THE ROLE OF THE FOUNDATION PHASE TEACHER IN FACILITATING MULTIPLE INTELLIGENCES IN THE CLASSROOM

by

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submitted in accordance with the requirements for

the degree of

MASTER OF EDUCATION

in the subject

INCLUSIVE EDUCATION

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR. H OLIVIER

July 2014

Acknowledgements

Thank you to all of the amazing people who have encouraged, supported and guided me through this learning process:

My husband, Paul, for your fathomless depth of patience, love and support throughout my years of studying. Thank you for allowing me to pursue my passion for lifelong learning.

My children, for your support and for assisting me with technology when it was clearly lacking in my ability levels.

My supervisor, Dr Olivier, for your belief in me. Thank you for your words of encouragement and support over the past few years.

The dedicated UNISA Librarians in Pretoria for their ongoing support in my Literature Research. You are amazing ladies and UNISA is privileged to have you in their employ. The long hours of reading and thinking inspired me to pursue my goal of studying.

The Heads of Department at the different schools, without whom this study would not have been possible. Thank you for granting me the time to chat and allowing me to be part of your lives for the duration of the study.

Declaration of Authenticity

I declare that "The Role of the Foundation Phase teacher in facilitating Multiple Intelligences in the classroom" is my own work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

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Mrs M. De Vries 30 December 2013

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Abstract

Multiple Intelligences (MI) is a theory that has radically challenged the conventional perception of human intelligence. Individuals have different combinations of intelligences (strengths and weaknesses). Teachers who want to achieve success in facilitating the learning of all learners in their classes need to understand and respect the varied learning styles and differences in each individual. In formulating this study, I was interested in how MI is utilised in the classroom, enabling learners to solve problems individually and in society.

The aims of the study are to describe and understand the experiences of the Heads of Departments at their schools, in terms of whether teachers facilitate MI practices in their classrooms and how this impacts both on teachers and learners.

In this study I followed a qualitative approach and I employed a case study design. Data collection consisted of semi-structured interviews that were conducted with four Heads of Department (HODs), in different local school settings in an urban environment. I also used a research diary, observations and visual data collection techniques.

It was found that leadership plays a crucial role in how teachers understand and facilitate MI in their schools. There is a basis from which the HODs could be empowered to change the conditions where they manage, teach or facilitate. Teachers can be empowered to meet the challenges of implementing MI in their own planning, preparation and classroom practice.

Key Concepts

- Case study approach
- Multiple intelligences
- Facilitation
- Teachers
- Impact on learning

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The Intelligence Rap

The eight intelligences are really cool.

We all have them so no one is a fool.

Linguistic deals with writing and with words.

We have language – we're not animals or birds.

Logical-mathematical doesn't need to be a shock.

If you study real hard, you'll be smarter than Spock!

Spatial involves seeing, drawing, and art,

Creating different things and taking them apart.

In case you didn't know, kinaesthetic is P.E.

Get fit and coordinated athletically!

Naturalists are collectors of animals and plants.

They like to press flowers and count little ants.

All of these so far are really neat,

But I like musical 'cause it has a beat.

Sometimes, I feel lonely, without any friends,

But interpersonal skills put that to an end.

Intrapersonal skills are when you want to reflect.

For yourself, you should always have respect.

Now, I've come to the end of my rap.

Learn in many ways and you'll never be a sap.

A poem by Shawna Munson, a fourth grade learner, on Multiple Intelligences. Quoted in Campbell, Campbell and Dickinson (2004).

Chapter One

INTRODUCTION

1.1 Introduction

In 1983 Howard Gardner presented his model of Multiple Intelligences. He describes (1983, 2006) intelligences as the 'languages that humans speak', which are influenced by society or the cultures in which we live. According to Gardner, intelligences are the tools needed to learn, solve problems and create. Most people have the full range of intelligences and use them in personal ways. However, research suggests that educational programmes tend to favour the traditional academic intelligences, such as maths and language (Ronis, 2007; Schlemmer & Schlemmer, 2008). Further research is necessary to determine if there is a gap in how we utilise the full spectrum of intelligences, so that educators and learners can be encouraged to experience greater success and enjoyment in the learning experience.

According to Gardner (Armstrong, 2009), it is very important for us to be aware of and nurture all of the different human intelligences and their combinations. Figure 1.1 depicts the eight Multiple Intelligences (MI) adapted from Gardner's model, with each being of equal importance. Gardner (2006) explains that the MI theory has three outcomes. Firstly, all individuals possess the complete range of intelligences, which is what makes us human. Secondly, nobody has identical intellectual profiles as we have different experiences in life. Thirdly, one may possess a strong intelligence in a particular area, but not purposefully act intelligently. According to researchers such as Campbell, Campbell & Dickinson (2004), all learners have all eight intelligences, to varying degrees. These intelligences may be described as follows.

Verbal-linguistic intelligence is the ability to use words in thought patterns, to use language for verbal expression and to appreciate complex meanings. People with logical-mathematical intelligence find it easier to work with numbers – calculating, solving problems, hypothesising and carrying out complex mathematical operations. Visual-spatial intelligence concerns visualising objects in three-dimensional ways. Bodily-kinaesthetic intelligence relates to manipulating objects in the environment and accomplishing physical tasks successfully. Having musical intelligence is the ability to hear pitch, tone, rhythm and melody. Interpersonal intelligence relates to the ability to understand others and to interact effectively with them. Having intrapersonal intelligence, in contrast, refers to the ability to build a realistic perception of oneself and to use this knowledge to guide one's life.

Naturalistic intelligence concerns identifying and classifying objects, visualising patterns found in nature and understanding natural and created systems.

Human beings are all so different largely because they have different combinations of intelligences. If we recognise the whole range of intelligences in an individual, then we will have a better chance of dealing appropriately with others, and the many problems that we face in our own lives. In the classroom, educators have the potential to recognise the intelligences inherent in each learner and to facilitate according to the learner's needs and capabilities.

Much development of intelligences depends on how educators plan and teach or facilitate in the classroom. Prichard (2005) indicates that, when planning and teaching lessons, educators need to be aware that learners are individuals with unique characteristics and who will respond in different ways to material presented. Learners respond in different ways because they have differing needs, interests, abilities and strengths. In the Foundation Phase of school, all learners are expected to attain a certain level of competence so that they have strong learning foundations for future learning experiences. Rief and Heimburge (2006) point out that there is no uniform method or correct manner of learning, and Carson (2009) argues that no single approach or teaching style increases children's learning. Educators who want to achieve success in facilitating the success of all learners in their classes need to understand and respect the varied intelligences and differences in each child.

The MI theory has spawned much discussion regarding human intelligence. According to Thousand, Villa and Nevin (2007), planning and teaching could incorporate all intelligences to enhance learning in the classroom. By using creative teaching methods which appeal to all intelligences as described through the Multiple Intelligences (MI) theory, educators can create positive learning environments in which children can live, learn, think and solve problems. Prichard (2005) explains that facilitation using MI allows for learning in a variety of ways and encourages flexible teaching practices.

The MI theory supplies an alternative perspective in understanding and motivating all learners in the classroom and society. According to Gardner (Carson, 2009), MI will be recognised if we change our views regarding intelligence and find other ways to assess it. We also need better ways of teaching. According to Rief (2005), educators should see the unique potential of individuals and guide the learners to develop their intelligences through the creation of appropriate learning conditions.

South African school children are mostly integrated into a mainstream system. Educators are faced with many challenges, such as learners who differ in gender, age, race, culture,

language, religion, intellectual abilities plus physical capacity, all in one classroom. Educators have to take each of these factors into consideration when they plan and teach. Through a variety of activities designed to accommodate their different areas of strength, the learners will have an opportunity to use their varied intelligences in the classroom. Educators can utilise the diversity of intelligences to think, solve problems and create so that children can become effective members of their class, and in turn broader society. According to researchers Sands, Kozleski & French (2000), we must embrace this diversity in our educational system to develop children who will be socially, economically and politically effective in their future.

As the above discussion has shown, the MI approach to education develops from Howard Gardner's concept of multiple intelligences (2006). Each learner's intelligence profile hence consists of a combination of relative strengths and weaknesses which interact with each other. A MI approach to education requires that educators construct enriched experiences by facilitating activities in which students can become involved with the material personally, rather than just absorbing it in the traditional transmission-based style of teaching. These enriched learning experiences can help children with so-called 'different' intelligence profiles to develop their unique learning styles. Carson (2009) argues that knowledge of MI is important when integrating it into teaching practice as learners learn in different ways, as this leads to better performance in learning. Aborn (2006) concurs that MI supports the idea of changing our teaching to suit the individuals in our classes.

1.1.1 Teacher Facilitation of Multiple Intelligences

The rationale of this study is to understand what MI is, to find out if educators are facilitating MI, and to discover if it has significance in the selected school settings. Through research of this nature, schools can be helped by encouraging educators to utilise MI to create rich educational experiences for our diverse community of learners. When teaching children, educators often want them to learn the way they learnt. Yet not all children learn the way we did, or they might think differently. Each person acquires knowledge or processes information in a unique manner. MI encourages educators to explore other approaches to understanding intelligence. MI has the potential to cause educators to rethink how we can adapt the curriculum to accommodate the diversity of learners that we now have in our classes. By nurturing each individual's MI, the long-term implications for each learner's potential may increase. Ronis (2007) states that the MI theory helps educators understand how their own personal style (their actual intelligences) affects their classroom teaching style. According to Campbell et al. (2004), people rely on their intelligences to be successful in life.

MI adds value to education by suggesting that educators need to enrich their strategies and techniques beyond what is expected in a mainstream class situation. The MI model provides for the development of each learner's potential by using his or her strengths. Moran, Kornhaber and Gardner (2006) concur with psychologist Vygotsky who said that experience, or the manner in which learners internalise information, is important for intellectual and personality development. Hence, educators need to provide learners with rich learning experiences in all MI to make the learning experience personal rather than abstract. Beliavsky (2006) also agrees that teaching and nurturing each learner's MI will support Vygotsky's idea of children maximising their zone of proximal development. This zone of development occurs within the social environment. This implies that educators will facilitate learners' cognitive, social and personal development by utilising the MI in each individual.

1.1.2 Why Multiple Intelligences?

MI acknowledges a person's ability to understand and perform actions using one's different learning styles and abilities. Individual differences are emphasised and individuals are given an opportunity to learn and solve problems in a variety of ways. Campbell et al. (2004) say that problem-solving skills, such as listening and speaking appropriately in conversation, are of particular importance as they are influenced by the community or cultural setting in which one is born or raised. Educators rely on their own preferred intelligences or learning styles, according to their choices, when teaching their classes. Learning styles are synonymous with all eight MI. Campbell et al. (2004) contend that educators who present information in a variety of ways accommodate all eight intelligences and learning styles, and therefore offer children more opportunity for success because they make the learning situation more meaningful for them. Aborn (2006) suggests that learners can learn to utilise strategies to support their strengths and compensate their areas of weakness while learning using MI. Learners can also develop co-operative learning strategies by realising that they can work with others, such as in groups. Positive self-esteem develops in learners when they feel part of a group.

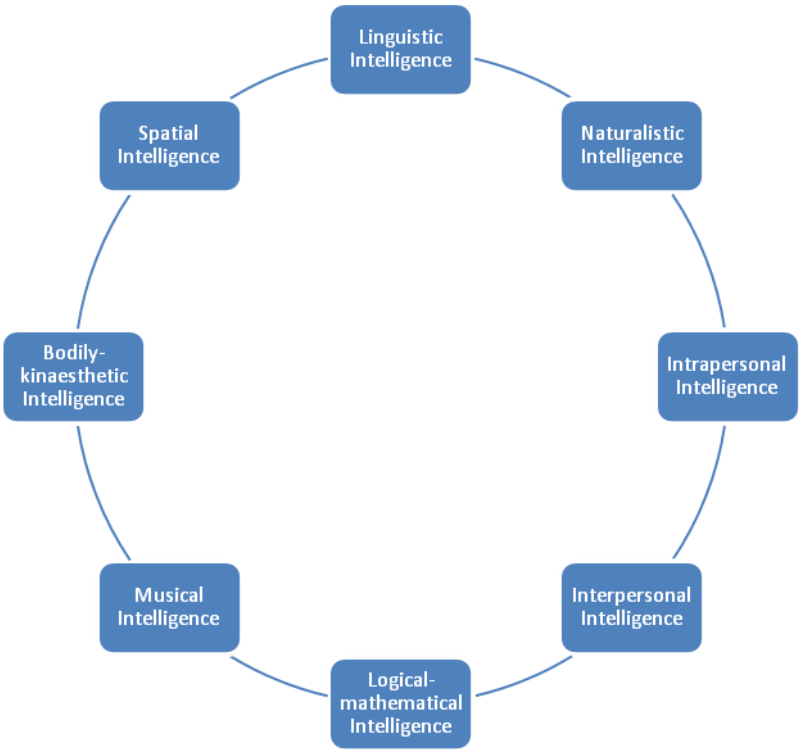

Figure 1.1: Diagram of the eight intelligences, adapted from Howard Gardner's model (2006).

1.2 Problem statement

As the researcher, I am concerned that children's individual learning styles and MI are not supported in the learning process in classrooms. Rief (2005) has argued that being aware of and sensitive to learning styles makes educators better able to teach a variety of learners. In this study I wanted to investigate what the role of the Foundation Phase (FP) educator is in facilitating MI in the classroom. It is my hypothesis that, if educators understood the MI model, they could deliver the curriculum material more effectively in class. This view is supported by Rief et al. (2006), who says that children, when allowed to use their strengths or intelligences, are better able to work successfully.

To test my hypothesis I chose Foundation Phase (FP) children as they are in the initial stages of their formal education at school. Early identification of a child's strengths and weaknesses

is important in FP in order to develop learning styles to enhance understanding for future learning experiences. Rief (2005) argues that teachers should facilitate classroom practice by building on children's strengths and offering support in areas of weakness. Gardner (2006) has called MI a "special gift of childhood" as children subconsciously make use of several of their intelligences spontaneously.

1.3 Significance of this study

There appears to be little research regarding the intentional facilitation of MI to impact positively on learners and educators in the classroom. We live in an era where there is such an explosion of knowledge that we need to make educators aware that there are alternative ways to educate children. MI supports the idea that truly differentiated teaching methods require a variety of strategies to stimulate learners and to encourage active participation in lessons so that all learners become 'smart' in all eight MI.

This study offers a different way of looking at intelligence. Mettetal and Jordan (1997) propose that the MI model provides an alternative way to think about cognitive ability or intelligences. He refers to how an individual uses his or her MI to learn, solve problems and to create. In this study, we looked at how teaching methods could develop a more positive impact on learning in the selected schools. The schools selected for the study, although urban, ranged in financial status, from government-funded schools to private. The practical significance of the research is to possibly indicate ways in which educators can adapt their planning and teaching to facilitate alternative classroom practices, leading to more inclusive outcomes. According to Haggerty (1995), MI lessons provide stimulation and variety while learners make or create products using personal interests and skills. Individualised styles, needs, strengths and interests are taken into account and the educator acts as a resource, facilitator and guide.

1.4 Assumptions

An assumption relevant to this study was that the FP educators in the schools selected for this study, have had similar education training within the borders of South Africa. That is to say that they have all completed matriculation as well as a professionally recognised educator's degree or diploma, and are adequately literate. The HODs selected for this study represent the professional teachers at the selected schools.

A second assumption was that all relevant educators have familiarised themselves with current policy regarding teaching, such as the Curriculum and Policy Statements (CAPS), and

are following the guidelines stipulated in such policies. Gultig, Hoadley and Jansen (2002) argue that curricula should be relevant and suitable for present and anticipated future requirements of the individuals, society and industry. This links to Gardner's idea of individuals becoming useful participants in their culture and society.

1.5 Clarification of terms and concepts

1.5.1 Definitions

The following definitions will provide guidance in understanding the terminology used throughout the study:

Foundation Phase Educator: By nature of his or her qualifications and experience, a Foundation Phase educator is appointed to teach learners in the first three years of formal education, within the parameters of Basic Education, as determined by the South African government.

Foundation Phase: This term refers to the first three years of formal education, in the Basic Education milieu, offered by the South African government to all learners. The learners range in age from five to nine years.

Facilitation: This is an action whereby a Head of Department or teacher supports a group of people, e.g. educators or children, leading to an understanding of common objectives and assisting them to achieve them. Facilitation has a strong base for future action. The facilitator supports learners in applying knowledge learnt in life situations. The facilitator helps learners to work more effectively and achieve better results.

Learning or working styles: Cuthbert (2005) points out that humans all learn differently and are influenced by their blend of past educational experiences, study practices and individual methods in relation to specific activities. This can be described as people's 'learning style', defined as how we assimilate, understand and retain information and experiences. Rief (2005) characterises learning styles as how a learner starts to focus on, process, and understand new and challenging information. Learning or working styles link closely to MI. For the purposes of this study, learning styles will be referred to as Multiple Intelligences (MI).

Multiple intelligences: Gardner (2006) uses the term "multiple intelligences" to refer to our skills or intelligences that assist us in understanding the world. The following intelligences were identified by Gardner as far back as 1983: Verbal-Linguistic, Logical-Mathematical,

Visual-Spatial, Bodily-Kinaesthetic, Musical, Interpersonal and Intrapersonal. The Naturalistic Intelligence was later added to his list of intelligences.

Mainstream education: This refers to the education offered in ordinary schools. According to the *Education White Paper 6* (Department of Education, 2001), ordinary schools are public schools that cater for mainstream learners and also for learners with special education needs. The local ordinary school would be the closest school to where a learner lives. Our schools are inclusive as it is the right of all learners to be educated together, wherever possible, in the mainstream education of a country with the appropriate networks of support.

Primary school: Primary school refers to the first seven years of basic, formal education offered by the South African government to all learners in our country. These years are grouped into Foundation Phase (the first three years); Intermediate Phase (the second three years); and Senior Phase (in which only the first year is located in primary school facilities).

1.5.2 Abbreviations

The following abbreviations were used in this study:

MI	Multiple Intelligences
FP	Foundation Phase
LOL	Language of learning
CAPS	Curriculum and Assessment Policy Statements
ZPD	Zone of Proximal Development
HOD	Head of Department
LSEN	Learners with Special Educational Needs

1.6 Research aims

The theory of MI was developed by Gardner (1986), not to change educational practices but to enrich classroom practice through developing strength in all areas of intelligence. In so doing, Gardner tried to expand the common view of intelligence beyond the Intelligence quotient or IQ score, as it is usually referred to (Ronis, 2007). I aimed to understand how the facilitation of MI by educators in the classroom could lead to improved academic results in the Foundation Phase, assuming that all learners can strive for academic and social improvement.

This study was designed to explore whether educators were aware of providing a rich teaching environment by utilising all eight intelligences. In other words, it aimed to

understand how educators facilitate classroom practice, dealing with daily situations during lessons, to accommodate the various intelligences inherent in the learners. It also sought to understand the challenges in implementing MI in the classroom.

1.6.1 Research questions

The following main question is pivotal to the study:

- How do educators understand the value of facilitating MI in Foundation Phase classes?

Secondary questions were as follows:

- What are the educators' understandings of the concept of MI?
- How do educators facilitate classroom practice to accommodate the various intelligences of learners?
- What possible challenges are there in implementing MI in the classroom?

1.7 Research Paradigm

I conducted my research from an interpretivist paradigm. This enabled me to conduct the study amongst participants in their environment. I aimed to understand the participants in terms of their own definitions, meanings and perceptions of their worlds. I aimed to understand how and if educators are facilitating MI, and also what their understanding of the concept of MI is.

1.8 Research Methodology and Design

Methodologically, I decided to conduct my study following a qualitative approach as I regard reality as subjective for each individual and I presume that social phenomena are context dependent. I intended to obtain a detailed understanding of the subject through face-to face interactions with selected people, such as Heads of Departments, in their settings, namely the schools.

I selected a case study design to investigate interpretations of MI, and the MI facilitation in everyday planning that could enrich classroom practice. According to McMillan and Schumacher (2006), a case study promotes better understanding of a situation and therefore facilitates informed decision making. They also explain that a case study contains descriptions (the sites, the HODs involved in the study and verbal descriptions); analysis of the data obtained; and naturalistic summaries, such as the interview transcripts and field notes. Case studies focus more on descriptions than analysis and interpretation.

Comprehensive descriptions are presented for each case study, based on the data collected. I elected to conduct interviews with HODs at the selected schools over a period of time. Important issues are highlighted in the case studies, based on themes identified from the interview transcripts, so that the complexity of the study can be understood.

The study took place in schools, using multiple data collection methods that are both humanistic and interactive. The participants involved in this study were myself and a HOD from four different schools. I chose these cases according to the criteria that each case had to be potentially informative to me, and that the participants had to be available and accessible.

A case study is similar to the phenomenological approach, which Patton (1990) describes as focussing on the experience of the phenomena, such as the HODs' experiences. In this study I attempted to identify whether educators are aware of the different MI inherent in children, whether they facilitate MI in schools, and how this impacts on educators and learners. These findings are presented in the case studies which follow, followed by an analysis of the data, and conclusions regarding the study's wider implications.

1.8.1 Literature Review

A literature review was undertaken to understand whether there is a need to undertake this research in our local community and whether the MI theory is facilitated in classroom practice. The literature review, in Chapter Two, focuses on MI theory and practice, the cognitive development of FP learners and the role of the educator in facilitating MI in classroom settings. The relationship between the three topics is elaborated on.

1.8.2 Site Selection

Four sites were purposefully selected as they were all local, in an urban environment, and the HODs were expected to be rich sources of information pertaining to the study. These sites proved to be feasible for my resources, such as time, transport and the involvement of participants in their school settings. The selected schools were (A) a wholly government-funded primary school; (B) a local Remedial Unit where parents support through payment of school fees; (C) an affluent multi-racial, private school; and (D) a multi-racial ex-model C school. All four of these schools are located in the Durban area.

Figure 1.8.2.1: A Government-funded primary school, where parents do not pay fees.

Figure 1.8.2.2: A mainstream school with a Remedial Unit attached to the school. Parents pay school fees, which are higher for learners in the Remedial Unit.

Figure 1.8.2.3: An affluent, multi-racial private school.

Figure 1.8.2.4: An ex-model C, multi-racial school where the parents pay school fees.

1.8.3 Research Participants

The participants of the case study consisted of four Heads of Department (HODs) in the Foundation Phase, one from each of the selected schools. They all had leadership roles as well as teaching posts at the relevant schools. Their schools were selected because they were accessible and represent varied financial statuses. The HODs were in turn invited to participate as representatives of the staff at each site. They were of the same sex but differed in teaching qualifications, experience, race, culture and beliefs.

1.8.4 Data Collection

Semi-structured interviews were conducted with each HOD at the selected schools. The HODs were all educators in the Foundation Phase at their schools. Additional data was recorded by means of observation notes and my diary, as well as visual data such as photos. This provided further evidence for the research.

As part of the research process, I felt it necessary to complete a MI checklist to reflect on my own personal intelligences. This improved my understanding of intelligences and assisted me in formulating more specific questions on the phenomena.

Observation of the HODs during the interviews was important. Informal observations and discussions took place at all four sites. This was non-reactive research which did not interfere with the daily routine of any class or school. My research plan was an emergent one, reliant on data collected. I was immersed in the case study, while at the same time endeavouring to understand the phenomenon through observation, interactions and discussions with the participants. The participants were all available on site as leaders.

1.8.5 Data Analysis

Following the interviews, I gathered the data and transcribed it, then extracted salient themes. Bailey (2007) and Babbie and Mouton (2001) both said that the triangulation of results, such as using a variety of data collection techniques, helped to ensure the quality of the field results. I found this to be true.

1.8.6 Quality Criteria and Ethical Considerations

I endeavoured to adhere continuously to ethical procedures throughout the duration of the study. According to Bailey (2007), ethical issues have to be addressed as such considerations are included in all aspects of the field research process. I was always conscious of the fact that I was a guest at the different sites; therefore I acted in an ethical manner towards the

participants and the research process. Initially I planned to obtain informed consent from the principals and the HODs at each school. Informed consent meant that the participants of the study became aware of the purpose of the research. A description of the intended use of data was also given to make participants aware of what was expected of them. The participants were led to understand that their participation in the research was voluntary. When gaining access to these sites, I gave assurances of confidentiality and anonymity. Dialogue formed part of the informed consent with each participant. McMillan and Schumacher (2006) caution that pseudonyms should be used to ensure confidentiality and anonymity, and the schools' and HODs' names have accordingly been disguised in the case studies. Throughout the study, quality criteria remained an important part of the process. I systematically reflected on who was in the research programme and their responses shaped the study. According to Bailey (2007), the internal validity of the study depends on the accurate representation of the setting. The credibility and trustworthiness of the study will depend on the results being plausible, authentic and believable. The methods I used to collect data were appropriate and honest. Results were derived from the data collected, and data was verified by hosting meetings with the participants where they could confirm the results. Sharing of data with participants was beneficial, as this strengthened the validity of the research.

1.9 Chapter Overviews

The following section gives an overview of the dissertation, highlighting the topics to be discussed in each chapter.

Chapter One contains the introduction and background to the investigation, a short explanation of the theory of MI, the purpose of the investigation, the role of the educator in facilitation, the relevance of learning styles and creative teaching, the significance of the research and an explanation of relevant concepts. This chapter gives an outline of my pragmatic perspectives as researcher, as well as an overview of the choices I made with regard to the research design, research methodology, ethical strategies and quality criteria.

Chapter Two offers a review of the literature regarding what is already known about curriculum differentiation and MI, leaning toward FP learners. The theoretical framework regarding MI was investigated. The focus of the review is on the MI theory and practice, the cognitive development of FP learners, and the educator as facilitator. Teaching strategies involving all eight MI are mentioned.

In Chapter Three I describe the research process. Attention is given to the research design of the study, including data collection methods, data analysis and interpretation. This chapter

also includes a discussion of measures to ensure rigour in addition to ethical issues considered.

Chapter Four reports on the findings of the study and highlights themes that will emerge during the analysis of the data. A comparison between expected and unexpected results is made alongside literature control, and implications for further studies are acknowledged.

The final chapter will provides a summary of the findings with regard to MI theory and practice, as well as how this contributes to current knowledge in the area. Directions for further research are given, along with ways to implement changes that will lead to better, more inclusive outcomes.

Chapter Two

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

According to Marshall and Rossman (1999), a literature review establishes evidence for the relevance of the research and contributes to the existing knowledge base concerning the topic. It also supports in developing a theoretical framework and refines the research question. In this chapter the concept of intelligence will be defined and Howard Gardner's theory of MI will be expounded on. Vygotsky's theory of cognitive development relating to the FP child in the South African context will be elaborated on and placed in the classroom context.

2.2 Background

South Africa has undergone prolific changes in educational policy since 1994, the dawn of our new democracy. Prior to this time and presently, our education system supports the uniformity of ideals. We have what Gardner (2006) describes as a 'core curriculum' through which all learners are presented with the same prescribed knowledge, skills and values. Our education system, according to Basic Education Minister Angie Motshekga (2009), has undergone systemic change to include new Curriculum and Policy Statements (CAPS). Inclusion has also become embedded in our national Constitution and educational policies (Department of Education, 2001). Inclusion refers to all learners having equal access and opportunity to basic education in mainstream classes, as long as it is feasible. This may not be possible for learners who experience severe barriers to learning, such as blindness or severe cognitive dysfunction.

Howard Gardner's (2006) characterisation of schools as very complicated institutions located in very complicated environments is highly appropriate to the complex South African school system. In South Africa, most children are integrated into an inclusive mainstream system. Educators are faced with learners who differ in gender, race, culture, language, religion, intellectual and physical capability all in one classroom. Educators have to take all of these factors into consideration when they plan and facilitate or teach. According to researchers such as Sands et al. (2000) we must include and use this diversity so that our education system can play a part in the social, political and economic programmes of the future.

Methods of teaching are not prescribed but educators do need to accommodate the diversity of learners. Facilitation of learning material is a teaching method intended to accomplish this.

A common method of teaching or facilitating in CAPS is differentiation. Differentiation refers to teaching or facilitating learning according to learners' cognitive ability, viz. top academic achievers, the middle group who achieve average scores, and the bottom group who cannot attain the grade requirements. Differentiation of the curriculum is common in all modern countries and there are principles guiding differentiation methods. South Africa is regarded as a developing country and our education system, including differentiation, has been developed to address the needs of all learners within the system. Armstrong, Armstrong and Spandagou (2010) contend that education policies should be developed alongside international trends. Sands et al. (2000) argue that the way in which the curriculum is defined affects the decisions made and options chosen for learners to achieve inclusive outcomes.

The old style of differentiation through ability grouping is under review worldwide. Current teaching practices include mainly visual and auditory teaching modalities. Researchers such as Rief (2005) and Borek and Thompson (2003) have found that many learners perform better when taught through curriculum differentiation, using multisensory learning. According to Campbell et al. (2004), restricting educational programmes to traditional linguistic and mathematical intelligences reduces the importance of other forms of intelligences. Those who fail according to the traditional systems of learning tend to possess a low self-esteem and may be lost to school and society. Gardner's approach (1986) redefined intelligence in order to reach a greater number of learners, and his model of intelligences is hence worth serious consideration.

2.3 Defining Intelligence and Cognition

Recorded debate surrounding the term 'intelligence' dates back to the sixth century B.C. Coon and Mitterer (2007) describe general intelligence as the ability to act with purpose, to think rationally and to deal sensibly with one's environment. According to Gardner, (in Campbell et al., 2004), intelligence can be defined as the ability to solve problems in everyday experiences, the ability to create new problems to solve, and the ability to give a valuable service in one's community or culture. Gardner (2006) further states that the way in which intelligence is expressed and the extent to which it is expressed, will be affected by the society into which one is born and the experiences that one has in that society.

Beyond this, there is much debate regarding a more specific functional definition of intelligence. According to Matlin, "cognition, or mental activity, describes the acquisition, storage, transformation, and use of knowledge" (Matlin, 2005:2). In other words, cognition refers to the mental processing of information. The mental processing of thoughts takes many

forms, such as deliberate thought, daydreaming, problem-solving and reasoning. This is how we solve problems, create problems and give service to our community or culture, as defined by Gardner (2006). It is clear from the above definitions and explanations regarding cognition and intelligence, that there are differing views. Hence, one must contemplate what is considered to be intelligent as pertinent to this study.

2.4 Why Multiple Intelligences?

According to Rief et al. (2006), learners must develop an understanding that people all learn differently and that there is no correct or incorrect way to learn. Each person's particular learning style affects how they think, behave and learn. Some people may prefer to learn through sensory preferences, such as auditory, visual or tactile-kinaesthetic means. Rief (2006) also acknowledges several cognitive-style learning preferences, such as global, left-brained or right-brained learners. Back in 1983, Gardner posed a theory that people use about seven intellectual capacities to solve problems and create products. Each intelligence has its own specialised mode of thinking. He added another intelligence, Naturalistic Intelligence, in 1995.

The Multiple Intelligence (MI) theory relates to the Multiple Intelligences, or learning styles, inherent in each individual. Gardner's theory (1986) acknowledges one's ability to understand and perform actions using one's talents. It is a pluralistic view in which individuals are acknowledged as having different cognitive abilities and styles. For the purposes of this study, I have viewed learning styles as synonymous with MI, and used the term MI throughout. According to Gardner (2006) and Armstrong et al. (2010), the term MI model questions the notion that everyone fits into a mass education system. Gardner (2006) describes an intelligence as a computational ability to process particular information, and he claims it is inherent in our human biology and our human psychology. According to Campbell et al. (2004), problem-solving skills are of particular importance as they are influenced by the community or cultural setting in which we are born or raised. Rief et al. (2006) also states that one uses one's strengths and weaknesses to solve problems or to develop products in a variety of ways. According to Ronis (2007), MI is a cognitive theory that attempts to explain how individuals can use their eight intelligences to create products and solve problems. We are dependent on our intellectual capacity to live and work successfully in society. Campbell et al. (2004) argue that as educators we rely on our own intelligences or learning styles, according to our preferences, when teaching our classes. Rief et al. (2006) maintains that educators who are aware of the diversity of MI in their classes

will be more effective in reaching more learners. This enhances understanding and enriches their personal learning experiences.

2.5 Howard Gardner's Theory of Multiple Intelligences

Since the creation of man, people have being trying to ascertain what best describes intelligence. Haggerty (1995) has said that intelligence is linked to aspects of human development, and that genetic factors may restrict or affect the manner in which an intelligence is recognised. Armstrong (2009) describes how, in the early 1900s, the psychologist Alfred Binet devised a test to score intelligence empirically. This test became a useful tool in assessing children. The Intelligence Quotient, or IQ as commonly known, became the norm in many Western countries and is still used in educational institutions in our country today.

According to Gardner (2006), many people since then have searched for the best measure of intelligence, such as Arthur Jensen who proposed looking at reaction time to assess intelligence, and Hans Eysenck who investigated looking directly at brain waves to predict a person's chances in life. The American Scholastic Aptitude Test rated people on a specific intellectual perspective. Gardner maintains that all of these assessments depict the "uniform view" and correspond with school curricula. According to Beliavsky (2006), such an assessment gives only a partial picture of one's intellectual potential.

In 1986 Gardner proposed a more pluralistic view of looking at intelligence. His viewpoint recognises many types of intelligence which take into account many more areas of human effort than previously recognised. It acknowledges that people have varied cognitive strengths and contrasting learning styles. According to Carson (2009), the recognition of MI included expanding and reformulating our human views of intelligence to create more ways to assess and teach intelligence. Gardner grouped intelligence into seven categories, namely verbal-linguistic, logical-mathematical, musical, spatial, bodily-kinaesthetic, interpersonal and intrapersonal intelligence. In 1995 he added the eighth intelligence, naturalistic intelligence. According to his theory and discussed by Aborn (2006), each of the eight intelligences has its own skills and behaviours. This MI theory can also be applied to the various forms of reasoning that people use cognitively, such as recalling information, problem solving and researching.

Other researchers support Gardner's MI model. Lupton (2006) agrees that Gardner's MI theory groups the different learning styles that children have. Schlemmer and Schlemmer (2008) mention that, of all the theories regarding intelligence, Gardner's still receives the

most attention. Rief and Heimburge (2006) state that all people have a unique way of learning and may require different methods of teaching in order to achieve success at school. Campbell et al. (2004) state that every person's life will be enriched through the greatest development of different kinds of intelligences. Hence, it may be said that Gardner changed views on the normal psychometric manner of answering items on tests of intelligence to indicate that person's place in society.

Gardner argued that intelligence is a computational capacity that processes information and that it originates in human psychology and biology. According to Gardner (2006), an intelligence has the ability to solve problems or create products that are of relevance in a specific culture or community. There is also a relationship between our intelligences and our symbol systems.

According to him, our intelligences entail specific operations which are activated by certain internal or external stimuli. They either work independently or several at the same time. Each intelligence has its own core operations and principles that define it, and therefore it cannot be grouped together with another intelligence (Gardner, 2006). Schlemmer and Schlemmer (2008) mention that each child has all of the eight intelligences, with strengths in some more than others. They further state that in traditional teaching, emphasis is often placed on logical-mathematical and linguistic intelligence while the other intelligences tend to be ignored.

Gardner and Hatch (1990), as mentioned by Prichard (2005), propose that it will benefit educators to identify learning strengths, or MI, and use those as the basis for learning and interaction.. Other researchers such as Ronis (2007) have also been concerned about the relationship between achievement and learning styles. Diane Ronis studied Gardner's theory and developed a table for educators to link each intelligence to a human behaviour that could be portrayed in the classroom. She further proposed teaching activities, teaching materials and instructional strategies for each intelligence. Sandra Rief and Julie Heimburge (2006) developed pie graphs of how people can understand intelligence by looking at their own intelligences and calculating a percentage of "smartness" for each intelligence. Campbell et al. (2004) associated learning for understanding using the MI model. Other researchers, such as Dunn, Dunn and Price (1985), Lemmon (1985) and MacMurren (1985), support the idea that children learn in different ways and their achievement in different learning areas is related to their learning styles. They also agree that when children are taught in ways, and with resources, that suit their MI, they achieve better results.

It is crucial for educators to know that children learn in different ways. Different MI have different needs that should be met for teaching to be effective and for successful learning to occur. Educators should know their learners' abilities, strengths and weaknesses so that they can develop approaches to teaching that will increase the number of successful learning opportunities, thereby allowing more learners to benefit. When educators know the MI of the learners, they can better plan learning strategies and activities that will benefit each learner's MI. When a whole class is taught a new concept in just one way, many of the learners may fail to grasp and apply it. This will be particularly evident if the learner's preferred style of learning differs from the educator's way of teaching. It will benefit each educator to know or to be aware of the possible problems that learning style differences may have. Teachers should be conscious of different MI and construct their lessons around a range of intelligences. It will also benefit parents to be aware of learning differences, thereby allowing them to continue to support their children in the same way at home and in the community.

Draper (2004), as mentioned by Prichard (2005), discusses the concept of the 'learning community' wherein both educators and learners adapt. Learning then takes on a social perspective and the learners become enculturated by joining the community. Facilitating using MI in the class will support Gardner's idea of solving problems that one encounters in daily living. As the learner adapts, he or she gains knowledge about that culture and community. As mentioned by Campbell et al. (2004), one purpose of intelligence is to create something or give a service that is important in society.

2.6 Howard Gardner's MI and Classroom Practice

Howard Gardner's model of MI has significant practical implications for teaching. According to Ronis (2007), each of the MI can be identified in teaching strategies across the curriculum, as the following table illustrates.

Table 2.6.1: The relationship between MI, teaching activities and instructional strategies (Ronis 2007)

Intelligence	Definition	Teaching activities	Instructional strategies
Verbal-Linguistic	To use language effectively	Verbal discussions Story telling Creative writing Word games	Listen, speak , read and write

Logical-Mathematical	To work with numbers, to reason logically and form conclusions	Problem solving Puzzles Critical thinking Mental maths Number games	Think, analyse, show calculations, explain processes, quantify, conceptualise
Spatial	To see dimensions, notice details and manipulate objects mentally	Art/craft activities Creative games Visual activities or representations	Imagine, see, draw, construct, colour, create
Bodily-Kinaesthetic	To use one's body skilfully	Sporting activities Tactile activities Drama and dancing	Create, feel, perform, touch and express
Musical	To appreciate, understand and create music	Rhythms, songs and melodies that enhance learning	Listen, sing, play, perform, feel the beat
Interpersonal	To be able to interact skilfully with others	Co-operative learning and teaching Facilitation Counselling Mentoring	Helping, collaborating with others
Intrapersonal	To be independent and self-reliant	Independent work Reflection Alternative learning options	Self-analysis, own behaviour and motivation
Naturalistic	To recognise patterns in the environment and to work outdoors	Learning through outdoor activities	Identify patterns and similarities in environment, relate to past experiences

According to Campbell et al. (2004), the eight intelligences can be grouped into three categories, namely, spatial, logical-mathematical and bodily-kinaesthetic. The ability to use one's intelligences are affected by a person's encounters in the physical environment. Linguistic and musical intelligence are object-free intelligences that are not dependent on physical objects. Intrapersonal and intrapersonal intelligences are person-related. Musical, naturalistic and logical-mathematical intelligences are object-related intelligences.

Schlemmer and Schlemmer (2008) say that it is not relevant to cover each intelligence in each lesson, but argue that when using MI, the educator is saying to the learners that she understands how they think and learn best and that she appreciates them as individuals. To be able to do this, educators must have a sound knowledge of the MI. Campbell et al. (2004) concur that educators need to recognise the intelligences in learners and should try to create positive learning environments. The next section will focus on each of the intelligences.

2.6.1 Verbal-Linguistic intelligence

Armstrong (2009) suggests that a person who indicates strength in linguistic intelligence is sensitive to phonological features of language, both in the written and the spoken word. Simply put, they enjoy using the spoken word and they have a way with the written word. He also points out that the areas of the brain associated with logical deductions in linguistic intelligence are the frontotemporal lobes, while the production of grammatical sentences occurs in Broca's area. Reif and Heimburge (2006) suggested that these children learn best through their senses, such as listening, speaking and seeing words. In the past, they were sometimes referred to as "auditory" or "visual" learners.

Campbell et al. (2004) observe that the four components of language, namely, listening, speaking, reading and writing, are valued in society and are fundamental to lifelong learning. They also list the characteristics of children who exhibit linguistic intelligence. Through listening, children respond to the sound and rhythm of the spoken word in speech, reading and others' writing. They hear, understand, remember and analyse what has been said. Through speaking, children apply the pragmatic rules of language effective to audiences, try to improve their own language ability in order to communicate effectively, and are able to reason, debate, explain and show appropriate emotional responses in varying situations. When reading, children understand, remember, communicate and enjoy elements of language. Through writing, children explain, debate, create knowledge and construct meaning in situations. They also try to enrich their own use of language. Campbell et al. (2004) further state that there are connections between the development and use of language and all other intelligences. All four linguistic skills, namely listening, speaking, reading and writing, can consequently be integrated throughout the school curriculum.

2.6.1.1 Facilitation implications for verbal- linguistic intelligence

Campbell et al. (2004) stress how important it is for educators to create classroom environments that are rich in language, and to engage the learners in using language in a variety of different ways. They point out that when children use language to express

viewpoints, question and think, they are developing metacognitive strength. This helps children to gain insight into what they really think and know. This implies that children's self-confidence will grow as they learn to express themselves in debates and discussions. Educators also need to apply different reading strategies to develop an enjoyment for reading in all children. They should teach learners how to use language effectively and create original written works. Educators need to develop questioning techniques to encourage children to become critical thinkers and to answer insightful questions. Learners will be able to experience a multicultural language curriculum, which is important in our diversified classrooms.

The use of language impacts on all other learning programmes. To improve the learners who do not have high linguistic intelligence, and to accommodate and enhance those who do, educators need to teach or facilitate the four components of language to develop personal skills and create opportunities for social interaction (such as collaborative learning which promotes a sense of belonging in the school community). The correct use of language has an influence on future learning experiences and communication, therefore educators should create learning opportunities that teach, stimulate, enrich and support the holistic development of each learner in the classroom.

2.6.2 Logical-Mathematical intelligence

Logical-mathematical intelligence has been defined by Campbell et al. (2004) as having many categories, such as calculating, thinking logically, solving problems, reasoning and discovering patterns and relationships. It is regarded as an important intelligence which can be integrated across all curricula. This intelligence has been widely studied by many psychologists. According to Armstrong (2009), the logical-mathematical intelligence includes the ability to use numbers effectively and to be able to reason ably. Problem solving skills are quick and may be constructed before being verbalised.

Armstrong (2009) points out that the areas of the brain linked to numbers are the frontal and the right parietal lobes. Ronis (2007) says that learners with logical-mathematical intelligence have the ability to work with numbers and are able to reason effectively. They are aware of patterns and relationships, can make hypotheses, draw conclusions and reason logically. Rief and Heimburge (2006) also say that learners who show logical-mathematical intelligence learn well through opportunities to experiment, looking for patterns and discovering things for themselves. According to Gardner (2006), the principal basis for conventional intelligence testing, along with language skills, is logical-mathematical reasoning.

Gardner suggests (Campbell et al., 2004) that Piaget's model of cognitive development was biased towards logical-mathematical intelligence as it progressed from sensori-motor tasks to concrete operational tasks. According to Campbell et al. (2004), children who show strength in logical-mathematical intelligence are able to grasp and understand objects, patterns and relationships in the classroom and environment. They understand concepts such as time, cause, effect and quantity and are able to use logic and reasoning to solve problems. The use of concrete objects to solve problems is replaced by abstract thought and symbols. Using mathematical skills, they are able to estimate, calculate, interpret and record information, as well as posing and testing hypotheses. They enjoy the challenge of complex operations and working independently or collaboratively. They are able to use technology to solve problems. Such learners may deviate from a learned problem-solving method and create their own processes.

2.6.2.1 Facilitation implications for logical-mathematical intelligence

According to Aborn (2006), Howard Gardner's MI theory can shape education by showing that each learner has unique potential and providing tools for teachers to use. From a young age, children naturally explore, investigate and enquire about their environment. They develop informal ideas concerning number, patterns, shapes and relationships from their daily living experiences. To build on this early knowledge, children need to be encouraged to become active learners in the classroom. Campbell et al. (2004) stress that to build on previous knowledge gained and to expand learners' understanding of Mathematics, learners must become active in more than the rote memorisation and computation techniques that dominated past approaches to Mathematics teaching.

All educators are not competent in teaching Mathematics and Science well but all educators can use and develop thinking skills in lessons across the curricula. By being encouraged to use logic, study patterns and use technology, learner's interests in Science and Mathematics may grow. Ronis (2007) suggests using critical thinking tasks such as brain teasers, puzzles and number games, problem-solving and mental calculations, to create a rich learning environment for learners.

Ronis (2007) further said that many different questioning strategies need to be introduced, such as open-ended questions and divergent thinking. Problem-solving situations should be related to the living context of the children, such as real life situations. Concrete apparatus is needed to demonstrate understanding. Learners should be allowed to estimate, predict and guess logical outcomes to problems. They should be encouraged to investigate patterns in

number. They need to be allowed to verbally express how they reached their conclusions. Technology should be encouraged as a tool to teach, learn and enrich understanding of concepts. Campbell et al. (2004) add that some mathematical concepts can be used in other curriculum areas, such as problem solving, logic and reasoning.

2.6.3 Visual-Spatial intelligence

Visual-spatial intelligence, as defined by Campbell et al. (2004), is a collection of related visual skills, such as visual discrimination, mental imagery, projection, spatial reasoning, recognition as well as the ability to duplicate imagery internally. All of this visualisation is central to spatial intelligence but is not directly related to the sense of sight. People process information through both visual and spatial modalities. According to Armstrong (2009), spatial processing occurs in the posterior regions of the right hemisphere of the brain. One needs to separate visualisation and sight. Blind people show a difference between spatial intelligence and visual perception.

Ronis (2007) describe visual-spatial intelligence as having the ability to notice details and imagine or manipulate things mentally. Campbell et al. (2004) hypothesise that visual-spatial intelligence may have inspired the first recorded human drawings. According to Armstrong (2009), the visual-spatial intelligence provides the ability to see in three-dimensional forms. The use of space in this intelligence includes activities such as creating a sculpture. Rief et al (2006) support this view by saying that people who are good at perceiving, imagining and recreating aspects of the spatial world are adept at using their mind's eye to make mental pictures and transfer these pictures into spatial forms, such as drawing, sculpting, modelling, dancing and painting.

Campbell et al. (2004) have found that not all children who reveal strength in this intelligence show the same skills. Some may be good at making models while others may be good at painting. Many children with high visual-spatial intelligence may show the ability to learn through using their sense of sight. Recognition of detail is important, such as faces, details, colour and shapes. They are able to direct and move successfully through space, such as finding their way to another class by relying on memory and not given directions. They think in picture form and tend to include much detail in drawings, they may rely on aids such as mind maps to recall information, and they may be able to decode information presented graphically, such as maps and diagrams. These children enjoy art forms and create concrete or visual designs, such as drawing, sculpting, doodling, painting and other activities for which the outcome is a visible object. Objects may be represented in different dimensions.

These children may observe or solve problems using new perspectives by utilising information about both the foreground and background because they are able to see the relationships in patterns. This implies that they are capable of abstract design and create original artworks, such as painting or creating three-dimensional models.

2.6.3.1 Facilitation implications for visual-spatial intelligence

When facilitating or teaching children, educators can create visual learning environments with large display areas, make use of visual tools and even use non-verbal communication. Campbell et al. (2004) state that visual humour may enrich the classroom situation. Pictorial representations such as flow charts, visual outlines, clustering of information and mind maps will enrich the learning situation. Visual-spatial intelligence can also be strengthened through encouraging learners to grasp, process and show their understanding with visual pictures, such as mindmaps or drawings. Brainstorming is a lovely, interactive strategy to emphasise main points and expand on concepts. Educators can use a variety of visual learning materials, such as highlighting key words and varying the shape of information. Board games can be utilised to memorise or teach facts. Visual Arts can become instructional lessons and may be integrated into other curricula and learning programmes.

2.6.4 Bodily-Kinaesthetic intelligence

Campbell et al. (2004) define bodily-kinaesthetic intelligence as people relying on their tactile or kinaesthetic processes for learning, and needing to experience or manipulate what they learn to process and retain information. Rief and Heimburge (2006) say that people who display strength in bodily-kinaesthetic intelligence show good ability in physical activities. Ronis (2007) agrees that strength in this intelligence gives one the ability to use one's body skilfully. According to Armstrong (2009), body movements are controlled by the motor cortex in one's brain. Each hemisphere controls the opposite side of the body.

Gardner notes (Campbell et al., 2004), that a separation between mind and body has emerged in latest cultural traditions. Some children may learn through touching and manipulating objects while others may learn through involving their whole bodies in the process, thus being engaged physically in the process of learning. Armstrong (2009) has also found that there is an indication that children do not all learn through their sensory modes, such as vision and hearing, as previously thought. These individuals need to rely on other channels to understand and remember information, such as touch and manipulation of objects. Some children use their entire body and the surrounding space when doing activities. These children learn through actions and multisensory experiences. According to Campbell et al.

(2004), these children can unite mind and body together in physical performances. Children experience life through these sensori-motor experiences. There is a biological, natural connection between the person and a physical movement or actions which may be executed without apparent training.

According to Campbell et al. (2004), learners with bodily-kinaesthetic intelligence enjoy exploring their world and objects through movement and touch, and generally have good co-ordination and a sense of timing. They remember best through action rather than instruction. They show good physical dexterity and participate in a variety of gross- and fine-motor activities. They are able to execute physical movements through mental planning and using selected strategies. Such children understand and live by healthy physical rules. They may create new dimensions to physical ability and create new types of activities in dance, sport and other physical endeavours.

2.6.4.1 Facilitation implications for Bodily-Kinaesthetic intelligence

Campbell et al. (2004) argue that bodily-kinaesthetic intelligence is the foundation of human intelligence because it is through our sensori-motor experiences that people experience life. They also contend that, as learning becomes more internalised in each child as he moves up to higher grades, so the opportunities for active, participatory learning reduces. This may be due to passive instruction from educators. An MI educator, however, can use a variety of strategies in lessons to involve the learners more actively and to stimulate learning.

Ronis (2007) describes instructional strategies to develop kinaesthetic intelligence, as building it, touching it, feeling it inside and dancing it. Learning may be more easily recalled through hands-on activities, such as including drama in lessons, where applicable. Physical education lessons and drama can be included in daily classroom practice. Creative body movements can be great activities in between lessons. Learning to manipulate apparatus can become part of lesson planning, as well as designing games to incorporate the fun element into learning situations. Excursions are a great way to physically involve each learner in the learning experiences of the day. Campbell et al. (2004) say that educators can create, through kinaesthetic learning exciting, memorable educational experiences for all children at school by establishing a physical learning environment. This may provide learners who do not learn through conventional means, an opportunity to succeed through kinaesthetic means. Being given an opportunity to master skills through kinaesthetic means may help such children to achieve success.

2.6.5 Musical intelligence

Campbell et al. (2004) define music as an auditory language with three components, namely rhythm, pitch and timbre. Music notes provide a universal symbol system. A person with musical intelligence is sensitive to auditory sounds and patterns, to rhythm, pitch and tempo. According to Armstrong (2009), the part of the brain involved in the perception and production of music is the right temporal lobe.

Zoltan Kodaly is quoted by Campbell et al. (2004) as saying that music is the evidence of the human spirit and is equivalent to language. Ronin (2009) defines musical intelligence as the ability to appreciate, create and understand music. Rief and Heimburge (2006) say that children with musical intelligence recognise, appreciate and understand pitch, rhythm, tone and melody in music. Campbell et al. (2004) point out that the musical intelligence has its own rules and thought structures which are not necessarily linked to other types of intelligence. Basically, music expresses itself and is unique to each person. Gardner (2009) says that the foundation for developing musically intelligent children begins at home by providing a rich musical environment. Musical experiences can be incorporated throughout curricula at schools.

Campbell et al. (2004) explain that children who show strength in musical intelligence listen and respond to a variety of sounds, such as in the environment, voices and musical sounds. They are able to discriminate between sounds, follow patterns and keep time to beats. They learn best through their sense of hearing, particularly if activities are rhythmical or linked to music, and they may collect sheet music or recorded music. They excel at playing one or more musical instruments, they may like to sing and drum, like the sounds of the human voice, and they may surround themselves with people who appreciate the same sounds as they learn from each other. These children may respond kinaesthetically to music by performing, conducting, singing or emotionally responding to the mood of the music. These children look for opportunities in the learning environment to hear environmental or musical sounds. Some people improvise with sounds so that they make sense to the person. They may interpret music differently to the original composer. They are also aware of different music styles and cultural influences.

2.6.5.1 Facilitation implications for musical intelligence

Campbell et al. (2004) maintain that educators can establish a musical learning environment by introducing music into the classroom. Learners can sing songs and listen to music related to the curriculum in all learning areas. Campbell at al. (2004) cite a study carried out by

Cockerton, Moore and Norman (1997), which showed that students achieved better cognitive skills when music was played. Music can be used across the curriculum in many different ways. Educators could choose appropriate background music to enhance learning skills, such as handwriting in FP, or learners could listen to songs to improve language skills. Ronis (2007) adds that learners could listen, create, rap, play and sing, thereby developing musical intelligence while gaining knowledge across the curriculum. Learners can play musical instruments and form bands at school. Learners can write their own lyrics and link them to learning subjects, such as a song about the water cycle. Researchers Mara Krechevsky and Mindy Kornaber (2010), who worked with Howard Gardner on Project Zero, said that educators who work with MI promote education through different art forms, such as music, drama, dance and visual art. They also said that working with MI encourages educators to use their strengths working in teams. Schools are encouraged to create rich learning experiences for all learners.

2.6.6 Interpersonal intelligence

Ronin (2007) describes interpersonal intelligence as the ability to be sensitive to subtle aspects of behaviour in people. Interpersonal intelligence helps us to understand and work with other people. Franklin Roosevelt, as quoted by Campbell et al. (2004), once said that for civilisation to survive we need to develop the science of relationships between people; the ability of everyone to live together, in society, in peace. To achieve this, we need to be able to understand our fellow men. According to Campbell et al. (2004), interpersonal intelligence stems from an ability to identify differences in individuals, especially related to emotional dispositions and intentions. This intelligence includes the ability to form and maintain relationships with others and to take on different roles in groups, such as leaders or group members. Hence, understanding and working with others is important in this intelligence.

Rief and Heimburge (2006) concur that people with strong interpersonal intelligence are aware of other people's emotions, understand their needs and can even be leaders or mediators in conflict situations. Armstrong (2009) says that the parts of the brain associated with this intelligence are the frontal lobe, the temporal lobe and the limbic lobe. The frontal lobes are extremely significant in interpersonal knowledge. There is biological evidence that close attachment to a mother, as well as social interaction skills, support the learner in developing interpersonal intelligence.

Children who display interpersonal intelligence display specific characteristics. According to Campbell et al. (2004), children with strong interpersonal intelligence like to bond and

interact with others. They recognise how to relate to others and sustain social relationships. They understand human emotions and talents, such as motivations, behaviours and skills. They can communicate with people effectively and may even be quite talkative. They have many friends and like to belong to groups. Their social skills are well-developed, they are able to maintain relationships, and take on varied roles within groups, such as leader or supporter, without being bothered about age or social status. Such people are able to influence the opinions of others; hence they succeed in team or co-operative activities. They are aware of social and cultural differences and their personality reflects in social interactions. Humour plays an important role in social relationships and they tend to make others feel accepted by making people relax and laugh. They enjoy organising activities and sharing ideas. Rief and Heimburge (2006) conclude that interpersonally intelligent people enjoy themselves and learn best when interacting with others.

2.6.6.1 Facilitation implications for interpersonal intelligence

Educators who display strong interpersonal skills are advantaged in many ways. British psychologist N.K. Humphrey has said that the best creative talent of our human mind is to effectively maintain human society (Campbell et al., 2004). Educators can achieve this effectively through planning multicultural, socially interactive lessons where children can understand the behaviour of their peers and learn about the consequences of their actions. Campbell et al. (2004) say that learning is more productive and children enjoy it more when they feel a sense of belonging and the classroom operates as a caring community. All children can be guided towards understanding relationships in the classroom and in society, such as conflict management in social situations. This will enable them to bond effectively with educators, parents, other children and the broader school community. These social relationships will last as they are able to relate well to others, in different ways.

According to Gardner (Campbell et al., 2004), the positive development of personal intelligences, both interpersonal and intrapersonal, establishes whether people will lead fulfilling, successful adult lives. Using these intelligences to live together in society and manage situations effectively is necessary for individuals and society. Educators should be better able to recognise and acknowledge the emotions and behaviours of the children they teach. To achieve this, they could teach children about the different MI. Educators will be able to assume different roles in facilitating teaching and learning experiences at school. Educators should be able to influence the opinions and actions of the children by being positive role models.

Communication will be influenced both verbally and pragmatically. These educators will be good negotiators in problem solving situations as they will be able to consider different perspectives and influence behaviour according to social standards. Their organisational skills will assist them to work with a variety of people of different cultural, social or ethnic backgrounds and encourage collaborative efforts for a common cause, be it educational, social or political. Educators could use strategies to develop problem solving strategies within learners so that they will be better able to be effective members of their society.

2.6.7 Intrapersonal intelligence

Armstrong (2009) relates intrapersonal intelligence to knowledge about ourselves and our ability to adapt our behaviour. It is an individual, or private, intelligence which helps us to visualise, plan and solve problems. Ronis (2007) characterises intrapersonal intelligence as an awareness of the subtle aspects of an individual's personal emotions. Rief and Heimburge (2006) describe intrapersonal intelligence as how well an individual knows and understands him- or herself. Introspection is an important aspect of this intelligence. Campbell et al. (2004) argue that introspection is very important to developing learners, who may become more ethical, productive and creative while at the same time showing positive signs of independence and interdependence. According to Armstrong (2009), the frontal lobes play a role in developing interpersonal intelligence. The part of the brain associated with intrapersonal intelligence is the same as for interpersonal intelligence.

People with well-developed intrapersonal intelligence often choose to work independently; they may daydream and they often follow their own interests or instincts. They excel at knowing their own strengths and limitations, they focus on their own personal needs and dreams, and can reveal their inner strengths through expressive writing, art or music. They may be original in thought and action. They learn best by working alone on individualised activities. They enjoy having their own space. They are conscious of a range of emotions and can express them individually. They tend to have a strong sense of themselves and be keen to recognise and follow goals. These people often live in accordance to an established ethical value system. They are curious and seek answers. They are independent and control their own progress. They like to give meaning and purpose to life experiences through self-actualisation. Supporting others is also important to them.

2.6.7.1 Facilitation implications for intrapersonal intelligence

Carl Rogers (1961) said that becoming a person is a slow process in which one develops a deep knowledge of oneself and others and experiences life to the best of one's ability

(Campbell et al., 2004). Campbell et al. (2004) maintain that parents, educators and care-givers serve crucial roles in developing interpersonal and intrapersonal intelligences, which begin to develop from birth along with one's genetic disposition, environment and experiences. These two intelligences, which are interdependent for the developing child as well as the positive, caring, stimulating environments that parents, educators and care-givers create, establish the foundations for healthy academic, emotional and physical growth. Hence, educators need to establish environments to nurture self-actualisation as learners need facilitation in relating their inner world to life experiences.

In the classroom, educators should set achievable goals and develop thinking skills through problem solving situations. Relationships need to be developed so that learners can truly know themselves and others and reflect on life experiences. Working together in groups sets the stage for intrapersonal relationships to develop and grow. Emotional intelligence can be developed through allowing learners to express feelings in classroom situations, such as discussions and creative writing. Feedback from working in groups will foster personal insight as well as interpersonal feedback. Educators, who teach or facilitate self-regard in a light-hearted manner, model a basic survival life skill. Being able to laugh at oneself is a pleasant way of enhancing self-understanding.

2.6.8 Naturalistic intelligence

This intelligence did not form part of the original group of seven intelligences. Initially, the naturalistic part was grouped into logical-mathematical and visual-spatial intelligences. Gardner later reviewed his criteria and hypothesised that naturalistic intelligence deserved independent recognition. According to Campbell et al. (2004), Gardner added this intelligence to his list in 1995. Ronis (2007) describes naturalistic intelligence as the ability to understand patterns in nature as well as subtle discrepancies among natural objects and forms of life. Rief and Heimburge (2006) describe naturalistic intelligence as having a special ability to recognise, understand and appreciate flora, fauna and other natural elements found in the environment. Armstrong (2009) explains that the area of the brain best associated with this intelligence is the left parietal lobe.

According to Campbell et al. (2004), children reveal this intelligence in many ways but they all enjoy observing and interacting with the natural environment. They can identify patterns in nature and they prefer to work outdoors. They look for opportunities to interact with nature through their senses; to observe, explore, discover, collect and care for creatures, plants, soil, weather patterns or anything related to nature. They are able to group objects according to

specific characteristics. Through using perceptual skills, naturalistically intelligent children can compare, classify, explain, and make and test hypotheses. They have the desire to learn how things work. These metacognitive abilities are also linked to the logical-mathematical intelligence. Naturalistically intelligent children are able to identify patterns, such as species of animals or the water cycle, and they enjoy learning about life cycles of plants and animals. They show empathy with nature and are interested in how systems change. They have a sense of cause and effect and may predict patterns, such as the weather cycle. They are interested in relationships between natural elements and man-made systems, and enjoy using equipment developed to understand nature better, such as microscopes, telescopes and so on. They may pursue careers that will enable them to work in the natural world, and may even discover new patterns, taxonomies or other relationships in the natural world.

2.6.8.1 Facilitation implications for naturalistic intelligence

This intelligence can be learnt, developed and strengthened in the classroom. As a result of urbanisation and parental working conditions, many children lack exposure to the natural world in their home environments. Educators can expose learners to the delights of learning about nature through field trips and designing lessons that take nature into the class. In South Africa we are blessed with a wide diversity of flora and fauna which could be brought into classrooms as part of the learning material for children to touch, feel and experience firsthand.

The use of technology, such as computers, can further enrich the lessons. Ideas that are learnt from naturalistic sciences, such as interdependence and relationships, can support other disciplines. Observing objects in nature may strengthen sensory perception in Language and Mathematics. George Washington Carver, as mentioned by Campbell et al. (2004), said that humanity requires people who observe, perceive, test, hypothesise and communicate ways to improve quality of life. The naturalistic intelligence is not isolated but links to learning programmes at school as it encourages children to observe, question and experiment. Foundation Phase educators can facilitate a love for learning through creating rich learning environments wherein the MI are encouraged to develop. To achieve this, some knowledge of cognitive development, such as Vygotsky's theory of cognitive development in children, is beneficial in teaching and facilitating.

2.7 Characteristics of a Multiple Intelligences Educator

Johnson and Kuntz (1997), as mentioned by Prichard (2005), found that specific qualities were evident in teachers who applied the MI theory in classroom practice. The MI teacher plans to teach in ways that incorporate as many intelligences as possible. General MI teaching incorporates more intelligences than traditional methods. Individualised teaching is structured according to the differing MI inherent in the children. According to Prichard (2005), learning styles can be adapted to MI and in different contexts. Educators should encourage learners to do MI self-assessments, hence making them aware of their own intelligences. The educators' opinions regarding assessment change once children are given choices on how their learning is to be recorded. Assessment becomes continuous and an integrated part of the learning programme.

Individuals have differing strengths and are likely to perform the same task in a variety of ways. According to Armstrong (2009), before adapting a model such as MI to the classroom, educators should apply it to themselves to gain a better understanding. Then they should be better able to personalise the model of MI and understand its theory. This should lead to creating a rich classroom environment wherein there is more active participation of all learners, using their MI, in learning. Hartshorne, Heafner and Petty (2013) quote Sobel (2013) who said that education is a living process. Applying MI will lead to greater success in learning for more children in the classroom. Hence, the classroom atmosphere will become more positive as the children gain respect for their own and each other's intelligences. Appreciation of differences in learners leads to greater involvement of the learners and a livelier, more creative classroom atmosphere. According to Smith (2008), Howard Gardner's work on MI has made a significant impact on thinking skills and practice in education. He believes in stimulating the mind to see outside the box of traditional education methods.

The MI theory also encourages self-reflection. Educators who accept their own MIs find that they have increased levels of self-confidence. Personal acceptance of one's strengths and weaknesses leads to more appreciation of each other's styles of teaching and learning. Educators begin to take risks. It is impossible for every lesson to lend itself to MI teaching. However, over a period of time the educator's planning will allow for a balanced, suitable set of MI activities for learning. Researchers such as Scoffham and Barnes (2011) have mentioned that times of happiness are connected to personal growth, health and development. When educators are content, they are more likely to be creative in both planning and facilitating lessons. This fits the MI concept. Happiness may support a positive approach to curriculum change, such as including the MI perspective in classroom practice.

A variety of learner responses should be the accepted norm, as well as a variety of ways to record work. For example, in a creative writing lesson, the learners may be given the option of writing a story, illustrating the story, doing picture/sentence captions, dramatising the story, retelling the story in dialogue form or using puppets, or sequencing sentence strips. The imagination of the educator defines the lesson content and outcomes. Individuals should be encouraged to use their preferred intelligences in learning. Instruction and activities should appeal to the variety of intelligences within the learners. There should be an opportunity for facilitation and flexibility in teaching methods.

According to Schlemmer and Schlemmer (2008), educators can differentiate learning activities using MI. This will make the learners aware that their educator values them as individuals and understands how they think and learn best. Prichard (2005) states that Vygotsky believed in individual people purposefully constructing their own knowledge and understanding. Also important is social interaction, in which the individual participates, such as through co-operative learning and classroom discussions. Hartshorne et al. (2013) cite Johnson and Johnson (1996) who maintain that the Vygotskian approach will strengthen behavioural learning and social interaction.

Prichard (2005) contends that educators' assessment of the learning made by learners should measure MI. This will occur when learners are allowed to respond differently in learning situations. In his view, educators should reward learners for showing individual style according to the material taught. Mara Krechevsky and Mindy Kornaber (2010), researchers who worked with Howard Gardner at Harvard University, said that MI supports schools in many ways. One way is to encourage educators to develop rich learning experiences for learners from different backgrounds. South African classes are filled with children from diverse backgrounds and this should encourage educators to utilise MI to facilitate learning in FP classes. To be creative and divergent in facilitating and teaching MI, educators need to understand how cognitive development occurs in learners.

2.8 Vygotsky's Theory of Cognitive Development

Among the psychologists who developed social learning theories, such as Albert Bandura, Jean Piaget and Ivan Pavlov, Lev Semenovich Vygotsky (1896 – 1934) wrote about an interesting perspective on the cognitive development of children. According to Papalia, Olds and Feldman (2008), Vygotsky focused his attention on the social and cultural processes that guided children's cognitive development. He saw cognitive growth as a collaborative process wherein children actively interact with their environment. He stressed that children

learn through social interaction. Vygotsky developed a theoretical framework for learning as a social process (Hartshorne et al., 2013). Through sharing activities and personal interaction with the learning material, using MI, children learn to internalise their culture's or society's manner of thinking and behaving.

In Vygotsky's model, emphasis was placed on language as an important part of thinking and learning about our world. Papalia et al. (2008) say that, according to Vygotsky, the more mature peers or adults involved in the child's life must support the child's learning before the child can internalise and master the learning content. This support and guidance will assist children to bridge the gap between what they are capable of doing and what they are not yet able to accomplish without support. Vygotsky called this the Zone of Proximal Development (ZPD). The word "proximal" means nearby or close by. Learners in the ZPD can almost perform tasks independently with some support. Through guided participation, they can successfully execute tasks. The adult's role in monitoring and guiding the learning slowly shifts from a educator-orientated to learner-guided approach. During this process, "scaffolding" occurs, which can be explained as temporary support provided by educators, parents and others whilst the learner executes the task until such a time that the learner can perform the task unaided. Scaffolding must be responsive to the learner's needs, to be effective. Vygotsky's main insight was that learner's thinking develops through dialogue with more capable people. Coon and Mitterer (2007) add that Vygotsky also had the belief that children participate actively in the quest to find and understand new information.

Vygotsky's theory still has important implications for cognitive development and testing in education today. This is particularly relevant in the FP, the formative years of basic education at institutions of learning. Parents, educators and caregivers play a vital role in what children know and learn. Children rely on them to understand how things work and to guide them in the learning process. All children have mental skills to perform tasks but the tasks may be too complex to be mastered alone. Learners working in the ZPD can make good progress if they receive support from their educators at school. Coon and Mitterer (2007) explain that when scaffolding, the educator uses knowledge and skills within the learner to further develop cognition. Initially, assistance is provided by a more knowledgeable person, then the learner attempts to work alone. The knowledge or concept becomes automatic through practice until the learner is confident and able to apply the knowledge independently. Thus the educator facilitates the progression into new mental territory. Dieterich (in Coon and Mitterer, 2014) cites Vygotsky who claimed that the reading skills of eight-to-ten year old children, who are

in FP, are closely linked to their mother's verbal scaffolding given at the ages of three-to-four years.

Children rely on communication to gain the knowledge, skills and values required to develop into independence. Adult behaviour is adjusted or adapted to give learners the required information to solve problems. In this way children learn about their culture and society. Our cultural context influences the way in which adults contribute to the cognitive development of children. We exist in a multicultural society which exhibits a wide variety of differences. In our inclusive school environments, educators support all learners in developing cognitive strengths valued by our particular society. They learn about cultural beliefs and values. Through adults' interactive involvement in learning, the children learn to observe and participate in classroom activities. Interaction is most beneficial in the ZPD, which occurs continuously in the FP classroom.

Beliavsky (2006) draws a connection between Vygotsky and Gardner's philosophies. She feels that Vygotsky's ideas should be seen through Gardner's theory of MI, and that Vygotsky's ZPD in children could be realised by using Gardner's MI theory. This implies that educators will teach developmentally. They will teach or facilitate with understanding, increase the learners' creative potential, and support social, personal and cognitive growth. She also believes in the use of practical apparatus when teaching concepts.

Other researchers such as Hartshorne et al. (2013) have also stated that in Vygotsky's theoretical framework, he placed importance on learning as a social process. Part of the social process is adapting to new information and change. Coon and Mitterer (2007) maintain that people are easily adaptable, and that adaption is important to coping successfully in our multicultural education system. In their view, educators should embrace changes so that children have greater success in learning and becoming part of society in the future.

2.9 Educators as Facilitators

Facilitation can be defined as developing knowledge and understanding in a learner where the message is in the method and not the content. Facilitation is a shared learning experience and the purpose of facilitation is to guide learners in their own learning. Jacobson and Ruddy (2004) stress that the process of learning is very important, and the educator plays an important role in the teaching or facilitating process. The role of the educator has changed throughout the last two decades and is still evolving. According to Jonathan Clifton (2006), facilitation is often viewed as an alternative to the traditional teaching method where the educator remains in front of the class and imparts knowledge to the children. He suggests that

both teaching and facilitation have their place in the classroom as different interactive methods.

Educators who use MI in planning and facilitating learning change the way in which they teach or facilitate. The educator allows the child to become responsible for his or her own learning, using MI. According to Rallis et al. (in Landsberg, Kruger and Nel, 2005) educators are facilitators who create classroom environments that should be full of learning opportunities for children to make sense of the knowledge, skills and values to be learnt (Landsberg, Kruger & Nel, 2005). Educators need to be organised so that they can support the range of learners, each with individual needs, in their classes. Hartshorne et al. (2013) explain that teaching or facilitation is personalised when knowledge is built on what learners know, are able to do and what they need to learn. Changes to teaching and assessment are made so that learners grasp and apply content meaningfully.

According to Jacobson and Ruddy (2004), facilitators need to ask the correct questions and guide conversation before, during and after an experience. This guides the learners towards new thinking, solving problems and learning. Sobel (in Hartshorne et al. 2013) mentions that educators create and solve problems in reality and that education is a living process in which learners are actively guided. Effectively it means that the learners will discover that the learning experience is true for themselves. In teaching, learners are required to memorise facts, whereas with facilitation, learners are guided or coached to develop their thoughts about the relevant information and to use it meaningfully. Facilitators should observe learner behaviour carefully, guide conversation in lessons and encourage knowledge to be applied.

As facilitators, educators should be aware of the changing needs of the learners and support them in assuming responsibility for their own learning. Clifton (2006) says that facilitator-learner interaction implies that the learner and the educator both have equal responsibilities. Educators should encourage understanding between learners and themselves. Learners need to be encouraged to pursue knowledge which should be taught in context; in other words, they need to understand knowledge in real life situations so that it can be applied holistically. Jacobson and Ruddy (2004) argue that a facilitator should show sincere curiosity about the learners and their learning so that profound learning occurs. Gardner (2006) states that individuals have the ability to grasp, understand and apply knowledge with the goal of becoming competent in the opportunities offered by a society.

2.10 Leadership in Facilitating Multiple Intelligences in the Classroom

James Spillane (2005) contends that in successful leadership, school principals and other leaders do not lead schools to greatness by themselves. Leadership involves or includes a mix of people. Leadership practice focuses on what people do and how they do it and why. The HODs need to work collaboratively with their departments at their respective schools, where they play a lead role in influencing facilitation and teaching. According to Gardner (2006), there are no tests to establish who will become a good leader. Leadership qualities arise naturally in situations and the leadership qualities speak for themselves..

Being a HOD in a school means steering the whole department. Gardner (2006) compares a leadership job to steering a ship. The leader has a long-term outlook, is concerned about the conditions in the school, sets a general direction, ensures that the necessary resources are available and inspires and encourages the educators, parents and children to stay on board. Gardner (2006) also points out that leaders' personal intelligences are important. Leaders need to communicate and negotiate with all of the intelligences inherent in people. The leader will be faced with different personalities and opinions on a daily basis. As a result, a leader needs to understand his or her personal strengths and weaknesses and to work well with the people within his or her workplace. Knowledge of one's interpersonal intelligence forms the support base for the successes of the other seven intelligences in the workplace. In Gardner's (2006) view, as a leader becomes more conscious of indicators of the eight intelligences, then that person should be able to grasp or capture indicators of intelligence as they occur in the normal workplace. This will prevent personal proclivities, such as strengths or bias, from affecting perceptions, performance and decision-making in the workplace.

2.11 Summary

On the basis of an extensive literature review, the MI model clearly offers an alternative viewpoint to defining intelligence. Researchers agree that there is no prescribed method to applying MI in teaching practice. I am of the personal opinion that MI is a good basis from which to develop strong teaching, facilitation and learning principles. Given the diversity in the classroom, one needs to be a MI educator and facilitate in such a way that will lead towards more balanced learners with better results in all learning programmes at school. In this way the learners will be better able to use the knowledge gained in different learning situations.

Traditional definitions of intelligence limit the range of skills to such as reading, writing and arithmetic. According to Prichard (2005), it is possible to have children work using their strengths while simultaneously fulfilling the requirements of a curriculum. There are many different ways in which to apply MI in the learning situation. Many individuals demonstrate strengths that are cognitive by nature, but they are not skilled with numbers and words, such as children with social and musical capabilities. Teachers need to be aware of the learners' different learning styles and strengths so that they can function to their full potential in the classroom. Prichard (2005) argues that it is important to give learners opportunities to participate fully in class activities in a wide variety of ways, and to give them full access to the curriculum, irrespective of their MI preferences. Physical attributes should be considered, as some learners prefer to sit and listen while others do not. Some enjoy individual tasks while others perform better in group situations. Recording of information can vary, such as writing prose, song, drama, drawing and oral debate. Educators need to adopt flexible approaches to teaching. They should make learners aware that there are different ways to approach tasks or solve problems, leading to purposeful outcomes.

Learners who exhibit differences successfully should be rewarded for their "out of the box" endeavours. Campbell et al. (2004) propose that classrooms can be transformed into learning enriched environments through thought, planning and enthusiasm. All too often excitement is missing from classrooms. Modern children need to be entertained and creative teachers can facilitate new, exciting learning activities in the classroom by becoming aware of the MI inherent in each child. Facilitating using MI presents a creative way of learning. Educators can inspire children to learn to the best of their abilities so that they can contribute meaningfully to their culture and society. This understanding suits Howard Gardner's definition of intelligence.

To be a MI educator and facilitate in such a way that will lead to balanced learners with better results, will benefit the society in which we live. From a negative perspective, educators who do not facilitate MI in the classroom may unknowingly restrict learning from taking place. Schlemmer and Schlemmer (2008) mention that in traditional teaching, emphasis is often placed on logical-mathematical and linguistic intelligence while the other intelligences are often ignored. The result of this overly narrow focus is that barriers to learning may occur in both the teacher and the learner.

Chapter Three

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

Chapter Two presented a literature review that concentrated mainly on the theoretical framework of MI. Detailed attention was given to the eight intelligences and their educational implications in FP classrooms. The role of the FP educator, as facilitator, was also discussed and Vygotsky's theory relating to cognitive development of FP learners was outlined briefly.

Chapter Three explains the processes used to gather data and conduct the research. There were many areas that were prerequisite to the success of this research project, such as a comprehensive literature review, understanding the principles of the MI theory, and interviewing the participants involved in this study. The research design is a case study in which semi-structured interviews occurred to investigate the lived experiences of the educators (through the four HODs) at the different schools.

Section 3.2 of this chapter explains the aims of this research, while Section 3.3 gives a detailed description of the research approach and design. It also explains my reasons for selecting a qualitative approach, with a case study design, in order to gather and analyse data relevant to the study. Section 3.4 describes the different strategies that were used, and how participants were selected. Section 3.5 explains how the data was collected. The process of analysing the data collected is presented in Section 3.6, and Section 3.7 describes the validity of the research. Lastly, in Section 3.8, ethical values are discussed. The chapter concludes with a brief summary.

3.2 Research aims

I have taught in South Africa for the past twenty-eight years. School policies and teaching ideas have changed over that time and I have personally experienced difficulty in applying new approaches and teaching strategies. Many colleagues have also experienced elements of resistance to the new approaches, such as we dealt with whilst implementing CAPS for the first time in 2012, in the FP. It is as a result of these personal experiences that the research aims have been formulated as follows:

- I aimed to understand how the facilitation of MI by educators in the classroom could lead to improved academic results in the Foundation Phase. The notion is that all

learners can strive for academic and social improvement. This study was designed to explore and describe whether educators actually understand how to teach and facilitate so that all children learn with understanding, with the focus on MI.

- I aimed to understand whether educators were aware of providing a rich teaching environment by utilising all eight intelligences. The study was designed to understand and describe how educators facilitate classroom practice, dealing with daily situations during lessons, to accommodate the various intelligences inherent in the learners. I also aimed to consider possible challenges in implementing MI in the classroom.

3.3 Research Paradigm

3.3.1 Epistemology

Interpretivism involves interpreting human behaviour in such a way that the background and past experiences of the participants are taken into consideration. It should be understood that making and interpreting meaning always takes place in a specific context and cannot be directly transferred to another context. My choice to employ interpretivism can be related to the aim of my study. I wanted to understand and describe how educators make meaning of MI in the classroom in the specific context (schools) that I selected.

3.3.2 Research approach

This study involved interacting with HODs in an attempt to describe their experiences utilising MI in FP classes. As a result I chose a qualitative approach which made it possible for me to obtain information-rich data from the HODs, from their own perspectives. According to McMillan and Schumacher (2006), in case studies, qualitative researchers study or investigate one phenomenon (such as utilising MI in FP classes) with small, specific, in-depth groups. In order to investigate this question, I selected a small, specific group of participants, namely the four HODs. Mertens (2010) maintains that one could explore and ascribe meaning to their own beliefs and assumptions. This knowledge is gained through an interactive process, such as interviews with the participants who have directly experienced facilitation of strategies in their classes. Actual facilitation practices, as well as attitudes and levels of commitment, were identified during the course of the study.

3.3.3 Research design

My research design was qualitative and descriptive, and made use of a case study approach to arrive at insights into each participant's subjective experiences. In a case study, Leedy and Ormrod (2005) point out that the researcher becomes an important part of the setting of the study, although the focus can be broad. The researcher must be perceived by the participants as trustworthy so that they will give open, honest answers to questions posed in the interviews. I chose to focus on the participants' experience regarding understanding and facilitating MI in their teaching, and how they interpreted their experiences. Qualitative studies may include several other interconnected themes, such as a naturalistic inquiry and the holistic perspective. In the naturalistic inquiry, the classrooms became the real world situations. With the Heads of Departments holding the interviews in their own classrooms or office, the threat of manipulation of location was minimised. The holistic inquiry focussed on the whole phenomenon being investigated.

I applied many different data-collecting strategies during the course of this study. Qualitative methods were used, such as participant observation, semi-structured interviews, field notes, checklists and text analysis. Observation and taking notes were also important ways to collect data.

Researchers such as Bailey (2007) and Patton (1990) indicate that triangulation of results is important in ensuring the quality of the field research carried out. Mertler (2012) states that triangulation means that there is more than one source of data used in a study. In this study, the data was collected from multiple sources, such as observations, field notes, interview transcripts and checklists, then triangulated and patterns sought. McMillan and Schumacher (2006) describe triangulation as involving cross-checking of data, data collection strategies, time frames and theoretical plans.

I interacted with four Heads of Department (FP) at different schools on different days and always after school. It was important to collect data from all four sites as the knowledge and experience of the HOD at each school were different. The location of these interviews remained constant. Transcripts of all interviews were made. The purpose of the interviews was for participants to explain or describe the phenomenon that we commonly share, namely our roles, as educators, in facilitating MI in our classrooms. Observation throughout each interview was important, including the body language and attitudes of the participants.

The learning programmes at all four schools could be associated with the eight intelligences, as outlined in the MI model. The learning programme Mathematics is generally linked more

to the Logical-Mathematical intelligence, while Verbal-Linguistic intelligence is linked mainly to Language. Other intelligences play either minor or major interlinking roles in the three compulsory FP learning programmes – Mathematics, Language and Life Skills. It was crucial to ensure that the HODs were familiar with the implementation of CAPS in all schools. They also needed to be open to the idea of change in, or alternative approaches to, mainstream teaching.

3.4 Data Collection and Data Collection Strategies:

According to McMillan and Schumacher (2006), a research design is the general plan that describes how the study was done. The objective of the design is to describe a plan for collecting empirical evidence that can be used to answer the research questions. As researcher selecting a form of qualitative research genre, I decided upon a qualitative, interactive method, specifically a case study. According to Stake (2000) case studies use a report format that conveys the experiences of people. Leedy and Ormrod (2005) explain that in case studies, a specific person, programme or occasion is studied for a specified period of time. The researcher relies on a variety of data sources, such as observations, interviews and reviews of documents that exist. According to Bogdan and Biklen (1998), as cited by Leedy and Ormrod (2005,) a case study is defined as a descriptive examination of a subject, a setting or an event.

To begin the case study, the researcher looks for people or places that may be sources of data to investigate the selected topic. Then the researcher collects data while at the same time analysing, exploring and reviewing data in order to make decisions about the next step of the research. McMillan and Schumacher (2006) say that in a case study design, the plan is emergent, hence research decisions depend on data gathered. The design can be changed as the researcher learns more about the topic. Case studies may also differ in terms of complexity. I chose to focus on utilising MI in FP class facilitation and teaching, and involved four HODs and their experiences in school settings.

According to Bogdan and Biklen (1998), observational type case studies are the most common type of case study. The focus of the observational case may be a specific group of people, a location or an activity at a location. Leedy and Ormrod (2005) point out that it is important to try to select a setting or group that is not overwhelming, for example in size. I selected four school settings to which I had easy access, and which suited the HODs' time constraints. According to Leedy and Ormrod (2005), a researcher has the opportunity to observe, make notes about what has been observed, and interact with participants in a case

study. I found that the more I participated in the study, the more I could learn firsthand what was actually occurring at each setting. This increased the chances of authentic realities being created in the data analysis stage.

3.4.1 Preparing for the interviews and observations

After completing the literature review on the topic of this study, I made contact with the four schools. I initially asked to speak to the principals to explain the purpose of the research and gain permission to make contact with the HODs. Permission from the principal was not necessary at the private school as the Foundation Phase HOD was regarded as a principal of her department, and the HOD herself gave permission to be interviewed.

According to De Vos (1998), participant observation was a term used by Lindeman as far back as 1924. He explained that that this entailed the manner in which people usually attach meaning to their world. The social constructs through which the HODs make sense of their school experiences will be understood best in this study through the phenomenological approach. According to Hatch (2002), the goal of observation is to attempt to understand the culture and social phenomenon being studied, in this case facilitating MI, through the eyes of the participants.

As the researcher, I also had to be emotionally ready to face the challenge that lay ahead, such as entering into the life world of strangers for the purposes of the study. Social interaction was one of the crucial data collection phases of this study, where information was collected in response to a prearranged set of questions. Some deviation from the questions was permissible and dependent on the responses from the participants.

Initially the participants and I were strangers to each other. I had to project myself in such a manner as to gain the support and trust of the participants from the start. Communication had to be basic, using everyday language for understanding. My first contact was made telephonically when I requested an informal interview. At the first informal interview, acquaintances were made. I then explained the sincerity of my intention to carry out the study, and set out the aims of the interviews and the expected results. I also explained practical aspects of the study, such as possibly recording the interviews and taking notes, as well as the location and time of the interviews. I endeavoured to establish a friendly atmosphere where the participants would feel comfortable and have the confidence to speak freely. Overall, the participants were made to feel important about their contribution to the study. Their special knowledge would help to develop ideas to enrich learning experiences for children. All four HODs agreed to participate in the study and confirmed their support.

3.4.2 Selection of Participants

I selected a HOD at each of the four local schools. The HODs will be referred to by pseudonyms for this study. The HODs were purposefully chosen because they were leaders at their respective schools and were involved in the development of the three FP learning programmes, namely Language, Mathematics and Life Skills, for their respective departments. All participants assured me of the good quality of the education being offered at their schools. The participants' work knowledge, personalities, adaptability to change and creativity were unknown to me at the start of the research.

The selected HOD participants were all well-experienced educators, each with around thirty or more years of classroom experience. Their experience over the years may have included applying familiar strategies repeatedly over the years without improving results. They might have been dependent on whatever system worked without considering the individual cognitive needs of the learners. An aspect that was taken into account was that experienced teachers and leaders at their schools may form strategies over the years that work for them. They may not want to be bothered with more work or new strategies that would require them to spend more time and effort in planning and preparation. Their personal opinions may influence the outcomes regarding developing learning programmes with other teachers in their departments. I have experienced firsthand that educators may doubt or even refuse to consider applying new or alternative approaches, such as MI, in their classrooms and schools. This was evidenced when Outcomes-based Education (1997) was implemented in our schools. Currently CAPS (2012) is being implemented in FP with some levels of resistance from teachers. Given my own position as a FP HOD, I was aware of my own opinion, viewpoints and personal experiences as possible limiting factors in the research results.

Table 3.1: Summary of participant characteristics

A summary of the participant characteristics follow in the table 3.1 below.

Head of Department	A	B	C	D
Type of school	A government-funded mainstream school.	A Remedial Unit attached to a mainstream, fee-paying school.	A private school.	A government school where parents pay school fees.
Years as a manager	3 years (1 in acting	3½ years	9 years	6 years Had taught there

	position, 2 as HOD) Taught there for 40 years prior to becoming HOD. Was a pupil at the school.			for 11 years prior to appointment as HOD.
Number of interviews	3	3	2	4
Teaching capacity	Full-time in grade 2 and managed the department with another HOD.	Managed the Unit and taught specific lessons in each class every week.	Managed the Department and taught specific classes each week.	Did not have a class of her own but managed the department and taught a specific lesson in each class every week.
Involvement in planning of programmes	Yes	Yes	Was directly involved in planning and implementing learning programmes in the school.	No
School facilities	Adequate infrastructure, quite drab. Minimal apparatus was noticed.	The school buildings were old but in good repair.	An affluent, well-resourced school. A lot of modern technology was evident.	This school had good facilities and the classrooms were stocked with useful apparatus.

3.4.3 Visits to the Sites

Each of the four school principals was contacted to explain the project and seek permission to access the sites and interview the HODs. They were also presented with a brief, written statement specifying the sites, the participants, the research activities and the research role. It was feasible to select these sites as they were easily accessible and in close proximity to each other, thereby eliminating transport costs. I was able to leave my school and arrive at another without keeping the participants waiting for long periods of time after school. Availability of the HODs to be interviewed was sought through telephonic contact and interviews were arranged at their convenience.

3.4.4 Field Notes

Detailed field notes are descriptions of interactions and observations at the sites. I kept my notes in chronological order with as much detail as I deemed relevant to the study. I recorded accurately what was seen, thought and what the participants at the schools actually said. These detailed accounts of conversations and informal interviews provided me with insight into the participants' lived experiences at their schools. According to Lofland (1971, as cited by Bailey, 2007), one should add to the field notes any behaviours or incidents that previously seemed insignificant at the time, but which become relevant later in the study. Naïve sketches, such as mind maps and other visual representations (charts), entertained my thoughts during the interviews and lessons. After the events, I wrote more detailed field notes in my reflective diary.

A variety of note-taking was used, such as planning notes, field notes, interview records, assessment notes and observation records. Meticulous, accurate notes served as data for the research. According to Bailey (2007), notes support the decisions made and maintain emotional stability. Visual information, such as photos, provided further evidence for the research.

3.4.5 Conducting Interviews and Observation

According to Bailey (2005), participant observation requires intense involvement in the selected topic of study. In this study, the selected topic was the utilisation of MI in FP classes. Leedy and Ormrod (2005) assert that in qualitative research, the researchers can be flexible and may move from one potentially significant object or event to another as it occurs. Observation is important in data collection for field research and is carried out in a variety of ways. In this study, my observations were open or overt. I participated at each setting, through interviews and observations. These observations were generally unstructured and occurred throughout the interviews in the selected rooms at each school. Observations focussed on what seemed relevant as events occurred at the sites, such as the physical properties of the sites, the participants' perspectives or the ways in which they attached meaning to MI, actions made by people, emotions expressed and body language.

As attested to by Patton (1990) and Leedy and Ormrod (2005), the advantages of this direct observation were as follows:

- The participants were involved in the social world of the phenomena, namely the school environment.

- I obtained an eyewitness account of events as they occurred in the natural settings of the participants.
- I experienced the complex, social interactions in the natural setting of the participants.
- This involvement offered me the opportunity to learn from my personal experience of each setting.
- It provided direct information about the behaviours of the participants.
- It facilitated non-judgmental, concrete descriptions of events as they occurred.
- I was given the opportunity to recognise unanticipated outcomes.

There were some disadvantages to the direct observation approach, such as:

- I may have offered a biased opinion of the experience according to my viewpoint. According to Leedy and Ormrod (2005), researchers must be careful not to confuse their real observations with their own interpretation of the phenomena. I endeavoured to guard against this.

Being inexperienced at empirical research, I may not have determined all that was important to notice. I may not have been aware of all the implications of what I observed; hence the accounts of observations may be slightly incomplete. Direct observation and the following analysis of the phenomena influenced the outcomes of the study. I noticed that my initial observation ideas changed as I became more confident throughout the study.

3.4.6 Field observations, research notes and supplementary data collection techniques

McMillan and Schumacher (2006) point out that the core of finding and corroborating varied perceptions lies in getting data from multiple sources, such as the HODs at different schools at varied times. Field observation is a technique which is important to all qualitative research. It includes detailed, direct observations and recordings of people and social interaction in everyday settings.

Field notes are an important facet of data collecting in qualitative research. McMillan and Schumacher (2006) describe data as field notes or observations of the events that occurred while the researcher was in the field. The notes are dated and the context is identified. Editing of the notes is necessary for people other than the researcher to understand. Some facts may be memorised and recalled later as part of the data collection. From these notes, I derived meaning from the experiences.

Supplementary techniques, as described by McMillan and Schumacher (2006), included the analysis of non-verbal communication, such as body language and pragmatics. McMillan and Schumacher (2006) add that photos and films are useful in validation because they are evidence of non-verbal behaviour and communication. Analysis of the non-verbal communication in this study proved valuable. Records of gestures, facial expressions and body movements were triangulated with the verbal data. This composite data revealed much about the HODs' responses to new strategies being introduced in the lessons, such as playing musical instruments and writing songs as an activity.

3.5 Data Analysis and Processing

Data analysis involves the collection of data, summarising it and gaining understanding from the information. After the interviews I grouped the data around themes or patterns to explain the experiences, and synthesised a description of the phenomenon in each school. The systematic analysing the data led to my analysing themes that emerged from the text. Douglass and Moustakas (1985) said that during data analysis the researcher initially looks for personal bias and removes the subjective involvement from the data. Preconceptions should be eliminated or clarified. Patton (1990) says that this analytical process is ongoing rather than fixed to a single event.

The semi-structured interviews allowed for the free flow of information. Leedy and Ormrod (2005) support this idea because similar kinds of information were obtained from each of the four HODs. The documents included all sorts of text, such as field notes, sketches, observation records and transcripts. The elements and essential structures of the data were uncovered and studied and key words were identified in the four interview texts and other notes. Key words or phrases were located within the statements which referred directly to the research topic, namely, facilitating MI in the classroom. These included recurring patterns, emotions, viewpoints, concepts and other points of interest. The meanings of these words, phrases, stories, behaviours and other responses were interpreted. The meanings needed to be investigated for what they revealed about the essence of the phenomenon being investigated. The data was then organised into meaningful clusters. Irrelevant or repetitive data was eliminated, and I offered a definition of the phenomenon in terms of patterns noticed.

Creswell (1998) as cited by Marshall and Rossman (1999), explains that the last stage of data analysis, or "structural synthesis", includes the "imaginative exploration" of all perspectives and meanings related to the experience. I then looked 'into' the experience for deeper meanings for the participants. To do so, I immersed myself in the text to gain a perspective of

the entire range of content of the experience. I found it valuable to withdraw from the situation for a period, thereby allowing insight and understanding of the phenomenon to take place. Finally I synthesised the deeper patterns and relationships and described the essence of the experience in a personal, creative manner.

An advantage of this interactive interviewing was that it allowed my personal experience to be combined with that of the participants being interviewed. The focus was on lived experiences and providing meanings for individuals. One assumes that the meanings will guide future actions. In practice, it was not easy for me to use my knowledge and experience creatively while at the same time holding onto the essence of the phenomena. I had to continuously step back and ask myself: "What is actually being experienced?" I needed to compare data from all four sites. I constantly checked the participants' responses and behaviours. It became relevant to notice reactions to the new strategies and ideas among the HODs. An advantage of comparison is that one may gain greater understanding of the phenomenon as it occurs throughout a study.

McMillan and Schumacher (2006) caution that data collection and analysis techniques must be valid, and suggest that qualitative researchers can use a combination of strategies to enhance validity. The data I collected had to be accurate and correlate with the research questions. In this study, participant observation and in-depth interviews occurred in natural settings, viz. the schools, which reflected the lived experiences of the HODs. It was important for me to continuously examine the data and maintain integrity throughout the study. The use of interviews, observations and field notes aided in broadening my understanding of the phenomena in question, and in triangulating my participants' perspectives for more accurate data interpretation

In this research, the trustworthiness of the data was determined through the fact that I was personally involved in the data collection, through interviews, personal observation, participant observation and other first-hand experiences. This study was based on actual events or experiences that formed the foundation for analysis and determined the outcomes of the study.

3.6 Quality Criteria

3.6.1 Validity

As McMillan and Schumacher (2006) point out, in qualitative research the researcher uses many strategies to enhance validity. I used fieldwork, interviews, discussions, field notes and observations. Sharing of data with participants was beneficial, as this strengthened the validity of the research. External validity is gained by generalising from the sample to a larger population or from one particular setting to another. Transferability, as described by McMillan and Schumacher (2006) indicates that the information gained in a situation could be applied in another similar situation. It is hoped that this research will increase knowledge regarding MI and facilitation, and show transferability to other settings.

3.6.2 Credibility and Trustworthiness

Bailey (2007) explains that the credibility and trustworthiness of a study will depend on the results being plausible, authentic and believable. Methods used to collect data were appropriate and honest and results were derived from the data collected. Data could be confirmed by hosting meetings with the participants.

3.6.3 Ethical Considerations

Educational research focuses mainly on people. According to Bailey (2007), ethical considerations permeate every detail of the research process. Bailey (2007) suggests that the researcher should ensure that consent is obtained from everyone involved in the research study, and should also ensure confidentiality by using pseudonyms for people and locations. As the researcher, I needed to protect the welfare and rights of those who participated in this research study. I made this a priority and all participants readily agreed to participate in the study. They gave informed consent and their privacy was protected. Confidentiality of data was assured. These factors brought in limitations to the type of study that could be conducted. As McMillan and Schumacher (2006) point out, participant discomfort and limitations as a result of certain laws and obtaining permission to conduct a study, are all factors that may influence the outcome.

3.7 Summary

The aim of the data collection and analysis stage was to describe the participants' experiences in the classroom, relating to MI. This chapter discussed the methodology used to determine possible answers to the questions, and in analysing the data obtained. The research took the form of a case study. According to Leedy and Ormrod (2005), there is no set structure for case study reports. I felt confident in presenting the problem, collecting and analysing the data and drawing conclusions. During the research process I gained valuable background information regarding MI and facilitation, which enabled me to be sensitive to the phenomenon I was studying. My professional experience with the phenomena helped me to understand the events and actions seen and heard from the participants' perspective. I rewrote the original research questions to refocus the significance after the research design was developed. As this was an emergent study, changes were acceptable.

This chapter has discussed the variety of data collection strategies used, such as interviews, field notes, and observations. Participant selection has also been discussed, along with the data analysis process and ethical considerations. Most importantly, I reflected constantly about the degree to which this study could be applied to other contexts or with other schools.

Chapter Four

FINDINGS OF THE STUDY

4.1 Introduction

In Chapter Three I described the empirical section of my study. I justified my research design, methods and approach. In this chapter I will report on the results of my study and discuss the themes that emerged during the data analysis. I will use verbatim responses to enrich my discussions and also relate the themes to existing literature.

Gardner (2006) recognises that people have different cognitive strengths and multiple intelligences, and developed a theory regarding MI. He recognised that everyone has all eight intelligences and uses them in different ways. The four HODs in this study had differing understandings of MI as well as MI in FP classroom practice. Whilst analysing data relating to this study, I looked for themes and found them pertinent to answering the questions related to this study. According to McMillan and Schumacher (2006), the narrative has to be framed in order for readers to understand the study and to extend the results to future research. The naturalistic context provided the framework for this study. The context was the schools and interviews in which the phenomenon, namely the facilitation of MI in FP classrooms, occurred. Quotations directly from the participants' spoken words give the narratives authenticity.

4.2 Research themes

The following themes emerged from the data analysis and were pertinent to the study:

4.2.1 Leadership and facilitating educators in MI

For the purposes of this study, leadership means that the HOD at each school is responsible for looking after the FP Department by facilitating and inspiring the educators, learners and parents in the learning process, using MI, and thereby creating rich or stimulating learning environments.

HOD A had taught at the school for forty years (HOD A, Int. 2, line 25) and had been in leadership at the school for about three years. She had acted for a year in 2010 and had been HOD since 2011 (HOD A, Int. 2, lines 31-32). HOD A stated that she met regularly with the

educators in her department and they "planned together" (HOD A, Int. 2, line 35). At these weekly meetings, they discussed work schedules, assessments, planning and other important departmental matters. This HOD chaired these meetings, thereby showing her position of leadership at the school.

HOD B had worked at her school for twelve years (HOD B, Int. 2, line 133) and it was her fifth year in leadership at that school. HOD B mentioned holding "Case Conferences" (HOD B, Int. 2, line 122) every week. At these case conferences, learners were discussed and the HOD facilitated the generation of ideas to support the learning process in the classroom. HOD B also mentioned that she taught in all classes and gave "support and encouragement" (HOD B, Int. 2, line 143) to the educators and learners. This proved her leadership ability in the school. HOD B also met with her educators but more on an individual level. They did not hold weekly meetings for the whole department. They focussed more on "individualisation" and on "adapt[ing] the learning programmes" for individual learners (HOD B, Int. 2, line 150).

HOD C had worked at the school for seventeen years. During this time she had been Head of Grade and had been one of the HODs since 2009 (about four years). HOD C taught "some classes" (HOD C, Int. 1, line 292) in the school every week, thereby indicating her leadership role in supporting the educators. She "oversaw the final product of planning" (HOD C, Int. 2, line 312) in her department, further indicating her role as leader in the department.

HOD D had worked at the school for twenty-two years, of which about thirteen years had been in a leadership position. She said that "it seems like forever" (HOD 4, Int. 2, line 436), which indicated to me that she may have felt confident in that leadership role or had always had a say in the management of the school. HOD D "taught in all of the Junior Primary classes each week" (HOD D, Int. 2, lines 438-439). She did not involve herself in the planning phase of her department and allowed "each grade to do their own planning" (HOD D, Int. 2, line 444).

Leadership skills appeared to be different among the four HODs. Gardner (2006) himself observes that we don't have tests to find out who could become a good leader. This is because leadership capabilities become evident in naturally occurring situations. Observing how long each HOD had been at each school, I could tell that their involvement in the school had been significant. Their interpersonal and intrapersonal intelligences must be considerable as they are able to manage their departments effectively.

James Spillane (2005) points out that in successful leadership, school principals and other leaders do not lead schools to greatness by themselves. Leadership involves a combination of people. In each department in my study, there was the HOD, educators in each grade and some specialist educators who formed the mix of people. James Spillane (2005) also mentions that leadership practice focuses on what people do, and how and why. This was evident through the HODs' interaction with other educators at each school, both at meetings and incidentally during school hours. Hence, leadership plays an important role in the facilitation of MI because the leader never tells a person what to do but rather guides them in the process of classroom practice. HODs B and C were aware of and understood Gardner's MI model and were keen to allow educators to facilitate using MI in FP classes, while HODs A and D did not possess the same knowledge.

As leader of this study, I deemed it necessary to apply the model of MI to myself by doing a mirror test to determine my actual intelligences and abilities. Gardner (2006) suggests the idea of mirror tests to help managers, or HODs in this case, make improved decisions and to diagnose what is working or not working. Campbell et al. (2004) assert that as educators we rely on our own intelligences or learning styles, according to our preferences, when teaching our classes. I aimed to prevent personal proclivities, such as strength or bias, from affecting the perceptions, performance and decision-making of the HODs in their relevant settings. This links to Gardner's statement (2006) that intrapersonal intelligence or knowledge of one's personal bias, weaknesses and strengths may support the success of other intelligences in places of employment. As I became more knowledgeable about intelligences throughout this study, I was better able to understand the influences of intelligences throughout the interviews.

4.2.2 Nurturing Multiple Intelligences in the Classroom

For the purposes of this study, I have characterised intelligence according to Gardner's definition of intelligence (2006) which states that intelligence has information-processing potential to create products and solve problems that are valued in a culture or society. This concurs with Campbell et al.'s (2004) definition of intelligence as having as the ability to solve problems in everyday experiences, to create new problems to solve, and to give a valuable service in one's community or culture. Educators need to develop the child holistically using a variety of strategies and practices. According to Schlemmer and Schlemmer (2008), educators can differentiate some activities using MI. This will make the learners aware that their educator values them as individuals and understands how they think and learn best.

All four HODs showed interest in developing the whole child academically. HOD B said that "we must work across broad areas to develop the whole brain" (HOD B, Int. 2, line 171). She also mentioned that "they push the children to greater heights. Educators solidify strengths to work on areas of weakness. The more interest a child shows in learning, the more inclined he or she will be to want to learn" (HOD B, Int. 2, lines 164-166). HOD C recognised that "each child is an individual and learns at a different pace, way and style. Children have different needs" (HOD C, Int. 2, line 318). Rief et al. (2006) suggests that educators who are aware of the diversity of MI in their classes will be more effective in reaching more learners. This enhances their understanding and enriches their personal learning experiences.

The schools where HODs A and D taught, offered the learners a wide range of academic learning covering the three learning areas, namely Language, Mathematics and Life Skills. They were not specific in viewing children as having MI. They tended to rely on group work in mainstream education, wherein all children did the same work with perhaps differing degrees of difficulty. They did not purposefully facilitate classroom practice to accommodate MI in learners. HODs A and D did not appear to be aware of the different intelligences inherent in children.

4.2.3 Facilitation of Learning

For the purpose of this study, the educators can be described as facilitators, developing knowledge and understanding in a learner using the MI inherent in each individual. Ashleigh Montague, as mentioned by Jacobson and Ruddy (2004), argues that the message in teaching is the method, not the content. She says that, when teaching in any class, the learning is a shared experience and the purpose of facilitation is to guide learners in their own learning. Educators should be able to know what enhances or stunts learning. Facilitation is a term used in schools but may not necessarily be understood in context. Throughout the interviews, the words "facilitation" and "teaching" were mostly used together. For the purpose of this study, understanding of the term "facilitation" and its application in the classroom was important.

HODs A and D did not appear to understand this term. HOD A said that it was "just another word for teaching" (HOD A, Int. 3, line 57) and she had never attended any courses "specifically" (HOD A, Int. 3, line 60) relating to this topic. At HOD A's school, they taught mostly in groups and she referred to grouping the learners in ability groups, namely top, middle and bottom. The core knowledge was the same for each group, but differed in level of

difficulty. Facilitation was not practised at her school as she lacked knowledge of this method of guiding learners. She said that she had not heard of Howard Gardner's theory (HOD A, Int. 3, line 62).

HOD D also said that children learn through group work, if the educators are that way inclined (HOD D, Int. 2, line 456). She had also "not really" heard of Howard Gardner's theory (HOD D, Int.3, line 469). HOD D regarded facilitation and teaching as "both teaching words" (HOD D, Int.4, line 553). At this stage, it was clear to me that facilitation did not occur at these two schools. It may be that the HODs at these two schools are unknowingly restricting the educational programmes to traditional linguistic and mathematical intelligences, and thereby reducing the importance of other forms of intelligences, as mentioned by Campbell et al. (2004).

As a facilitator, one should show sincere interest in each learner and his or her learning experiences so that genuine learning occurs. HOD B indicated that she was aware of the term "facilitation" and was able to explain that facilitation "is a strategy which is learner-centred" compared to teaching which is "often more educator-directed". She had attended a three day SAALED Conference "in the last few years" (HOD B, Int. 3, lines 178-182), thereby increasing her knowledge about facilitation. She further said that "facilitation was better than teaching" (HOD B, Int. 3, line 235). This HOD clearly understood the role of facilitation as well as MI in classroom practice.

HOD C clearly understood the term facilitation and was able to use it in her responses to questions. She specifically emphasised that she "most definitely" (HOD C, Int. 3, line 315) understood the difference between facilitation and teaching. She said that the educators at her school prefer "to facilitate rather than teach" (HOD C, Int. 3, line 324) and that they do accommodate the different multiple intelligences when facilitating lessons. To her, "all intelligences are linked" (HOD C, Int. 2, line 339). This HOD had endeavoured to learn more about facilitation and multiple intelligences through attending courses over the last few years (HOD C, Int. 2, line 330). This had placed her in a good position to facilitate MI successfully in classroom practice as she was aware of the different intelligences. This would have a positive impact on both the educators and the children in her department.

4.2.4 Educators' Knowledge and Understanding of Multiple Intelligences

Ponte, Ax, Beijaard, and Wubbles (2004) identify three different facets of knowledge in education, namely ideological, or the philosophy of education; empirical, referring to links between the education phenomena in the education reality; and technological, relating to

strategies, techniques and methods used in teaching. They have found that educators who paid attention to all three areas of knowledge, started to develop knowledge in all three areas. My understanding of Ponte et al.'s model of the facets of education is that, to develop knowledge in all three learning areas, educators need to facilitate more according to individual abilities and needs.

HOD B was very aware of all three aspects of knowledge. She understood the philosophy of Howard Gardner's theory, saying "he is the closest in trying to encapsulate intelligence" (HOD B, Int. 3, line 188). She understood the educational need to "work across broad areas to develop the whole brain" (HOD B, Int. 2, line 171). She had attended courses to develop in the ideological, empirical and technological areas of knowledge (HOD B, Int. 3, lines 182 and 186). HOD C believed that "each child was an individual and learns at a different pace, way and style. Children have different needs" (HOD C, Int. 2, lines 318-319). She also understood that "all intelligences are linked" (HOD C, Int. 2, line 339) and gave the overall impression that, at her school, every attempt was made to facilitate across the broad areas of teaching and learning. She said that educators do facilitate the different MI (HOD C, Int. 2, lines 369-371). This indicated to me that HODs A and D were more interested in traditional teaching and less interested in understanding the ideological and empirical aspects of education. Neither HOD A nor HOD D showed interest in learning more about facilitation and were comfortable with the traditional method of teaching, where the educator controls the learning situation by imparting knowledge and the learners respond as best they can in each situation.

HOD C said that "each child is an individual and learns at a different pace, way and style. Children have different needs" (HOD C, Int. 2, lines 318-319) and that "all intelligences are linked" (HOD C, Int. 2, line 339). This indicated to me that the HOD was perhaps unknowingly allowing each child to function and develop in his or her ZPD. Children in the ZPD, as described by Vygotsky, can successfully execute tasks through guided participation. The adult's role in monitoring and guiding the learning slowly shifts from a teacher-orientated to child-guided approach. During this process scaffolding occurs, which can be explained as temporary support from educators, parents and others whilst the child executes the task, until such a time that the child can perform the task unaided. Scaffolding must be responsive to the child's needs, to be effective. Vygotsky's main insight was that children's thinking develops through dialogue with more capable people. He also had the belief that children participate actively in the quest to find and understand new information (Coon and Mitterer, 2007).

4.2.5 Multiple Intelligences in the Classroom

In literature, learning styles are often referred to as intelligences. All of the participants in this study were aware of the different learning capabilities inherent in all children, yet they viewed these in different ways.

HOD B saw the different learning capabilities as working "more in terms of processing" and described her school's learning programmes as "multi-dimensional". By this she meant that they encourage "active participation" from the children in their learning process (HOD B, Int. 2, lines 154-158). HOD C was "definitely" aware that each child "is an individual" who has a different learning capacity and learns at "a different pace, way and style" (HOD C, Int. 2, line 318). HOD C believed in "group teaching" and "providing different worksheets" (HOD C, Int. 2, line 321). Additional teaching support, such as "Grade Floating Assistants" and "retired teachers", provided the learners with additional support (HOD C, Int. 2, lines 321-322). Rief (2006) suggests that educate who are aware of the diversity of MI in their classes will be more effective in reaching more learners. This appears to hold true for the learners at these two schools, as they were given the opportunity to use their MI to enhance their understanding and the educators enriched their personal learning experiences through individualised teaching practices.

HOD A viewed the different learning capabilities as pertaining to teaching children in groups. She further referred to "Special Class" work. On further investigation, she linked this to children "who can't cope in mainstream and go to Special Class" (HOD A, Int. 3, lines 48-50). Special class is now called LSEN, referring to Learners with Special Educational Needs. Therefore, at this particular school, children who do not fit the mould of mass education are sent along to another class. Their individual intelligences are not utilised in the learning process. Their unique way of learning, as mentioned by Rief et al. (2006), may not become recognised at all.

HOD D was unsure of this question but affirmed that "all children learn at different rates and do different things" (HOD D, Int. 2, line 449). She referred to the "different ways of learning", such as "visual, auditory, tactile, kinaesthetic and computer-aided learning" (HOD D, Int. 2, lines 450-451). Her reference to these learning styles indicated to me that this HOD was still using traditional teaching ideas and had not become familiar with Gardner's MI model. She too recognised that group work is important but that "not all teachers do it" (HOD D, Int. 2, line 456). However, she was aware that children, as mentioned by Rief et al.(2006),

do have a unique way of learning and may require different methods of teaching in order to achieve success at school.

4.2.6 Educators' Understanding of Multiple Intelligence Theory

For the purposes of this study, Gardner's theory of MI entails knowledge of the different MI inherent in each individual. My question was whether educators facilitate MI and how this impacts on educators and learners.

Of the four HODs, one clearly indicated (HOD A, Int. 3, line 62), that she had not heard of Gardner's theory of MI. HOD B clearly stated, concerning Howard Gardner, that "he is the closest in trying to encapsulate intelligence". She also noted that MI has social connotations because she said that "children who are not socially adept, developmentally, will be affected in the classroom" (HOD B, Int. 3, lines 188-189). HOD C was clearly in favour of MI and commented that Gardner "raises very valid points. His idea is real because it looks at more than one aspect of intelligence. Intelligence is not only figures that show how bright you are. It relates to the child as a thinker. It allows for doers, visual learners, etc. It allows for a variety of children's learning styles" (HOD C, Int. 2, lines 332-336). HOD D tried to create the impression that she knew about learning styles and had attended courses but could not be specific. She said that she was "not really" aware of Gardner's theory of MI (HOD D, Int.3, line 469).

Gardner's MI theory has been around since the eighties and has impacted education worldwide. Much literature has been written about this pluralistic view of looking at intelligence. Schlemmer and Schlemmer (2008) said that, of all the theories regarding intelligence, Gardner's still receives the most attention. Of the four HODs included in this study, two have embraced the concept of lifelong learning and found out about MI. This supports Prichard's (2005) opinion that it will be beneficial for teachers to identify learning strengths, using MI in practice when teaching and learning, and to develop those strengths as a basis for learning and interaction.HOD B and HOD C also appear to agree with Rief and Heimburge's (2006) statement that all people have a unique way of learning and may require different methods of teaching in order to achieve success at school. HOD B and HOD C also concur with Gardner's view (cited in Campbell et al., 2004) that every person's life will be enriched through the greatest development of different kinds of intelligences.

HOD B mentioned the important social aspect of Gardner's theory. She implied that a child needs to be socially adept in the classroom. This links to Gardner's idea, as cited by Campbell et al. (2004), that one aspect of intelligence is to create something or give a service that is

important in society. This is only possible if a child becomes socially adept and is able to work with others in the learning process.

HOD B also said that MI has social connotations because "children who are not socially adept, developmentally, will be affected in the classroom" (HOD B, Int. 3, lines 188-189). According to Papalia et al. (2008), Vygotsky focused his attention on the social and cultural processes that guided children's cognitive development. He saw cognitive growth as a collaborative process wherein children actively interact with their environment, and stressed that children learn through social interaction. According to Hartshorne et al. (2013), Vygotsky developed a theoretical framework for learning as a social process. Through sharing activities and personal interaction with the learning material, using MI, children learn to internalise their culture's or society's manner of thinking and behaving. HOD B appears to have understood Vygotsky's practical application of his theory.

4.2.7 Importance of Various Intelligences

Each of the four HODs had their own opinion regarding what they viewed as the most important to the least important intelligences. Their viewpoints were based on years of teaching experience. Three of the HODs viewed Verbal-linguistic Intelligence as the most important. I had to briefly explain the eight MI to HOD D as she was unaware of the different intelligences. From that brief explanation, she was able to quickly form an opinion. She said that the Verbal-linguistic Intelligence was "the most important. If you can't do language, you can't cope academically" (HOD D, Int. 4, line 528-529). HOD A showed no interest in MI but had her opinion regarding the most important aspect of learning when planning and facilitating lessons. She mentioned that "Language is important". Her reason was that "all learners in the school are second language learners. It's not easy for them" (HOD A, Int. 3, lines 66-67). She also said that "Language and reading are the most important for comprehension" (HOD A, Int. 3, line 87). HOD B likewise chose Verbal-linguistic Intelligence as the most important of the intelligences (HOD B, Int. 3, lines 194). HOD C had another opinion. She felt that "all intelligences are linked" (HOD C, Int. 2, line 339) and that Verbal-linguistic Intelligence is "the second important intelligence. Children must be able to communicate. Communication relates to everything else" (HOD C, Int. 2, lines 344-345). She further said that "Interpersonal Intelligence is one of the most important intelligences. It relates to people to form relationships and communicate" (HOD C, Int. 2, lines 431-432). She viewed Intrapersonal Intelligence as the third most important intelligence because "One has to be in a good space to learn. Personal development is very important" (HOD C, Int. 2, lines 347-348). This links the social aspect of MI to facilitation and teaching in the classroom.

Of the four HODs, HOD A was unable to specify which she thought to be the next most important intelligence. She did, however, affirm that "children cope with Maths if they understand the language" (HOD A, Int. 3, line 89). HOD B felt that Logical-Mathematical was the third most important intelligence (HOD B, Int. 3, line 201) while HOD C viewed it as the fourth most important (HOD C, Int. 2, line 350). HOD D viewed Logical-Mathematical as the second most important intelligence (HOD D, Int. 3, line 529). There may be many reasons for the differing position of this intelligence in the participants' ranking. HOD D tends to relate to the more traditional methods of teaching and viewed Language and Mathematics as more significant than the other MI, as described by Gardner.

It was important to observe that while not all schools may be aware of the theory of MI, they did all provide for lessons across the broad spectrum of intelligences, to accommodate the range of intelligences. Lessons such as Music provided for Musical, Bodily-Kinaesthetic, Spatial, Interpersonal and Intrapersonal intelligence development. All intelligences can be linked to Linguistic Intelligence. Art lessons and Drama provide for Spatial, Bodily-Kinaesthetic, Spatial, Interpersonal and Intrapersonal intelligence development.

Rief and Heimburge (2006) say that all people have a unique way of learning and may require different methods of teaching in order to achieve success at school. All four HODs did ensure that teaching across the curriculum occurred at their schools, but differed in their opinions regarding intellectual importance. Prichard (2005) argues that it will benefit educators to identify learners' MI and use those as the basis for learning and interaction. Different MI have different needs that should be met for teaching to be effective and for successful learning to occur. Educators should know their learners' abilities, strengths and weaknesses so that they can develop approaches to teaching that will increase the number of successful learning opportunities. When educators know the MI of the learners, they can better plan learning strategies and activities that will benefit the learner's individual styles.

According to Ronis (2007), each of the MI can be identified in teaching strategies in all learning areas in FP classes. When a whole class is taught knowledge simultaneously, many of the learners may fail to grasp and apply concepts taught. This will be particularly relevant if a learner's preferred style of learning or differs from the teacher's way of teaching. It will benefit each educator to know or to be aware of the possible problems that MI differences may have. Educators should be conscious of different MI and they should try to create positive learning environments.

4.2.8 Barriers to Learning

A facilitator should show sincere curiosity about the learners and their learning so that profound learning occurs (Jacobson and Ruddy, 2004). I found two of the HODs to have this enthusiasm regarding facilitation. However, not all showed the same reaction towards classroom practice. I identified the following subtle barriers to learning and endeavoured to understand how two of the HODs faced their challenges.

4.2.8.1 The Retired Attitude

HOD A appeared to lack this commitment and put her own feelings forward by saying that she was retiring next year and that "the next HOD must do as she is able" (HOD A, Int. 3, line 102). This despondent attitude seemed to rub off onto this HOD's work ethic. She also appeared to be simply tired of teaching. She did not appear to be conveying the true message of teaching and facilitating multiple intelligences in her department.

4.2.8.2 The Daunting Task of Teaching

HOD A also said that teaching has become "scary" (HOD A, Int. 3, line 97). This appeared to imply that she lacked the drive and enthusiasm necessary to motivate and challenge learners to develop to their full potential. She tended to blame others for many ailments, such as the children "getting weaker, lack of skills, pressure and demands placed on teachers" (HOD A, Int. 3, lines 97-100). HOD D also expressed an array of comments regarding how teaching had changed for her (HOD D, Int. 3, lines 523-532). It appeared to HOD D that teaching "was more fun" in the past (HOD D, Int. 4, line 544). Perhaps this was partly because she was younger then and better able to rise to the challenges of teaching. HOD D also mentioned that there is "no opportunity to be different" (HOD D, Int. 3, lines 539-540). She also said that "we don't think of alternatives, we just teach" (HOD D, Int. 3, line 537). This indicated to me that perhaps the HOD was justifying her position on teaching. This may be a barrier to facilitating and using MI in teaching and learning.

4.2.8.3 Being Socially Adept at School

HOD B also understood that barriers to learning exist in learners, such as those "who are not socially adept, developmentally, [who] will be affected in the classroom" (HOD B, Int. 3, lines 188-189). The methods used at her school supported developing each learner holistically, and aimed to reduce barriers to learning.

4.2.8.4 Vocabulary

HOD D was unaware that "facilitation and teaching" were anything more than "both teaching words" (HOD D, Int. 3, line 553). HOD A also said that "facilitation was just another word for teaching" (HOD A, Int. 3, line 57). This may impart the incorrect attitude towards the educators in their departments and cause a barrier to learning among the learners.

Campbell et al. (2004) said that classrooms can be transformed into learning enriched environments through thought, planning and enthusiasm. All too often excitement is missing from classrooms. I found that barriers to learning were perhaps unconsciously developed through the HODs' attitudes, such as the daunting task of teaching and the ill-informed use of some vocabulary. Our modern children need to be entertained and creative educators can facilitate new, exciting learning activities into the classroom by becoming aware of the MI inherent in each child. Facilitating using MI presents a creative way of learning. Educators can show commitment in their daily teaching practice and inspire children to learn to the best of their abilities so that they can contribute meaningfully to their culture and society. This understanding suits Howard Gardner's definition of intelligence. From a negative perspective, educators who do not facilitate MI in the classroom may unknowingly restrict learning from taking place. Schlemmer and Schlemmer (2008) mention that in traditional teaching, emphasis is often placed on logical-mathematical and verbal-linguistic intelligence, while the other intelligences are often ignored.

4.3 Conclusion

Interpretation of data is subjective and each HOD had her own viewpoints. I endeavoured to explain the dominant themes so that the research questions could be answered in the best possible way. Some unexpected data emerged throughout the study, such as the barriers to learning. That is acceptable as this is an emergent study. Some of the HODs were aware of developing trends in teaching, such as facilitation and MI. They were aware of the different intelligences as described by Gardner, and of the benefits of facilitating MI to enrich the learning situation. They have adapted their teaching strategies accordingly.

According to Draper (2004), as cited by Prichard (2005), the concept of the learning community is developed wherein both teachers and learners adapt. Learning then takes on a social perspective and the learners become acculturated by joining the community. Facilitating using MI in the class will support Gardner's idea of solving problems that one encounters in daily living. As the learner adapts, he or she gains knowledge about that culture and community. This idea supports Howard Gardner's theory of MI from its social

perspective, namely that one aspect of intelligence is to create something or give a service that is important in society.

In the next and final chapter of this study I summarise all the previous chapters. I reach final conclusions by reflecting on my research questions, then I conclude by making recommendations for future projects and practice.

Chapter Five

RESEARCH CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

According to Smith (2008), Howard Gardner's work on MI has made a significant impact on thinking skills and practice in education. Gardner believes in stimulating the mind to see outside the box of traditional education methods. This study attempted to understand whether educators facilitate and teach using the MI model. This chapter provides an overview of the entire study. The research is summarised and the limitations of the study outlined. Conclusions are drawn and recommendations presented, including areas for further research.

5.2 Overview of the Investigation

I set out to investigate whether educators understand MI in classroom practice, whether they utilise MI and if it impacts on teaching and learning. The HODs' views on their role in influencing educators in the learning process were very important in this study. There appeared to be a need to change the teaching methods using the MI approach to enrich the learning situation and effectively reach more learners.

Gardner (2006) defines intelligence as the ability to solve problems in everyday experiences, the ability to create new problems to solve, and the ability to give a valuable service in one's community or culture. He established eight intelligences that are inherent in each person in different degrees, each with their own set of criteria. According to South African researchers Van den Berg and Nieman (2007), learners will have a good opportunity to develop their intelligences in the class by being given a variety of activities. These activities must accommodate their different intelligences. Ronis (2007) explains that the MI theory attempts to explain how individuals can use their eight intelligences to create products and solve problems. There is also a close relationship between Gardner's theory and Vygotsky's theory because both theories are child-centred and value each learner as an individual. Each person is capable of learning and possesses all of the intelligences to differing degrees. Individuals learn best when allowed to proceed at their individual level, using methods that enrich their learning.

The main body of this research study was divided into four chapters. In Chapter One the process leading to the study was discussed. I felt that there may be a need to change the

teaching methods which are followed in local schools, and I had observed that, while educators have the power to make the necessary changes, they often appear to be resistant to change. This chapter presented the research problem, research aims and research design. Particular reference was paid to MI, and explanations for utilising the different learning styles inherent in children through facilitation or teaching were expounded upon. Howard Gardner's theory of MI was of particular interest for implementing teaching strategies in classroom practice.

The study took the form of a case study which contains a description, analysis and naturalistic summary of the phenomenon in each school context. The phenomenon under investigation was whether educators are aware of the different intelligences inherent in children, whether they understand MI, whether they facilitate MI, and how this impacts on educators and learners.

Chapter Two contains the literature review. A brief history of intelligence testing formed the initial part of the chapter. Such testing is limited to the Binet standardised form of testing which is still currently practised in our local school system. A limited dimension of intelligence is assessed in this method of testing. This narrow focus led to the development of alternate theories of intelligence, one of which was Howard Gardner's MI theory. Campbell et al. (2004) define intelligence, using Gardner's approach, as the ability to solve problems that occur in life, the ability to create new problems to solve, and to be functional in one's society. Gardner defined eight areas of intelligence, namely, verbal-linguistic intelligence, logical-mathematical intelligence, naturalistic intelligence, spatial intelligence, bodily-kinaesthetic intelligence, interpersonal intelligence, musical intelligence and intrapersonal intelligence. Gardner (2006) gives the following brief definitions for the eight intelligences:

Verbal-linguistic intelligence refers to one's ability to use language to communicate effectively, either in verbal or written form. Logical-mathematical intelligence refers to the ability to use numbers when solving problems through logic and reason, using various methods of calculation. Naturalistic intelligence refers to having an understanding of nature, and classifying patterns and relationships that occur in it. Spatial intelligence refers to one's ability to think in three-dimensional ways. Bodily-kinaesthetic intelligence entails using one's body and personal space to manipulate objects and carry out physical skills. Musical intelligence refers to an ability to be sensitive to tone, rhythm, pitch and melody. Interpersonal intelligence is the ability to interact effectively with others. Lastly, Intrapersonal intelligence refers to the ability to understand oneself so that one can independently direct one's activities.

Chapter Two also discussed the notion that all children have each intelligence inherent in them to some degree. Learners bring all of these intelligences into a classroom at any given time. However, each individual learns at a different pace and in different ways, and each person tends to show one or more preferred learning styles. Educators need to make use of the MI theory to improve learning in the classroom and to reach learners using more effective strategies.

Chapter Three discussed the design and methodology of the study, which was conducted at four different school settings. The participants were four HODs who were responsible for the management of the learning programmes in their respective FP Departments. The learning programmes at the four schools were all the same, namely Mathematics, English Home Language and Life Skills. There were some differences in the Life Skills programmes relating to the time allocation for subjects, such as Music, Art, Physical Education and additional languages. A variety of data collection techniques were used during the study, such as observations, field notes and interviews. These techniques were separately explained in the chapter.

Chapter Four dealt with the results or findings of the study. Meetings with the HODs at the different schools were discussed. These interviews helped me to understand the life world of the HODs at the schools. I was better able to understand the research question. The study indicated that leaders and educators play a crucial role in setting the learning tone of the school. Constant involvement in the learning and planning stages was necessary in order for teachers to fully implement the learning programmes. New strategies and techniques were welcomed if and when they had the support of the HODs.

5.3 Limitations of the Study

The contribution of this study to increasing knowledge on facilitating MI strategies in the local and broader context is important. The research took place in a varied selection of schools. All four schools were situated in an urban environment and all had the benefit of modern conveniences such as tarred roads, proper ablution facilities, structures built from brick, electricity and technology at their daily disposal. One factor that differed amongst schools was the financial situation. The private school and the two schools where parents supported education through payment of school fees, had superior resources compared to the school which was reliant on government funding. The majority of schools in South Africa may not have the facilities that all four of these schools possess.

Class sizing is another factor to be considered. In the government-funded school the average class size was nearly forty learners per class. The number of learners per class dropped to about thirteen in the Remedial Unit and was about twenty in the private school. At the fee-paying government school there were about twenty-eight learners per class. The size of the class appeared to have an effect on the morale of the HOD and educators. One school hosted about thirty-eight learners in each class. The schools with better financial support were able to afford teacher assistants who supported the teachers during school hours.

Another limitation was that of personal development in the HODs. At each of the schools, the HOD had been educated through the South African schooling system and trained as educators locally. However, their attitudes towards their jobs differed. Those in financially advantaged schools appeared to have more enthusiasm and commitment towards teaching and managing their departments. They did also not all understand the term facilitation nor where the HODs all able explain how they facilitate in practice. Hence, the depth of dialogue varied amongst the HODs and the researcher.

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5.4 Conclusions of the Study

If learners are not succeeding and learning well at school, educators should be able to ask, “What can I do differently to support the learners to achieve success at school and in the community?” In this study I found that the HODs were aware of the different intelligences inherent in children and that there was a basis from which they could be empowered to change the conditions where they manage, teach or facilitate. One aim of this study was to understand whether educators facilitate MI practices in their classrooms and how this impacts both on educators and learners. The HODs who knew about Gardner’s MI theory and applied knowledge successfully in their schools created richer learning environments. I also found that educators could be empowered to meet the challenges of implementing MI in their own planning, preparation and classroom practice.

5.4.1 Conclusions Drawn from the Literature Review

- South Africa is ranked one hundred and fortieth out of one hundred and forty-four schools, in terms of academic success. This may indicate serious problems with the present teaching approaches used in our schools. A change in our teaching approach is necessary in our schools.

- Teaching approaches or strategies such as MI are closely linked to CAPS and Outcomes-based Education. All of these systems encourage child-orientated learning approaches and value each learner individually. All learners are recognised as having the potential to achieve. Success will be increased or strengthened when the learners are taught in creative, exciting ways, according to their strengths or personal learning preferences.

- MI strategies use learner strengths to develop the weaker intelligences, through using a variety of strategies and activities.

5.4.2 Conclusions Drawn from the Study

As this was an interpretivist study, the emphasis was to understand and describe the l**i**ved experiences from the HODs' experience of the phenomenon. They participated freely in the study and gave honest answers. Their knowledge or lack thereof regarding the MI theory and facilitation was discussed. There are challenges that could be associated with implementing MI as a form of teaching in South African schools for the following reasons relating to teachers:

- The role of the educator in bringing creative teaching into the classroom is important to enrich teaching practice.

- There is still a lack of knowledge about facilitating rather than teaching.

- Educator training needs to include alternate strategies to accommodate differences in our multicultural environments.

- Selection of educators in posts is important. Suitable qualifications will support the teachers in knowing how to develop learning programmes for the learners.

- Selection of HODs at schools is important. Motivated HODs who will adopt new strategies and be open to change can and will improve learning conditions both for teachers and learners at their schools.

- Support for HODs and educators are pivotal for changes to be successfully implemented in schools.

Factors affecting the school environment could be as follows:

- A top-down approach could support policy implementation; therefore the principals of schools should be aware of the policies and give HODs guidance in successfully implementing new ideas.

Factors affecting classroom management include:

- Lesson planning and preparation should be done in collaboration at schools so that all educators in each grade and department can ensure steady progression through the learning phases. The HODs must be instrumental in ensuring quality teaching at their schools.

- Collaborative teaching, or planning and working together, encourages educators and HODs to share knowledge and ideas.

- Facilitating leads to the development of problem-solving skills both in educators and learners. Facilitation should replace much of the old fashioned teaching practice and allow for creative methods, such as MI strategies, to become part of daily classroom practice.

- An awareness of learning styles or preferences in learners is pivotal in catering for the different needs in learners.

Factors affecting learners are as follows:

- Learning occurs best when children are relaxed and have positive classroom experiences. The "one style fits all" approach no longer works in our diverse society and HODs need to ensure that educators facilitate for the learning differences in their classes.

- Learner performance can be enriched by using creative strategies in the class.

- Integration of learning areas is important.

- Educators mentioned that there is not enough time to teach everything. By integrating learning areas, through better planning and using creative teaching methods, more successful learning could occur within the time frames stipulated by Government.

- Positive relationships between educators and learners are important for successful learning to occur.

- Learners who are made aware of their own MI can be more motivated to personalise the learning situation, thereby becoming more responsible for their own learning. The "Intelligence Rap" at the beginning of this study clearly indicates to me that young children are capable of understanding and utilising their own intelligences.

5.5 Recommendations

The following recommendations were found to be relevant to this study.

5.5.1 Recommendations with Regard to Educators

- On the basis of these findings, I personally feel the need to raise awareness regarding MI strategies in everyday teaching. Courses on alternative teaching methods, such as implementation of MI strategies, could be introduced and HODs and teachers should be encouraged to attend. HODs could conduct their own in-service training seminars on creative teaching strategies at their schools.

5.5.2 Recommendations with Regard to Implementing MI in South African Schools

The following are recommendations that can be made regarding the implementation of MI in schools:

5.5.2.1 General Teacher Training

The Department of Education needs to review the training programme for teachers. Students seem to enter schools for Teaching Experience and later, when qualified, have very little knowledge about what teaching is actually about. They appear to lack core knowledge regarding how children actually grasp and retain knowledge, skills and values. Their training appears to be more academically inclined and offers little in the way of how to practically develop and facilitate or teach learning programmes to a diverse group of children.

School policies, planning, classroom management and the attitude of the learner have changed vastly. Technology has become the way of teaching, and social and cultural influences affect the dynamics of schools. We cannot ignore the changes that have occurred that directly affect our learners. MI will only be successfully implemented if students and teachers are properly trained. MI training, as well as knowledge regarding facilitation

strategies, could become part of student training or in-service training at schools. Qualified educators could be guided towards life-long learning by researching new developments in education or attending meetings that explain alternative methods of facilitating and teaching, such as MI. This will empower them to be better educators and successfully reach more learners than under the present system.

5.5.2.2 Teacher Support is Crucial

According to Campbell (2008), Gardner's Theory of MI has explained what many educators intuitively know: that every child has potential to learn. New methods and strategies need to be applied. Implementing new systems such as CAPS, and creative models such as MI, is not always accepted and places many additional demands on already overburdened educators. In-service training programmes, lead by HODs, could empower educators to take ownership of new MI strategies and facilitation tools in their regular classroom practice.

Educators need constant encouragement, guidance and support from their school management team and each other to facilitate these changes. Results are often only visible over time and some educators may find this disheartening. Support encourages educators to remain focussed and involved in the new programme. Once educators become familiar with facilitation techniques and alternatives to promoting learning, such as MI strategies, their confidence in developing creative strategies will increase.

5.5.2.3 Be Tolerant of Change

Many educators are resistant to change as they have already established systems that work for them. Some resist ideas that imply more work. Fortunately, at every school there are those who are willing to explore new ideas and welcome change. These enthusiastic educators often bring their new ideas into discussions and many ideas are successfully implemented, both by the willing and the unwilling, without realising that they have changed. I found that schools tend towards teaching concepts and learning areas in isolation. Greater emphasis could be placed on integration of learning areas, such as writing songs during a Language lesson, thereby incorporating Musical Intelligence into Language.

5.5.2.4 Helping the Learners to Develop

Once learners become aware of their personal learning styles and preferences, they will become more motivated to achieve in all areas, including those in which they achieve less success. To reach this level, the learners need to be made aware of their different learning intelligences, how to use them successfully and how to develop them. The role of the

educator in this regard is to facilitate learning in such a manner that the learners grow in self-confidence and self-esteem. They need to be taught to use their strengths to support and enrich areas of weakness so that all intelligences develop. Much literature is available on creative teaching methods.

5.5.2.5 School Environments and Availability of Resources

A school environment needs to be conducive to implementing the MI methods. Classrooms need to be stimulating learning centres where the correct atmosphere will contribute to successful learning. Educators have the power to develop children to their full potential by having a positive attitude and relating to learners in a calm, focussed manner. Facilitating, as opposed to old-fashioned teaching, will allow for more critical thinking, using alternate approaches such as MI. Making use of a variety of resources, such as technology and Maths equipment, will allow learners to participate more actively in lessons.

5.5.3 Recommendations for Further Research

I have found that HODs are not all aware of the MI theory, either in theory or practice. MI offers every learner the opportunity to excel in several areas of intelligence. Campbell (2008) asserts that when learners are exposed to new concepts in a variety of ways and are presented with more opportunities to understand, retain and apply knowledge, their learning experiences are more meaningful. Their cognitive needs are challenged through a variety of daily activities, and they better understand their own potential as individuals. This suggests further studies relating to this topic could be done. Pilot schools embracing the MI model in practice could be established in South Africa. An assessment of the MI model in pilot schools could be done after three or more years. There is also ignorance regarding understanding of facilitation and this is an area for future research and development.

5.6 Conclusion

There are differing views on the definition of intelligence but many researchers support the idea that it includes the ability to learn, to apply what has been learnt, to adapt to one's environment or to alter one's environment. Howard Gardner challenged the common belief regarding the nature of intelligence and tried to broaden this concept by saying that intelligence includes one's ability to solve problems and create products in one's culture. Ronis (2007) points out that school systems generally prioritise Verbal-linguistic or Logical-mathematical intelligences over the other intelligences.

The MI theory presents a new way of understanding all eight intelligences equally. Facilitating using MI brings a renewed enthusiasm into teaching perspectives as well as classroom practice. It can provide teachers with methods and strategies to facilitate learning in a variety of ways that can enrich learning experiences and lead towards learners being better able to solve problems in everyday life situations. Learning that occurs in classrooms and the community leads to children becoming successful citizens in their cultures.

Children who display strong verbal-linguistic intelligence may become authors, editors, poets, speakers or educators. Those with strong logical-mathematical intelligence may choose careers such as accounting, and become scientists, engineers or computer programmers. Children showing naturalistic intelligence may enrich our natural environment through studying towards conservation, ecology, botany, biology, landscaping or farming. Those with strong spatial intelligence have strong imagery skills which will enable them to become architects, sailors, pilots or even artists. Children who exhibit strong bodily-kinaesthetic intelligence could pursue careers as surgeons, sportsmen and women, or become skilled at craftwork. Musically intelligent persons compose lyrics or sing or play musical instruments. People with strong interpersonal intelligence will be capable in any career in which they are able to understand and relate to others, such as social workers, therapists and teachers. Intrapersonal intelligence will benefit philosophers, ministers of religion and psychologists.

In this study, I aimed to understand the lived experiences of how four HODs understood and experienced facilitation using MI strategies in their classes. Triangulation of results ensured the trustworthiness of the study. I felt that the study was valuable, in that I was able to challenge a small group of school leaders to possibly rethink their role of instilling creative and effective teaching strategies at their schools, and thereby become better role models for the educators in their departments.

Howard Gardner underscores the importance of identifying and nurturing all of the different intelligences and the combinations of intelligences (Armstrong, 2009). We are different because of our varied combinations of intelligences. If we recognise this, we will stand a chance of dealing correctly with the many problems that we are faced with in our world. Through changing the measurement of intelligence, such as the current IQ score that values only a small subset of human potential, less human potential will be wasted in society. Gardner believes that MI holds the solution to increasing the learning potential of each child in the classroom so that society will reap the rewards after the child leaves school. If educators develop the full range of intelligences in the classrooms, the future prospects for the development and deployment of intelligences will benefit society.

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Appendix A: INTERVIEW TRANSCRIPTS

Interviews with Head of Department A

Interview 1: the preliminary interview

1 Hello_____, how are you?

2 Good, thank you. And you?

3 I'm great, thanks.

4 Let's go to my class. It's quiet there now.

5 Thank you for agreeing to meet with me. Your support with these interviews will help

6 me to understand my research questions.

7 Yes, we can do that. What are you studying?

8 I'm studying for a degree and need to do research. I chose to interview you as

9 part of the study. I've prepared a letter explaining the purpose of my study.

10 Please will you read it. If you agree, then we can sign it together.

11 Sure. How can I help you?

12 Your opinion is valuable to me.

13 Ok.

14 I've also prepared a letter to give to your principal but haven't yet been able to

15 speak to her. It's important that she is aware of what we are doing.

16 She's often out.

17 When will it be convenient for us to meet?

18 Let's meet after school, on Tuesday, at quarter to three?

19 Sure, I'd appreciate that very much. See you then.

Interview 2: the basic background

Hi _____. Thanks for meeting with me again. You are really helping me with my studies. I appreciate your support.

May I ask a few personal questions first?

Ok.

For how many years have you been working at this school?

I have taught here for forty years. I was a pupil at this school too.

Wow! Are you a full-time class teacher and a Head of Department?

Yes I am. There are thirty-eight children in my class. I teach grade 2.

Have you always lived in this town?

Yes, I grew up here, married and raised my children here.

For how many years have you been Head of Department?

This is my second year officially. I acted for a year in 2010. Now I've been Head of Department since 2011.

How actively are you involved in the planning of learning programmes in your department?

We plan together. One teacher types everything on the computer. The reports match assessments, CAPS assessments.

CAPS is new. How are you managing?

Like everyone else. It's hard.

We are all in the same boat here.

40 It's been great chatting to you today. When could we schedule our next interview?

41 Let's meet next Tuesday, same time?

42 That's great, thanks _____. See you then.

Interview 3: questioning and probing

43 Hi _____, good to see you again.

44 You too.

45 Can we talk about children's intelligences and facilitation?

46 Have you any knowledge on or are you aware of different learning capabilities

47 inherent in children?

48 My experience is to teach in groups. Would you like to see the Special Class work?

49 What do you mean by Special class?

50 Children who can't cope in Mainstream go into the Special Class.

51 How do your teachers cater for the various strengths that learners display in the

52 mainstream class?

53 They do group teaching. Some lessons are taught as a class. In some lessons,

54 we use the pull-out system and give those children extra work. The groups

55 change according to ability.

56 Are you aware of the term facilitation?

57 It's just another word for teaching.

58 Have you ever attended any professional development courses regarding

facilitating the different learning styles in children?

Just ordinary courses, nothing specific.

Are you aware of Howard Gardner's Theory of Multiple Intelligences?

No.

What ability do you consider to be the most important when planning and facilitating lessons?

Linguistic?

Perhaps Language is important. All learners in this school are second language learners. It's not easy for them.

In the classroom situation, are children exposed to a variety of specialised lessons, such as:

Music?

Yes, there is a special Music teacher who has each class for one hour each week.

Physical Education?

There's a special Physical Education teacher who has each class for one hour every week.

Drama?

Drama is done incidentally with the class teacher and the music teacher.

Art?

The class teacher teaches art to her class.

We have specialised teachers who teach Zulu. Children read, write and speak.

Is Zulu the mother tongue for most of the learners in the school?

Yes, we only have a few children from other races. And we have one child who

was placed in our Special Class but now she's back in Mainstream.

Do children attend the lessons in groups, as a class or privately during school hours?

No. Only one child goes to Kip McGrath for extra lessons.

Which multiple intelligences or learning strengths do you encourage the teachers in your department to focus more on?

Language and reading are the most important for comprehension.

Why?

Children cope with Maths if they understand the language.

Do they accommodate the different multiple intelligences in the children in the classroom?

Not really.

Which alternate strategies do your teachers use when teaching or facilitating lessons?

Bright children get extra work and nice activities. This method encourages other children to be faster.

Has teaching changed for you over the years?

Teaching has become scary. Children are getting weaker. They are not retaining information. They don't have the basic skills so we have to use more apparatus.

We, as teachers, can't take anything for granted. There is so much pressure to meet the demands placed on teachers now.

What changes could you see that will benefit the children in your school?

I am retiring next year. The next Head of Department must do as she is able.

The principal has strict requirements in place.

Thank you very much for helping me to understand your viewpoints. It's been great chatting to you.

Would you like me to give you feedback at the end of my studies?

If you want to. Thanks _____.

Interviews with Head of Department B

Interview 1: the informal discussion regarding the study

Hi _____. Thank you for agreeing to meet with me for a few interviews.

Your support with these interviews will help me to understand my research questions.

You worked here too. You know the school.

I would like to tell you about what I am doing.

Yes, we can do that. Let's meet in my office. What are you studying now?

I'm studying for a Masters Degree and need to do some research. I chose to interview you as part of the study. I've prepared a letter explaining the purpose of my study.

Please could you read it. If you agree, then we can sign it together.

Fine.

I've also prepared a letter to present to your principal. I'll leave it in her in tray.

It's important that she is aware of what we are doing.

She will get it tomorrow.

When will it be convenient for us to meet?

We have Case Conferences on Tuesdays and Thursdays. They may run late so we can try to meet on Wednesday after school. I will let you know if anything changes.

Thanks _____. See you then.

Bye.

Interview 2: questioning and probing

127 Hi _____, how are you today?

128 It's been one of those days, hit the ground running and never stopped.

129 Thanks for giving me some of your time. We can have a short interview today

130 and continue another time if you so wish.

131 That's not a bad idea.

132 Well then, let's begin. How long have you been working at this school?

133 I've been at this school for twelve years.

134 For how many years have you been Head of Department?

135 This is my fifth year.

136 Please tell me a little about this Unit.

137 We have classes of ten to thirteen learners per class. The classes range from grades one to five.

138 The children are referred here from mainstream schools. They have been

139 identified as having specific learning difficulties. The children remain in our Unit

140 for two to three years before returning back to mainstream classes.

141 As a leader, do have a class to teach?

142 No, I do not have my own class. I do teach a phonics lesson in every class.

143 In that way I can oversee and offer support and encouragement to the

144 teachers as needed.

145 Are all children successfully remediated and cope back in mainstream?

146 Most children benefit from our system. You know that very well. Some are

referred to long-term Remedial Schools.

Are you involved in the planning of learning programmes in your department?

This is a Remedial Unit and we are different to mainstream schools. We believe more in individualisation. We adapt the learning programmes for Individual Educational Planning.

Have you any knowledge on or are you aware of different learning capabilities inherent in children?

We use the children's personalities to teach. We work more in terms of processing, not just left and right brained. We encourage our children to become confident.

Language acquisition is very important, for understanding.

Our programmes are multi- dimensional.

What do you mean by multi-dimensional?

We develop our passive children to become active persons, as much as possible.

How do your teachers cater for the various strengths that learners display in the class?

They push the children to greater heights. Teachers solidify strengths to work on areas of weakness. The more interest a child shows in learning, the more inclined he or she will be to want to learn.

A good Maths brain is important. In written language, we work on strengths and back up weaknesses.

Some aspects, not all, may be weak in a child.

It appears that you believe in developing the whole child.

171 We must work across broad areas to develop the whole brain.

172 Are you aware of the term facilitation?

173 Yes.

(The interview was interrupted by a lengthy telephone call. We waved good bye and signalled on a calendar about when we would next meet.)

Interview 3: more questioning and concluding interview

174 Hi _____. Thanks for meeting today. Do you have time to chat?

175 Yes.

176 What were we discussing?

177 We had just begun to talk about facilitation. What does this word mean to you?

178 Facilitation is a strategy which is learner-centred.

179 Teaching is often more teacher- directed.

180 Have you ever attended any professional development courses regarding

181 facilitating the different learning styles in children?

182 Yes, I attended a three day SAALED Conference.

183 When did you attend these courses?

184 In the last few years.

185 Are you aware of Howard Gardner's Theory of Multiple Intelligences?

186 Yes.

187 Do you have an opinion regarding this theory?

188 He is the closest in trying to encapsulate intelligence. Children who are not

189 socially adept, developmentally, will be affected in the classroom.

Of the eight multiple intelligences defined in his theory, which do you consider to be the most important when planning and facilitating lessons from your point of view as a teacher?

Linguistic?

Most important.

Interpersonal?

Also the most important.

Intrapersonal?

Second most important. We must know the children and plan our programmes accordingly.

Logical-Mathematical?

Third most important.

Bodily-Kinaesthetic?

Some children learn well through space. We do active Occupational Therapy skills to calm down some children so that they can focus on their bonds and tables.

In the classroom situation, are children exposed to a variety of specialised lessons, such as:

Music?

No.

Physical Education?

Yes, they do one hour every week.

Drama?

Not really.

Art?

They do one hour every week.

Are there any other special lessons that the children participate in?

Yes, they do Computers for a half hour each week. They work through the programme called “Readers are Leaders.”

Do children attend these lessons in groups, as a class or privately during school hours?

They do these activities as classes during school hours. Not many parents can afford to send children to private lessons any more. With the recession, things have gone downhill.

Which multiple intelligences, or learning strengths do you encourage the teachers in your department to focus more on?

I encourage them to be individualistic.

Why?

One’s personality influences classroom performance and well as the strategies chosen.

Is there a particular multiple intelligence strength that you personally focus much of your attention on?

We focus hugely on making the children aware of their strengths and weaknesses. We teach meta-cognitive strategies about themselves. They learn to cope and get tools to survive.

They use strategies and words. Facilitation is better than teaching.

As Head of Department, do you support the multiple intelligence theory in classroom settings?

Yes, we are forced to because children in our Unit don't learn naturally in mainstream classrooms. Therefore, we need alternatives.

Which alternate strategies do your teachers use when teaching or facilitating lessons?

We meet the emotional needs of the children. We live in a troubled society where there is a breakdown in families. Many parents are working.

We rephrase and redirect questions and statements.

We use physical apparatus.

Visual stimuli are used.

Movement is important in many lessons.

We use "out of the box" strategies. My experience and from attending meetings comes into play when planning and facilitating in the classroom.

Over the years, how has teaching changed for you?

There are so many society issues now that influence teaching. Many more parents are working now and are neglecting the academic needs of their children.

We need to meet more needs.

We feel that we are working under a whip with the strict Education Department requirements.

Children are under more pressure.

There is a lot of STRESS, especially emotional.

There is too much to do and we need to provide for the children's needs.

It's hard to maintain standards.

What can be changed, in your opinion?

Focus more on foundation skills to develop stronger foundations for future learning experiences.

We have chatted for a very long time today. I feel so happy having heard your opinion.

Thank you.

Would you like me to give you the end results of this study?

When will I have time to read it? But yes, it will be interesting. See you soon _____.

Interviews with Head of Department C

Interview 1: the informal discussion regarding the study

Hi _____. Thank you for agreeing to meet with me for a few interviews. Your support with these interviews will help me to understand my research questions.

You are welcome. We enjoy learning about topics that are fresh at our school.

Your opinion is very valuable to me, particularly as you work in a private school.

Could we meet after school to discuss the study?

I would like to tell you about what I am doing.

Yes, we can do that. Let's meet in my office. What are you studying?

I'm studying for a Masters Degree and need to do some research. I chose to interview you as part of the study.

I've prepared a letter explaining the purpose of my study.

Please could you read it. If you agree, then we can sign it together.

Sure.

I've also prepared a letter to present to your principal. It's important that she is aware of what we are doing.

I do not need to ask for permission to see you. I am Head of the Foundation Phase Department. As such, I can interview alone.

When will it be convenient for us to meet?

Let's meet on Thursday, at two thirty. Is that convenient for you? We will meet in my office.

291 Oh, do you have a class too?

292 No, I work from the office. I do teach some classes each week.

293 Thanks _____. See you on Thursday.

294 Bye.

Interview 2: questioning and probing

(This interview did not happen as planned on that particular day as the Head of Department was in a meeting that ran overtime. Her secretary phoned to apologise and we set up another interview for the following Wednesday.)

295 Hi _____. Thank you for agreeing to meet with me. Is it convenient for us

296 to chat now?

297 Your support with these interviews will help me to understand my research

298 questions.

299 Yes, I think so.

300 Your opinion is valuable to me.

(She smiled.)

301 For how many years have you been working at this school?

302 I have worked here for seventeen years.

303 Wow. That's a long time. For how many years have you been Head of

304 Department?

305 There are two Head of Departments at this school. I have been Head of

306 Department since 2009. Before that I was Head of Grade.

307 How actively are you involved in the planning of learning programmes in your

department?

We have Grade Heads. The Head of Department (Academics) facilitates the Grade Head meetings.

We have a term overview. We do our planning every two weeks. I oversee the final product every week.

I am so pleased that you used the word facilitation. Do you see a difference between facilitation and teaching?

Most definitely.

Have you any knowledge on or are you aware of different learning capabilities inherent in children?

Yes, definitely. Each child is an individual and learns at a different pace, way and style.

Children have different needs.

Do your teachers cater for the strengths that learners display in the class?

We do group teaching and provide different worksheets. There are Grade Floating Assistants who help in each class.

Outside retired teachers are called in to extend and support learners.

We facilitate rather than teach.

Have you ever attended any professional development courses regarding facilitating the different learning styles in children?

Yes indeed. We have hosted such a meeting at our school, such as Howard Gardner's Multiple Intelligences. I've been to workshops and conferences.

Have you attended these courses recently?

In the last few years.

What is your opinion regarding Howard Gardner's Theory of MI?

I think that he raises very valid points. His idea is real because it looks at more than one aspect of intelligence.

Intelligence is not only figures that show how bright you are. It relates to the child as a thinker. It allows for doers, visual learners, etc. It allows for a variety of children's learning styles.

Of the eight multiple intelligences defined in his theory, which do you consider to be the most important when planning and facilitating lessons?

This is a hard question as all intelligences are linked.

Interpersonal?

This is one of the most important intelligences. It relates to people to form relationships and communicate.

Linguistic?

The second most important intelligence. Children must be able to communicate. Communication relates to everything else.

Intrapersonal?

The third most important intelligence. One has to be in a good space to learn. Personal development is very important.

Logical-Mathematical?

The fourth important intelligence.

Musical?

Music has rhyme and rhythm; children need these. It links to linguistics and language.

These first five intelligences are the most important.

Naturalistic, Spatial and Bodily-Kinaesthetic?

These are all number six in intelligences. We are all of equal importance but we are different.

In the classroom situation, are children exposed to a variety of specialised lessons?

We have specialist teachers for Music, Art, Drama, Physical Education and Computers.

Music?

Grades 00 to three have Music once weekly, but this may vary. The grade three children may have Music twice weekly.

Physical Education?

Grades 00 to three have one hour weekly.

Drama?

Drama is built into Music, for example; one Music, one Drama weekly. The lessons may be combined.

Art?

Children have two hours weekly in their classrooms. This is not a specialist subject.

Computers?

Grades 0 to three have one hour per week. The work done is linked to lessons.

Zulu?

A specialist teacher teaches Zulu each week.

Afrikaans?

Grades two to five have Afrikaans lessons each week, taught by a specialist

teacher.

Do children attend these lessons in groups, as a class or privately during school hours?

They go as classes. Some go privately, to our Music School. Drama is taught by an outside person.

Do finances play a role in these additional activities?

Yes, this is a rich, private school.

Which multiple intelligences or learning strengths do you encourage the teachers in your department to focus more on?

It's a personal thing; hard to say. Our school recognises that children have different intelligences.

So teachers do accommodate the different multiple intelligences in the children when facilitating lessons?

Yes.

Is there a particular multiple intelligence strength that you personally focus much of your attention on?

No, I don't think so. I'm open to recognise others' strengths and weaknesses.

As Head of Department, do you support the multiple intelligence theory in classroom settings?

It's very important for teachers to be able to teach in their own learning style, as long as they recognise that their learning style may not suit everyone.

Lessons must be planned, organised and flexible.

Are there alternate strategies your teachers use when teaching or facilitating lessons?

401 As a school, we are pretty good at using different strategies. We deal with

402 concepts in methods and expose children to different ways.

403 Therefore, children benefit by exploring different MI to solve problems.

404 Has classroom teaching changed for you over the years?

405 The type or range of intelligences or capabilities is so vast in each class.

406 Everyone needs support. Some need extension.

407 The school values or norms have changed.

408 Parenting styles have changed.

409 What changes could you see that will benefit the children in your school?

410 Our academic standards compare favourably with other local private schools.

411 Thank you so much for spending time with me. I've really enjoyed chatting to

412 you and obtaining your input on this topic.

413 You are welcome. Good luck with your studies. Bye.

414 Bye _____.

This interview lasted a very long time (just over an hour and a half). Speech flowed well so I did not plan a subsequent interview. This Head of Department has a very busy schedule and I was most appreciative for the time that she spent with me. She was very informative and had answered the questions posed very satisfactorily, as well as added her own thoughts.

Interviews with Head of Department D:

Interview 1: the informal discussion regarding the study

Hi _____. Thank you for agreeing to meet with me for a few interviews. Your support with these interviews will help me to understand my research questions.

You work here too. You can pop into my office at any time.

Yes, I know that but your opinion is valuable to me. Could we meet after school tomorrow to discuss the study that I'm doing? I would like to tell you all about it.

Ok. Tomorrow after our meeting is fine with me.

As you are aware, I'm studying for a Masters Degree and need to do some research. I chose to interview you as part of the study.

I've prepared a letter explaining the purpose of my study.

Please could you read it? If you agree, then we can sign it together.

Sure.

I've also prepared a letter for our principal. It's important that she is aware of what we are doing. I've already been to see her.

So, what are we doing?

Should we chat about multiple intelligences and facilitation after school tomorrow? Are you busy at two o'clock?

Yes, after our Management meeting. See you tomorrow.

Interview 2: questioning and probing

433 Hi _____. For how long have you been working at this school?

434 Since 1991, that makes it twenty-two years.

435 For how many years have you been Head of Department?

436 Since about 2000, not sure. It seems like forever.

437 Do you teach a class?

438 No, I don't have a class but I teach Afrikaans in all of the Junior Primary classes

439 each week. I work from my office as you know.

440 This is a large school with very good facilities.

441 We have stunning facilities.

442 How actively are you involved in the planning of learning programmes in your

443 department?

444 Not as much now as before. Each grade does their own planning.

445 Have you any knowledge on or are you aware of different learning capabilities

446 inherent in children?

447 What do you mean by capabilities?

448 I am referring to learning styles or the way in which children learn.

449 Yes, all children learn at different rates and do different things. There are

450 different ways of learning;

451 visual, auditory, tactile, kinaesthetic, computer-aided learning.

452 Do your teachers cater for the various strengths that learners display in the

453 class?

454 What do you mean?

455 Children learn in different ways.

456 The main thing is group work. Some teachers don't cater at all. Some have

457 extension work for bright children.

458 They have a slower pace for slow learners. Additional support

459 is provided through the Readers are Leaders computer programme.

460 I need to go now. We can continue another time.

461 Sure. Thank you. See you tomorrow.

Interview 3: more questioning

462 Hi _____. Let's chat now for a while.

463 Where were we?

464 We were talking about learning styles inherent in children. Have you ever

465 attended any professional development courses regarding facilitating the

466 different learning styles in children?

467 Yes, many over the years. There were a lot of courses at one stage.

468 Are you aware of Howard Gardner's Theory of Multiple Intelligences?

469 Not really.

470 Briefly, Howard Gardner defined eight different intelligences in his theory, such

471 as Linguistic, relating to language; Logical-Mathematical, relating to logic and

472 reasoning;

473 Interpersonal, relating to understanding oneself; Intrapersonal, or social

474 relationships with others;

475 Musical,

476 Spatial, or using space to understand concepts;

477 Bodily-Kinaesthetic means to learn through physical activities;

478 and later Naturalistic, which refers to learning through the environment. Of all

479 of these eight intelligences, which do you consider to be the most important

480 when planning and facilitating lessons?

481 Linguistic?

482 The most important.

483 Logical-Mathematical?

484 Second.

485 Bodily-Kinaesthetic?

486 Third

487 Interpersonal?

488 Fourth.

489 Naturalistic?

490 Fifth.

491 Intrapersonal?

492 Sixth.

493 Musical?

494 Seventh

495 Spatial?

496 Eighth

(No further comments were given.)

497 In the classroom situation, are children exposed to a variety of specialised

498 lessons, such as:

Music?

Grades 0 and 1 have two half hour lessons weekly. Grades 2 and 3 have three half hour lessons weekly.

Physical Education?

Grade 0 has one hour of Physical Education weekly.

Grades 1 and 2 have two hours weekly, as well as a Sports Tournament at the end of the first three terms each year.

Grade 3 has two hours weekly.

Drama?

Drama lessons are not taught specifically but our Junior Primary has a bi-annual concert.

Grade 0 has their own annual concert. Grade 1 has a Grandparents Morning; Grade two have a Fashion show and Grade 3 presents a play at Prize giving.

Art?

Every class has Art and Crafts for one hour weekly, taught by the class teacher.

Are there any other specialist subject classes that the children attend?

Grade 0 children have a half hour computer lesson weekly.

Grades 2 and 3 have an hour of computer lessons weekly.

Are other languages taught at your school?

Not during class time. Eastern languages, specifically Tamil and Hindi, are taught to some children after school, on Fridays.

Do children attend specialist lessons in groups, as a class or privately during school hours?

521 Classes are split into groups for Readers are Leaders. Our Physical Education

522 classes are divided into boys and girls groups.

523 I need to go now. See you tomorrow.

524 Thanks for your help. See you soon.

Interview 4: questioning and concluding interview

525 We were talking about multiple intelligences. Are there any intelligences, or

526 learning strengths which you encourage the teachers in your

527 department to focus more on?

528 The Linguistic intelligence. If you can't do language, you can't cope

529 academically. Also Logical-Mathematical to strengthen all learning areas.

530 Is there a particular multiple intelligence strength that you personally focus much

531 of your attention on and why?

532 Linguistic; we've got to get results.

532 As Head of Department, do you support the multiple intelligence theory in

533 classroom settings?

534 I would love it to be more integrated.

535 Are there alternate strategies that your teachers use when teaching or

536 facilitating lessons?

537 We don't think of alternatives, we just teach. We do a variety of activities, like

538 group work, teach through song.

539 We only do class work. There is no opportunity to be

different.

Over the years, how has teaching changed for you?

Phew! More pressure to get results.

Children learn much more.

Teaching was more fun. There was more time to do creative things.

We teach advanced work now; there's not much discussion time or time to be practical.

There's no fun…….too much too fast.

Children learned more quickly then. They were more disciplined; they sat and listened.

Children wanted to learn.

Parents were more supportive.

The social structure of families has changed.

Learning ethics have changed.

Can you explain the difference between facilitation and teaching?

They are both teaching words.

Thank you so much for participating in these interviews. Would you like me to share the results with you, when I am finished?

Of course.

APPENDIX B: Informed consent form

Information and Consent Form

My name is Dot de Vries. I am currently doing research for degree purposes. My selected topic is facilitation of Multiple Intelligences, or learning styles, in the local classroom context. I would like to interview you as Head of Department at your school. The information supplied during the interview will be treated confidentially and full anonymity is assured. It will be used for the purpose of this study only. The study involves investigating whether teachers include the children's different learning styles when planning and facilitating lessons. The interview involves a few questions about the way you think when solving problems, handling tasks and working on projects. Questions of a personal nature will be asked, regarding your teaching career and school demographics. The research results will only be available to individuals directly involved with the study. Your valued support is much appreciated.

I have read the above information and have a clear understanding thereof.

I consent to participate voluntarily in the interview.

Participant's name and surname: _____

Participant's signature: _____

Date: _____

Researcher's name and surname: _____

Researcher's signature: _____

Date: _____

APPENDIX C: Letter of Permission to Participants

18 August 2012

To whom it may concern

I am a student at the University of South Africa. At present, I am enrolled for a dissertation of limited scope in the structured Master's degree.

To fulfil the requirements for the research, I would like to interview your Foundation Phase Head of Department. My selected topic concerns facilitating Multiple Intelligences, or learning styles in our local classrooms. The semi-structured interview will probably last about an hour.

Thank you very much for helping me reach my goal. It is valuable to me as an educator to be able to take responsibility for my own professional development and to contribute to the various aspects of the cognitive life of the learners in South African schools.

You are welcome to contact my supervisor, Dr. Hermien Olivier at 012 4296753 if you would like further information.

Yours sincerely

Mrs. M.J. De Vries Student number: 5388112

Head of Department

APPENDIX D:Letter of permission to do research from the Education Department

education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Received 15 - 05 - 2013

Enquiries: Sbusiso Alwar Tel: 033 341 8610 Ref: 2/4/8/366

Mrs Marilyn Jane De Vries
P. O. Box 1829
NEW GERMANY
3620

Dear Mrs De Vries

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **Investigating the Role of the Foundation Phase Teacher in Facilitating Multiple Intelligences in the Classroom.** in the KwaZulu-Natal Department of Education institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 01 February 2013 to 31 January 2015.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Mr. Alwar at the contact numbers below.
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report / dissertation / thesis must be submitted to the research office of the Department. Please address it to The Director-Resources Planning, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to the following schools in the KZN Department of Education:
    10.1. Alho Heights Primary School
    10.2. Pinetown Junior Primary School
    10.3. Pinetown Senior Primary School (Remedial Unit)

Nkosinathi S.P. Sishi, PhD
Head of Department: Education
Date: 21 May 2013

KWAZULU-NATAL DEPARTMENT OF EDUCATION

POSTAL Private Bag X 9137, Pietermaritzburg, 3200 KwaZulu-Natal Republic of South Africa

PHYSICAL 247 Burger Street Anton Lembede House, Pietermaritzburg, 3201. Tel: 033 392 1004 Fax: 033 392 1203

EMAIL ADDRESS: ...@kzndoe.gov.za CALL CENTRE: 0860 593 363

WEBSITE www.kzneducation.gov.za

APPENDIX E:Research Diary and Field Notes

Research Diary and Field Notes

Where to begin?

Studying through correspondence is no easy task. After reviewing much literature, I thought that it would be advisable to meet with my supervisor. Hence I flew to Pretoria in April 2012, from Durban, to discuss the way forward with my mini-dissertation. I worked alone on this study and felt quite nervous yet also excited to perhaps be part of developing knowledge about a particular phenomenon.

Reflection

After meeting with my supervisor, I felt that I knew the direction that my research was going to take.

Preparation to visit the schools

All four of the schools that I chose to include in this study are in close location to each other. This made travel arrangements easy for both the researcher and the participants. The participants were not kept waiting great lengths of time for the researcher to arrive. The schools are all situated in an urban environment, with modern amenities, such as tarred entrances, piped water, electricity, solid brick buildings and grounds for both gardens and sports fields.

Reflection

Similar situations at all four locations would allow the researcher to focus more on the phenomenon and not be distracted by unnecessary variables.

Data Collection field trip: School A

General observations:

This school is situated in a business/residential part of town. My initial impression was that reasonable care was taken of the facilities, with limited financial support. The classroom in which the interviews all occurred, generally was clean but lacked colourful stimulation. Overcrowding was clearly evident by the large number of desks, chairs and very little walking space around the classroom.

Observations of the HOD throughout the interviews:

Initial interview date: 11 September 2012

This HOD welcomed me into her school. In total, for the purposes of this study, we met on three occasions. We had met at previous school meetings and often in shopping malls and were already comfortable with each other's company. However, she exuded an attitude of tiredness during the interviews. She was near to retirement (due date to retire: 2013). Some questions were answered with almost an air of acceptance for the way things are at the school.

Reflection

She appeared to be willing to participate in the study. She was keen to answer questions. A fair amount of probing was necessary to obtain some answers. Some enthusiasm was evident when discussing classroom related strategies, especially relating to past teaching. New terminology, such as facilitation, was not discussed with as much insight or enthusiasm.

Data Collection field trip: School B

General observations: 19 September 2012

This school is positioned as an inner-city school. It took up exactly one block and was surrounded by busy roads. The school buildings are over a hundred years old and are well-maintained. A small garden was present outside the office block. The two sports fields were kept neatly mowed. The interviews were held in the HOD's office, reminiscent of a traditional school office - structured and sparsely furnished.

Observations of the HOD throughout the interviews:

Initial interview date: 12 September 2012

The researcher had worked at this school for a number of years and was friendly with the HOD. This made their manner of engaging with each other easy. Three in-depth, yet semi-structured interviews were held, over a time period of a month. The HOD was enthusiastic about the research topic. She felt that it was extremely relevant to the department which she ran. Her answers to the questions were insightful and she extended the researcher's knowledge base regarding MI methodology in the local context.

Reflection

Friends give honest answers. The researcher felt enthused by the responses and saw that the study was indeed relevant and that the participant understood the phenomenon well. The HOD appeared to be strong-willed in some of her responses that she believed to be correct.

Data Collection field trip: School C

General observations:

This school is situated in an affluent residential suburb. It boasts large grounds and extensive gardens which were well-maintained. Many sports fields, two swimming pools, pavilions and other structures added to the overall wealth of the school. The classrooms were built in an unusual design. Extra facilities included the boarding establishment and the school chapel.

Observations of the HOD throughout the interviews:

Initial interview date: 19 September 2012

The researcher did not know this lady and was impressed with her calm, friendly approach. Her welcoming smile and confident manner gave off a warm feeling. She clearly understood the terms facilitation and MI. She answered questions and added her own opinion with clarity. Unfortunately only two interviews were held, due to time constraints.

Reflection

This HOD did not sign my letter nor did she need permission from the school principal. He trusted her as a school leader. How profound is that!

If I had young children, I would love for them to attend a school such as this one, where the leadership understands education fully and encourages their staff to develop in the educational field, to explore options and to teach or facilitate using a wide variety of strategies and methods.

She often paused before offering a response. This showed insight and words were carefully used to portray the best answers.

Data Collection field trip: School D

General observations:

This school epitomised the essence of a regular, ex-model C school, situated in a middle class, residential suburb. Built on a slope, the buildings were triple storied. Three playing fields and one swimming pool were evident. The school obviously took pride in its appearance as the buildings were well cared for and the gardens neatly kept.

Observations of the HOD throughout the interviews:

Initial interview date: 3 October 2012

The researcher was also employed at this school and held the same rank as the HOD. Altogether four formal interviews were conducted and a few incidental chats also occurred along the corridors of the school. Unsettling body language, such as impatient gestures, finger-tapping and shrugs occurred during the second and third interviews. At times, the answers are given in an abrupt manner. During the fourth interview the mood lightened considerably when the participant was able to chat about past teaching experiences and problems. She clearly felt more comfortable at this time.

Reflection

This HOD was clearly unsettled at first. She lacked understanding of the research question but did not want to appear "unknowing". Possibly she felt that she should be in control of the situation but lacked the confidence at that moment in time.

General reflection:

Teaching has changed and so must we. New trends should be explored, terminology should be applied in the correct manner and methods to develop the child holistically need to be adopted.

All of the schools involved in this study do offer a wide curriculum to the learners, in differing ways. Holistic development through facilitation and MI techniques are possible. Much depends on the attitude of the leadership at each school. Leadership can inspire teachers. Doctors heal, lawyers arbitrate, politicians negotiate and teachers could facilitate more effectively by changing their mindset.

The researcher is of the opinion that this study was successful, in that she investigated the question fully and understood the essence of the phenomenon.