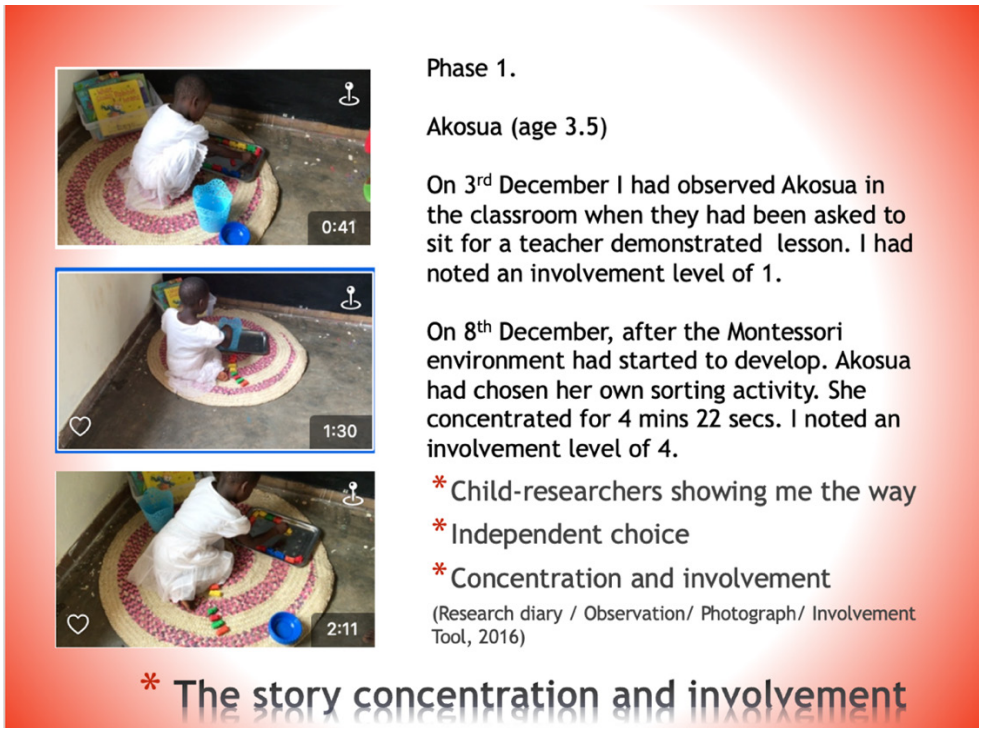


Photo Narrative 8.17 Reality: The Handshake

Photo Narrative 8.18 Freedom of choice and learning

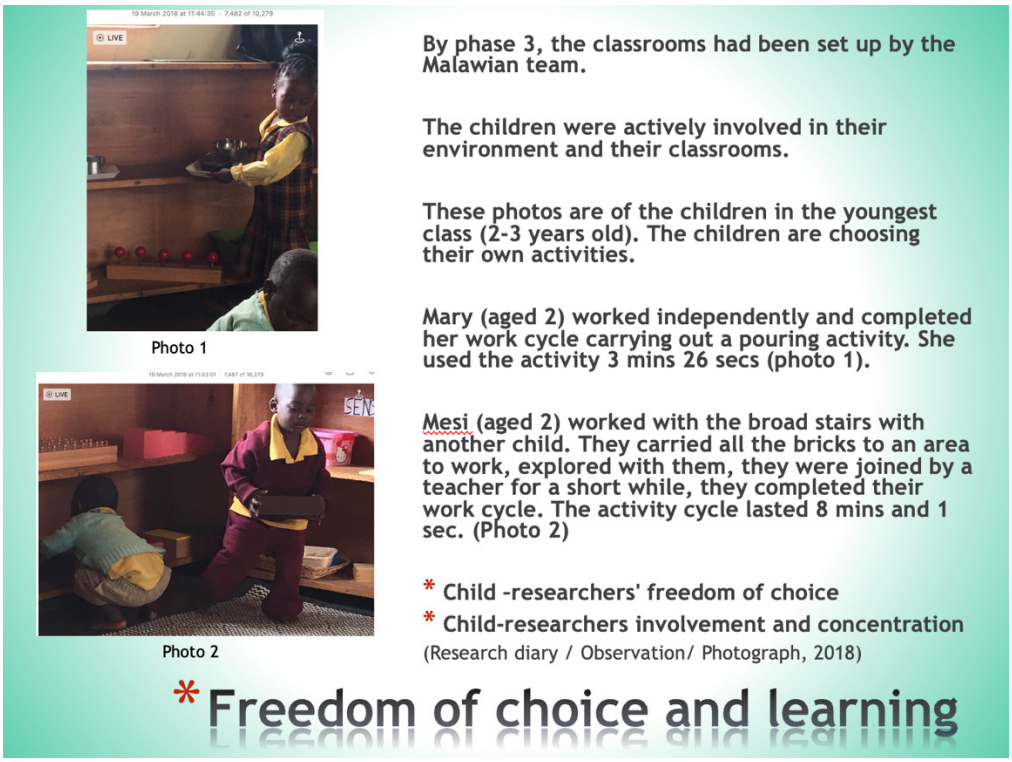


Photo Narrative 8.19 Showing empathy

8.5.3 How does the Montessori method support the child's engagement with the environment?

Central to any environment is the child and their experiences, their experiences are related to other experiences that unconsciously develop intelligence (Montessori, 2020). Montessori's research found that the child's social, economic, and cultural background significantly influenced his intellectual development (Trabalzini, p41), findings that began to become evident in phase three of my research. Intellectual development was also identified by Gladstone et al (2010) and as discussed in Chapter 3 as an important focus for the Communities in Malawi, alongside manners and social understanding. As argued by Boyd (2018), social sense and ecological attachment are formed through a child respecting and loving their community and learning about this through their environment. The analysis of the data that emerged and culminated in phase three was that the child had a direct influence on developing the environment from a blank canvas. I understood my data to show that when the children were given opportunity to bring interest into the classroom (Photo Narrative 7.2) and activities were developed from this point, this supported the children's engagement in their learning, this was in contrast to Stephenson (2003) who argues that the children's hunger for challenge is satisfied more through the practitioner's attitudes than the provision itself.

My findings supported that collaboration between the teacher and the environment to nurture the child's engagement and that teacher knowledge developed in relation to understanding both children and their learning when established though creative real experimental experience. Montessori (1950 cited by Trabalzini, 2011, p177) continually spoke of her method as experimental, developed around the inspiration of children and of practical experience (p188).

Montessori inferred that, innate tendencies are the same in children worldwide, although, as

is indicated through the research, these tendencies that enable the children to adapt to their "in the moment" experiences are influenced by culture and experiences that are brought into the classroom. Nurturing the natural development of the child would, in turn, mean that environments in different cultural contexts such as Malawi, would need to be adapted to support the manifestation of the sensitive periods in this other cultural child. As the research progressed and the natural development of the environment occurred it became apparent that these natural desires, innate in the child, drove the interests of the child that in turn developed the creation of the complex environment that would provide unity for the child (Montessori, 2002).

In a physical way Montessori discussed the importance of resourcing environments for the child when she was writing about, and comparing them, to learning environments. As cited by Trabalzini (2011) Montessori wrote about children huddled over adult-height desks, behind closed doors, in comparison to the children participating in this research study that do not have desks to lean over or even chairs to sit on. This brings me to consider what is important in the environment and what we really need to provide the child with. Montessori describes education as "a help to life, an education from birth" (2007c, p50), so it would seem essential that the education is relevant, responsive, and attainable within its cultural context (Brunold-Conesa, 2019). My findings demonstrated that children in Malawi were more comfortable working on the floor, on mats, which was consistent with their home environments, but conflicts with Lillard & McHugh's (2019a; 2019b) view of authenticity. When you consider these aspects, it becomes clear that continual collaboration of the founding elements, the dynamic triangle, are fundamental and to support this the community must draw on funds of knowledge (Moll et al, 1992) to create a culturally relevant environment (Ladson-Billings, 1995).

Therefore, my research found, as Montessori advocated (1907 cited by Trabalzini, 2011, 943) observing children in their own environment provided insight into how they changed not only their own behaviours, but also changed the environment.

8.5.4 How can we gather data on the children to support their innate desire to learn?

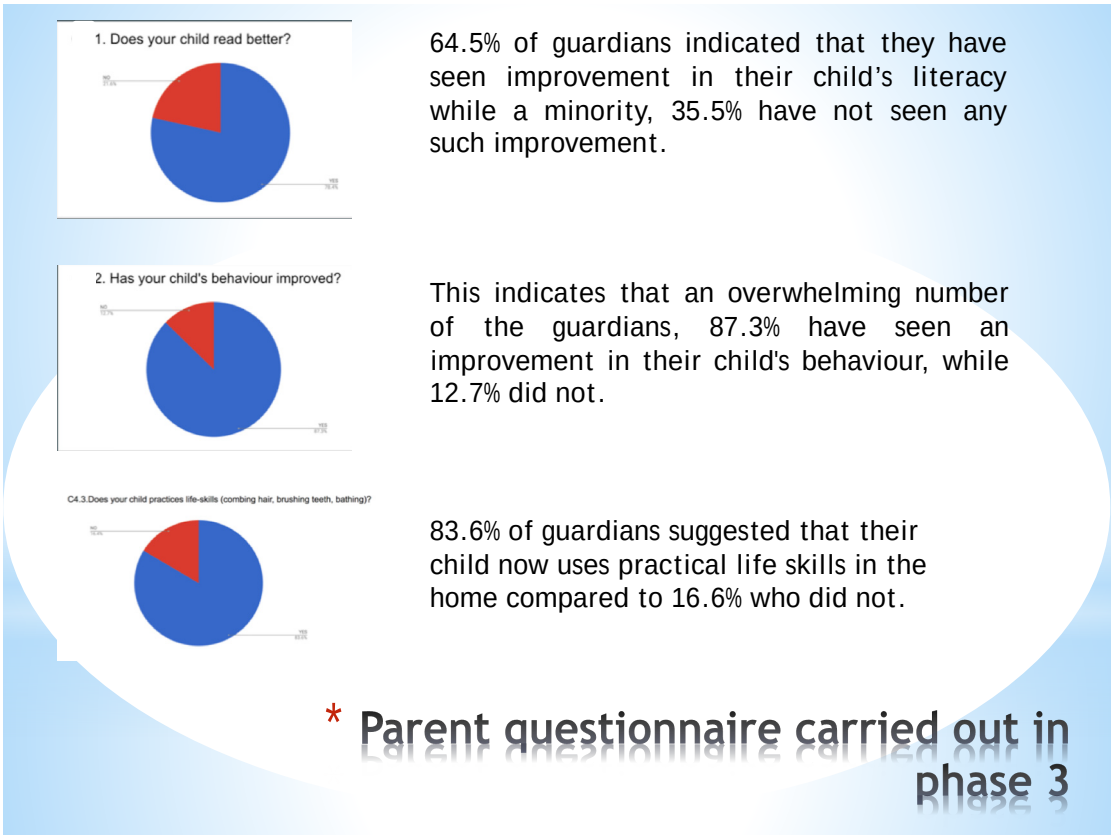
In phase one the Malawian team were keen to gather data on the children to evidence what they wanted them to learn, and this was based around the ECD assessment. As indicated in the findings this became less important and eventually the original tool became an ongoing record of achievement as a necessity for the foundation, rather than to inform knowledge of the children.

As described by the data this was another area that cultural context had to be considered as Gladstone et al (2010) explain evaluation of normal child development in Africa often uses assessment tools created for Western settings with little adaptation to acknowledge the cultural context of rural African children (Brunold-Conesa, 2019). This was also true in the first phase of this research. The findings suggest that collaboration brought about change and demonstrated the development of the observation tool to ensure appropriateness in the Malawian context. As suggested by Gladstone et al (2010) these concepts relating to child development were adapted and incorporated into the final assessment tool and observations tools.

One extra step we carried out in this phase was to meet with the parents/guardians again. The phase one meeting was informing the parents about the research, although through discussion I identified themes that were prevalent during the discussion when the following question was asked "What is important for your children to know and to do?" (Appendix 11). When we met with the guardians during phase three, we posed three questions that I had written as

a result of the most popular themes that had arisen from the phase one meeting (Fig 8.7). The data indicated a positive impact from the guardian's perspective, 64% seeing improvement in literacy (speaking and talking) and 87.3% seeing improvement in their child's behaviour. The final question that addressed transferrable skills to use at home was high with 83.6% agreeing that their children were using practical life skills at home.

Figure 8.8 The Voice of the parents/guardians



8.6 How do we reconsider the Montessori method to support cultural collaboration and learning in the Malawi context?

Montessorians are proud of the fact that the Montessori method has remained largely unchanged for many years (Marshall, 2017), yet my research suggests that some elements need to change as we learn more and science advances (Montessori, 1967). It became evident in my findings that some of the more important aspects of the Montessori philosophy have

not been interpreted into current practices, something Montessori argued was imperative to embrace change and progress. Education must seek new ways to support the development of human potentialities (Montessori, 1999b).

The findings justify the reconsideration of the Montessori pedagogy in Malawi. The themes that threaded through the analysis of freedom, independence, collaboration, respect, and confidence are those Montessori herself advocated (Trabalzini, 2011) and are the foundations of the approach. The findings suggest that these Montessori foundations rather than the curriculum materials are crucial to the development of a culturally responsive Montessori environment. Teacher training, in relation to the first plane of development, should better reflect the need for nurturing the child, cultural awareness, opportunity, appropriateness of the environment and less on the tangible materials. Teacher training should be developed in a Montessori way (Gang, 2020), acknowledging creativity, freedom of exploration, respect for funds of knowledge and the opportunity for the adult as an actor, rather than a receiver. It should be about preparing the spirit of the adult, rather than explanations and demonstrations of the material presentations (Montessori, 1998b). It is important to develop thinking around the meaning of the Montessori philosophy to ensure that opportunity is offered to reflect the everyday experiences and opportunities for children in communities worldwide. Offering opportunity for exploration, study and acquisition of knowledge (Grazzini, 2020) for the adult, to enable them to support and empower the child in their task.

8.7 Summary of Chapter

In this chapter I have told the story of the research findings in action. Through the development of the discussion, I have detailed the changes that took place as the three phases of the research cycle progressed. The benefit of the collaboration between the co-researchers was evident in the richness of the data collected and the opportunity of learning from each

other, the sharing of funds of knowledge (Moll et al, 1992) that enabled respect for the cultural context (Ladson-Billings, 1995) in which the research was taking place.

The data analysis and findings allowed for response to a definition of a framework of authentic Montessori developed by Lillard & McHughes, (2019a: 2019b), supported by the emerging themes. The findings suggested that there should be more recognition of the cultural context of the prepared environment and acknowledgement of the culturally dictated opportunities (Brunold-Conesa, 2019). Although Lillard & McHugh (2019a; 2019b) argue that the Montessori classroom includes no extraneous materials, they do acknowledge that there should be culture-specific practical life. I argue that this is not enough to ensure a culturally responsive environment that respects the reverence of its locality (Leonard, 2015). The findings showed that understanding of how to create the culturally influenced Montessori environment is supported by the appropriateness of the teacher training. Results of these findings are discussed and developed further in the next chapter, along with the strengths and limitations of the study and ideas for further research.

Chapter 9 Conclusions and possibilities

'I repeat and I insist: I did not wish to originate a method of education, nor am I the author of a method of education. This is not a method of education like other methods, but it is the beginning of something which must grow, and which is in no way bound to any personality that may appear as the author, but it is solely allied to human beings who develop in freedom. It is a history of liberty and not the recital of any individual's thoughts'

(Montessori, 1913/2013, p10)

9.1 Chapter introduction

In the above quote Montessori (1913/2013) implies the need for continuing research into her method to enable growth within other communities. In my own words, this conclusion sets out to demonstrate reflection, growth, and development through research. My research developed from the seeds of Montessori's early work in the first of her children's houses and my own interpretation of this, as discussed in Chapter 2. The intention was to explore the implementation of the Montessori approach to education in a nursery in rural Malawi. The research study used CAR as a framework (Chapter 6.3, Fig 6.1) underpinned by a theoretical framework (Chapter 5.4, Fig 5.1) rooted in the philosophy of social constructivism.

My thesis tells the story of three phases of the research cycle (Chapter 7.1.2). Through collaboration, development, and creative research, the aim was to address the question: How do we reconsider the Montessori Method to support cultural collaboration and learning in the context of Malawi? Highlighting how a community influenced the development of a culturally relevant Montessori pedagogy, in collaboration between the adult, the child, and the environment (Chapter 1.8, Fig 1.1).

This conclusion reflects on my research findings and how a deeper understanding of Montessori and Malawi has developed because of collaborative participation in the research.

The research enabled reflection on, and development of, Montessori philosophy and practice, funds of knowledge (Moll et al, 1992) and CRP (Ladson-Billings, 1995). The strengths and limitations of the study are introduced–at the beginning of this chapter, because they had influence on the methods and collaboration that supported the development of the research from the very first visit. I reflect on how my work draws on the principles of CAR, the Montessori community, and researching in Malawi. I make recommendations for future research, which leads on to a reflection of my own personal pedagogical journey that my professional doctorate has taken me on. Finally, I draw my thesis and my research together and share an up-to-date postscript.

Whereas the elements of the dynamic triangle (Chapter 1.8, Fig 1.1) have been used as a device to structure previous chapters, here you will note there is deviation from the dynamic triangle that has framed previous chapters: the child, adult and environment are not considered separately but brought together to show their interconnectedness, so that the Montessori approach and its implementation in Malawi is considered holistically.

9.2 Montessori in Malawi

Not unlike what Montessori found in San Lorenzo (1912), the environmental conditions of a rural Malawian nursery allowed the opportunity for this research to take place in a cultural contextual space 'devoid of obstacles to the expansion of the child's personality" (Trabalzini, 2011, p177) and the creation of a Malawian children's house.

My thesis provides an exemplar for introducing the Montessori approach to support children's early educational opportunities alongside increasing the knowledge and confidence of the Malawian teachers, enabling them to take control of improving the education opportunities

for the children in ways that are contextually and culturally responsive (Ladson-Billings, 1995; Ford & Kea, 2009). Chapter 7 demonstrated how Montessori's own approach to education was revisited by working in collaboration with participants and co-researchers. Through this collaboration, knowledge and understanding of the Montessori approach was reconsidered and applied to culturally responsive practice in the 21st century. The research reflected on this in the context of implementing Montessori in a country with limited resources, but one with a tradition of learning within the community, to create a culturally relevant and inclusive approach to the Montessori method and Montessori teacher training in Malawi.

The research explored the role of the child, the adult, and the environment as collaborative cosmic agents of change (Montessori, 2020). Using co-researchers' voices, their funds of knowledge (Moll et al, 1992), and by exploring decolonisation of the teacher training (Osgood, 2020), a culturally responsive Montessori environment (Ladson-Billings, 1995; Brunold-Conesa, 2019) was developed over the duration of the three phases of the action research cycle. The research demonstrated that it was possible to sustain the Montessori environment, which offered a social, purposeful, hands-on and child-led learning experience. Moreover, the findings supported the evolution of a Montessori pedagogy that is refined through observation, cultural influence and practical experience and is impassioned by the foundations of the Montessori philosophy.

There is some value in significant transferrable knowledge from established Westernised curricula and approaches to learning (Chapter 3), but it is important to recognise that there is also tension between these globalized curricula and local cultural contexts (Dei & Asgharzadeh, 2005; Parsons & Harding, 2011; Leonard, 2015; Wood, McAteer & Whitehead, 2018; Ali et al 2021).

Through reflexivity and reflection, the identity, voice and values of the local community were empowered in the research process (Parsons & Harding, 2011) helping to overcome this tension. Reconsidering the Montessori approach, and the training in this Malawian cultural context (Chapter 7.3 and 8.3), my research identified ways to redefine Montessori practice as culturally responsive to the Malawian community. Nurturing and protecting cultural contexts was fundamental to the research. Global standards and indicators are important in terms of children's rights to access early childhood education and care provision, but through their implementation there is a risk of homogenization and devaluation of traditional practices, (Kagan, Britto, & Engle, 2005), as discussed in Chapter 6 and 7. Through the experience of the action research, I enabled genuine collaboration with the teachers and children, and I could contribute in a meaningful way to the development of their Montessori practice.

Asking critical questions of myself, the literature, and the research also prevented the process from further "entrenching the colonial project, rather than fostering redress through the democratization of knowledge" (Wood, McAteer & Whitehead, 2018, p8). Action research in collaboration with community co-researchers, gave insights into ways of adapting the Montessori approach to education to the cultural context, rather than the other way around. For example, in chapter 7, I explained how the collaborative conversations supported the sharing of knowledge to ensure that learning, from the training, was reflected upon, adapted and implemented in a relevant way into practice. This is also illustrated in the golden learning moment (Chapter 7.1).

9.3 Strengths and limitations of the research

Strengths develop from reflecting on limitations and this seemed to be a pattern throughout my research. One of the first most notable strengths was the community cohesion and uniqueness in thinking around the challenge, changing working patterns and looking for other

methods of data collection, which developed from the first major challenges experienced on arrival in Malawi; for example, the lack of electricity which impacted the anticipated means of data collection and on-going communications on return to the UK (Chapter 6.6.1). As their knowledge increased, the teachers took ownership of the methods and created Montessori activities and classroom resources, founded on the Montessori philosophy, out of local available materials, thus taking their learning forward and reducing their reliance on pencils and paper, that were often unavailable.

Positionality and reflexivity became a strength that refined through the collaboration, as discussed in chapter 7.4.1c, and enabled challenge of power imbalances (Parsons & Harding, 2011). The introduction of Montessori had been encouraged by the UK based Foundation who fund the school (Chapter 2.6) which created aspects of unequal power relations (Parsons & Harding, 2011; McAteer, 2013; Wood & McAteer, 2017; Musgrave, 2019) that had not initially considered. As discussed in chapter 7.4.1d, together we designed fundamental strategies, such as the collaborative conversations (Chapter 4.7 & Chapter 7.4.1d), to overcome this challenge and support collaboration. Collaborative conversations were instrumental in overcoming the identified see-saw nature of power (im)balance which also enabled empowering reflection (Chapter 7.4). To open the dialogue in the first collaborative conversation, I used my own context as a white westernised female researching in another community (Osgood, 2020), positioning myself in the research and exposing my reliance on the Malawian-researchers' funds of knowledge (Moll et al, 1992), this in turn developed an equality, respect, and a foundation of trust between myself and the Malawian researchers. This developed a role more aligned to facilitation rather than deliver of the implementation of the Montessori approach and the action in the research, contributing to co-construction of knowledge and shared meanings, enabling decolonisation and social change (McAteer & Wood, 2018).

It was recognised that there would be limitations to giving the children and the teachers a voice, in a country where I did not speak the language. My research evidenced the importance of identifying ways that the researchers bring cultural knowledge into the research process (Chilisa & Tsheko, 2014). This links to positionality, power relations and Montessori teacher training, when you consider language as one of the key tools of cultural expression and knowledge sharing. The teacher training was delivered in English, with some Chichewa translation, and this identified an important challenge for Montessori teacher training, which expresses the cultural hegemony as it is delivered mostly around the world in English, Italian, Spanish and French. To support opportunity for cultural responsiveness, the methods described in Chapter 6.6.1 refined over the three phases of the action research into what became an ethical framework of research methods, in a move away from some of the more traditional methods that were initially going to be used, such as question and answer formats. This approach not only helped to lessen the power imbalances found between adults and children, and researchers and participants, but it fostered and supported multiple forms of expression (Punch, 2002, p334) to redress power inequalities. The diverse methods of data generation acknowledged the uniqueness of each individual adult and child and sought to embraced culture, ages, and stages of the co-researchers (Einarsdottir, 2005). Everything comes from language: our worldview, indigenous knowledge systems and the way children are viewed; so it was important to acknowledge this to address the culturally driven power imbalances and to overcome barriers. Being unable to speak or understand the local Chichewa language was initially a barrier, but this barrier was addressed in the way I viewed the children, respected the richness of the culture, and found ways to listen to their voices. An eagerness developed in the child-researchers to share their culture and knowledge, this seemed to come about through the creative communication needed to overcome the language barrier. For example, in chapter 6.7, I describe the use of photographs and video with the children. As the research cycle

progressed there was a willingness to embrace learning from each other and hear each other's language.

Although initially a limitation, the lack of Montessori resources, both for the teacher training and for classroom practice became a positive turning point for the research and in developing cultural understanding and influence. For example, in chapters 7 and 8, I discussed the difficulty of access to the specialist Montessori teaching material, evidencing how this became a strength of the whole project and supported the way the teacher training developed (Chapter 8.2), how the environment instinctively developed, how the teachers' knowledge became unique to their context and how the environment became culturally responsive. Hence, the most influential limitation became a strength to the research process and findings.

9.4 Drawing on the principles of CAR in Malawi

A pattern of research context and of research methods developed through the collaboration that was fundamental to the success of my research project. This supported the creation of a culturally adapted research and observation methods framework; working collaboratively with the teacher-researchers we identified and selected the tools that we felt were the most inclusive and relevant in their approach embracing cultural context, this was named the Collaborative Data Triad (Chapter 6.7, Fig 6.2), and was built around the elements of the dynamic triangle: the child, the environment and the teacher, in isolation and cooperatively (Chapter 1)

The core of the research design is the flexibility and the reflexivity in the design of the methods that have created a transferable, responsive framework. The methods gave a strong voice and empowered co-researchers. As a Montessorian, I appreciate and value that action research is developed as a reflexive process that influences our position (Parsons & Harding,

2011). The collaboration shed light on the use of the data generation techniques that were originally chosen and gave a new breadth to the understanding of inclusive research methods. My own developing cultural literacy around the community and approbation of funds of knowledge (Moll et al, 1992) was the drive behind changes made through the action research cycle.

The methods of data collection revealed the participants' distinctive abilities to understand and explain their world, offering opportunity for verbal and non-verbal participation. Methods were designed to be adaptable to the needs and preferences of teacher-researchers and child-researchers, thus "shaping the research agenda using concrete real-life events and experiences" (Thomas and O'Kane, 1998, p.342). Using this stance, facilitated the development of transferable methods and ensured that their unique cultural context influenced the study (McAteer & Wood,2018; Lillard & McHughes, 2019). CAR as a methodology presented opportunity to access funds of knowledge (Moll, et al, 1992) with reflexive responsiveness from all who were involved in the research.

The methodology underpinning this research also offered an action responsive (Gang, 2020) research approach, as suggested in chapter 5.1. Through this approach I sought to avoid a top-down approach to my research (McAteer & Wood, 2018) and, through observing action with the co-researchers, we drew on the principles of CAR to cultivate our research framework that promised collaboration and inclusivity, enabling full contribution, placing all the researchers and participants in the research (MacNaughton & Hughes, 2009; McNiff, 2017; Ali et al, 2021). To create opportunity for knowledge development, reflection, and exploration time, I added a reflection transition phase (RTP) (see Chapter 7.4 & Chapter 9.3.), aiming to ensure opportunity for the co-researchers to increase their funds of knowledge, which helped to create equilibrium and address the initial power imbalance.

9.4.1 Reflection transition phase (RTP)

The structure of the overall research framework included the addition of a reflection transition phase (RTP) (Chapter 6.3, Fig 6.1). This became a real advantage for the researchers in building relationships, learning about the culture, and making connections with and extending their own funds of knowledge. I took a reflexive approach to the research (Musgrave, 2019) and constantly explored and reflected on positionality and knowledge. During the RTP the Malawian team continued to collect data, they also carried out their own reflections to be not only collaborators but also co-researchers. This collaborative process enabled further reflection on my own ontological and epistemological assumptions and to embrace inclusion, respect for local knowledge and culture (Wood & McAteer, 2017), and aiming to bring about sustainable change.

9.4.2 Funds of knowledge

My professional educational background and the foundation of my personal pedagogy is steeped in the Montessori approach, which was built on its foundations on the community and culture. The collaborative and reflective approach to my research supported understanding and development of knowledge in the co-researchers and participants (McAteer, 2013). When we moved ideas from one fund of knowledge to another, the receiver is given the freedom to translate the idea to support it within their own culture (Loeffler, 1992) ensuring there is understanding at local level (MacNaughton & Hughes, 2009) that embraces their unique culture. For example, in chapter 7.4.1d, the simple story of carrying a tray with an activity on it, the western way: out in front; or the Malawian way: on the head.

The research indicated a strength in the collaboration contrary to Pirbhai-Illich and Martin (2020), who found that the teachers collaborating in their research struggled to work with

funds of knowledge because they confused funds of knowledge, family culture and cultural context. In this research context CAR afforded the co-researchers the time and the opportunities for reflection on the nature of expert knowledge (Turner, 2016). Moreover, it was recognised that there was no single fund of knowledge that was principal but a combination of funds of knowledge, collaborating to create depth and richness. My research has contributed to understanding of a culturally collaborative Montessori pedagogy (Chapter 9.5, Fig 9.1) which can be shared internationally. This gives emphasis to dynamic elements of the Montessori environment, alongside giving credence to the cultural context, and ensures equitable and respectful collaboration.

9.5 Montessori teacher training

One of the most important starting points for the exploration of the implementation of Montessori was the training that would underpin the adults' knowledge of working in the school (as discussed in Chapter 4.2.). It was from this perspective, and through the training, that the teachers and the children came together to create the Montessori prepared environment that would be unique to their culture and community. As the outcomes of the research show, as the training progressed and the collaborative approach became embedded in the teacher training, as well as in the research, the content and the context of the training shifted from the westernised approach I was used to using, to culturally relevant approach (see 9.5 above).

The findings provide evidence of the value of the philosophy underpinning the approach. These foundations of the Montessori classroom practice and the preparation of the teacher became more responsive than an in-depth focus on the mechanics of a presentation. The cultural context had a determining influence on the construction of teachers' knowledge, and

the culturally directed expectations influenced the process of teacher training. It became obvious during the journey of the both teachers and researchers that we had to seek out knowledge about all our cultures (Ladson-Billings, 1995), during the collaborative conversations, for example, as discussed in Chapter 7, we investigated our own heritage, upbringing, and cultural biases. This was an important part of teacher preparation, to enable us to understand CRP. This reflection developed cultural sensitivity that then influenced the environment and Montessori pedagogical techniques. The research evidenced that, as collaboration bought about trust and reflection, that cultural bias could be overcome and contextual cultural understanding became a well-informed fund of knowledge (Moll et al, 1992). Teachers and researchers, together, underwent this rigorous self-appraisal to enable them to support the creation of a culturally responsive physical and social Montessori learning environment (Fig 9.1). As discussed in chapter 7, we started this process in our collaborative conversations talking about our families, our histories, our upbringing, our personal relationships, our own learning experiences, and our visions. This collaborative journey informed our funds of knowledge (Moll et al, 1992) of ourselves and of others, enabling us to better recognise ourselves and to appreciate each other's cultures, decisions, and traditions.

These research findings, refining knowledge and understanding enabled me to review current Montessori teacher training and create a new approach, which was applied in practice through this research project. This was constructed around interpretation and our connectedness with the local community. With opportunity afforded to them during the teach training of exploration and, independence the teacher-researchers creatively thought about how to implement Montessori in their cultural environment. In designing and implementing their culturally rich Montessori curriculum through their teacher training and their own funds of knowledge (Moll et al, 1992) the newly trained Montessori teachers developed, what they considered to be truly culturally responsive cosmic education. They had confidence that it started with the child in the centre and their community

embedded and this resulted in them developing understanding and confidence in themselves.

It became notable, as discussed in chapter 7, that the training which was initially being delivered within a westernised stance through a westernised lens, was inappropriate for the time and place. As positionality of the co-researchers within the research changed, their experiences influenced the decolonization of the teacher training curriculum (Osgood, 2020). Changing the focused content and the way in which trainers supported delivery (see Chapter 7 and 8) challenged marginalized ideas of westernized Montessori training. Combining the conventional training, carried out by an external expert, with the process of CAR enabled me to take an approach to the training led by the child and the teacher, rather than led by the trainer, creating a right-action approach to the training (Gang, 2020).

As discussed in chapter 8.2, the lack of available Montessori materials meant more creative approaches to training were required. Teachers did not focus so much on controlled presentations and specific material, and this naturally changed the nature of the training, providing opportunities for the classroom practice to become more creative and culturally responsive (Ladson-Billings, 1995; Brunold-Conesa, 2019) in its process. Exploration of the philosophy and of the learning activities created with the children-in the classroom was a recurring theme reported on during the teacher training and demonstrated the need of cultural awareness in all three elements of the dynamic triangle. It was evident that a more observational approach to training the teachers was appropriate, parallel to how Montessori teachers support children's learning, embracing the creativity of the adult (Turner, 2016).

This approach challenged my own earlier perceptions of what Montessori teacher training should look like. It identified the need to shift the emphasis onto the essence of Montessori legacy rather than my previous experience of sharing knowledge with training teachers. This was a more difficult approach to take to training and required creative and 'in the moment'

thinking by the trainer. The training shifted from an abstract learning programme to a concrete one and in its very nature became more Montessori inspired (Chapter 4.5.1), driven by the teachers rather than the trainer. The teachers and the trainers sharing their experiences of the children created a positive learning environment for the new teachers that empowered their knowledge and understanding. Subsequently, as an outcome to my research, I have written a Montessori training programme that allows for transferability to further Montessori cultural projects, with a right-action approach to preparing Montessori teachers in a Montessori way.

Since learning comes from multiple places, the Montessori teacher takes on varied roles. They move from traditional roles as experts, with the primary task of instructional delivery, to facilitators and guides of learning that is personalised and customised to individual children's needs. The focus on the adult in the Montessori environment is that of creating opportunities for discovery and self-learning for the children; they are encouraged to learn actively, rather than expecting children to learn primarily from direct instruction, and this is where one of the main differences arose for the teachers in Malawi. As discussed in chapter 3.7, and indicated through the data gathered in chapter 7.1.1, prior to participating in the research the teachers were rote teaching to children who were passively rote learning in the classroom. This was fundamentally the main barrier for trained teachers and community members to break down when developing understanding of the ethos of Montessori training and teaching. In the context of the research, the development of the adults' knowledge of Montessori pedagogical principles was a crucial element of the research (Chapter 8.3.2). During the research, as evidenced in chapter 8.3, the teachers gained an understanding of the essence of Montessori, to explore and be creative in their own knowledge and development (Wood, McAteer & Whitehead, 2018); rather than participating in intensive teacher training (Katz, 1992) and becoming entrenched in the use of the Montessori materials and their presentations, so relying too heavily on the trainer to pass down the methodology.

9.6 Contribution to the Montessori Community

Themes relevant for critical reflection of understanding and differentiating the fundamental foundations of the Montessori approach were refined. These were influenced by acknowledgment of the difference in culture, knowledge and understanding, teacher training and the child. These themes challenge research into 'authentic Montessori' education (Lillard et al, 2017, 2019a; 2019b), and what this term means to practice and in teacher training, in Malawi (Chapter 8.3.2 and 9.4). If there is agreement on the authenticity of delivery and the use of high-fidelity Montessori materials, there must then be consideration of what could be considered as cultural irrelevance of both delivery and materials, as evidenced in my research outcomes. It became evident, during the research phases, that there was contradiction between high fidelity Montessori and cultural relevance. The outcomes of the research supported the prime importance of cultural relevance and how this is supported through a Montessori cosmic education. As discussed in chapter 4.4.3, given Montessori's promotion of intercultural respect and cosmic education, it is considered extremely unlikely Montessori would have favoured high fidelity over adaptation to maintain cultural relevance, as intermated by the quote at the start of this chapter.

My research indicates that, with in-depth knowledge of the cultural context of a community and with collaboration with stakeholders, Montessori, as an approach to education, can successfully be implemented as a culturally responsive pedagogy (Fig 9.1), if we develop our thinking and embrace, fully, the culture in which we are working. The complexity of culture includes understanding traditions, beliefs, social relationships, community values and the ever-changing world views (Ladson-Billings, 1995; Ford & Rea, 2009; Gay, 2019). These are the things that give meaning to the stakeholders of the setting or school. It became evident during the research process that just understanding the physical and visible culture is not

enough. It is only through trust, collaboration, and reflection that the implicit behaviours are understood, and true equilibrium will develop, and the deep complexity of culture be shared and respected in the culturally responsive Montessori environment that is created. The differing experiences of the teachers in initially embracing the collaborative conversations evidenced the importance of commitment to cultural responsiveness and the development of the approach to teacher training, developing an action right approach (Gang, 2020). There must be a willingness to reflect and respectfully relate to people and community cultures (Ladson, Billings, 2019) in the training (see 9.5 above), as this is where the work of the teacher will begin (Brunold-Conesa, 2019). It should be considered how future Montessori training and practice can embrace culture into practice and dismantle the reliance, and the high level of emphasis, on the material presentations, and so move away from transfer of knowledge teacher training towards training through collaboration and exploration. To directly influence this, as evidenced in the research outcomes (Chapter 8.4), teacher knowledge is developed more deeply through culturally responsive and collaborative training. As Montessori trainers we should reflect on how a community can achieve a culturally responsive Montessori environment through their own cultural capital, and through what is easily available to that community, whilst finding ways to support authentic Montessori practice and concepts of learning and development.

My research indicated that reliance on expensive Montessori materials is not necessary (Chapter 8.5). A more creative and Montessori approach to teacher training helps to embrace cultural responsiveness and respect and to develop better outcomes for children. This diminishes the power-relationship that often develop through the current westernised approach of training and creating irrelevant cultural environments, thus decolonising our approach (Osgood, 2020). As part of the Montessori community, I would suggest we are risking not only colonising the Montessori curriculum (Osgood, 2020) and the Montessori

training but also perpetuating an unaffordable elite education system with reliance on material that, for many communities, is inaccessible for a variety of reasons, as evidenced by my findings. It might be suggested that the Montessori community has created an exclusive method of education, which needs to be challenged and ways and means for inclusive sustainable Montessori education found.

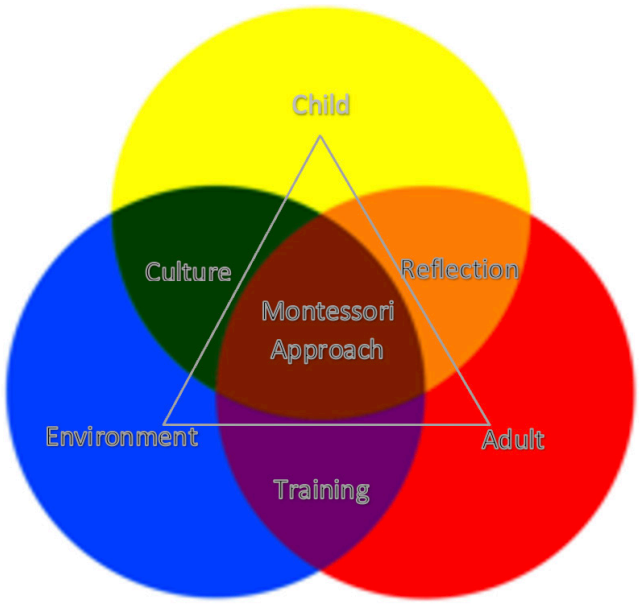
Montessori (1912) spoke of the fundamental work, the cosmic purpose of children to prepare them to be citizens of the world (Montessori, 1946/2012); as discussed in chapter 4.7, this supports their own responsiveness to culture in their own development. The research indicated (Chapter 8) that, through the collaboration between the Montessori approach and the Malawian community culture, the children became more tolerant, more accepting, they co-operated, they took responsibility and they showed respect for their peers, for adults and for their environment, and notably these are all descriptors of global citizenship (Brunold-Conesa ,2019). Hammond (2015) reminds us that CRP is not a set of clever techniques or strategies and, as Brunold-Conesa (2019) writes, nor is Montessori pedagogy, they are both philosophies that can collaborate to develop a culturally responsive (Ladson-Billings, 1995) Montessori approach that has a positive impact on the child, the teacher and the environment and values their own cultural context, empowering their voices. I contend that the authentic Montessori environment must be culturally adaptable, and that collaboration empowers the creation of the authentic culturally collaborative Montessori environment (see Fig 9.1).

Authentic key principles of the Montessori approach should be maintained alongside cultural adaptations (Turner, 2016) and ways must be found to accept cultural differences as essential components of Montessori teacher training, to give access to global communities and thus underpinning its international validity. As Montessori continues to expand, the

implementation of dominant models of teacher training and traditional Montessori education can be challenged, and a culturally responsive hybridity accepted.

Based on my research a new model is proposed when creating a Montessori learning community. Using culture, responsiveness, reflection, and training, the three elements of the dynamic triangle are drawn together to frame a culturally collaborative approach to Montessori practice creating a culturally collaborative pedagogy (see Fig 9.1).

Fig 9.1 Montessori as a culturally collaborative pedagogy (MCCP)



With opportunity, supportive guidance from adults with relevant training and mentoring (Turner, 2019), and a culturally unique prepared environment, can support children in becoming their own person, within their unique community, which is acknowledged and celebrated. The freedom to explore, experiment, repeat, practise, and achieve, through a culturally developed learning environment, empowers the child to develop from within. The children have their own their learning environment to develop the lifelong natural disposition,

of making sense of their own unique experiences (Katz, 2012), particularly in the first plane of development (see Chapter 2.5.2a).

The Montessori environment, in the context of the Malawian nursery, developed due to the new knowledge that the co-researchers gained and combined with their own cultural experiences. Collaboration between the researchers embraced an indicative relationship between funds of knowledge, cultural relevance, and Montessori knowledge. This created an education based on real experiences, experiences of their own culture, and learning experiences that deepen connections between themselves and their community (Ladson-Billings, 1995; Katz, 2012; Ali et al, 2021), thus creating a more responsive Montessori approach for rural Malawi. This approach to creating a MCCP can be relevant anywhere in the world. The use of collaborative conversations, reflection, and reflexivity (Chapter 6.4 & Chapter 7) will empower cultural responsiveness, whether that be UK, Europe, Westernised, majority or minority countries. It also offers an opportunity for respect and equilibrium for cultures and communities in education and learning.

Montessori education today is undergoing a surge of interest the world over (Debs, 2019) and, as Montessori herself wrote, "education should not limit itself to seeking new methods for a mostly arid transmission of knowledge: its aim must be to give the necessary aid to human development" (Montessori, 2018, p.84).

9.7 Contribution to the Malawian community

Malawi must move on from history and move forwards to developing a more sustainable future for its population (Seppo, 2014). Built from the foundation of the child's spiritual embryonic stage (Chapter 2.6.2), the child is the future of mankind (Montessori, 2007c; 2008). However, as Abdi and Cleghorn (2005), and Lwanda and Chanika, 2017 have

suggested, Malawian education currently remains influenced by westernised ideas and, as Sharp (2009) argues, it is critical that development continues without abandonment of their own unique culture, whilst at the same time acknowledging that "it is through Western values and knowledge that non-Western parts of the world seem to be able to develop themselves" (p74).

Sustainable education needs to be holistic, working in collaboration with the whole community of stakeholders (Pramling-Samuelsson & Siraj-Batchford, 2014), enabling the flattening of power relations (Wood & McAteer, 2017) and the sharing of knowledge to create sustainable change (Siraj-Blatchford & Brock, 2017). My research reconsidered the Montessori approach to education in collaboration with the Malawian co-researchers (Montessori, 1974) to create a Montessori learning environment that was right-action (Gang, 2020) for the community. Observation of, and collaboration with, Malawian teacher-researchers demonstrated what a culturally responsive Montessori pedagogy could be, through reconstruction of their understanding of theories of childhood, cultivated from their own context and experiences. As indicated by my research, the nature of my work has further redefined western notions of what constitutes collaborative methodology. When positioned within post-colonial theory, action research by its very nature supports engagement with critical reflection and collaboration (Parsons & Harding, 2011) supporting value in the community and equality. It is through a culturally relevant education approach that Malawian communities can celebrate and facilitate their own cultural identity. The local Malawi culture is steeped in Community traditional knowledge which should be a foundation of their education system, thus allowing communities, through concrete experiences, to refine understanding of their environments (Dei and Asgharadeh 2005) and draw this into their education system.

It is commonly agreed that as CBCCs continue to develop in rural Malawi (Munthali et al, 2014; World Bank, 2015; Rasmussen, 2016) there needs to be awareness of the challenges of sustaining this community-based model of education, which can create a foundation on which to build future knowledge to continue to support the development of young children and families in rural communities. My findings indicate that a culturally collaborative Montessori pedagogy can support development of sustainable early childhood education for minority countries, such as Malawi, whilst offering development of new knowledge it celebrates the importance of the cultural context and community, whilst developing a sustainable learning environment.

Embedding cultural resilience will be the foundation on which the survival of some Communities will rely (Boakey-Boaten, 2010). Central to this will be the education of the more isolated rural Communities and possible survival of indigenous and cultural knowledge (Pence & Shafer, 2006). The now independent Malawi is in real need of education curricula that would enable its people to meet the needs and challenges of this new era. The collaboration built between co-researchers ensured that my findings were built on a platform of well-informed funds of knowledge (Moll et al, 1992) of the stakeholders, to refine practice and create a culturally responsive pedagogy (Ladson-Billing, 1995; Ford & Kea, 2009).

This project offered an opportunity for the Malawian children and teachers to gain the confidence to create their own culturally responsive approach to learning, underpinned by Montessori educational principles, that could remain sustainable.

9.8 Future research

Globally, future education should consider such realities, such as climate change, poverty, and inequality, that face communities worldwide. Montessori has long traditions of child-led

learning and historical writings to support the philosophy of child development and her view of the child and education as agents of change. My research steered me towards further developments and areas for further research to support sustainable Montessori education.

Montessori recognised and advocated for the natural unconscious urge in children to work towards evolution, self-functioning, and self-realisation (Grazzini, 2020), this is the task of the child as an agent of change (Chapter 4.5). Through this task of self-construction, they are developing group identity of belonging and they may bring about change within their own cultural communities. Future research needs to interrogate how 'whiteness' seeps into how we view children, community, culture and education, to support us in finding ways to give respect and voice to culture and local language. How do we support development of Montessori's social agenda to support sustainability through transformational and inclusive education?

While my research contributes to better cultural understanding of implementing the Montessori approach in Malawi, further research using my model could be helpful to better support understanding from other cultures and countries. I would argue that the theoretical framework I developed, supported by my research finding is transferrable. The opportunity to carry out comparable studies, in different cultural contexts, would explore whether this framework is relevant in other cultures for every child, for example, through developing similar research projects in UK, Europe, majority, and other minority countries. It is important for the Montessori community that boundaries are created that hold true Montessori principles and create a framework that is built around the authentic foundations, as determined by my research. This one project is not enough to argue what those foundations are, although the ones identified in chapter 8 provide a strong starting point for further discussion.

My research also raised a question over the current dominant approach to teacher training. There are more relevant ways to implement Montessori teacher training in the 21st century, that embrace creative and cultural thinking. If we are to support sustainability of education, and projects such as this one, the sustainability and transferability of the teacher training in rural communities and minority countries will be fundamental. There is need for much deeper consideration of the importance of acknowledgement of indigenous knowledge and to question the colonization of the teacher training. Theoretical and practical implications of culturally relevant teacher training need further deliberation.

The research portrayed a need to enhance cultural competence in the younger child to support their cosmic task (Chapter 4.5) of self-development (Montessori, 2019). Our understanding of the importance surrounding a Cosmic education is an area in which the participants and the researchers refined a deeper understanding during the research and this needs to be brought to the forefront of teacher training. Stronger links need to be made to the importance of the practical life and knowledge and understanding of the world areas of the classroom, in developing foundations of a cosmic education during the first plane of development. Interdependence, respect, responsibility, sustainability, and citizenship are the central elements of Montessori's Cosmic education (Chapter 4.5) and can be embedded through a culturally responsive learning environment that becomes integral and further embedded through teacher training and further research. We need to further research what Montessori education means in diverse cultural communities if we want to consider Montessori as a global movement intrinsically supporting the SDG 4 (UNESCO, 2015), through a sustainable Montessori curriculum (Siraj-Blatchford & Brock, 2017).

When I started the research project, I had high hopes of collecting progress data with the children. As we progressed through the phases of the CAR it became apparent that it was not

appropriate to gather this data. For this particular community, they are keen to embark on the next CAR cycle to gather more rigorous data on the children's outcomes and then to carry on the research to determine the impact on children's entry into their standard 1 class.

9.9 Revisiting my personal interpretation of Montessori

Undertaking this research has led me along a path of personal and professional development that has challenged my own assumptions of Montessori theory and practice. As I started this thesis writing about my own interpretation of the Montessori approach (in Chapter 2), it seemed apt to include a personal narrative on how my own assumptions have refined and how my interpretation has become more my own.

Montessori believed that the answer to the needs of the child is to build an education that aids development, that follows the path of childhood and is a study of the child (Montessori, 1946/2012). My research challenged my thinking as I reflected on the foundations of the Montessori approach that I considered important.

9.9.1 The child

The interwoven working of the Montessori triangle (Fig 1.1) needs to foster a learning environment that is best to support the child in their task of self-construction, through a framework of collaboration and mutual understanding. Montessori believed that the answer to the needs of the child in the first plane of development is "to sow the seeds of everything" (Montessori, 2015, p1); they have a mind that is ready to grow their learning and increase their knowledge. This statement is as relevant to today's child as it was when Montessori developed her method. It supports the vision of an environment that allows the freedom to explore all subjects through the vision of cosmic education enabling the child to make sense of their learning and development and gain a sense of self. Child development is holistic, and

education is not about a traditional transfer of knowledge but is an opportunity to follow the child's development and interests to ensure they meet their full potential (Montessori, 2020). Montessori is an approach to education that deepens a love of learning, a curiosity and respect for the community and the world we live in.

One of the most important elements of the philosophy is in trusting the child's knowledge of their development, learning about the child through observation and reflecting on the needs of both the formal and informal community, which is the foundation of the children's education. Community is about where we belong and where we grow and this needs to be the foundation on which the Montessori approach in any nursery or school should be built on. To create a community for the children and to construct a society you need to construct knowledge inspired by, and rooted in, the community around the child.

9.9.2 The adult

How the adult interprets the Montessori philosophy influences their knowledge and their practice. I am aware of how much Montessori's writings in translations have been interpreted over the years by trainers representing a variety of training organisations based within western colonial cultures and this has influenced the sharing of knowledge and practice. I believe this has resulted in the current situation of Montessori as an approach to education being in danger of becoming exclusive, contrary to Montessori's initial wish that it was accessible to all (Montessori, 1912) and as evident from the schools she opened in different countries; no two Montessori settings were the same.

Reflecting on how the adult influences the learning environment, and acknowledging culturally dictated traditions and expectations, is fundamental to the learning experiences of the children. The strength of listening to the child, embracing the knowledge they bring to the classroom and building on an interest to create activities for the shelves in collaboration with

the children, rather than the adult leading the creation of the shelves. Funds of knowledge (Moll et al, 1992) were fundamental to the success of creating an inclusive Montessori environment and evidenced a lesser reliance on the Montessori materials and more on the theory of learning they offer.

9.9.3 The environment

The prepared environment is one that allows children the freedom to explore all subjects through principles of cosmic education and collaboration with culture. As culture constructs the personality of the child and their lives, it is imperative that more focus is placed on this in the development of the Montessori environment. This includes acknowledging what is and is not possible through the local context practically, economically, and academically (Chapter 8.2.2). The environment should be one that varies because of local cultural influence and is constantly ever-changing to meet the needs and interests of the child and one that is rooted in Montessori foundations, that then has the capacity to become a sustainable education.

I have an aspiration that all children should have the opportunity and freedom to fulfil their unique potential on this, the first part of their journey of self-discovery; being supported by an adult who has respect for them, in an environment prepared for them. In these prepared conditions natural development will enable them to flourish in their own unique way.

9.10 Chapter summary

This chapter has drawn conclusions as to how Montessori pedagogy, training, collaboration, and empowerment have sought to bring about change and ownership (Turner, 2016) for a rural Malawian community who embraced the research, and subsequently the Montessori approach, in their own unique way (Chapter 9.6). This thesis has demonstrated how cultural

adaptation ensured a more inclusive opportunity to the Montessori approach resulting in the creation of a model to support Montessori as a culturally collaborative pedagogy (Fig 9.1). There remains contention as to what elements are important for strength of consistency in Montessori education (Chapter 9.5). My research has opened dialogue to explore the theoretical foundations of Montessori pedagogy that will support the adult in practice and will bring the Montessori approach to their learning and teaching environments.

Early childhood education influences young children's lives, which in turn will influence the future of the world; this influence has the capacity to support minority countries in achieving SDG 4 (UNESCO, 2015) ensuring achievable and sustainable education to promote change and lifelong learning. Montessori talked of employing new methods to bring about change, and these methods then give rise to new education (Montessori, 2007b). In practice we must be willing to try new resources to support a sustainable ethos (Boyd, 2018) and education. The new CRT (Fig 6.1) ensured opportunity for reflection whilst bringing about change (see 9.3 above) and to begin to identify the foundation roots of the Montessori approach. Collaboration, reflection, and observation supported the development of a Montessori culturally collaborative pedagogy (see 9.3 above) supporting growth and advancement of the method. Successful Montessori environments are influenced by the adults that prepare them.

My research has contributed towards decolonization of the current westernised approach to Montessori teacher training and considered a new approach to the training (see 9.4 above). To leave the final words with Montessori: "The study of the child, may have an infinitely wider influence, extending to all human questions. In the mind of the child, we may find the key to progress" (Montessori, 1998a, p3)

9.11 Postscript

Although the three phases of the first CAR cycle have been completed, and my focus has been writing up my thesis, the work in Malawi has not stopped. It is important to add a short note at this point to recognise the continuing journey that is being travelled in Malawi.

On writing this, at the beginning of 2022, the Montessori method is still embedded in the early years centre in Malawi. It has weathered a change in staff, with new staff now being trained by one of the team from the original research. The Malawian team are now keen to plan their own research project, looking more closely at the development of the children and the outcomes that they meet.

COVID still challenges us all, and, in Malawi when they had to close the centre, they took Montessori to the children's outlying Communities, and I was sent pictures of the children and adults working together in the streets (Photo Narrative 9.1).

Photo Narrative 9.1 Sustainable education

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Appendix 1: Participant Consent Form - Child Consent

Anglia Ruskin University
Cambridge Chelmsford Peterborough

CHILD CONSENT FORM

NAME OF CHILD PARTICIPANT:

NAME OF PARENT:

Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

The Researcher will discuss the following point with the child with the use of an interpreter during a circle time. With the help of the interpreter and their class teacher we will ensure that children have a full understanding of their collaboration in the research.

- I will watch you work and play with your friends and write stories about what you are doing
- We will talk together and look at pictures and you can tell me what is happening
- You can take me on a tour of your school and show me the things you like doing and take photographs of them
- You can take me on a tour of the school and show me things you don't like and take pictures of them

If the researcher feels that the child is happy with what they will be participating in, the child will be invited to make a mark , draw a picture or write their name to show their agreement to participation.

Child name	
Researcher name	
Child picture, mark or signature	

Child Consent Form April 2017

Appendix 2: Participant Consent Form – Parent /Child

Anglia Ruskin University
Cambridge Chelmsford Peterborough

PARTICIPANT CONSENT FORM – Parent /Child

NAME OF PARENT: Name of child:

Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

Researcher Contact : Michelle Wisbey, The Stack Yard, Little Sampford, Saffron Walden, Essex, CB10 2SA. 07811 441615. Michelle.Wisbey@anglia.ac.uk

With the help of the class teachers, the village leaders and the interpreters we will discuss the following points during a parent gathering. We will ensure a verbal understanding and will assist in completion of the form.

1. I agree for my child to take part in the above research. I have read the Participant Information Form for the study. All my questions have been answered to my satisfaction.

   Yes ☐ No ☐

2. I understand that I am free to withdraw my child from the research at any time, for any reason and without prejudice.

   Yes ☐ No ☐

3. I have been informed that the confidentiality of the information collected on my child will be safeguarded.

   Yes ☐ No ☐

4. I understand that I will be free to ask any questions at any time before and during the study.

   Yes ☐ No ☐

5. I have been provided with a copy of this form and the Participant Information Forms.

   Yes ☐ No ☐

Data Protection: I agree to the University[1] processing personal data which I have supplied. I agree to the processing of such data for any purposes connected with the Research Project as outlined to me*

_____ _____ _____
Name of parent Date Signature

YOU WILL BE GIVEN A COPY OF THIS FORM TO KEEP

If you wish to withdraw from the research, please complete the form below and return to the main investigator named above.

Title of Project: **The introduction of Montessori into a Malawian NGO school : evaluation of the impact on the teachers well-being and the children's outcomes**

I WISH TO WITHDRAW MY CHILD FROM THIS STUDY

Signed: _____ Date: _____

[1] "The University" includes Anglia Ruskin University and its partner colleges

Appendix 3: Parent/Carer PIS

Anglia Ruskin University

Cambridge Chelmsford Peterborough

PARTICIPANT INFORMATION SHEET – Parent /Carer

TITLE OF RESERCH - Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

Over the next year I will be carrying out research in the Sparkle school with teachers and children to introduce the Montessori Method of Education.

I would like to ask your permission for your child to be involved in my research. I would like to explore with them the introduction of the Montessori method into your school.

Before you decide I would like you to understand why the research is being done and what it involves.

With the help of the school administrator, the village leaders and the interpreters we will discuss the following points during a teacher meeting. We will ensure a verbal understanding

I will go through the project information with you and your child and answer any questions you have. Please ask me if there is anything that is not clear.

What is the purpose of the project?

This research project aims to evaluate how the introduction of the Montessori ethos and education benefits staff well-being and children's outcomes. Observations will be made on children both before the introduction and after the introduction to measure their independence and progression through the use of the environment.

This research is being carried out for my Educational Doctorate studies.

Why have you been to give permission?

I am asking you for your permission for your child to be involved in this research project because your child attends the school at Sparkle.

Do I have to take part?

It is up to you to decide whether you would like your child to take part. If you decide that you do not want them to take part then you do not have to give a reason. If you do decide to allow them to take part then we will ask you to sign a consent form. I will give you a copy of this form to keep.

Your co-operation with this research will be very much appreciated and the research could not take place without your permission and your child. Please understand that the research process is not designed to make you or your child feel uncomfortable. All teachers and the children in the school have been given the opportunity to be co-researchers.

You have a right to withdraw your child at anytime without giving a reason.

Expenses and payments

You or your child will not be paid to participate in the project.

What are the possible disadvantages and risks of taking part?

I hope that the project will be interesting, interactive and beneficial to the teachers, the children and the community. You may at times find it difficult to understand the changes in the classrooms, if this is the case please ensure that you tell me so I can support you.

What are the possible benefits of your child taking part?

Your child will enjoy being part of the research, enjoying themselves in the classroom while learning and taking more control of themselves and their learning.

What will happen at the end of the project with the findings?

The research project will be presented to the examining authorities Anglia Ruskin University. The project will be shared with the Sparkle Foundation and in some cases the academic community on completion.

Will taking part in the project be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence. If your child joins the project as a co-researcher some parts of the data collected for the project will be looked at by authorised persons from the Anglia Ruskin University who are supporting me in the research to check that the project is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

All information which is collected about your child and by your child during the course of the research will be kept strictly confidential, stored in a secure and locked office, and on a password protected database.

Any information about your child which leaves the University will have their name removed (anonymised) and a unique code will be used so that you cannot be recognised from it. Although what you say in the interviews and in the questionnaires is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may feel it necessary to report this to the appropriate persons.

What will happen if I agree to take part?

If you agree for your child to be involved as a co-researcher we will use various methods to collect data, some of which your child will be involved in:

Questionnaires for teachers

Multimedia tours with children

Semi-structured group meetings with teachers

Informal conversations with children.

Observations and assessment using online record keeping system : individual child profiles

What will happen to the data?

The research data recorded on the digital Dictaphone (voice recording device), video and camera will be removed and stored securely on a secure computer at my home. All paper based data will be securely stored in my office in a locked cupboard. During this time all precautions will be taken by all those involved to maintain your confidentiality.

All data collected will be kept for 12 months after the end of the project so that I am able to complete the writing up of the project, during this time I may contact you about the findings of the project and possible follow-up studies (unless you advise me that you do not wish to be contacted). You can ask me to remove this information later if you change your mind.

Neither yourself nor your child will be in any danger when participating in this project.

Agreement to participate in this research should not compromise your legal rights should something go wrong.

Appendix 4: Parent/Carer PIS – Chichewa

Anglia Ruskin University
Cambridge Chelmsford Peterborough

PEPALA LACHIDZIWITSO CHAKUTENGA NAWO MBALI – Aphunzitsi/ Akuluakulu

MUTU WA KAFUKUFUKU – Kufufuza Chiyambi cha njira yophunzilira ya Montessori mma sukulu amabungwe osakhala aboma mMalawi

Mu chaka chikubwerachi ndikhala ndikupanga kafukufuku ku sukulu ya Sparkle ndi aphunzitsi ndi ana kuti ndiwadziwitse ndondomeko yamaphunziro a Montessori.

Ndikufuna kupempha chilolezo chanu kuti mwana wanu atenge nawo mbali pakafufukuyu. Ndikufuna ndi fufuze nawo limodzi kuyambisa kwa njira za Montessori pa sukulu yanu.

Musanapange chiganizo, ndikufuna mumvetsetse chifukwa chimene kafukufukuyu akupangidwa komanso zomwe kafukufukuyu akukhudza.

Ndidutsa mu uthenga okhudzana ndi pulojekitiyi ndi inu komanso mwana wanu ndipo ndiyankha mafunso alionse omwe mungakhale nawo. Chonde ndifunseni ngati pali chilichonse chimene sichikumveka bwino.

Kodi cholinga cha pulojekitiyi ndi chani?

Kafukufuku wa pulojekitiyi ndi kupima momwe kubweretsedwa kwa mfundo ndi maphunziro a Montessori zimapindulira umoyo wangwiro wa ogwira ntchito komanso ana. Kauniuni oona kuima paokha ndi kupita chitsogolo kwa ana azachitika poyamba ndipomaliza pogwilitsa ntchito malo omwe awazungulila

Kafukufukuyu akuchitika ngati mbali yakupitiliza maphunzilo anga a sukulu yaukachenjede

Ndichifukwa chani mukuyenera kupereka chilolezo?

Ndikupempha chilolezo choti mwana wanu atenge nawo mbali mu pulojekiti ya kafukufukuyu chifukwa mwana wanu amaphunzira pa sukulu ya Sparkle.

Ndikuyenera kutenga nawo mbali?

Zili kwa inu kupanga chiganizo chokuti mwana wanu atenge nawo mbali. Ngati mwaganiza zokuti mwana wanu asatenge nawo mbali simukuyenera kupereka chifukwa chomwe mwatero.Ngati mwaganiza zoti mwana wanu atenge nawo mbali mukuyenera kusayina kalata ya chilolezo.Ndidzakupatsani fomuyi kuti musunge**.**

Mgwirizano wanu pakafukufukuyu kudzayamikidwa ndipo kafukufukuyu sakanachitika chipanda chilolezo chanu ndi mwana wanu. Chonde mvetsetsani kuti ndondomeko yakafukufukuyu sinapangidwe mokuti inu ndi mwana wanu musakhale omasuka. Aphunzitsi ndi ana onse pasukulupa apatsidwa mwayi kukhala atenga mbali pakafukufukuyu.

Muli ndi ufulu omuchotsa mwana wanu panthawi iliyonse osapereka chifukwa.

Malipiro

Inu kapena mwana wanu simudzalipidwa kuti mutenge nawo mbali pa pulojekitiyi.

Ndi zoipa ziti komanso chiopsezo chobwera potenga nawo mbali?

Ndikukhulupilira kuti pulojekitiyi ikhala yosangalatsa, yokambilana komanso yopindulitsa kwa aphunzitsi, ana ndi dela lonse. Nthawi zina muzakhala ndi mavuto kuti mumvetsetse kasinthidwe kamkalasi, ngati zili chonchi chonde onetsetsani kuti mwandifotokozera kuti ndithe kukuthandizani.

Ndiphindu lanji mungapeze mwana wanu akatenga nawo mbali?

Mwana wanu adzakondwa potenga nawo mbali mukafukufukuyu, kusangalala mkalasi kwinaku akuphunzira komanso kudzilamulira okha ndi maphunziro awo.

Chidzachitike ndichani ku zotsatira pulojekitikiyi pamapeto?

Kafukufuku wa pulojekitiyi azaperekedwa ku olamulira azakafukufuku ku yunivesite ya Anglia Ruskin. Pulojekitiyinso izagawidwa ku Sparkle Foundation ndiponso gulu la zamaphunziro pamathero ake.

Kutenga nawo mbali mu pulojekitiyi kudzasungidwa mwachinsinsi?

Tizatsatira makhalidwe abwino komanso malamulo ndipo uthenga ulionse okhudzana nanu uzagwiritsidwa ntchito mwachinsinsi.Ngati mwana wanu azatenge nawo gawo, mbali zina zamalipoti omwe azatoleredwe pantchitoyi azaunikidwa ndi adindo akuyunivesite ya Anglia Ruskin omwe akundithandizira mukafufufukuyu kuti azaone ngati ntchitoyi ikugwiridwa moyenelera. Onse azakhala ndi udindo wosunga chinsinsi kwa inu ngati otenga nawo mbali ndipo tidzayesetsa kuti tizakwaniritse udindowu.

Uthenga onse omwe uzatoleredwe okhudzana mwana wanu komanso ndi mwana wanu munthawi yakafukufukuyi zizasungidwa mwachinsinsi chandithu, kusungidwa mu ofesi yokiyidwa komanso mu nkhokwe yamauthenga yokhala ndi nambala ya chinsinsi.

Chilichonse chokhudzana ndimwana wanu chomwe chidzachoke ku yunivesite sichidzakhala ndi dzina la mwana wanu (chizakhala chachinsinsi) ndipo nambala yachinsisi izagwilitsidwa ntchito mmalo mwadzina lamwanalo. Ngakhale zomwe munganene pa makambitsilanowa ndipamafunso omwe angafunsidwe zizakhale zachinsinsi koma ngati pali zina zomwe tikuona ngati zingakuikeni inu kapena ena mmavuto tingaone kofunikila kuwadziwitsa anthu oyenela.

Chizachitike ndichiyani ndikavomera kutenga nawo mbali?

Ngati mwavomereza kuti mwana wanu atenge nawo mbali tizagwiritsa ntchito njira zosiyanasiyana kutolera uthenga, zina zomwe mwana wanu azatenge nawo mbali ndi:

Ndandanda wamafunso aaphunzitsi.

Maulendo ophunzirira ndi ana

Ma intaviyu agulu ndi aphunzitsi osankhidwa

Machezedwe opanda ndondomeko ndi ana

Kuona ndikuyesa kugwiritsa ntchito njira zapa intaneti zosungira zinthu: mbiri yamwana payekha

Chidzachitike ku uthenga wotoleledwawo ndichani?

Uthenga wakafukufuku otengedwa pa rekoda ndipakamera uzachosedwamo ndikusungidwa mu kompyuta yotetezeka kunyumba kwanga. Uthenga onse omwe uzalembedwe papepala uzatsekeledwa mu kabati pa nthawiyi, njira zosamalila mauthengawa zizatsatilidwa ndi onse omwe akukhudzidwa kuti zonse zisungidwe mwachinsinsi.

Mauthenga onse otoleledwa azasungidwa kwa miyezi khumi ndi iwiri pulojekiti ikazatha kuti nditha kumalizisa zolembalemba za pulojekitiyi, panthawiyi nditha kukutumizilani uthenga okhudzana ndi zomwe tapeza ndimaphunziro omwe tingathe kutsatilapo (pokhapokha ngati simungakonde kulandila uthenga). Mutha kundiuza kuti ndichotse uthengawu nthawi iliyonse ngati mwasintha maganizo.

Inu kapena mwana wanu simuzakhala muvuto lililonse pothandiza nawo pulojekitiyi.

Kuvomeleza kuthandiza nawo mukafukufukuyu sikuzasokoneza maufulu anu ena aliwonse ngati chinachake chingasokonekele

Appendix 5: Ethics Approval

Anglia Ruskin University

Cambridge & Chelmsford

Cambridge Campus
East Road
Cambridge
CB1 1PT

T: 0845 271 3333
Int: +44 (0)1223 363271
www.anglia.ac.uk

12 July 2017

Dear Michelle,

Re: Application for Ethical Approval

Principal Investigator(s): Michelle Wisbey

Project Number: 16_17 012

Project Title: Exploring the introduction of the Montessori method of education in a NGO school in Malawi

Thank you for resubmitting your documentation in respect of your application for ethical approval. This has been reviewed by the Chair of the Faculty (of Health, Social Care & Education) Research Ethics Panel (FREP) in advance of the next scheduled meeting in September.

I am pleased to inform you that your ethics application has been approved by the Faculty Research Ethics Panel (FREP) under the terms of Anglia Ruskin University's Research Ethics Policy (Dated 08/09/16, Version 1.7).

Ethical approval is given for a period of 3 years from 12 July 2017.

It is your responsibility to ensure that you comply with Anglia Ruskin University's Research Ethics Policy and the Code of Practice for Applying for Ethical Approval at Anglia Ruskin University, including the following:

- • The procedure for submitting substantial amendments to the Panel, should there be any changes to your research. You cannot implement these amendments until you have received approval from FREP for them.
- • The procedure for reporting adverse events and incidents.
- • The Data Protection Act (1998) and any other legislation relevant to your research. You must also ensure that you are aware of any emerging legislation relating to your research and make any changes to your study (which you will need to obtain ethical approval for) to comply with this.

- • Obtaining any further ethical approval required from the organisation or country (if not carrying out research in the UK) where you will be carrying the research out. Please ensure that you send the FREP copies of this documentation if required, prior to starting your research.
- • Any laws of the country where you are carrying the research and obtaining any other approvals or permissions that are required.

- • Any professional codes of conduct relating to research or requirements from your funding body (please note that for externally funded research, a Project Risk Assessment must have been carried out prior to starting the research).
- • Completing a Risk Assessment (Health and Safety) if required and updating this annually or if any aspects of your study change which affect this.
- • Notifying the FREP Secretary when your study has ended.

Please also note that your research may be subject to random monitoring.

Should you have any queries, please do not hesitate to contact me. May I wish you the best of luck with your research.

Yours sincerely

Dr Sarah Burch
For the Faculty (of Health, Social Care & Education) Research Ethics Panel

T: 0845 196 2560
E: sarah.burch@anglia.ac.uk

cc:
Dr Paulette Luff (Supervisor)

Wendy Durham (sponsor)

Appendix 6: Additional PCF – Co-researcher

Anglia Ruskin University
Cambridge Chelmsford Peterborough

CO-RESEARCHER CONSENT FORM – Adult / Teacher

NAME OF ADULT /TEACHER CO-RESEARCHER:

Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

Researcher ~~Contact :~~ Michelle Wisbey, The Stack Yard, Little ~~Saxnpford,~~ Saffron Walden, Essex, CB10 2SA. 07811 441615. Michelle.wisbey@anglia.ac.uk

With the help of the school administrator and the interpreters we will discuss the following points during a teacher / village leader gathering. We will ensure a verbal understanding.

1. I agree to take part in the above research. I have read the Participant Information Sheet I understand what my role will be in this research, and all my questions have been answered to my satisfaction.

   Yes ☐ No ☐

2. I understand that I am free to withdraw from the research at any time, for any reason and without prejudice.

   Yes ☐ No ☐

3. I have been informed that the confidentiality of the information I provide will be safeguarded.

   Yes ☐ No ☐

4. I understand that ~~I will~~ be free to ask any questions at any time before and during the study.

   Yes ☐ No ☐

5. I have been provided with a copy of this form and the Participant Information leaflets.

   Yes ☐ No ☐

Data Protection: I agree to the University[1] processing personal data which I have supplied. I agree to the processing of such data for any purposes connected with the Research Project as outlined to me*

_____ _____ _____

[1] "The University" includes Anglia Ruskin University and its partner colleges

Name. Date Signed

YOU WILL BE GIVEN A COPY OF THIS FORM TO KEEP

If you wish to withdraw from the research, please complete the form below and return to the main investigator named above.

Title of Project: **Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.**

I WISH TO WITHDRAW FROM THIS STUDY

Signed: _____ Date: _____

Appendix 7: Additional PIS – Co-reseacher

Anglia Ruskin University
Cambridge Chelmsford Peterborough

PARTICIPANT INFORMATION SHEET – Teacher / Co-Researcher

TITLE OF RESERCH - Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

Over the next year I will be carrying out research in the Sparkle school with teachers and children to introduce the Montessori Method of Education.

I would like to invite you to take part in our project. I would like to explore with you the introduction of the Montessori method into your school.

Before you decide I would like you to understand why the research is being done and what it involves.

With the help of the school administrator and the interpreters we will discuss the following points during a teacher / village leader gathering. We will ensure a verbal understanding.

I will go through the project information with you and answer any questions you have. Please ask me if there is anything that is not clear.

What is the purpose of the project?

This research project aims to evaluate how the introduction of the Montessori ethos and education benefits staff well-being and children's outcomes. Observations will be made on children both before the introduction and after the introduction to measure their independence and progression through the use of the environment.

This research is being carried out for my Educational Doctorate studies.

Why have you been invited?

I am inviting you to be a co-researcher in this research project because you are a teacher in the school and work with the children.

Do I have to take part?

It is up to you to decide whether you would like to take part. If you decide that you do not want to take part then you do not have to give a reason. If you do decide to take part then we will ask you to sign a consent form. I will give you a copy of this form to keep.

Your co-operation in this research will be very much appreciated and the research could not take place without you. Please understand that the research process is not designed to make you feel uncomfortable. All teachers and their children in the school have been given the opportunity to be co-researchers.

You have a right to withdraw at anytime without giving a reason.

Expenses and payments

You will not be paid to participate in the project.

What are the possible disadvantages and risks of taking part?

I hope that the project will be interesting, interactive and beneficial to yourself as a teacher, the children and the community. You may at times find it difficult to understand the methods, if this is the case please ensure that you tell me so I can support you.

What are the possible benefits of taking part?

I hope that you increase your knowledge of the Montessori method, better enjoy your profession as a teacher and fell you can support the children in the school in their learning and development.

What will happen at the end of the project with the findings?

The research project will be presented to the examining authorities Anglia Ruskin University. The setting involves in the research has requested a copy of the report on completion. The project will be shared with the Sparkle Foundation and in some cases the academic community.

Will taking part in the project be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence. If you join the project as a co-researcher some parts of your data collected for the project will be looked at by authorised persons from the Anglia Ruskin University who are supporting me in the research to check that the project is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

All information which is collected about you during the course of the research will be kept strictly confidential, stored in a secure and locked office, and on a password protected database.

Any information about you which leaves the University will have your name removed (anonymised) and a unique code will be used so that you cannot be recognised from it. Although what you say in the interviews and in the questionnaires is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may feel it necessary to report this to the appropriate persons.

What will happen if I agree to take part?

If you agree to participate as a co-researcher we will use various methods to collect data, many of which you will be involved in, you receive training and support to enable you to be a co-researcher:

Questionnaires for teachers

Multimedia tours with children

Semi-structured group meetings with teachers

Informal conversations with children.

Observations and assessment using online record keeping system - individual child profiles

What will happen to my data?

The research data recorded on the digital Dictaphone (voice recording device), video and camera will be removed and stored securely on a secure computer at my home. All paper based data will be securely stored in my office in a locked cupboard. During this time all precautions will be taken by all those involved to maintain your confidentiality.

All data collected will be kept for 12 months after the end of the project so that I am able to complete the writing up of the project, during this time I may contact you about the findings of the project and possible follow-up studies (unless you advise me that you do not wish to be contacted). You can ask me to remove this information later if you change your mind.

Neither yourself nor the child will be in any danger when participating in this project.

Agreement to participate in this research should not compromise your legal rights should something go wrong.

Appendix 8: Phase 1 and Phase 3 Questionnaire

Phase 1 and Phase 3 Questionnaire

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Thank you for completing this questionnaire to help with the research. There are no right or wrong answers, anything you write will help us. Do not write your name on this paper. Please answer all sections, if you do not know the answer or cannot answer just please write 'do not know'.

Research question : Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

Do you agree or not agree with these statements, please circle as appropriate

I have a good knowledge of child development theory?

Strongly agree Agree Neither agree or disagree strongly disagree disagree

I have a good knowledge of the Montessori method and learning environment?

Strongly agree Agree Neither agree or disagree strongly disagree disagree

I know how children learn?

Strongly agree Agree Neither agree or disagree strongly disagree disagree

I feel confident when I am teaching the children?

Strongly agree Agree Neither agree or disagree strongly disagree disagree

I know how to design a learning activity that meets a defined learning concept?

Strongly agree Agree Neither agree or disagree strongly disagree disagree

I know what the meaning of Pedagogy is?

Strongly agree Agree Neither agree or disagree strongly disagree disagree

Do you know who Maria Montessori is?

Yes No

Please give a brief description of how children learn ?

Please list three elements important to creating a supportive learning environment?

Any Other Comments :

Thank you for completing this questionnaire. By completing this questionnaire you are helping us to evaluate the learning and knowledge that you have had access to this week. Please give this to Michelle Wisbey on completion.

Appendix 9: Teacher: Interview Evaluation

Phase 1 / Phase 2/ Phase 3

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Meeting Schedule : Malawian teachers on-going evaluation interview

Research Title : Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

Teacher name :

1.How long have you worked for the Foundation?

2. What are your current qualifications?

3. Do you agree with the foundations vision for sustainable education and training?

Yes
No

Further comments

4. Do you feel confident in your role as an Early Years teacher ?

Yes
No

Further comments – reasons why ?

5. Can you explain the Montessori Method?

Phase 1 / Phase 2/ Phase 3

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Yes
No

Further comments

6. Do you rely on the Malawian curriculum books to support your teaching?

Yes
No

Further comments

7. Do you look forward to coming into work everyday?

Yes
No

Further comments

8. Do you enjoy teaching ?

Phase 1 / Phase 2/ Phase 3

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Agree
Disagree

If you agree, can you tell me more about what you know ?

9. Do children know who they are?

Yes
No

If you answered YES, what do you enjoy ? If you answered NO what don't you enjoy?

10.Are the children learning?

Yes
No

If you answered YES, what are they learning ?

11. Are the children happy ?

Phase 1 / Phase 2/ Phase 3

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Yes
No

Further comments

12. What is your personal aims for the next 2 years ?

Do you have any further comments ?

Appendix 10: Teacher interview evaluation V3

Phase 2/ 3 (please circle)

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Meeting Schedule : Malawian teachers on-going evaluation interview

Research Title : Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

Teacher name :

1. Do you feel you are benefitting from learning more about Montessori education?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

2. Do you feel you are benefitting from learning more about how children learn?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

3. Do you feel you have benefitted from learning how to observe children ?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High

Phase 2/ 3 (please circle)

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Extremely High
Don't know

Further comments

4. Do you have confidence in your own teaching?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

5. Do you look forward to working in the classroom?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

Phase 2/ 3 (please circle)

Anglia Ruskin University
Cambridge Chelmsford Peterborough

6. Do you look forward to working in the outside classroom?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

7. Do you look forward to coming into work everyday?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

8. Are you enjoying teaching?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High

Phase 2/ 3 (please circle)

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Extremely High
Don't know

Further comments

9. Are children learning academics?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

10.Are children happy?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

Anglia Ruskin University
Cambridge Chelmsford Peterborough

11. Do children understand more about who they are?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

12. Are children choosing their own learning?

(Tick the most appropriate)
Extremely Low
Low
Moderate
High
Extremely High
Don't know

Further comments

13. Number in order the most important element of the Montessori Method as you currently understand it? *(Please allocate 1 – 10)*

Phase 2/ 3 (please circle)

Anglia Ruskin University
Cambridge Chelmsford Peterborough

The Montessori material

The Montessori activities

Freedom of choice

The work cycle

Vertical age grouping

The prepared environment

Sensitive periods

Human tendencies

Cosmic education

The teacher

Appendix 11: Analysis overview from parent phase 1 meeting

Parent Information Group discussion

The question……. What is important for your children to know and to do ?

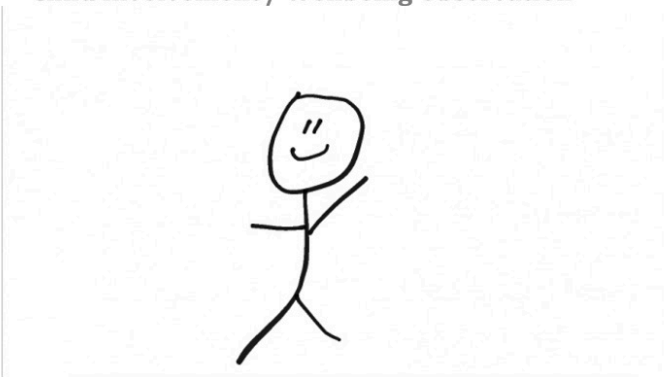
Themes mentioned more than once
14 adults present
Gladstones (2009) Domains of development
9 mothers
5 grandmothers

Gross Motor	Fine Motor	Language	Social	Emotional	Cognitive
Can carry her sister	Can make his own toys	Can speak English	Can play with other children	It is good to cry	Learns his numbers
Play football	Can write	Can sing	Can shake hands	Is gentle	Needs to know letters in English and Chichwa
Be flexible (Movement)	Holds a pencil	Can say his prayers	Has friends	He should smile	Can go to primary school
Carry a pot on her head	Can shake hands	Can speak Chichewa	Can tell me when they want to toilet		Can use books
Strong to carry wood			Knows how to talk to an adult		
Is able to walk			Part of the family		
Can bash maize			Can work in village		
Can work in the fields			knows everyone in the family		
Can fetch water					
I love them to dance					
Can do skipping					
Can do chores					

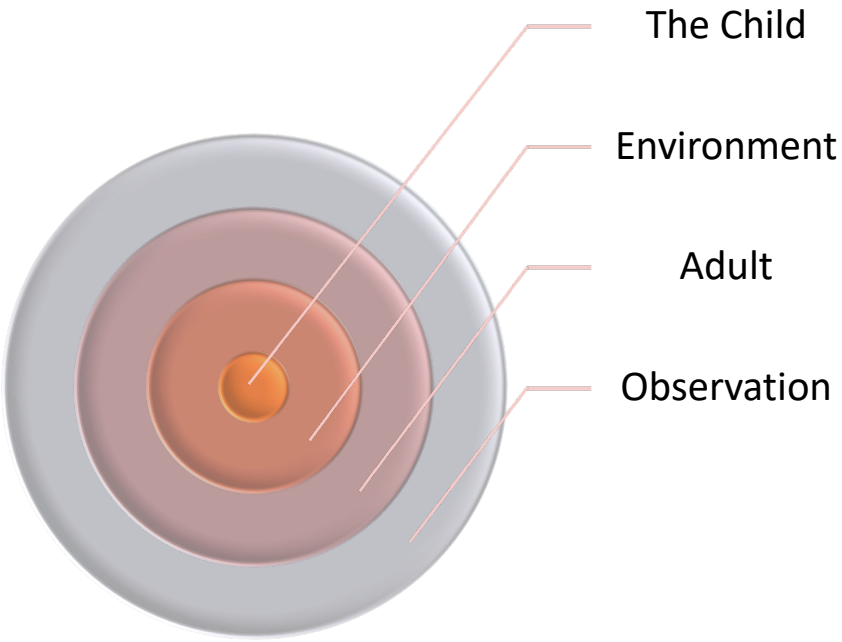
Appendix 12: Early Years Engagement Tool Kit / Child involvement

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Child Involvement / Wellbeing Observation



Early Years Engagement Tool Kit



The Child
Is the centre of all Early Years education. Everything that happen outside of the child has a direct affect on their development and their foundations for learning.

The Environment.
There are many approaches to Early Years Education. The environment created due to the approach adopted by the setting should be owned and created by the child for the child and will effect how and what the child learns.

The Adult
The role of the adult in tracking the child's learning and development is fundamental in supporting the child's learning journey.

Observation
Observation techniques, should be simple and monitor both the involvement in learning and the well-being of the child. They should be adapted to suit the context and community that the Early Years setting is part of.

The Leuven Scale for Well-being (in learning)

It's time for an honest observation of your students

Based on: http://www.plymouth.gov.uk/documents-idtoolkitleuven.pdf

Let's hope teachers are designing and evaluating classroom activities with an aim that every learner might reach a state of flow.

Extremely low

The child clearly shows signs of discomfort such as crying or screaming. They may look dejected, sad, frightened or angry. The child does not respond to the environment, avoids contact and is withdrawn. The child may behave aggressively, hurting him/herself or others.

Low

The posture, facial expression and actions indicate that the child does not feel at ease. However, the signals are less explicit than under level 1 or the sense of discomfort is not expressed the whole time.

Moderate

The child has a neutral posture. Facial expression and posture show little or no emotion. There are no signs indicating sadness or pleasure, comfort or discomfort.

High

The child shows obvious signs of satisfaction (as listed under level 5). However, these signals are not constantly present with the same intensity.

Extremely High

The child looks happy and cheerful, smiles, cries out with pleasure. They may be lively and full of energy. Actions can be spontaneous and expressive. The child may:

- talk to him/herself,
- play with sounds,
- hum, sing.

The child appears relaxed. The child expresses self-confidence and self-assurance.

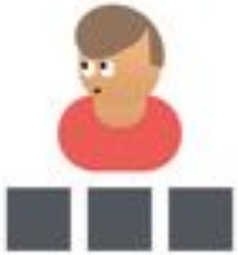
By Richard Wells
Twitter: @iPadWells
iPad4schools.org

The Leuven Scale for Involvement (in learning)

It's time for an honest observation of your students

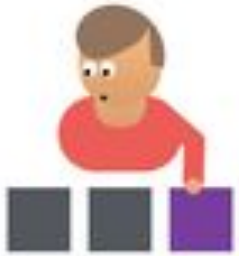
Based on: http://www.plymouth.gov.uk/documents-ldtoolkitleuven.pdf

Let's hope teachers are designing and evaluating classroom activities with an aim that every learner might reach a state of flow.



Extremely low

Activity is simple, repetitive and passive. The child seems absent and displays no energy. They may stare into space or look around to see what others are doing.



Low

Frequently interrupted activity. The child will be engaged in the activity for some of the time they are observed, but there will be moments of non-activity when they will stare into space, or be distracted by what is going on around.

Moderate

Mainly continuous activity. The child is busy with the activity but at a fairly routine level and there are few signs of real involvement. They make some progress with what they are doing but don't show much energy and concentration and can be easily distracted.

High

Continuous activity with intense moments. The child' activity has intense moments and at all times they seem involved. They are not easily distracted.

Extremely High

The child shows continuous and intense activity revealing the greatest involvement. They are concentrated, creative, energetic and persistent throughout nearly all the observed period.

Look out for: focused concentration on the present moment; loss of self-consciousness; activity that's intrinsically rewarding; Distorted awareness of time; personal agency.

By Richard Wells
Twitter: @iPadWells
iPad4schools.org

The Leuven Scale for Well-being

Level	Well-being	Signals
1	Extremely low	The child clearly shows signs of discomfort such as crying or screaming. They may look dejected, sad, frightened or angry. The child does not respond to the environment, avoids contact and is withdrawn. The child may behave aggressively, hurting him/ herself or others.
2	Low	The posture, facial expression and actions indicate that the child does not feel at ease. However, the signals are less explicit than under level 1 or the sense of discomfort is not expressed the whole time.
3	Moderate	The child has a neutral posture. Facial expression and posture show little or no emotion. There are no signs indicating sadness or pleasure, comfort or discomfort.
4	High	The child shows obvious signs of satisfaction (as listed under level 5). However, these signals are not constantly present with the same intensity.
5	Extremely high	The child looks happy and cheerful, smiles, cries out with pleasure. They may be lively and full of energy. Actions can be spontaneous and expressive. The child may talk to him/herself, play with sounds, hum, sing. The child appears relaxed and does not show any signs of stress or tension. He/she is open and accessible to the environment. The child expressed self-confidence and self-assurance.

The Leuven Scale for Involvement

Level	Well-being	Signals
1	Extremely low	Activity is simple, repetitive and passive. The child seems absent and displays no energy. They may stare into space or look around to see what others are doing.
2	Low	Frequently interrupted activity. The child will be engaged in the activity for some of the time they are observed, but there will be moments of non-activity when they will stare into space, or be distracted by what is going on around.
3	Moderate	Mainly continuous activity. The child is busy with the activity but at a fairly routine level and there are few signs of real involvement. They make some progress with what they are doing but don't show much energy and concentration and can be easily distracted.
4	High	Continuous activity with intense moments. They child's activity has intense moments and at all times they seem involved. They are not easily distracted.
5	Extremely high	The child shows continuous and intense activity revealing the greatest involvement. They are concentrated, creative, energetic and persistent throughout nearly all the observed period.

Child Involvement / Wellbeing Observation

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	Learning Areas Involvement				Development areas Well-Being	
Description of 2 minute period	Physical	Language Literacy	Numeracy Maths	KUSW	Social and Emotional	Moral and Spiritual
	1 - 5	1 - 5	1 - 5	1 - 5	1 - 5	1 -5
Time:						
Time:						
Time:						

Child Involvement / Wellbeing Observation

Individual Child Observation and Assessment Form

based on the Leuven Involvement Scale

Child's Name: Date:

Category	Weak Statement	Scale	Strong Statement
Knowledge (Science Concepts)	Shows no understanding of pushes or pulls	1 2 3 4 5	Recognises when a push or pull is necessary.
Knowledge (Literacy Concepts)	Shows no interest in stories or books	1 2 3 4 5	Chooses to look at books / listen to stories.
Knowledge (Literacy Concepts)	Shows no understanding of letters	1 2 3 4 5	Recognises some relevant letters
Knowledge (Math Concepts)	Shows no interest in numbers	1 2 3 4 5	Recognises numbers
Knowledge (Healthy practice)	Shows no understanding of washing hands	1 2 3 4 5	Recognises when to wash hands
Skills 1 (Using and applying - science)	Is not able to use a push or pull to move objects.	1 2 3 4 5	Is able to use a push or pull to move objects.
Skills 2 (Using and applying - literacy)	Is not able to use letters in context	1 2 3 4 5	Is able to use letters in context
Skills 3 (Using and applying - mathematics)	Is not able to use numbers in context	1 2 3 4 5	Is able to use numbers in context
Skills 4 (Co-ordination)	Lacks physical / fine motor skills to handle play equipment.	1 2 3 4 5	Handles play equipment accurately.
Skills 3 (Using and applying – healthy practice)	Is not able to wash hands in context	1 2 3 4 5	Is able to use wash hands in context
Disposition 1 (exploration)	Not keen to experiment with the play equipment.	1 2 3 4 5	Keen to experiment & try out a range of equipment.

Child Involvement / Wellbeing Observation

Anglia Ruskin University

Cambridge Chelmsford Peterborough

Disposition 2 (resilience)	When experiencing difficulty abandons activity.	1 2 3 4 5	When experiencing difficulty is spurred on to keep trying or make more effort.
Feelings 1 (enthusiasm)	Unwilling or reluctant to investigate activities	1 2 3 4 5	Enthusiastic and eager to work at activities.
Feelings 2 (enjoyment)	Appears tense or anxious when playing with activities.	1 2 3 4 5	Appears relaxed and happy when playing with activities.
Social behaviour 1	Prefers to play alone, little or no interaction with peers.	1 2 3 4 5	Enjoys engaging with the other children.
Social behaviour 2	Has difficulty taking turns or sharing.	1 2 3 4 5	Takes turns easily & shares equipment cheerfully.
Comments			

Appendix 13: Early Years Engagement Tool Kit / Environment

Anglia Ruskin University
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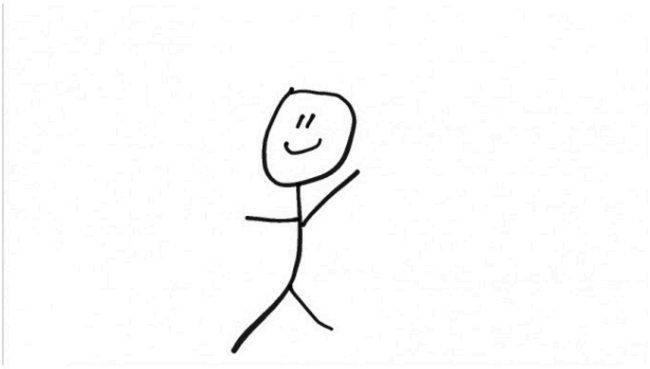
Environment and child involvement



Early Years Engagement Tool Kit

Environment and child involvement

Anglia Ruskin University
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	Learning Areas Involvement				Development areas Well-Being	
Description of 2 minute period	Physical	Language Literacy	Numeracy Maths	KUSW	Social and Emotional	Moral and Spiritual
	No of children	No of children	No of children	No of children	No of children	No of children
Time:						
Comments						
Time:						
Comments						
Time:						
Comments						

Appendix 14: Methods of data gathering in detail

Questionnaires for teachers – All the teacher-researchers that have chosen to participate in the research were offered the opportunity to complete a questionnaire, either in groups or individually with support from the researcher and a translator (the senior administrator of the school). The questions helped to inform the research, ascertain a starting point on teachers' ideas and understanding of the Montessori methods and evaluate the feeling of well-being of the teachers. In gaining further understanding of the point that we are all starting from, I hoped to encourage the collaboration needed for this project as we all went together on this journey of discovery, the staff in Montessori and myself in Malawian culture. Specifically, in this case, answers were obtained through questionnaires. The questionnaire includes closed questions (some using a Likert scale, some using dichotomous questions and open questions) and were completed with supported discussion.

Multimedia tours with children – The child-researchers were given the opportunity to tour their environment identifying with the use of cameras and video their favourite things. This enabled the children to have a voice without using the spoken or written word. The children had charge of the camera and the video, assistance was given when the child asked.

Informal conversations with children – This gave the child-researchers the opportunity to talk through their multi-media tour of the environment. They were given the opportunity to tell the story of their pictures, giving the opportunity to the child-researchers to use the photos as a tool to enhance discussion. There was flexibility of holding these individually or in small groups. These conversations were recorded in note form. There was a Malawian co-researcher present at these conversations as a translator.

Semi-structured group meetings with teachers – the interview schedules, provided a list of topics to be explored during the interview. The teacher-researchers and I met during each of

my visits to Malawi. I was made aware by the iNGO trustees that the teacher-researchers may feel more comfortable meeting as a group, as this is the case in Malawi ,I was happy to do this. The discussion, answers and observations from these meetings provided rich, in-depth information that helped me to understand the unique and shared aspects of experiences, and the meanings attributed to the delivery of their Montessori training. There was no need for a translator as the English both spoken and understanding was of a good level. Notes were taken during these meetings.

The final focus of the teachers learning will be of their articulation of a personal philosophy of pedagogy and was the main discussion point of the final group meeting and throughout their practical assessments for their Montessori training.

Observations and assessment – The plan had been to use a simple on-line observation tool, but due to the nature of the lack of electricity and wifi in Malawi this option was not appropriate. After some discussion between the researchers, it was decided that the teachers and the researcher will make observations of the children carrying out activities over the three phases, both in written and photographic form. This will also be supported by the use of the assessments already used by the school linked to the Malawi Early Childhood Development Monitoring and Assessment Guide (2012). This was to ensure the ongoing Malawian context is respected and to give credence in Malawi to the research. Measures of child achievement and the suitability of the environment will be done adapting tools from the guide. This also helped us in tracking the achievements of the children and measuring their outcomes, against Malawian measures, giving the researcher valuable data on the development of the children in all areas, PSE, Literacy, Mathematics, KUSW, Physical and Creative. After some discussion during phase two we also introduced the use of the Leuven scales for emotional well-being and involvement (developed by the Research Centre for Experiential Education at Leuven University, under the supervision of Professor Ferre Laevers).

Researchers' photographs **-** Phone cameras were used by the researchers to capture moments in time that would build a pictorial narrative of the research journey, of cultural and social contexts and changes in the collaboration elements.

Child tracking **–** With the use of the ECD we monitored each child's progress in the areas of development, and this will give us the opportunity to build the individual profiles.

Observational research diary - As the researcher I kept a diary and field notes, recording my learning and experiences. This has proved to be an important source for me.

WhatsApp data collection – This was an easy source for the Malawian teachers to use to contact me in the UK when they had access to wifi. It enabled the teachers to share 'in the moment' thoughts quickly.

Appendix 15: Sample page from Reflective Research diary – Classroom Obs

Classroom Observation Notes — 11/06/2017 06:38

Title — Created

10-10-17

L & R Room

These children are 4/5 years old
32 children in the classroom
2 staff members.
The largest room in the school
Well resources for a Malawian classroom.
Shelves laid out in a Montessori style

Photo

The children are working happily and independently, the teachers are working with the children. There were just 2 children who were not focused on a task. Some children working alone and some children working independently.

R is working with a small group of 6 children using flash cards to learn the English names of things, using a rote teaching methods. This lesson carries on for most of the time I am in the room. She speaks in an authoritative tone with the children and they take turns to name when she chooses them.

L is working around the room, overseeing the children. She stops when she sees a child working with the knobbed cylinders and she does a presentation with him. It is not correct but he achieves the aim.

L then left this child when she saw a child not doing anything. She went a got a spindle box (photo), the spindle box had been made by the teachers after their visit to Blantyre. The child worked with the Spindle box and was supported by L as he worked.

Section 1 | Section 2 | Section 3

Appendix 16: Phase 1 Sample Classroom Observation

Classroom observations
Phase 1, samples from research diary

8.00 am – 20 mins
T class: (2 – 3 years)

- 1 Staff sitting and watching
- 1 staff leading a circle time – topic hand shaking
- Teacher uses Malawi curriculum book to read the lesson to the children
- Children sitting on floor
- General involvement level of children very low – level 1
- Teacher doing all the talking
- Little direct talking to the children

8.30 am – 20 mins
R class: (3 -4 years)
Very similar set up as per T class; observation showed similar points for discussion as well as:

- Children involvement a higher - level 2
- Teacher teaching about the parts of a flower
- Command and task teaching taking place
- Draw flower on board, give children pencil and paper (some of which was already drawn on)

Teacher observation review
9.00am – 9.30

This was a very positive discussion with many of the above points raised by Chibale,showing good reflection skills
On discussion observation of the children's different involvement and concentration between the two rooms was attributed to age.
We talked about styles of teaching and how Montessori explains the role of the teacher. It is important that Chibale acts as a role model for the younger less experienced teaching staff.
Moving forward:

- Chibale should plan and record content of his Wednesday training sessions; it was suggested that:
- Begin to use the training session to consider what needs to be in the rooms as part of the development of the prepared environment.
- Start learning about the prepared environment
- Cover the importance of observations

Appendix 17: Phase 3 Sample Classroom Observation

Classroom observations
Phase 3, samples from research diary

8.00 am
Tiger class:

- Ordered environment
- Calm atmosphere
- Engaged teachers
- Age-appropriate materials
- Little interference from the teachers
- Little interaction amongst children: why?
- Good concentration and involvement levels

To continue to develop further

- Allow children to choose activities from the shelf
- Teachers to handle materials with clear slow movements
- Help the child a little…don't do things for the child
- How did the teachers generally respond to the children?

8.30 am
Rhino class:
Very similar set up as per Tiger class; observation showed similar points for discussion as well.

- Good to attempt presentations i.e. the buckle frame: practise presentation for analysis of movements!
- Lovely to see more interaction between children; more natural but here children are older

DISCUSSION ON OBSERVATION with Abikanile

9.00 – 9.30 am
This was a very positive discussion with many of the above points raised by Abikanile, showing good evaluative skills and positive Montessori understanding
On discussion observation of the children's different socialisation between the two rooms was attributed to age and is developmentally normal.
Moving forward:

- Abikanile should plan and record content of his Wednesday training sessions; it was suggested that:
  - more focus on practice i.e. on presentations of the materials on the shelves is essential for the teacher to support the children's work better

- Abikanile carries out training sessions with the staff in Chichewa (for better comprehensions) and in English to provide more exposure to the language. Teachers should also be encouraged to explain concepts in both languages.
  - next training session to cover the above points on classroom observation i.e. the importance of freedom of choice etc.
  - support in English language acquisition should focus on listening for comprehension and speaking rather than on grammatical exercises.

- Start learning about AEL presentations
- Cover the importance of observations

Appendix 18: Sample simplified child observation - Individual child

SPARKLE FOUNDATION

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Child Observation and Assessment Form
based on the Leuven Involvement Scale

Child's Name: Funsar

Date: Phase 3.

Category	Weak Statement	Scale	Strong Statement
Knowledge (Science Concepts)	Shows no understanding of pushes or pulls	1 2 3 (4) 5	Recognises when a push or pull is necessary.
Knowledge (Literacy Concepts)	Shows no interest in stories or books	1 2 3 (4) 5	Chooses to look at books / listen to stories.
Knowledge (Literacy Concepts)	Shows no understanding of letters	1 (2) 3 4 5	Recognises some relevant letters
Knowledge (Mathematical Concepts)	Shows no interest in numbers	1 (2) 3 4 5	Recognises numbers
Knowledge (Healthy practice)	Shows no understanding of washing hands	1 2 3 4 (5)	Recognises when to wash hands
Skills 1 (Using and applying - science)	Is not able to use a push or pull to move objects.	1 2 3 (4) 5	Is able to use a push or pull to move objects.
Skills 2 (Using and applying - literacy)	Is not able to use letters in context	(1) 2 3 4 5	Is able to use letters in context
Skills 3 (Using and applying - mathematics)	Is not able to use numbers in context	(1) 2 3 4 5	Is able to use numbers in context
Skills 4 (Co-ordination)	Lacks physical / fine motor skills to handle play equipment.	1 2 3 (4) 5	Handles play equipment accurately.
Skills 3 (Using and applying – healthy practice)	Is not able to wash hands in context	1 2 3 4 (5)	Is able to use wash hands in context
Disposition 1 (exploration)	Not keen to experiment with the play equipment.	1 2 3 4 (5)	Keen to experiment & try out a range of equipment.
Disposition 2 (resilience)	When experiencing difficulty abandons activity.	1 2 (3) 4 5	When experiencing difficulty is spurred on to keep trying or

Appendix 19: Sample completed Early Years Engagement Tool Kit / Child Involvement

THE SPARKLE FOUNDATION MALAWI
Creating brighter futures

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Child Involvement / Wellbeing Observation

Child Name	Chimisi	Term / Phase	1	2	3

Description of a minute period	Learning Areas Involvement				Development areas Well-Being	
	Physical	Language Literacy	Numeracy Maths	KUSW	Social and Emotional	Moral and Spiritual
	1 - 5	1 - 5	1 - 5	1 - 5	1 - 5	1 -5
Time: 8.20 → 5 mins						
Circle Time kindness 37 children						2.4
Time: 9.00 - 20 mins						
Workcycle CT - working with other child Pestle + Mortar. S.P Number Presentation	PM 5/5M		CT 4/7M Tied SP No 4 →			
Time: 11.00 → 10 mins						
Workcycle Book corner Threading	T 3 →	BC 4/7m				

Appendix 20: Sample completed Early Years Engagement Tool Kit / Environment

Period	Learning Areas Involvement				Development areas Well-Being	
	Physical	Language Literacy	Numeracy Maths	KUSW	Social and Emotional	Moral and Spiritual
	1 - 5	1 - 5	1 - 5	1 - 5	1 - 5	1 -5
(14)						
...c busy + engaged Chris body movements ...f boys creating more wire (3) ...ne on jumper None level low	1/4 Threads 1/4 lego		1/4 Construct Triangle lesson. 1/4 hCylw	1/4 Geos.	Role Play 3 - [illegible]	
(14)						
...become 6 - but they a role player ...lego, knex that they saw built into cos. ...triangle lesson ...lesson ...non. None level low	2/4 - AEL Spooning 1/4 Nuts + Bolts		1 x cd box 1 1/3	1 - aviids of w	Role play 6	2 ... obs ... He ... tra
(13)						
...ruetetwi ...ygaged. None level low	1/4 spoons 1/4 Screws 1/4 nuts + Bolts		1 x 3pt colours. 1 x Text Body Production	1 x animal of the week.	Role Play 6 lego x 1/4	
2yr 9mths 41 mins	Spooned Carried on tread Sorted Parts ordered beans in Pot	Cooking / Pouring 3 boys.	- k - nex 31 mis		Hannah got ch ... b	

THE SPARKLE FOUNDATION MALAWI
Creating brighter futures

Putting things away → watch your classroom.

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Child Involvement / Wellbeing Observation

Child Name	Zukonio	Term / Phase	1	2	3

Description of 2 minute period	Learning Areas Involvement				Development areas Well-Being	
	Physical	Language Literacy	Numeracy Maths	KUSW	Social and Emotional	Moral and Spiritual
	1 - 5	1 - 5	1 - 5	1 - 5	1 - 5	1 -5
Time: 8.20 (32)						
Circle Time Handwashing Constructive Triangle presentation 32 = 3			Constructive Triangle 3			
Time: 8.40						
Circle time Class questions 14 = 1 10 = 2 8 = 4			Constructive Triangle 4			
Time: 8.50 – 11.50						
Work cycle Pink Box 1 Yellow Box Wooden Gls Xylophone K Cyls Constructive Triangles Lego Spindle Box Language boxes Brio Lock's Board	3/5	9/14 2/3 1/5	5/3	6/5 2/3		

The children don't need language.

Appendix 21: Sample analysis of Teacher Questionnaire

Intrim tracking questionnaire

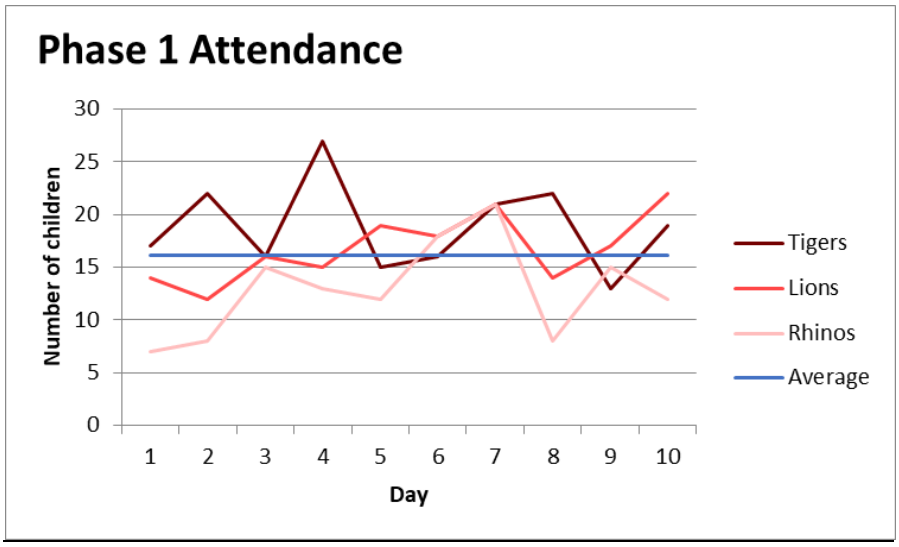
Phase 2 Teachers Questionnaire supported by conversation

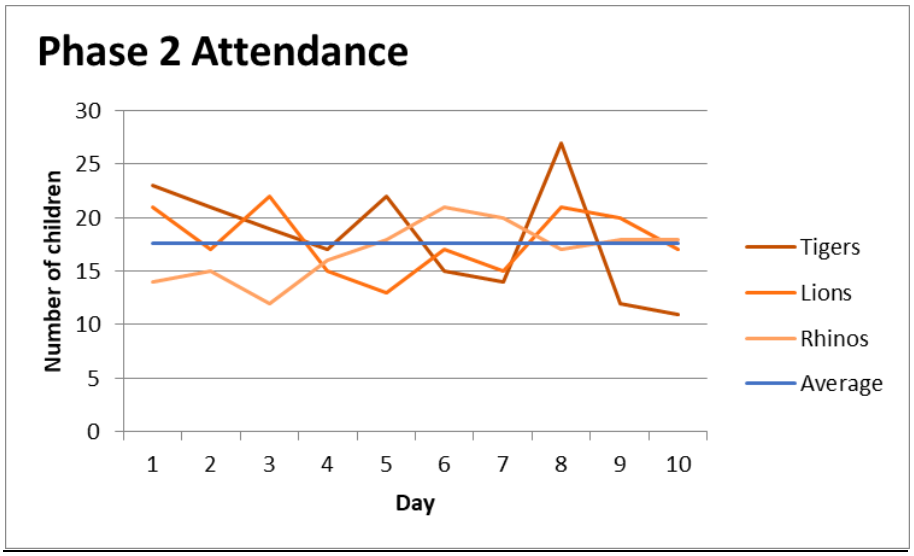
Question Number	Question	Extremely low	Low	Moderate	High	Extremely High	Don't Know	Comments
1	Do you feel you are benefitting from your Montessori education?			4	2	1		1 Ablkanile - I really like the cosmic education. It feels like Malawi"
2	Do you feel you are benfitting from learning more about how children learn?			3	3	2		
3	Do you feel you are benefitting from learning how to observe children to			4	1	1		1 Asale - am learning more about the children everyday,
4	Do you have confidence in your own teaching?			4	1	1	2	
5	Do you look forward to working in the classroom?			3	3	2		Bomani - he children are much better behaved and a busy
6	Do you look forward teaching in the outside classroom?			3	4	1		Added when in Malawi
7	Do you look forward to coming to work every day?	3		1	1	1	1	
8	Are you enjoying teaching?	1		3	2			1 Lin - unsure of the children having so much freedom, so they know what they should be learning
9	Are children learning academics?	2		1	2		2	
10	Are children happy?			1	3	3	1	
11	Do children understand more about who they are?			1	2		5	
12	Are children choosing their own learning?			1	1	3	3	
13	Are the children involved in their learning?			5	1	2		
14	Do you feel confident in preparing the environment	2		6				

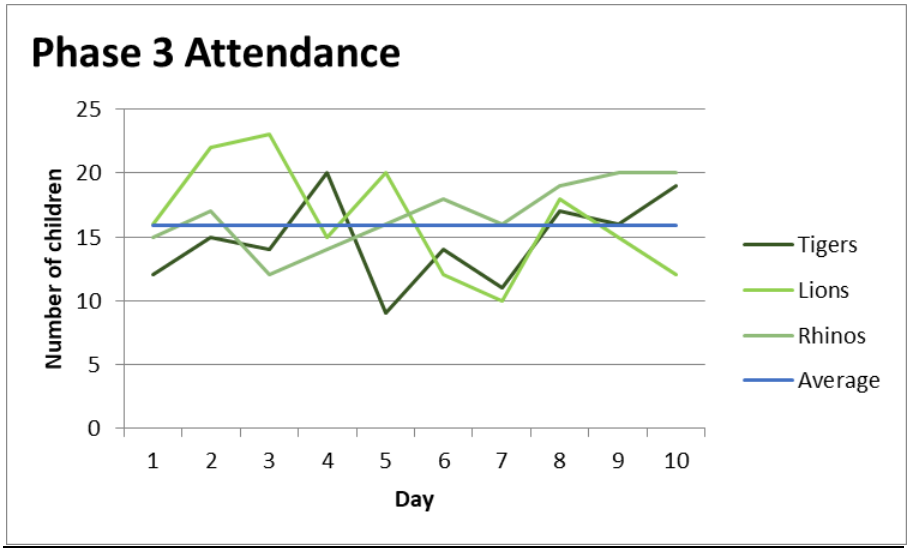
Involvement Videos | CHILDREN DETAILS | Phase 1a analysis | Phase 3a analysis | Sheet2 | Phase 2 analysis | Phase 3 analysis | Phase 1 Narrative Comments | Phase 3 Narrative Comments

Along the bottom you can see the tabs and the number of analysis I carried out.

Appendix 22: Children's Attendance

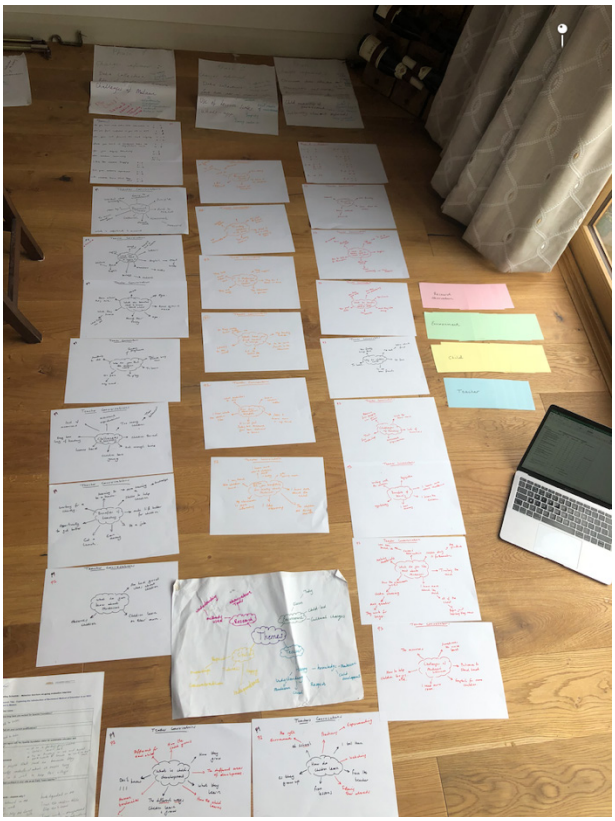






Appendix 23: Developing the analysis.

From lots of paper , through to mind maps, through to computer, spreadsheets and typed narratives



Appendix 24: Spreadsheets developing the analysis.

TEachers Questions Spreadsheet — Saved to my Mac

Phase 2 Teachers Questionnaire supported by conversation

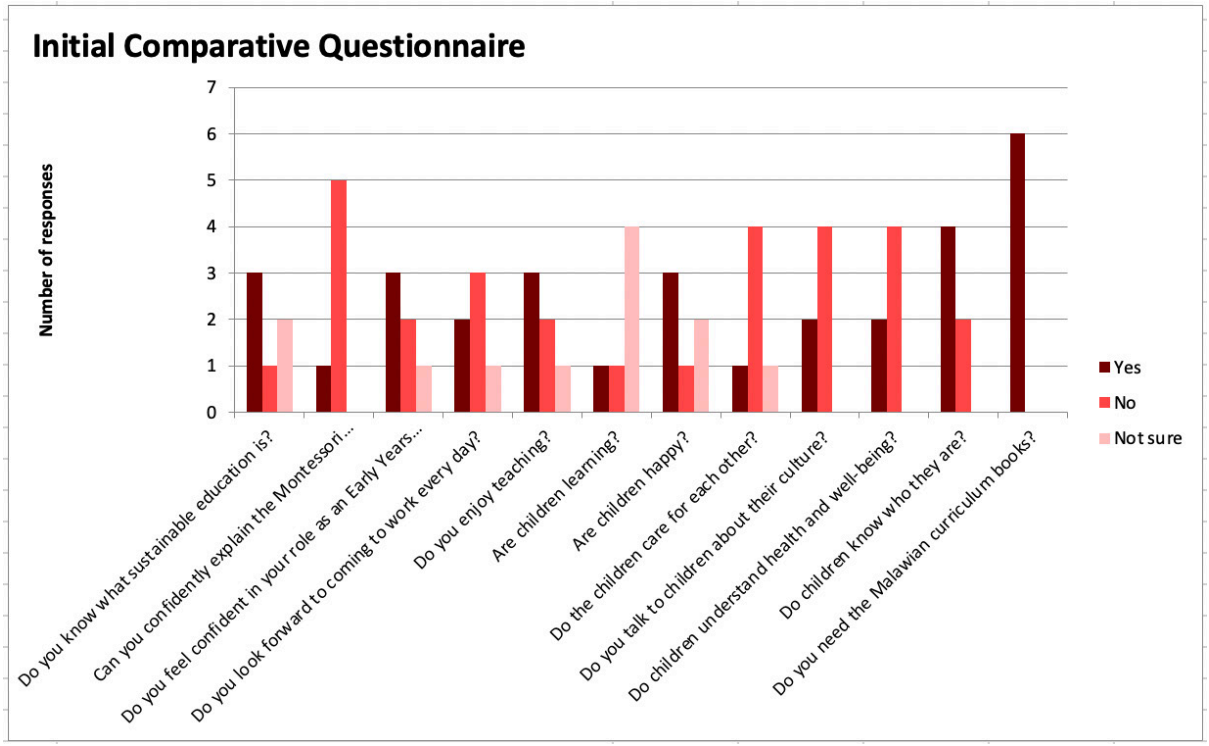
Question Number	Question	Extremely low	Low	Moderate	High	Extremely High	Don't Know	Comments
1	Do you feel confident in your Montessori education?		2	2	1		1	
2	Do you feel you are benfitting from learning more about how children learn?		1	4	1			
3	Do you feel you have benefitted from learning how to observe children to		4	1	1			
4	Do you have confidence in your own teaching?		4	1	1			
5	Do you look forward to working in the classroom?		3	3				
6	Do you look forward teaching outside?		3	4				Added when in Malawi
7	Do you look forward to coming to work every day?	3	1	1	1			
8	Are you enjoying teaching more?	1	3	2				
9	Are children learning more academics?	2	1	2			1	
10	Are children happy?		1	3	2			
11	Has children understanding of health and well-being increased?		1	2			3	
12	Do children understand more about themselves ?		1	1		1	3	
13	Are children involved in their learning		1	4	1			

		Yes	No	Not sure	Comments
14	Do you need the Malawian curriculum books?	4	1	1	Added when in Malawi
15	Is there something you would like to know more about?	3	1	2	See mind map

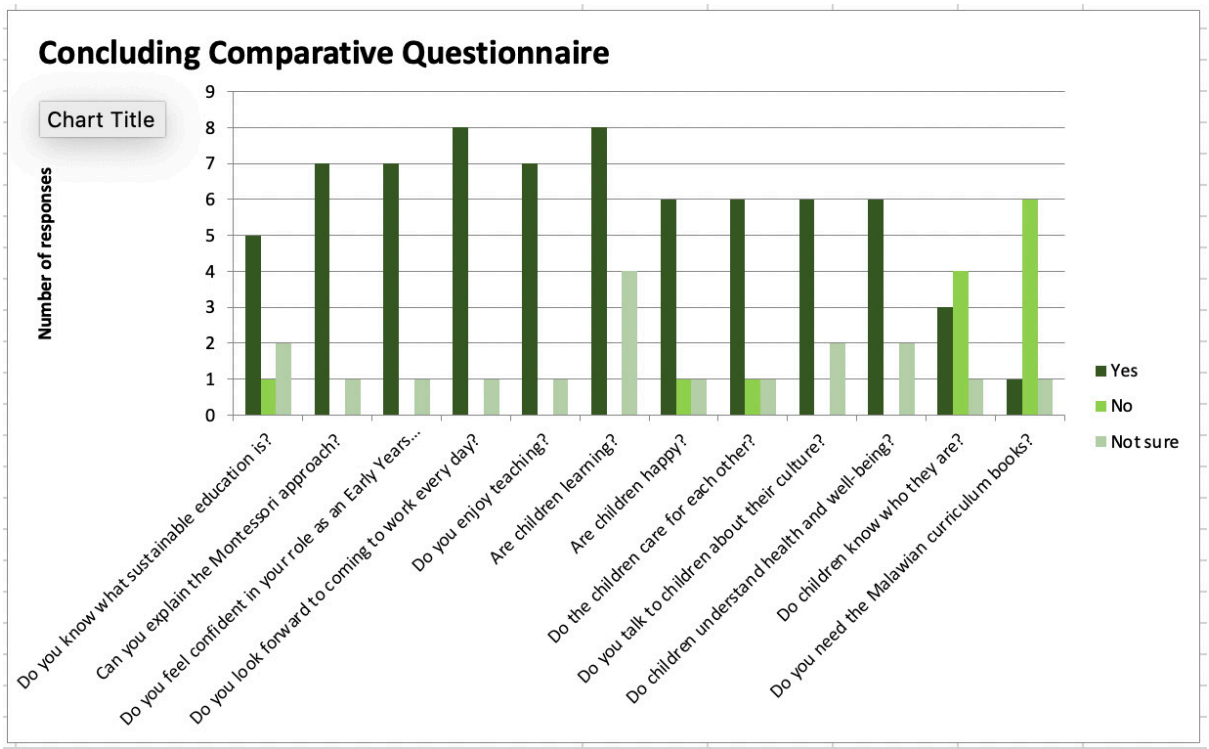
Teacher Details | CHILDREN DETAILS | Phase 1 analysis | Phase 2 analysis | Phase 3 analysis | Phase 1 Narrative | Phase 2 Narrative | Phase 3 Narrative

Appendix 25: Results from teacher-researchers' questionnaires

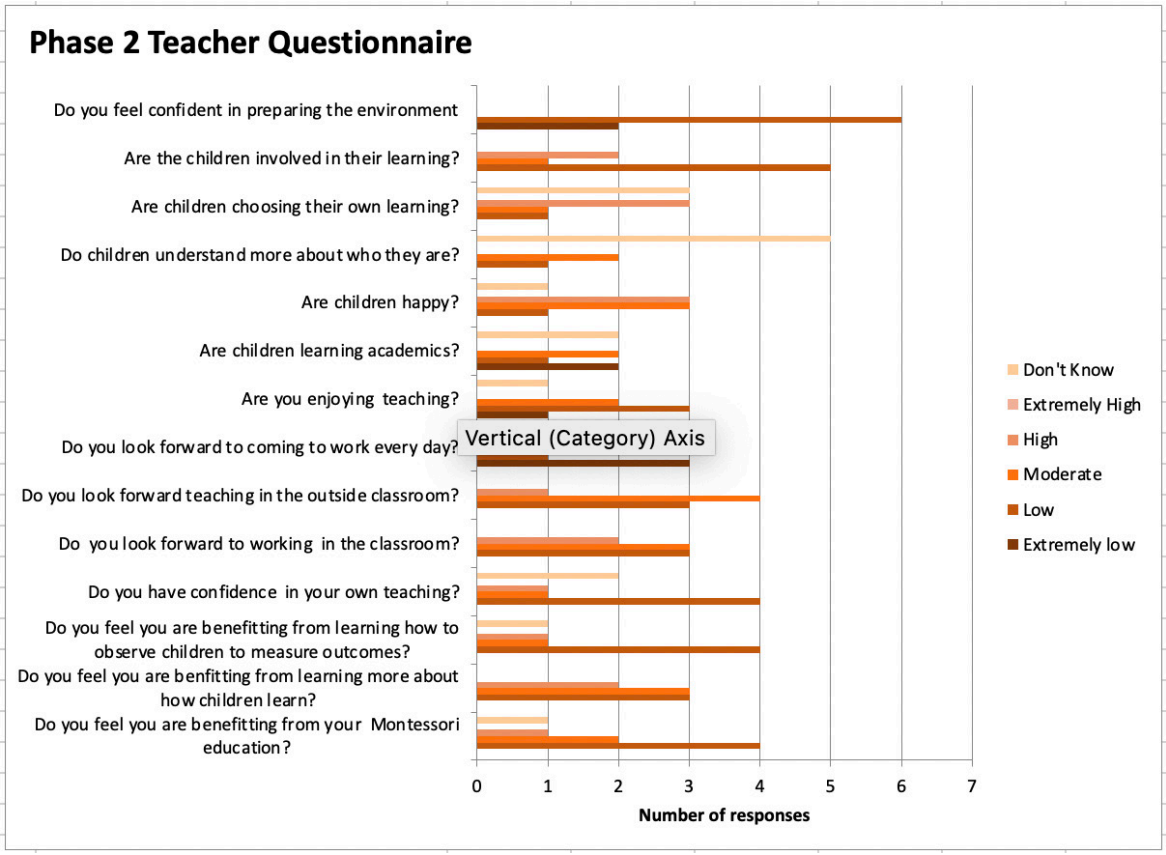
Phase 1

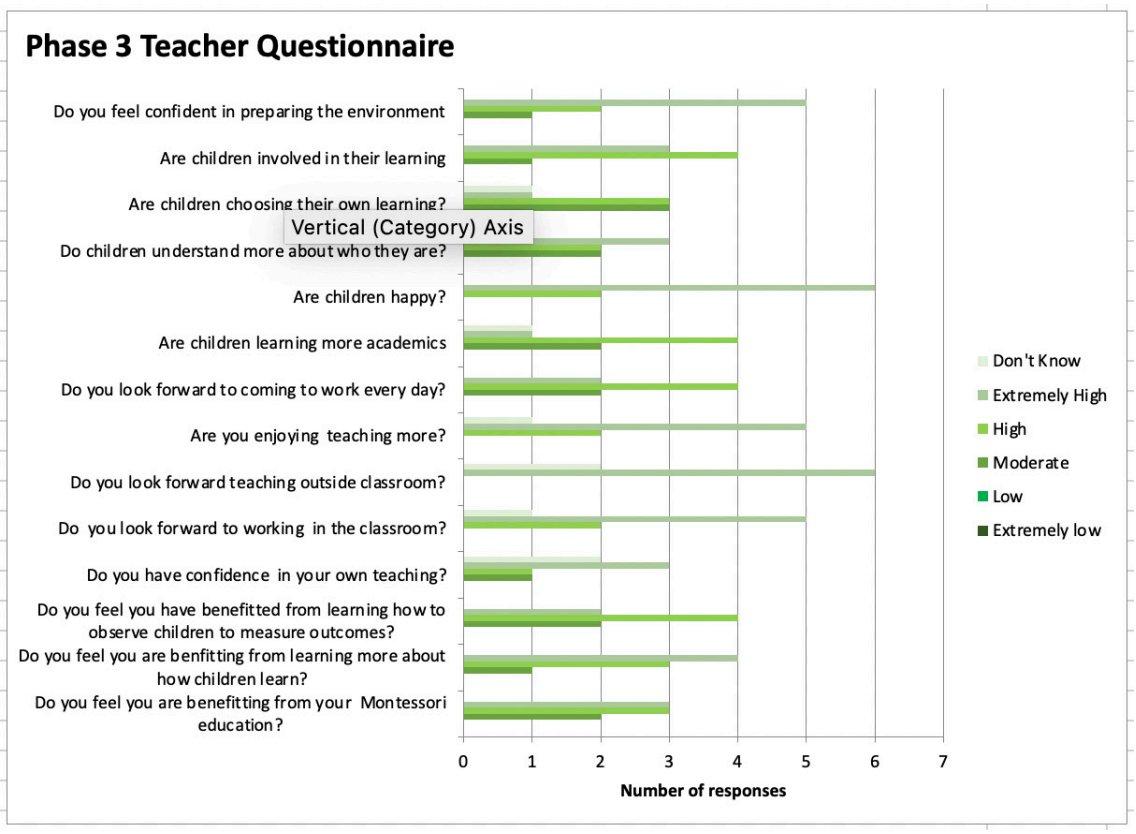


Phase 3



Phase 2 and Phase 3 Comparable questionnaire


Phase 2 Teacher Questionnaire
Do you feel confident in preparing the environment
Are the children involved in their learning?
Are children choosing their own learning?
Do children understand more about who they are?
Are children happy?
Are children learning academics?
Are you enjoying teaching?
Do you look forward to coming to work every day?
Do you look forward teaching in the outside classroom?
Do you look forward to working in the classroom?
Do you have confidence in your own teaching?
Do you feel you are benefitting from learning how to observe children to measure outcomes?
Do you feel you are benfitting from learning more about how children learn?
Do you feel you are benefitting from your Montessori education?
Vertical (Category) Axis
0
1
2
3
4
5
6
7
Number of responses
Don't Know
Extremely High
High
Moderate
Low
Extremely low


Phase 3 Teacher Questionnaire
Do you feel confident in preparing the environment
Are children involved in their learning
Are children choosing their own learning?
Do children understand more about who they are?
Are children happy?
Are children learning more academics
Do you look forward to coming to work every day?
Are you enjoying teaching more?
Do you look forward teaching outside classroom?
Do you look forward to working in the classroom?
Do you have confidence in your own teaching?
Do you feel you have benefitted from learning how to observe children to measure outcomes?
Do you feel you are benfitting from learning more about how children learn?
Do you feel you are benefitting from your Montessori education?
Vertical (Category) Axis
0
1
2
3
4
5
6
7
Number of responses
Don't Know
Extremely High
High
Moderate
Low
Extremely low

Appendix 26: Child Tracking Tool

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Me Tool – Individual Learning Profile - Mapped

Progress Assessment

Date started	
Name of child	
Age	
Term started	

Physical - Activities of Everyday Living

	Presented	Emerging	Does well
Walk the line exercise – *Can walk and run*			
Walk the line normally			
Walk heel to toe			
Walk on tiptoe			
Walk carrying a cup of water			
Walk with book on head			
Climb stairs			
Kick, jump and hop			
Can stand on one foot for a long period of time			
Able to forward somersault			
Throw and catch a large ball			
Throw and catch a small ball			
Can dance			
Transferring using hands - *By imitation can transfer from one container to another*			
Threading - *Can string 5 large beads*			
Whisking activity - *Can stir liquids and foods*			
Pouring Jug to Jug – *Can pour water*			
Pouring Jug to cup – *Can pour water into a cup*			
Spooning activities – Can hold a spoon			
Tongs activities - Gains control of hands and finders			
Pestle & Morter Activity – *Can mash maize*			
Threading boards - *Can thread on boards*			
Sewing boards – *Can sew on boards*			
Dressing Frames - Velcro			
Dressing Frame - Clip			
Dressing Frame - Zip			
Dressing Frame - Buckle			
Can take of shoes and socks without help			
Can put shoes and socks on without help			
Can cut with scissors			

Using Montessori activities and mapped to Achievement targets taken form the document "Early Childhood Development, Monitoring and Assessment Guide (2012) . Ministry of gender, children and social welfares, Lilongwe 1

Me Tool – Individual Learning Profile - Mapped

Straight line					
Curved line					
Zig-zag line					

Mental/Cognitive

Sensorial			
	Cannot do	Attempted	Does well
Pink Tower - *Builds a tower / Sort objects by size / Sort by weight*			
Pink Tower - *Knows the difference between big and small*			
Broad stair - *Understands Narrow/wide*			
Red Rods - *Understands long/short / Can sort by measure*			
Knobbed cylinders - *Work out simple puzzles*			
Knobless Cylinders – *Can sequence objects*			
Shape sorting activities – *Can sort objects by shape*			
Colour sorting activity - *Can sort objects by colour*			
Colour Box 1 - *knows primary colours*			
Colour Box 2 – *Knows 10 colours*			
Geometric Trays – *Can name shapes*			
Geometric Solids – *Can name Cube, Oval, Ball*			
Constructive Triangles – *Can create patterns*			
Tessellations – *Can create patterns*			

Colour Box 1

	Match	Name
Red		
Blue		
Yellow		

Colour Box 2

	Match	Name		Match	Name
Green			Purple		
Pink			White		
Orange			Blue		
Grey			Red		
Black			Yellow		

Geometric Trays

Circle	
Square	
Triangle	
Rectangle	
Oval	

Using Montessori activities and mapped to Achievement targets taken form the document 2
"Early Childhood Development, Monitoring and Assessment Guide (2012) . Ministry of gender, children and social welfares, Lilongwe

Anglia Ruskin University
Cambridge Chelmsford Peterborough

Me Tool – Individual Learning Profile - Mapped

Can trace shapes			
Can draw controlled lines			
Can draw a 'O' shape			
Can draw a 'V'shape			
Can draw a body shape			
Can speak 2 or 3 word sentences in Chichewa			
Can speak 2 or 3 words sentences in English			
Can hold a short conversation in English			
Can hold a short conversation in Chichewa			
Can answer questions correctly			

Sandpaper letters - *Uses the following sounds with 90% accuracy*

Notes

English

	Sound	Match LMA		Sound	Match LMA		Sound	Match LMA
a			j			s		
b			k			t		
c			l			u		
d			m			v		
e			n			w		
f			o			x		
g			p			y		
h			q			z		
i			r					

Early Language Material – *Can read and recognize words / Learns language rapidly*			
Pink Box 1			
Pink Box 2			
Pink Box 3			
Pink Box 4			
Pink Box 5			
Pink Word Stripes			
Pink Phrase Stripes			
Blue Box 1			
Blue Box 2			
Blue Box 3			
Blue Box 4			
Blue Box 5			
Blue Word Stripes			
Blue Phrase Stripes			

Using Montessori activities and mapped to Achievement targets taken form the document 4
"Early Childhood Development, Monitoring and Assessment Guide (2012) . Ministry of gender, children and social welfares, Lilongwe

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Me Tool – Individual Learning Profile - Mapped

Noun Box			
Singular and Plural Box			
Adjective Box			
Verb Box – *Can respond to instruction*			

Social and Emotional – AEL

Care of Self			
	Cannot do	Attempted	Does well
Self-identification *First name* *Family name* *Age* *Where they live* *What they like* *What they don't like*	Notes		
Expression of affection *Can make eye contact* *Can touch* *Can hug* *Can shake hands and greet*	Notes		
Wiping their nose - *Can express their needs clearly*			
Can ask for the toilet – *Can express their needs clearly*			
Dressing Frames - *Can dress them selves*			
Grace & Courtesy			
Enjoys introducing themselves with confidence			
Can meet and greet with confidence			
Child seeks attention			
Shows affection to others			
Child observes others and how they are doing things			
Spends time playing alone			
Spends time playing with others			
Co-operation play with others			
Asks for help			
Can communicate appropriately with teachers, children and staff			
Had a strong sense of gender identity			

Moral and Spiritual - Knowledge & Understanding of the World - Inquisitive – attracted to creation and the world

	Cannot do	Attempted	Does well
Animal Families			
Matching & Pairing Cards			

Using Montessori activities and mapped to Achievement targets taken form the document 5
"Early Childhood Development, Monitoring and Assessment Guide (2012) . Ministry of gender, children and social welfares, Lilongwe

Appendix 27: Training plan

Sparkle Montessori Training Plan

Aims. Objectives, Outputs and Outcomes

Aims

To introduce Sparkle teachers to the philosophy and ethos of Montessori education

To provide Sparkle teachers with training and education to support them in achieving their Malawi Montessori diploma

To increase the skills base of Sparkle teachers to provide a Montessori education for the children attending Sparkle school

To up skill current Sparkle teachers to support the long term vision of a Sparkle Montessori training centre in Malawi.

Objectives

Recruit current teachers and school staff of Sparkle to carry out the training

Run a 6 month training programme at Level 2

Teach the Montessori philosophy, ethos and curriculum.

Introduce concept and ideas to support teaching and training skills

Outputs

Date	Aim	Notes
23rd March	teachers to pass their Malawi IMP practical exam	7 teachers passed their practical exam 1 did not due to illness 1 did not pass
31st July	teachers to pass their Malawi Montessori theory SAP's	
31st August	teachers to have completed and graduated their Malawi IMP	

Outcomes

1. Sparkle school team to have a greater knowledge of the Montessori Method
2. Sparkle school team to be more confident in using the Montessori method in their classrooms
3. Sparkle school team achieve their Malawi IMP Level 2.
4. To provide opportunity to progress onto Level 3 on completion of Level 2

Outcome indicators

1. 90 % of participants have an greater knowledge of the Montessori method
2. 90% of participants are more confident in using the Montessori method in their classroom
3. 90% of participants pass the Malawi IMP Level 2.
4. 20% of participants progress on to work towards their Montessori Level 3 or 4 qualification

Outcomes Evaluation and Monitoring

1. Use of questionnaire before and after training. Measure the number of questions answered correctly.
2. Use of confidence / self-esteem scale in transfer of knowledge
3. Data from final exam grades
4. Data from Sparkle staff registering to go on further with their training.

Training Programme

Timings

Phase	Date	Task	Trainers	Notes
1	March 8th – March 23rd	Two week practical training workshop on materials and curriculum	Michela /Michelle	Michela – 2 weeks (Travel to arrive on 7th) Michelle – 15th – 23rd
2	March 22nd	Practical exam	Michelle/Michela	Complete
3	Feb – March	Theory training and assessments on Montessori Philosophy – The environment / The teacher	Liz training on site Michelle/Michela marking in UK	Some of this completed during phase 1.
4	April – May	Theory training and assessments on Montessori Philosophy – The environment / The teachers	Liz carrying out on site	
5	June - July	Teaching Practice observations and assessment on Child development	Liz carrying out on site	
6	August	Graduation		

Training Plan

Module	Details	Extra Requirements
Practical	* 2 week workshop * Training on use of materials. This will support both early years children and primary children at Sparkle * Assessment to be short practical presentation and discussion on each area of learning.	Need to identify list of extra material to be taken out to Malawi by Michelle / Michela / Chris / Liz School will need to be closed for first week and for the second week just needs to be closed in the afternoons.
Written	* Theory delivery by Liz on 3 main modules The Montessori Environment The Montessori Child The Montessori Teacher	Modules to Liz in both hard copy and with the online materials ___just in case there is electricity and Wifi !!
	* 3 short written Short answer reflections	
Teaching Practice	* 2 formal observations carried out by Liz on classroom practice on each member of staff.	Maybe partnership work with Mari-beth on this to support teachers in the classroom
Re-sit opportunity		

Training schedule

Day 1

The Montessori Philosophy

Aims of unit

This unit aims to provide a general overview of the Montessori philosophy and pedagogy to give you an insight into Montessori practice and using the Montessori approach with children. The focus here will be to develop your basic knowledge of Montessori's founding principles, philosophy and methodology. As you progress through the course, you will learn how to apply this knowledge across the Montessori curriculum areas. This unit is therefore crucial in establishing a thorough foundational knowledge from which you can develop your understanding and application of the Montessori approach to education

This unit will cover

- A history of Dr. Montessori's life
- The principles of the Montessori approach
- The child, and their development
- The favourable environment
- The qualities of a Montessori teacher

Day 2 AEL (All day session - school closed)

Activities of Everyday Living and Prep of Environment

Aims of the unit

This unit aims to provide you with the principals of the Montessori approach to engaging children in activities of everyday living. You will explore the direct and indirect objectives of this area of learning and relate these to children's learning and development. The unit will present activities of everyday living as supporting a smooth transition between home and classroom, and as a foundation for the development of skills and future learning.

This unit explores the role of the Montessori educator in providing an environment that is favourable to the child's development by drawing on activities of everyday living. This unit will also introduce you to a range of practical activities and how to present these activities in the classroom.

This unit will cover

- Key principles of the Activities of Everyday Living
- Activities to develop Manipulative Skills
- Activities to develop Care of Self
- Activities to develop Care of the Environment

Day 3 & 4 (PM Sessions only)

Sensorial Education

Aims of the unit

This unit explores the Montessori approach to the importance of education through the senses as a foundation for learning and development. This will include the consideration of the senses in relation to Montessori philosophy.

With a Montessori approach to education, it is understood that children build their understanding of the world through sensory experience. You will be introduced to the influences on Montessori's thinking in the connection with the education of the senses and the construction of ideas and how these form a methodical approach to concept formation through sense education.

You will be introduced to a range of practical activities in sensorial education and explore how these activities can be presented in the classroom.

This unit will cover

- The key ideas behind sensorial education
- Refining the senses - Visual and Tactile
- The Stereo gnostic and Kinaesthetic senses
- Designing sensorial activities

Day 5 & 6 (PM sessions only)

Numeracy and Arithmetic

Aims of Unit

This unit provides the learner with insights into the Montessori approach to developing the child's capacities in mathematics. This will support the child's sensitive period for order and build on the foundations already laid in sensorial education.

The purpose of this unit is to introduce learners to the Montessori approach to working with numeracy and arithmetic. You will be introduced to the child's tendency for order and structure in building the foundation for mathematics. This unit will briefly revisit the concept of the 'mathematical mind' and provide opportunities for the exploration of a range of materials and activities which offer concrete experiences in working with mathematical concepts.

This unit also aims to introduce a range of practical activities that prepare the child for work with the Montessori materials and offer the opportunity for you to become familiar with the relevant materials and activities in this area of learning; and to support you to develop an understanding of the connections between mathematical concepts and other areas of learning.

This unit introduces a range of practical activities in this area and explores how these activities can be introduced in the classroom.

This unit will cover

- Links to Sensorial education
- Counting to 10
- The Golden Bead material
- The Seguin Boards
- Early Addition and Subtraction

Day 7 & 8 (PM sessions only)

Literacy

Aims of Unit

This unit aims to provide the learner with insights into the Montessori approach to literacy and language skills. This will include specific activities that prepare the child for literacy (reading and writing) and grammar. The unit introduces a range of practical activities and explores how these activities can be presented in the classroom.

As with other areas of the Montessori curriculum, the approach to literacy is one which has specific associated activities, but also has a wider integrated approach. Many skills come together in the process of learning to read and write, many of which are based on clear developmental skills, therefore this unit aims to examine how these developmental skills are nurtured in the individual child. In terms of preparation for literacy, books, games and listening activities play a vital role as well as preparation through other curriculum areas such as sensorial education.

This unit aims to include practical activities that engage the child's emerging literacy skills. It will consider how to present and extend literacy activities when working with children and to develop the practical skills to make purpose-made literacy materials for the environment.

This unit will cover

- Pre-literacy skills
- Writing
- Reading
- Early Grammar

Day 9 (PM session only)

Knowledge and Understanding of the World

Aims of Unit

This unit explores the Montessori approach to developing the child's knowledge and understanding of the world. This includes consideration of the principle of Cosmic Education and how this

is embedded in the daily life of children in a Montessori educational setting and what it means in the context of the lives of children, the Montessori setting and the wider community. The unit introduces a range of practical activities and experiences in this area and explores how these activities can be presented inside and outside the classroom.

This unit aims to provide the learner with the principles of the Montessori approach to engaging children in developing their knowledge and understanding of the world. Cosmic Education is a key concept in the Montessori approach, which is fundamental to a child's understanding of both their immediate and wider environment. This principle indicates that a child's understanding of the world should integrate first hand sensory experiences of the world and its richness to encourage enthusiasm, respect and responsibility for their immediate and wider environment.

Across many areas, developing knowledge and understanding of the world is approached form the starting point of direct, lived, first-hand experiences of the child. This is the starting point and foundation for nurturing the child's attitudes towards being a 'citizen of the world'.

This Unit will cover

- The principles of Cosmic Education
- The Montessori approach to developing children's knowledge and understanding of the world

  Applying the Montessori approach to developing children's knowledge and understanding of the world

Day 10
Preparation for the practical assessment (pm only)

Day 11
Practical Assessment

Day 12
Practical Assessment Certificates

PLEASE NOTE:
In the morning we should train on the floor, so we can observe each day the practice of a different teacher and give feedback straight away. This should start after the philosophy session the day before.

Appendix 28: One on one teacher meeting

Phase 1/2/3

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Meeting Schedule : Malawian teachers one on one meeting

Research Title : Exploring the introduction of Montessori Method of Education in an NGO school in Malawi.

Teacher name :

1.How long have you worked for Sparkle Foundation?

2. What are your current qualifications?

3. Do you agree with the Sparkle foundation vision for sustainable education and training?

Yes
No

Further comments

4. What is your personal vision of where you will be in 2 years time ?

Yes
No

Further comments – reasons why ?

5. What is your personal vision of where you will be in 5 years time ?

Yes
No

Further comments

Phase 1/2/3

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6. Is there one thing you have achieved since our last interview ?

Yes
No

Further comments

7. Is there one thing you have not managed to achieve since our last interview ?

Yes
No

Further comments

8. Are you confident in your knowledge of the Montessori philosophy?

Agree
Disagree

If you agree, can you tell me more about what you know ?

9. Are you enjoying your training?

Yes
No

If you answered YES, what do you enjoy ? If you answered NO what don't you enjoy?

Phase 1/2/3

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10.Is there anything you are finding challenging in your training?

Yes
No

If you answered YES, what are they learning?

11. Are you being well supported in your training?

Yes
No

Further comments

12. These are the targets you set in Phase 1 have you met them ?

Target	Met	Not met	New target

13. Why do you come to work at Sparkle everyday, please number in order of importance?

Money
Hours of work
Experience I gain
To gain qualification
For a future career with Sparkle
For a future career in general

Do you have any further comments ?

Appendix 29: Questions to use for children with their tours

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Guide for questions to use with photo tour with children

Question Number	Question
1	What is your favourite activity?
2	Where is your favourite place?
3	What makes you happy?
4	What makes you sad?
5	Where do you like to work?
6	Who do you like to be with?
7	What is the first think you do when you arrive in the morning?
8	What do you do before leave at the end of the day?