

**DETERMINING FACTORS OF SCHOOLING TWINS TOGETHER OR SEPARATELY IN
THE FOUNDATION PHASE**

by

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DECLARATION

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I declare that **DETERMINING FACTORS OF SCHOOLING TWINS TOGETHER OR SEPARATELY IN THE FOUNDATION PHASE** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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ABSTRACT

The schooling of twins can be daunting and challenging for twins, parents and educators. Separation or non-separation during the foundation phase cannot be left to chance. The process of deciding whether it is in both twins' best interest to school them together or separately relies on various factors, which includes premature birth, individuality, dominance, relationship type and friendship-forming patterns. Parties involved in making the decision must consider each twin's emotional, cognitive, behavioural, and social development. Premature separation of twins can lead to internal as well as external behaviour problems, while non-separation of mature twins may be detrimental to each twin's individual progress and development. The study aimed to identify the determining factors when deciding upon schooling twins together or separately when they enter into the foundation phase. Existing school policies regarding classroom allocation of twins were considered. Three sets of twins, including teachers, parents, twins and other significant individuals involved in the process of separation or non-separation, were interviewed. Based on the findings, recommendations were made to assist parents and educators in making informed decisions about the schooling of twins.

Key words: monozygotic twins; dizygotic twins; schooling; separation; dominance; decision making; individuality; foundation phase education.

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CHAPTER 1

INTRODUCTORY ORIENTATION, STATEMENT OF THE PROBLEM, AIM OF THE STUDY AND CLARIFICATION OF CONCEPTS

1.1 INTRODUCTION TO THE STUDY

Internalizing and externalizing behaviour problems in children, and specifically in twins, are functions of both genetic and environmental influences. One such vital influence is the classroom environment. With regard to problem behaviour, DiLalla and Mullineaux (2008:107-125) found that twins are more likely to demonstrate good behaviour when they share a classroom.

Twins are usually not used to being separated prior to their first school day. Sharing the same class has the advantage that twins can support each other. The presence of a co-twin can make them more confident in class, even if they are not together constantly (Webbink, Hay & Visscher, 2007:573). Merely knowing that their co-twin is in the same room may provide the reassurance they need (Segal, 2006:473). On the other hand, separating twin pairs in terms of classroom could prevent them from being overly competitive and could stimulate independent development (Webbink et al., 2007:253). Other researchers are of the opinion that twins separated during their first year of school had more internalizing problems, such as anxiety, depression and social withdrawal, than did twins who were not separated (Tully, Moffit, Caspi, Taylor, Kiernan & Andreou, 2004:121).

A distinction can be made between monozygotic (identical) twins and dizygotic (non-identical) twins. For monozygotic (identical) twins it seems that internalizing problems are even more persistent – not only during the first year of school, but for relatively long periods after that as well. They also seem to experience higher anxiety levels compared to non-separated twins. Furthermore, monozygotic twins appear to have lower reading performance when separated. Dizygotic twins, however, tend to work harder when they are separated (Tully et al., 2004:122). The overall findings of the study conducted by Tully et al., (2004) indicate that the premature separation of twins may be associated with the development of emotional problems. Any decision to separate twins within the first few years of school should be taken with care and planning. The needs and experiences of each child in a twin pair, along with the input from parents, should rather be considered on a case-by-case basis (Jones & De Gioia, 2010:252).

In an American study carried out by Segal and Russell (1992:69-84), it was found that most schools had a very firm policy of separating twin pairs, regardless of parental preferences or substantial research

evidence proving that it is in fact best for twins to be separated. Some schools abroad even support the policy of separating twins in terms of schools which, apart from emotional problems it may cause, also creates logistical problems for families (Moorhead, 2009). Mandatory policies in the school systems across the globe appear to advocate the separation of twins based on the belief that if twins are placed in the same class, they will fail to develop their own individuality (Jones & De De Gioia, 2010:241).

A study conducted in the United States of America focused on the knowledge, attitudes and perceptions of school counsellors with regard to classroom placement of twins and multiples (Nilsson, Leonard, Barazanji & Simeone, 2009:1-18). The results indicate that, although participants had twins and multiples in their schools, most parents were unaware if their school had a policy regarding placement, and if they were, what the policy stated. In cases where the policies were known, it was in favour of separation of twins into different classrooms. Most participants supported early separation – between the ages of three and six years old – and believed that separation would have a positive impact on the children's development in terms of identity, individuality, social skills and self-esteem. Participants were also of the opinion that having twins remain together in the classroom may make it more difficult for teachers. More than 70% of the participants had no training on issues associated with twins and multiples in the school system (Nilsson, et al., 2009:13).

An Australian investigative study by Jones and De Gioia (2010:239-253) explored the perception of teachers regarding classroom assignment of twins. During this study the participants' qualifications, teaching experience and perceptions of twin relationships were considered. None of the participants had direct training in the education of twins. This particular study found that teachers based their beliefs regarding classroom assignment of twins mainly on their previous personal and professional experiences with twins (Jones & De Gioia, 2010:250). With the increasing number of twin and higher multiple births, informed decision making and parent assistance in terms of beneficial schooling of twins and multiples are becoming a pressing issue.

1.2 BACKGROUND TO AND INCENTIVES FOR THIS RESEARCH

1.2.1 Initial awareness

My inspiration for this research stems from my own personal interest in the phenomenon of twins. During my first year of teaching as a grade one teacher in the foundation phase in 2005, my very first encounter with a parent revolved around the separation or non-separation of her identical twin boys. I clearly remember feeling completely out of my depth when having to answer her questions about what would be best for these specific boys, and for twins in general. None of my formal training had even touched on this subject. Up until that point in my life, I had no experience with or exposure to twins. Upon further enquiry about the school's policy regarding the education of twins, I found that there was no existing

policy. It appeared as if that important decision had to be made without any substantial research or frame of reference. A few years later I relocated to another province and as a grade two teacher I was faced with another dilemma regarding the phenomenon of twins. Opposite-sex, dizygotic twins were educated separately as recommended by the school at that stage, although it went against the preferred choice of education of the parents. At the end of that year the twin in my class had to repeat the year while his sister was ready to progress to grade three, and the family was faced with the emotional consequences for both as a result thereof. The parents went to extreme measures to ensure that the twins were not separated in terms of grade-levels, which drew my attention to the unknown and easily misunderstood world that twins share. During my subsequent teaching career, I had encounters with other twin pairs, both mono- and dizygotic. The psychosocial bond between twins, as well as their specific educational needs, personalities and areas of interests and strengths, remains fascinating.

My interest in this study was encouraged even further when I spontaneously fell pregnant with monozygotic twin girls in 2009. Although many twins and higher multiples are born prematurely, which could influence their development (Hay & Preedy, 2006:398), I was privileged to give birth to healthy, full-term babies, weighing in at 3,1 kg and 2,9 kg respectively. Both as parents and as siblings our household experiences many joys and challenges that come with raising twins. Currently, at the age of three, they are attending a pre-school where the only option is to educate them together, but, as they progress to primary school and enter into the foundation phase, an informed decision regarding their classroom assignment will have to be made. My inspiration for this research strongly draws on this.

1.2.2 Exploration of the problem

Two large studies dominate the research field with regards to twin separation upon school entry – one in Australia and one in the United Kingdom (Hay & Preedy, 2006:400). Another study in the UK has followed since, as well as one in the Netherlands, but very little other research with specific reference to the schooling process of twins and multiples is available.

Although being a twin is not a disability, it differs from being a singleton and therefore requires special consideration. Hay and Preedy (2006:398) point out that twins share a unique and special relationship that is not available to singletons, and that having such a companion available is an advantage – especially when entering primary school. On the contrary, it also appears that the closeness of twins might impede their language development. Webbink et al., (2007:573-580), however, arrived at an opposing conclusion, noting that non-separated twins perform better in language and in some cases in arithmetic in the foundation phase. The presence of a co-twin appears to matter among the early stages of primary education of same-sex twin pairs, while it seems far less so at the later stages of education (Webbink et al., 2007:580). Furthermore, twins and multiples are not able to develop personally, emotionally and socially in the same manner as singletons. Sibling rivalry might also be more intense

for twins and multiples than for other siblings, since the presence of the co-twin creates direct competition and comparison (Hay & Preedy, 2006:399).

By school age singletons are able to place themselves in categories according to their gender, size, age and appearance. For multiple birth children an additional category is added, namely that of “twin” or “triplet”. Their individuality and sense of self is therefore directly linked to the extent to which they view themselves as a unit (Hay & Preedy, 2006:340). Their ability to make friends outside of their unit is subsequently influenced.

A recent survey by the National Organization of Mother of Twins Clubs (NOMOTC) showed that 43% of educators believe that all multiples should be separated when they enter primary school, while most parents are of the opinion that separation would be detrimental to their children (Fierro, 2011:1). Some reasons for keeping twins and multiples together in a class includes the bond they share, convenience and learning styles. Due to genetic compatibility, twins and multiples often share the same learning styles and aptitudes. They often also tend to prefer similar personality types when it comes to teacher preferences, and would therefore opt for the same teacher. According to Fierro (2011:1-3) reasons for separation of twins include the avoidance of confusion among teachers and peers, especially where monozygotic twins are concerned. Comparative statements to indicate differences between monozygotic twins can be distressing.

Hay and Preedy (2006:401) offer some scenarios where multiple birth children are likely to benefit from separation, which includes one child being markedly more able than the other or where one child perceives himself as failing. When one or both children are dependent to such an extent that they are unable to form relations with other children outside the twinship, it may be considered beneficial to separate twins. Contrasting to these findings, Van Leeuwen, Van Den Berg, Van Beijsterveldt and Boomsma (2005:390) concluded that it makes no significant difference whether or not twins are separated in the foundation phase – neither in academic achievement or problematic behaviour.

In the early 1990s Segal and Russell (1992:69) launched longitudinal studies with regard to the placement of twins and multiples in educational settings. These researchers are of the opinion that despite many studies conducted on the phenomenon of twins and classroom allocation, few conclusions can be made. Making a decision to separate or keep twins together in a formal educational setting remains difficult for parents, counsellors and educators.

1.3 THE RESEARCH PROBLEM

Considering the afore-mentioned research, it appears that separating twins or educating them together remains a grey area without clear guidelines for educators, parents and counsellors. This gives rise to the question whether informed decisions are being made upon the placement of twins when entering the foundation phase and, if so, what exactly are these decisions based upon? The primary question for this study is thus formulated: What are the determining factors that should be taken into consideration when a decision is made to separate twins or keep them together when they enter into a formal educational setting?

Subsequent questions arised as a result of the preceding question include the following:

- Who are the parties involved in making decisions regarding the classroom placement of twins?
- Which considerations are being accounted for during the decision making process of separation or non-separation of twins?
- How many placements of twins in classrooms, either together or separately, are merely left to chance?
- Is the twin phenomenon fully understood by those making the decision to separate or not to separate twins?

1.4 AIMS OF THE INVESTIGATION

The aim of this research study is to investigate which determining factors should be considered when educating twins together or separately. With reference to the preliminary comments and the formulated research problems for this study, a general aim and specific aims have been identified.

1.4.1 General aim

The general aim is to define the determining factors of schooling twins together or separately in the foundation phase.

1.4.2 Specific aims

In order to define the determining factors of schooling twins together or separately in the foundation phase, and thus to offer a possible solution for the research problem, specific aims have been formulated:

- To understand the phenomenon of twins in relation to singletons as far as schooling is concerned.
- To distinguish between specific twin relationships and the effect each type has on the need for separate or shared classroom assignment.
- To investigate the dynamics of mono- vs dizygotic twin pairs in relation to scholastic experience.
- To differentiate between emotional, behavioural and social, and cognitive factors which influence the general functioning of twins, and therefore the assignment to shared or separate classrooms.
- To consider the practical implications of teaching twins in the same class, as well as when educating them separately.
- To investigate what school's policies are regarding classroom allocation of twins.
- To determine what the parents' view is of allocating twins to the same or separate classrooms.

1.5 THE NATURE, APPROACH AND METHOD OF THIS RESEARCH

A literature study was utilized in order to collect information to constitute the theoretical framework of this research study. Resources include books, newspaper articles, scholarly articles, research reports and authentic internet websites.

A phenomenological approach, which falls within the qualitative research paradigm, was employed. Phenomenology aims to understand a certain phenomenon from the participant's perspective (McMillan & Schumacher, 2006:333). With reference to this study, the explorative ability of semi-structured interviews was considered to be a suitable data gathering tool. Semi-structured interviews are employed to investigate something that affects an individual, or individuals, significantly and can therefore be considered appropriate, as classroom separation of twins can have either a positive or a negative influence in the general functioning of twins as individuals.

For the purpose of this study three sets of foundation phase twins were interviewed together with their parents, educators and other relevant parties, based on purposive sampling. Each interview was recorded and transcribed for purposeful analysis. The purpose of the interviews was to present perceptions, feelings and motivations regarding separation of twins in the foundation phase, as well as to verify and extend information from the literature study and to verify and extend hunches and ideas I had developed regarding the phenomenon of twins.

Purposive sampling, in contrast to probability sampling, increases the utility of information obtained from small samples (McMillan & Schumacher, 2006:319). According to McMillan and Schumacher (2006:316), an exploratory study such as this "adds to the literature by building rich descriptions of complex situations and by giving directions for future research". It is for this reason that the principal of a selected primary school in my area of service was identified and approached for permission to conduct

the research within his school's foundation phase (cf Addendum C). Once consent was received, the parents of three identified sets of twins were approached. Parents and educators involved all signed permission letters (cf Addendum D & F) to indicate their willingness to participate in this particular study. Since the twin children themselves were involved in the study, they signed letters of assent (cf Addendum E).

The existence and content of policies regarding twin classroom allocation in the foundation phase of primary schools was also investigated in this research study. In order to interview the foundation phase heads of department of five primary schools in the area of focus, permission was requested from the Mpumalanga Department of Education (cf Addendum B).

Since qualitative research can easily be perceived as personally intrusive, ethical considerations were vital to this study. In order to meet the ethical clearance requirements involved in qualitative research, certain measures were considered. Participation in this study was voluntary and involved no envisaged risks or harm to participants. Pseudonyms were used to protect the privacy and confidentiality of participants. Informed consent refers to permission given by participants to partake in a research study (McMillan & Schumacher, 2006:334). For the purpose of this research study, written and signed informed consent was obtained from participants.

1.6 CLARIFICATION OF TERMINOLOGY

The research was aimed at gaining insight into the factors which determine whether it would be beneficial for twins to be schooled together or separately. A clear description of the key concepts of this research study is provided.

1.6.1 Monozygotic twins

Multiple births occur in one of two ways. During fertilization, or conception, a zygote is formed, which is a single celled organism. When a single fertilized zygote splits into two, the result is monozygotic (one-egg) twins, commonly known as identical twins. Monozygotic twins share the same hereditary makeup and are the same sex, although they differ in some respects. Temperament and hand dominance are examples of differences in monozygotic twins (Papalia, Olds & Feldman, 2006:60-61). Monozygotic twins can be categorized further into monochorionic or dichorionic twins. The former develops within the same fluid-filled sac and normally share blood and have similar hormonal levels, which affect brain development. Monochorionic twins have a tendency to be more concordant in terms of cholesterol levels, personality traits and IQ than dichorionic twins, who grow in separate fluid-filled sacs (Papalia et al., 2006:75).

1.6.2 Dizygotic twins

Dizygotic twins occur more commonly than monozygotic twins. Papalia et al., (2006:61) explain dizygotic (two-egg) twins as babies conceived by the union of two different ova with two different sperm cells. Dizygotic twins are also referred to as fraternal twins. These twins are more alike in hereditary makeup than other siblings. They may also be of different sexes. Dizygotic twins are generally inclined to differ more in terms of IQ than monozygotic twins (Papalia et al., 2006:79). Dizygotic twins may share 50% of the same genes, whereas monozygotic twins share 100% of their genes (Shaffer & Kipp, 2009:100). As a result, dizygotic twins are no more alike than other siblings. In terms of individual growth and development, dizygotic twins tend to vary more than monozygotic twins (Albi, Johnson, Catlin, Deurloo & Greatwood, 2010:21,235).

1.6.3 Individuality

Twins appear to be continuously striving to be themselves, despite the fact that they view themselves as part of a twin pair. Baxter and Diaz (2012:17) note that the ultimate way to identify a twin's sense of self is to value the process of social interaction and the narrative each twin individually has about his/her past and present experiences. Bilger (2009:44-55) came to the conclusion that many monozygotic twins tend to wear the same clothes and finish each other's sentences. Yet, they also exhibit a desire to function independently from each other. Cassell (2011:16) found that monozygotic twins perceive their co-twin as an extension of themselves simply because looking at each other meant to them looking at a clone of themselves. The companionship a twinship provides to both twins decreases a desire to break away from the relationship.

1.6.4 Stereotyping

Stereotypes can be seen as the cognitive component of attitudes toward any social group. It refers to people's beliefs and assumptions with regard to the social identity of all individuals belonging to a specific social group. Stereotypes function as schemas which suggest that members of any particular group possess certain typical traits. Once these schemas are activated, the traits come to mind automatically (Baron, Byrne & Branscombe, 2006:38-42). Twins can be regarded as a specific group of individuals which excludes singletons. Certain stereotypical assumptions are often generalized to all twin pairs. While some common ground exists among twins, each twin relationship is unique and should be considered as such.

1.6.5 Dominance

Jones and De Gioia (2010:243) refer in their research to dominance as the way one twin might overshadow their co-twin, being more outgoing and doing things for the overshadowed twin – speaking on their behalf, for example – and thus hindering their co-twin’s emotional and social development. One of the widely accepted beliefs regarding classroom assignment is that separating twins where dominance is a factor is beneficial for the dominated twin.

1.6.6 Over-reliance

Over-reliance within the context of this study can be explained as the reliance of one child on his/her co-twin to the point where the child does little for him/herself and struggles to function without the presence of his/her co-twin (Jones & De Gioia, 2006:243).

1.6.7 Support

Support within the framework of this study refers to the emotional assistance that twins offer each other, especially in new and daunting circumstances. DiLalla and Mullineaux (2007:108) point out that twins - especially monozygotic twins - are particularly attached to one another, placing their relationship within the definitions of an attachment relationship. It is therefore reasonable to expect that twins perceive each other as a secure base offering emotional support when they are in a stressful situation.

1.6.8 School policies

Multiples should be acknowledged as a group which needs special consideration in terms of school policies (Hay & Preedy, 2006:401). Twins are frequently stereotyped as being too close and policies of separating them are often implemented in schools without being evidence based. Hay and Preedy (2006) suggest a policy which is flexible towards assessing the needs of twin children as individuals, but also takes into account the uniqueness of twin relationships. They also recommend that school policies make room for teacher training in the field of educating multiple birth children. School policies refer to the governing documents by which a school district and school building is run (Meador, 2013).

1.6.9 Foundation phase

According to the Department of Education (Revised National Curriculum Statement, 2003:27), the foundation phase is the first phase of the General Education and Training Band, which consists of Grades R, 1, 2, and 3. The three learning programmes, i.e. Literacy, Numeracy and Life Skills, focus on primary skills, values and knowledge which lay the foundation for further learning. Children enter into

the foundation phase in the year they turn seven and complete the phase at the maximum age of ten years old.

1.7 THE STRUCTURE OF THE RESEARCH

This research report is structured as follows:

- Chapter one consists of an introduction orientation, statement of the problem, aim of the research, the nature and course of the research and the clarification of concepts.
- Chapter two focuses on a literature study in which the general phenomenon of twins is examined, as well as existing policies and classroom allocation of twins to separate or same classes. Attention is paid to different types of twin relationships, and the advantages and disadvantages of separation in order to consider possible factors which influence the decision of classroom assignment.
- Chapter three explains the research design. This chapter provides detail in terms of the research approach, sampling, ethical considerations and the process used to collect data.
- Chapter four reports on the findings and results from the data gathered. It aims at determining the specific factors which should be taken into account when deciding on the separation or keeping together of twins in the foundation phase.
- Chapter five is dedicated to the conclusions and limitations of the research study. It presents a summary of the findings and shortcomings, and offers direction in terms of future research opportunities. It aims to make recommendations to the parties involved in making decisions about appropriate policies on classroom allocation of twins.

1.8 DELIMITATIONS OF THE STUDY

The focus of this research is on classroom allocation of twins in the foundation phase and therefore mainly explores the determining factors of separating twins or keeping them in the same class when they enter primary school. It does not focus on the effect of internalizing and externalizing behaviour of twins during the intermediate and senior phases of their education, and nor does it investigate twin functioning during tertiary education.

Although there is a need for research on the separation of all multiple birth children, this study has been narrowed down to the classroom allocation of mono- and dizygotic twins, and does not focus on higher multiples.

1.9 CONCLUSION

The issue of classroom separation of twins has been an area of interest since the 1960s (Tully et al., 2004:115), yet very little evidence-based research supports the decisions made by educators, counsellors and parents. With the increasing number of twins born, schooling them in terms of their unique and special needs affects more and more twins, teachers and caregivers. Various factors play a significant role when deciding whether separation of twins in the foundation phase is beneficial. From previous research it is evident that having a pre-defined school policy presents challenges, and that each case should be considered according to its own criteria. The aim of this research is to determine what factors should be considered, and which factors are, in fact, significant regarding classroom allocation of twins. Several factors seem to have a profound impact on these decisions.

It is for this reason that an extensive literature study on the phenomenon of twins and their educational needs is vital. The extent to which being part of a twin pair affects a child's social, emotional and cognitive development in the foundation phase will be considered in the second chapter of this study.

CHAPTER 2

THE TWIN PHENOMENON

2.1 INTRODUCTION

This chapter is dedicated to a literature study that explores the phenomenon of twinship and how being a twin differs from being a singleton. The research question is: What are the factors one should consider when determining whether twins should be separated or schooled together in the foundation phase? In order to explore the factors involved it is necessary to understand what the twin phenomenon entails. As indicated in chapter one (cf 1.1 & 1.2.2), there are various facets which are unique to twin relationships and which create unique educational issues not faced by singletons.

Barghols (2010:8) distinguishes between two basic concepts when it comes to the way in which parents raise twins. Twinning refers to viewing and handling twins as a pair, or unit, while differentiating implies that parents and other caregivers view twins as individuals. The way in which twins are reared and viewed by others is significant in terms of emotional, cognitive, social and behavioural development, which in turn influences classroom allocation. Researchers Hay and Preedy (2006:400) recognize the fact that more than one type of twin relationship exists, which will influence classroom allocation of specific twin children accordingly. Furthermore, school policies regarding appropriate schooling of twins play a fundamental role in addressing the specific educational needs of twins. Previous research studies have indicated that a flexible approach is more efficient than rigid placement policies (Tully et al., 2004; Van Leeuwen et al., 2005; Hay & Preedy, 2006).

2.2 TWIN TYPES

Being part of a twin relationship is a unique phenomenon that has a weighty impact on the rearing and development of the twin children. In most cases, twins are together from conception through to young adulthood. They have a life partner from the moment of conception and experience major life events in tandem. These special environmental conditions affect the social and psychological development of twins, as well as the relationships they form throughout their lives (Cassell, 2011:3).

Zygoty and gender differences or similarities often serve as criteria for categorizing twins according to type – predominantly based on genetic factors (Staton, Thorpe, Thompson & Danby, 2012:200). However, twin pairs also vary in terms of relationship dynamics.

2.2.1 Zygoty

Zygoty denotes the genetic similarity and dissimilarity of different twin types. Fierro (2012:14-24) explains zygoty as the scientific term for distinguishing between identical and fraternal twins. Monozygoty twins (a) are the result of a single fertilized egg, or zygote, while dizygoty twins (b) originate from two separately fertilized eggs. This, together with the phenomenon of polar body twins (c), is illustrated in figure 2.1 below:

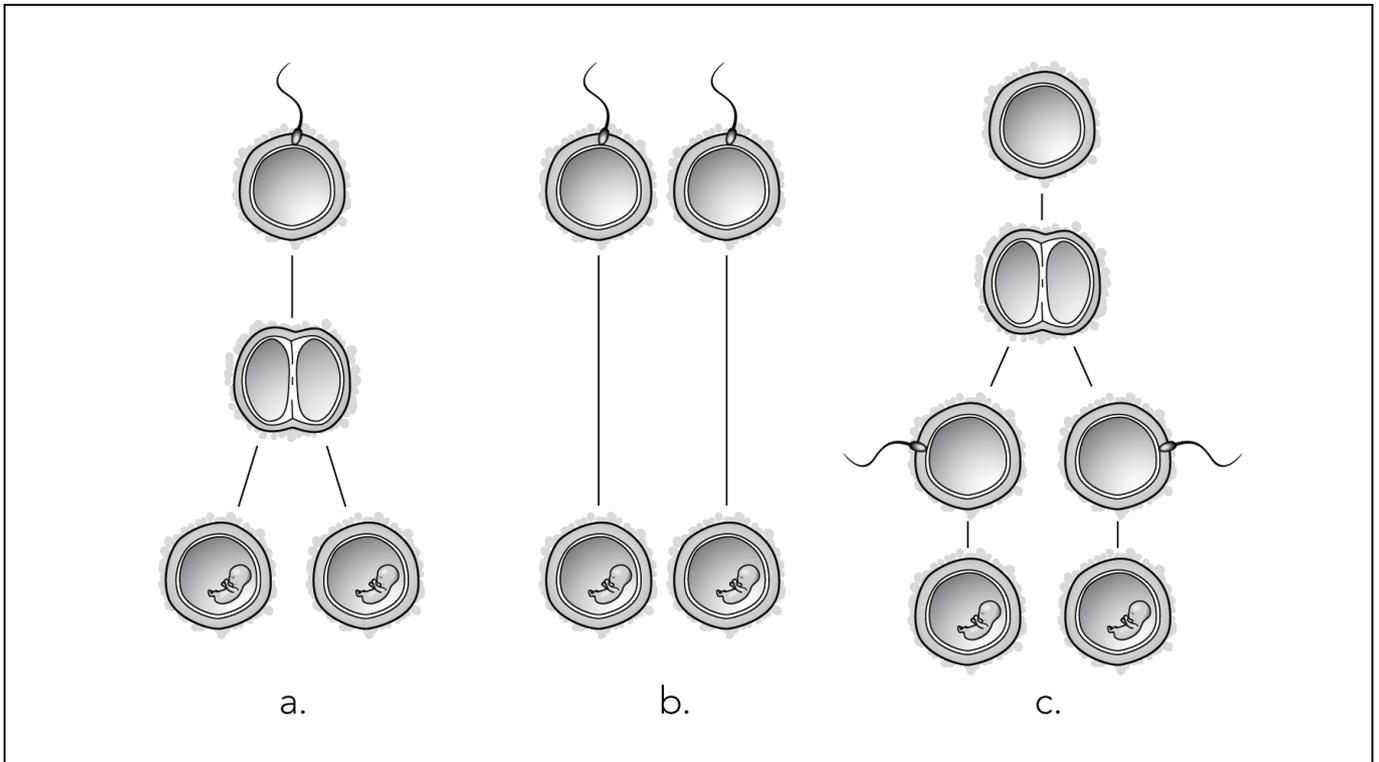


Figure 2.1: Twin fertilization

Source: Fierro (2010:17)

Dizygoty twins (*di* meaning two, and *zygoty* meaning fertilized egg, or zygote) are essentially two siblings that happen to be born at the same time, each formed by a separate egg and a separate sperm. Monozygoty twins (*mono* meaning one) are formed when one fertilized egg splits into two individual zygotes, which then develop into two babies. Despite the increase in multiple births, the monozygoty twinning rate remains steady. Monozygoty twins share 100% of their genes and are always same-sexed, whereas dizygoty twins share only 50% and can be opposite-sexed or same-sexed. In essence, dizygoty twins are, therefore, no more similar than non-twin siblings (Baxter & Diaz, 2012:14). Polar body twinning happens very rarely and results in 75% shared genotypes. This phenomenon occurs when a single egg splits before fertilization, and is then fertilized by two separate sperm.

Other monozygoty twin types that are worth mentioning are mirror image twins and conjoined twins. According to Fierro (2010:19) more or less 23% of monozygoty twins are classified as mirror image

twins, displaying reversed asymmetric physical characteristics. Opposite hand preferences (left or right hand dominance), birth marks on opposite sides of the body or hair locks that twirl in opposite directions are some examples of identifying mirror image twins through observation. These twin types usually share a placenta in vitro.

In the event of timely splitting of fertilized eggs, it may happen that the zygote does not separate completely, resulting in conjoined, or Siamese, twins. Although some conjoined twins live to an old age, most of these monozygotic twins are challenged with health complications, since they often share organs (Fierro, 2010:22).

Depending on when the zygote splits, monozygotic twins will have two separate placentas. They are then termed dichorionic. The placenta may, or may not, fuse together. If the twins share a placenta, they are termed monochorionic. Monozygotes who share a placenta, however, may still have their own amniotic sacs, resulting in what is referred to as diamniotic monozygotic twins. Monozygotic twins sharing an amniotic sac are termed monoamniotic. Figure 2.2 explains the link between zygosity and chorionicity (Fierro 2010:22).

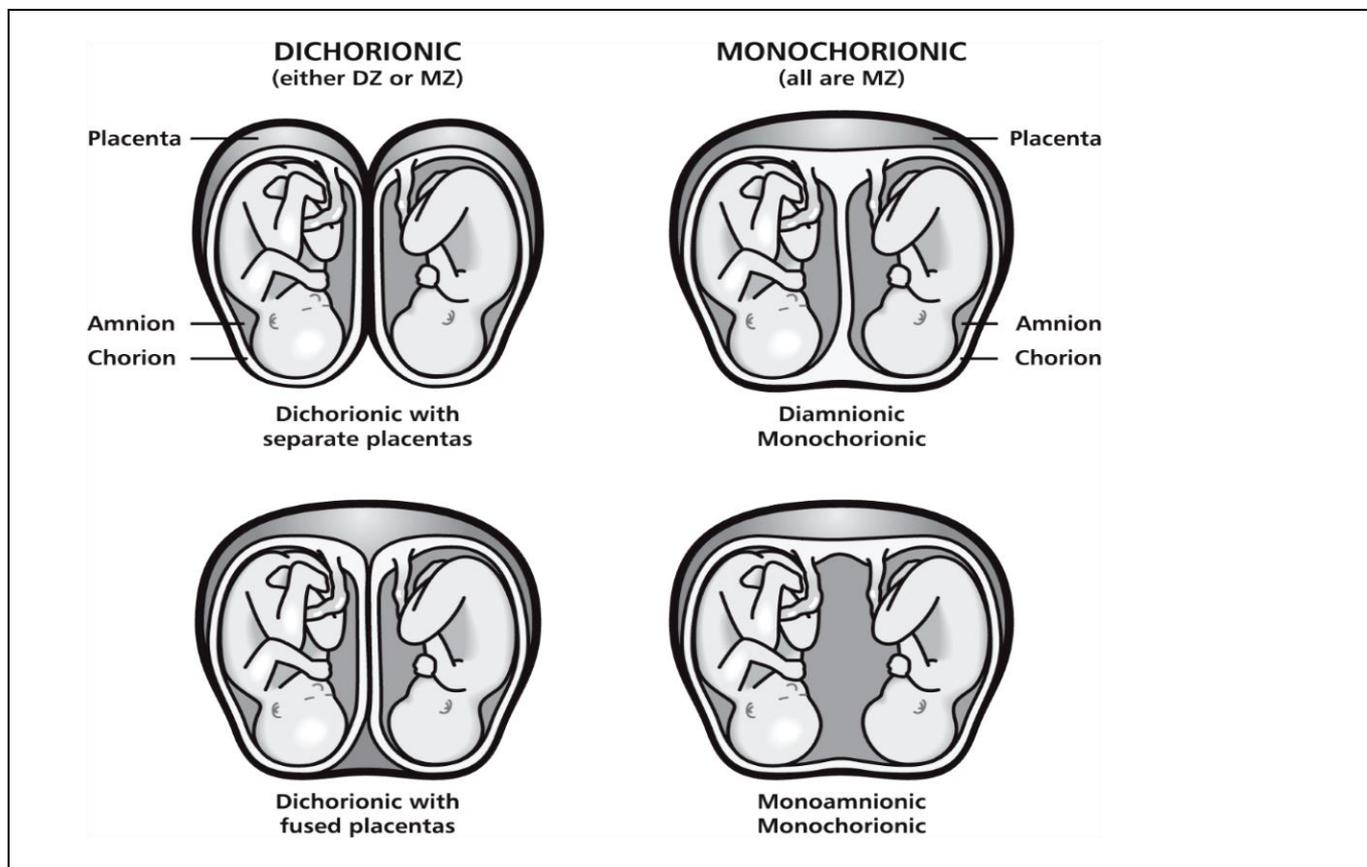


Figure 2.2: Zygosity and chorionicity Source: Fierro (2010:22)

2.2.2 Relationship types

Twin relationships are often considered to be unique and one of the most intimate of interpersonal relationships (Fraley & Tancredy, 2011:308). On the one hand twin relationships could be so intense that they don't feel the need to involve anyone else, where they are considered completely dependent upon each other. On the other hand, twin relationships could be productive and enviable (Barghols, 2010:11-12).

Empirical research shows that twins may have a special regard for one another since they share more of their genes with one another than non-twin siblings. Twins, therefore, are more likely to behave altruistically toward one another, invest in their co-twin's offspring, and grieve the loss of one another more intensely than non-twin siblings (Fraley & Tancredy, 2011:310).

Hay and Preedy (2006:400) distinguish between three types of twins: *extreme individuals*, *mature dependents* and *closely coupled* multiples. The latter refers to twin children who act as though they are a couple or unit, and are mostly treated by outsiders as such. They might be unable to recognize their own mirror image, and respond to both names interchangeably. They often combine to be a powerful unit. *Closely coupled* multiples tend to have few or no friends outside their unit. *Extreme individuals* represent multiples who find their relationship restrictive to such an extent that they might even deny their multiple birth status. They tend to fight and often polarize to opposite extremes in order to establish their own identities. *Mature dependents* are multiples who enjoy their relationship with each other and who can function effectively as both individuals and as a unit. They are able to form friendships outside of their unit without resenting or over-competing with their co-twin. These twins are able to pursue their own interests and are content if it happens to be the same as their co-twin's. The differentiated twin types are illustrated in figure 2.3 below:

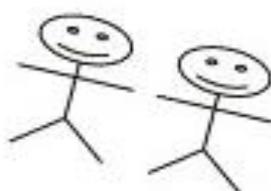
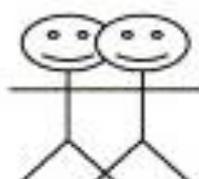
"Extreme Individuals"	"Mature Dependents"	"Closely Coupled"
		

Figure 2.3: Three types of twins

Source: Hay and Preedy (2006:400)

Generally children who are closely coupled find separation traumatic, although they may benefit from it, while extreme individuals tend to prefer being in separate educational environments (Hay & Preedy, 2006:401). The type of twin pair will thus inextricably be a determining factor in classroom allocation.

2.3 EMOTIONAL DEVELOPMENT

In order for children to function optimally in a social environment, they need to have well developed emotional skills. The core feature of emotional development includes the child's ability to identify, understand and control their own feelings. In addition to this a child should be able to accurately read and understand the emotional states of others, and develop empathy for others in order to establish and sustain relationships (Boyd, Barnett, Bodrova, Leong & Gomby, 2005:3). Early social-emotional difficulties in children predict later social-emotional problems at school age for prematurely born children, of which twins often make up a large percentage (Treyvaud, Doyle, Lee, Roberts, Lim, Inder & Anderson, 2012:782).

All children, including twins', primary emotional experiences are directly related to the family environment. Parents who support positive emotional development interact with their children affectionately, as opposed to parents who are emotionally unavailable. It is, therefore, reasonable to expect that the quality of interaction between primary caregivers and children in the home contributes significantly to a child's emotional development (Knight, 2010:242; Boyd et al., 2005:5).

2.3.1 Attachment

According to the attachment theory, all infants are born with the ability to form an attachment relationship with a primary caregiver (Roisman & Groh, 2011:105). Renn (2009:2) explains attachment as any form of behaviour resulting in a person attaining proximity to a significant other. The attachment theory focuses on the role that a parent plays in terms of responding to a child's affective states. Internal cognitive-affective working models of attachment are formed within close parent-child relationships where feelings of safety and security are established. When effective recognition, labelling and evaluation of the child's affective states take place, the primary caregiver or parent facilitates secure attachment.

Secure children are able to use sophisticated cognitive strategies to resolve fear of separation, which influences behaviour patterns in future relationships throughout life. When a parent is unpredictable, unavailable or inconsistent, the child develops insecure patterns of attachment, which could result in emotionally detached behavioural patterns later in life.

For singletons, the most significant attachment figure is usually the parent, or primary caregiver. Twins, however, are born into a unique situation where they have a same-age sibling since the earliest prenatal period and right through development. This typically results in a very close bond that sets their relationships apart from others (DiLalla, Mullineaux & Elam, 2009:509). Tancredy and Fraley (2006:78-93) argue that twin relationships are attachments and that twins are more likely to consider their siblings as attachment figures than non-twin siblings. Attachment relationship patterns are formed very early in life, and are dependent on parent-child proximity since infancy. This is illustrated in figure 2.4 below:

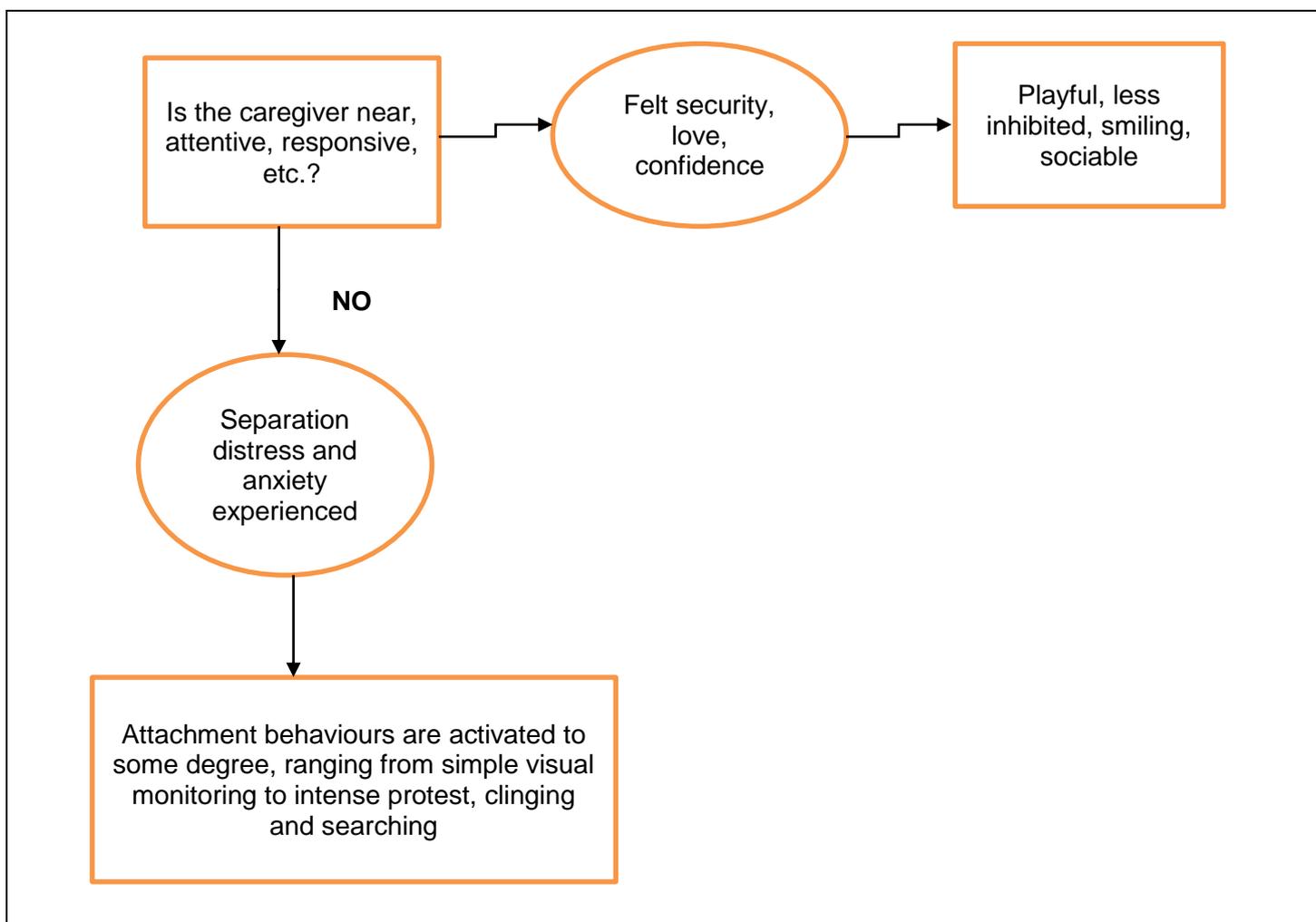


Figure 2.4: Attachment relationship patterns Source: Tancredy and Fraley (2006:80)

Based on the work of Bowlby (1969), attachment relationships can be described by four distinguishable qualities, namely proximity seeking, separation distress, the use of the other as a safe haven during times of stress, and the use of the other as a secure base from which to explore the world.

In her research, Cassell (2011:4) mentions the object relations theory, which focuses on the concept of the unitary self as being an essential step in development. It identifies that a baby's successful differentiation of his own body from his mother's within a healthy environment is essential. This

separation is usually facilitated by means of a transitional object – a soft toy or a blanket. Twins, however, can use one another as transitional objects. While this might be effective in moving beyond the attachment to the mother, twins' transitional objects have the potential to become permanent parts of their identity, largely due to the comfort they provide to each other, and the fact that both are available. This leads to twins simply replacing the attachment figure of the mother with that of their twin. Furthermore, twins tend to rely more on each other as they become older in comparison with non-twin siblings (Tancredy & Fraley, 2006:91).

In recent research, Tancredy and Fraley (2006:314) found that it is possible to differentiate between monozygotic and dizygotic twins in terms of attachment relationships. On account of genetic differences (monozygotic twins share more of their genes than dizygotic twins), they conclude that monozygotic twins share a stronger attachment relationship than dizygotic twins. Bruswitz (2009:5) concurs by reporting on a higher degree of attachment among monozygotic twins as opposed to dizygotic twins. However, despite the fact that both dizygotic twins and non-twin siblings only share half of their genes, dizygotic twins tend to feel more attached to each other than non-twin siblings. Penninkilampi-Kerola, Moilanen and Kaprio (2005:520) support the concept of the monozygotic twin relationship to be the closest type of connectedness between two individuals, and explain attachment as a relationship of a mature and enduring nature.

In light of the above it can therefore be expected that zygosity and degree of attachment will be a considerable factor in deciding whether to educate twins separately or together in the foundation phase.

2.3.2 Personality and temperament

Temperament is a stable, early developing tendency to experience and express emotion in a specific way. Genetic, emotional and environmental factors influence the development of a child's temperament (DiLalla et al., 2009:515). Temperament refers to the personality traits that are unique to each child, such as being fussy, shy, anxious, aggressive, angry or pleasant (Harkey, 2011). Children can be described according to their temperament as being well-adjusted, under-controlled, inhibited, confident or reserved (Papalia, Olds & Feldman., 2006:209). Approximately 42% of measurable temperament is the direct result of genetic factors (Harkey, 2011; Papalia et al., 2006:208). Since monozygotic twins share 100% of their genes, it can be expected that they will exhibit temperament similarities more so than dizygotic twins or non-twin siblings.

Many monozygotic twins, however, report differences in their personalities. Personality refers to the distinctive characteristics which make an individual unique. As monozygotic twins grow older, they may begin to display subtle differences, which are usually ascribed to differences in environment. Recent research conducted by the Spanish National Cancer Center in Madrid, and reported on by the *New York*

Times (2005), reflected this phenomenon in yet another way. Monozygotic twins increasingly differ in what is known as their 'epigenome' – the natural chemical modifications that occur in a person's genome shortly after conception, acting on a gene either like an accelerator or an anticatalyst, marking it for higher or lower activity (Chatterjee & Morison, 2011:369).

Monozygotic twins share the same set of epigenetic marks on the genome when they are born, but variations in the epigenome emerge as twins grow older. The differences also become greater the more twins are separated from each other. Two possible reasons for these differences exist. Firstly, epigenetic marks are lost randomly as people grow older and can therefore be anticipated to occur differently in two members of the same twin pair. A second possible explanation is that personal experiences and elements in the environment feed back onto the genome by changing the pattern of epigenetic marks. In light of these findings, personality differences in twins are not only possible, but also probable (Chatterjee & Morison, 2011:370; Haque, Gottesman & Wong, 2009:136-141).

2.3.3 Empathy

Empathy refers to the ability to put oneself in another person's place and feel what the other person is feeling (Papalia et al., 2006:205). Monozygotic twins tend to respond more similarly to each other than dizygotic twins in terms of expressing empathy, which suggests a genetic influence on this pro-social behaviour (DiLalla et al., 2009:517).

Many twins can relate to the paranormal empathic phenomenon of telepathy or extrasensory perception (ESP). One twin might experience emotional distress when his/her co-twin experiences trauma, or physical symptoms or pain when his/her co-twin is injured (Fierro, 2011:1). Twins also often perform the same actions at the same time even when they are apart, or share similar taste in clothing or food.

In a study conducted by Brusewitz (2009:1-13), results confirmed that significantly more monozygotic twins experience telepathy and synchronicities than dizygotic twins. It has been speculated on theoretic grounds that twins who were more "entangled" within the womb – sharing an amniotic sac and placenta, as in the case of monochorionic twins, as opposed to dizygotic twins with separate amniotic sacs and placentas – might share more extraordinary connectedness (Parker & Jensen, 2013:28). Although being a monozygotic twin seems to aid telepathy, it does not seem to be the only considerable factor. Extrovert personality types also seem to be more prevalent to experience ESP than introvert personality types (Powell, 2009:49). Among the literature Playfair (2009:115) provides the most comprehensive survey and most extensive research on this topic to date, and states that more or less 30% of monozygotic twins experience telepathic connectedness.

The above mentioned serves to emphasize the unique bond that exists between twins, which in turn implies the necessity for careful consideration whether to separate or keep twins together in an educational environment.

2.4 SOCIAL, EMOTIONAL AND BEHAVIOURAL DEVELOPMENT

According to Hartup (2013:1), socialization involves the construction of relationships as well as the inculcation of social skills, social motives and social norms. Social, emotional and behavioural competence includes the knowledge and skills that children need to effectively reach their goals and interact with others. Social competence integrates a broad range of values, attitudes and skills involving both self and others. Whether children will eventually become more or less socially competent is influenced by many factors, including childhood learning, child development and the context in which a child functions (Kostelnik, Whiren, Soderman, Rupiper & Gregory, 2013:3-6). There are optimal periods of social and behavioural development. Between the ages of birth and twelve years, children are considered eager, motivated social learners. During these periods children are developmentally primed to acquire new skills and understanding. Social development occurs in an orderly sequence over a period of time in many areas, including self-concept, empathy, prosocial behaviour, moral understanding, and self-regulation. Learning is also considered a social process, and academic success strongly relies on a child's emotional and social strengths (Kostelnik et al., 2013:7).

In her research, DiLalla (2006:100-101) found that twins might be at risk of poorer social interactions in early and middle childhood on account of having become comfortable with a same-age peer who is both genetically and environmentally similar to themselves, leaving them to feel less comfortable with children who are dissimilar. Cole (2014:204) emphasizes that the social setting in which children develop influences their ability to regulate their emotions. A child's ability to move from emotional social-regulation to self-regulation is determined by their social relationships. It is thus considered significant to further investigate social factors such as friendships, co-twin dependence, parenting styles and social behaviour among twins.

2.4.1 Friendship-forming patterns

Friendships are central to human existence. When adults are questioned about the most important elements in their lives, they generally mention the people they feel closest to. The same is true for children (Levinger & Levinger, 2013:111). To say that two people share a relationship implies that each person can and does influence the other. This is no different for the relationship that exists between twins. Levinger and Levinger (2013:113) point out that a relationship with a high amount of closeness is generated when the two people involved in the relationship see each other often, do a wide variety of things together and have known each other for a long time. When considering twin relationships, it is

then clear that the frequency, diversity, intensity and duration of the interaction between them will have a meaningful effect on the extent of their relationship. However, these dimensions are also carried over to friendship relations outside of the twinship.

Emotionally healthy children engage in positive play behaviours, develop mutual friendships and are more likely to feel accepted by their peers. Play is the medium through which children learn how to work together in teams and cooperate with others. Early rejection by peers has been associated with persistent academic and social difficulties in school (Boyd et al., 2005).

Durlak, Weissberg, Dymnicki, Taylor and Shellinger (2011:405-432) explain that teaching and learning have strong social, emotional and academic components, since children typically do not learn alone, but rather in collaboration with their teachers, in the company of their peers and with the encouragement of their families. Emotional experiences which are derived from friendships and peer relationships within the classroom setting can facilitate or impede children's academic engagement, work ethic, commitment and ultimate school success (Durlak, et al., 2011:405). This idea is supported by Vitaro, Boivin, Brendgen, Girard and Dionne (2012:366-380). They argue that academic achievement is predicted, amongst other aspects, by children's social experiences in the classroom. In particular, experiences with peers will influence child learning. The important goal of early education is to ensure that children develop the capacity to build positive relations with peers and blend easily into their social group. Because friendship relations and emotional development coincide with how and what children learn, it is vital to consider friendship-patterns inside and outside of a twinship relation.

Thorpe and Gardner (2006:162) point out that friendships play an important role in the social development of children and that for twins the process of establishing and sustaining friendships is unique. In their research they examined the effect that the type of twinship has on friendship development and found that the extent to which friendships are shared varies with the status of the twin pair. Same-sex twin pairs share more friends than opposite-sex twins, while monozygotic twins share more than half of their total friends – double that of dizygotic twins. Dizygotic twins potentially have more negotiation issues between each other with regard to shared and non-shared friendships.

To a certain extent twins seem to have an advantage over singletons when it comes to establishing friendships, since they are exposed to the development of socializing skills from birth and even before. Having a same-age friend in the house on a permanent basis allows for plenty of socializing opportunities (Baxter & Diaz, 2012:17). However, research suggests that young twin children have difficulty in forming friendships outside of their twinship, and are socially withdrawn. Since parents often assume twins to be established playmates, they are less exposed to play-dates with other children. Parents who participated in a survey conducted by the Twin and Multiple Birth Association (TAMBA:2009) report that, although twins often share friendships with other children, it is not always the

case. In many instances the mere fact that they are twins differentiate these children from singletons and often result in twins becoming the victims of teasing and bully behaviour. Parents of other children are often reluctant to invite one twin without the other, especially when they are perceived by outsiders as a unit. As a result twins are often not invited to birthday parties or play-dates, which may lead to general feelings of isolation and rejection by their peers (Fraser, 2009:8).

A related issue focuses on fighting between twins over friends, particularly if one twin is more outgoing and does not want to share his/her friends, or look after his/her shadowing twin (Fraser, 2009:35). Contrary to this, polarization can also occur where twins become overly dependent upon each other, resulting in a closed, exclusive friendship where interaction with peers who are not part of the twinship does not develop.

Fierro (2013:1) remarks that twin friendships become more challenging as twins become older. Initially most twins are introduced to new friends at the same time, which allows the same opportunities for becoming friends. In the early years friendships are frequently formed with the twin unit (Benson & Marshall, 2010:510). In general, young twin children show less social independence and fewer friendships with other children than do singletons. Despite little research that has been done on the topic of friendships outside of twinships, Benson and Marshall (2010:510) are of the opinion that twins are at risk of exhibiting less prosocial behaviour than singletons. They mention that monozygotic twins tend to be shyer than either dizygotic twins or non-twins because they are used to interacting with their co-twins. These twins spend so much time together that they may not learn how to interact with other, different children as well (Benson & Marshall, 2010:511). As children engage in separate activities at school, sports or other environments, doors are opened for separate exposure to meeting new friends. The typical friendship-forming pattern of each individual twin pair should thus be considered as a determining factor in appropriate classroom allocation.

2.4.2 Co-twin dependence

Co-twin dependency may be described as the close and intimate relationship and connectedness between twins. This is often also referred to as the twinning bond, the couple effect, interdependence or the twinning reaction (Penninkilampi-Kerola et al., 2005:520). Twin researchers usually apply the concept of 'dependence' to characterizing the strong interconnection and closeness between twins. Dependence in the twin relationship could be a manifestation of problems in identity formation and excessive inter-twin identification, and it may be that the same factors that influence twin identification may also be associated with twin dependence.

Twins, like other siblings, vary from extreme closeness to excessive conflict (Fortuna, Goldner & Knafo, 2010:206). For some, the ever-presence of the co-twin serves a comforting, soothing function, thus

encouraging extended mutual dependence. This dependence often results in a fear of losing his/her co-twin. At an extreme, twin co-dependence may restrict the twins' ability to develop individually.

Klein (2008:2-3) explains that a fear of not being with a co-twin, as well as an overwhelming need for intimacy as a result of being a twin, exists within the psychological dynamics of twinship. Depending on the parenting styles within which twins are raised, twins are more or less at risk of being overly dependent on each other's personality strengths and limitations. On the one hand, twins who are reared as an undifferentiated unit, as well as those treated as polar opposites of each other, have dependency-related problems. Twins who were raised with emphasis on individuality, on the other hand, are able to function within this special bond with a better understanding of each other. Therefore, adequate parenting is essential for twins to develop independence. Where individuality and independence are lacking, one twin can become dominant and the other one submissive or passive.

Penninkilampi-Kerola et al., (2005:522-523) explain that the theoretical bases for research on dependency in twin relationships generally falls into the categories of object relations and social learning theories of dependence. These researchers describe dependence as a person's behaviour being intimately dependent upon the appearance and behaviour of another person. Dependence is considered a more generalized response tendency, not necessarily directed to any specific individual, in contrast to attachment where a specific attachment figure is identified. Earlier studies of dependence in twin siblings portrayed dependence to be a developmental deficit rather than a growth-promoting characteristic (Segal & Herschberger, 1999:29-51). These studies implied that twins may experience more difficulties in terms of identity formations, personality development and object relations as a result of dependence upon co-twins. Only in recent years did the perception change to focus on the unique connectedness and closeness as a positive and enriching experience (Fortuna et al., 2010:205-211). Nevertheless, dependency in twin relationships is still associated with identity formation and excessive inter-twin identification.

Co-twin dependence is closely related to gender, as girls are more likely to report themselves as co-twin dependent than boys. It has also been found that mothers of twins in the foundation phase of their school career showed a significant tendency to regard their twins as dependent – more than the twins themselves (Penninkilampi-Kerola et al., 2005:527). Dependent twins report their co-twins to be their best friends with whom they share more hobbies and friends than independent twins.

Furthermore, the degree of dependency within individual twin pairs also determines time spent apart. Monozygotic twins are more likely to be co-twin dependent than dizygotic twins, as was found by Fortuna et al., (2010:210). One possible reason for this difference is offered by Penninkilampi-Kerola et al., (2005:535) who state that dizygotic twins' relationships may actually be like any other non-twin sibling relationship in terms of dependent behaviour. However, Fortuna et al., (2010:211) argue on account of

their research that dizygotic twins were depicted as closer as and more co-dependent than non-twin siblings. This study also indicates that lower dependence and stronger rivalry among same-sex twins exist – possibly as a result of having more similar needs, making the struggle for shared resources especially tight.

2.4.3 Identity and Individuality

Identity involves the differentiation of the individual from the rest of the world, while individuality refers to the quality or character of a particular person that distinguishes him from others of the same kind, especially when strongly marked. Soddy (2013:5-7) refers to identification of the self as part of the process of identity development. Twins show interesting aspects of identity development in that they often have the feeling that others do not differentiate between them as individuals. This may be either a source of satisfaction or of frustration to them.

Fortuna et al., (2010:206) remark that rivalry and competition are often present in sibling relationships, but that it has an especially salient influence on twins' development of their individuality and identity. Rivalry may be fuelled by parents' and others' tendency to inadvertently compare the twins who are developing side by side. This may push twins to compete with each other.

Twins attract attention – especially monozygotic twins. They may find it tiresome and frustrating to be addressed by the wrong names, or be referred to as “the twins”. Outsiders such as teachers or peers often pose the question: “Which one are you?” Being viewed as a unit often interferes with twins' ability to develop as individuals (Fraser, 2009:35). Bacon (2005:141-147) provides a broader understanding of twins' social worlds, or social identities. She describes it as a process in which both parents and twins play an active role in constructing, performing, resisting and reforming twin identity. One such way to develop identity and individuality is by the way parents dress their twin children. Young twin children are often dressed similarly. Transition from sameness to difference often only comes when the children object to being dressed the same. It appears that, while parents may set the stage for twins' presentation of themselves, twins also actively engage in the utilization of their identity and individuality in the way they learn to present themselves both as individuals and as part of a unit. (Benson & Marshall, 2010:508-518).

Moreover, individuality is influenced by zygosity, as Bacon (2005:145) points out. It is somewhat easier for dizygotic twins to pass themselves off as non-twins on account of not appearing physically alike. Monozygotic twins, however, find it more challenging to convey themselves as individuals as they are restrained by their physical appearance, or *sameness*. This idea is supported by Jenkins (2004:4) who explains that a person's internal sense of self (or identity) cannot be separated from how others perceive us. Identity is, therefore, not fixed, but rather something that is established as people present themselves

to others, and then modify, internalize or reject external perceptions accordingly. Twins tend to develop their identities in terms of each other, by comparing and contrasting themselves with each other. In this sense one twin may describe himself to be the responsible one, while the other one is rebellious or weak (Bacon, 2012:311). Bennett (2009:172-185) concurs by suggesting that some monozygotic twins choose to represent themselves as twins, rather than solely as individuals, or as siblings who are also twins, in order define the boundaries of their individuality.

2.4.4 Stereotypes

A stereotype refers to a widely held but fixed and oversimplified image or idea of a particular type of person or thing (Hinton, 2013:7). Stereotypes essentially have three basic components. Firstly, a group of people are identified by a specific characteristic. By identifying the group by this characteristic, the group is distinguished from other groups on account of this characteristic. Secondly, additional sets of characteristics are ascribed to the group as a whole. Thirdly, upon identifying a person as having the identifying, meaningful characteristic, the additional, stereotypical characteristics are spontaneously ascribed to the person as well (Hinton, 2013:7-8).

Explicit beliefs and ideologies relating to twins as a homogeneous group can have far-reaching implications. Beauchamp and Brooks (2003:433) mention that the formation of twin stereotypes is influenced firstly by zygosity of the twins. They refer to an *assimilation effect* (treatment of their children as a unit) that occurs for parents of monozygotic twins, while a *contrast effect* (treatment of their children as individuals) occurs with parents of dizygotic twins. According to their research results, mothers of monozygotic twins tend to focus on similarities in personality traits, physical attributes and abilities of their twins, while mothers of dizygotic twins tend to emphasize the differences. It further appears as if teachers' expectations of twins tend to be influenced by zygosity as well, since they presume twins to have the same temperament and skills. Apart from zygosity, the media depiction of twins is a factor which contributes to stereotypes. Twins themselves may internalize stereotypic media representations of twinship. The *prima donna effect*, which refers to twins' reaction to continuously being in the spotlight and treated differently from singletons, reinforces stereotypes that twins draw more attention than singletons wherever they go. In some instances it is known that twins consciously use the prima donna effect to increase their social status by manipulating their popularity (Beauchamp & Brooks, 2003:434).

2.4.5 Social behaviour in the classroom

Children are constantly developing social skills and learning social behaviour in the classroom through modelling, experimentation and reinforcement. These learnt social behaviours may be positive or negative (Elias & Schwab, 2011:309). In the context of this study, social behaviour refers to the way in which children and twins specifically, behave within the physical and social environment of the classroom.

It is commonly believed that classroom separation is best for twins in order to help them develop their individuality without being influenced by a sibling classmate (Alexander, 2012:133). Classroom separation may decrease the likelihood of twins being compared with each other or given labels such as being disruptive, obnoxious, out-spoken or shy. Negative labels may adversely affect a child's self-esteem, especially when one twin is perceived as inferior in some way to his/her sibling (Alexander, 2012:134).

Contrary to these beliefs, some research indicates that children actually do better in terms of general social behaviour in the classroom when being educated alongside their twin sibling. A study conducted by Oliver, Pike and Plomin (2008:647) where monozygotic twins were allocated to separate classrooms indicates that monozygotic twins differ in terms of problem behaviour, and relates the source of problem behaviour to each child's perception of their classroom. Their results show that twins with less favourable perceptions of their classroom environments had more behaviour problems. These findings touch on an issue which is very relevant for this study, namely the presence or absence of a co-twin and thus the creation of favourable classroom perceptions as a result thereof.

DiLalla et al., (2009:511) state that classroom separation of twins can lead to internalizing behaviour, such as fear, shyness, withdrawal and depression, as well as externalizing behaviour, including aggression, disruptiveness and impulsivity. In previous studies conducted by DiLalla and Mullineax (2007:126) it became evident that, at least for conduct problems (being non-compliant, aggressive and rule-breaking), monozygotic twins may have fewer behavioural problems when they are schooled together. Figure 2.5 below illustrates some differences between monozygotic and dizygotic twins.

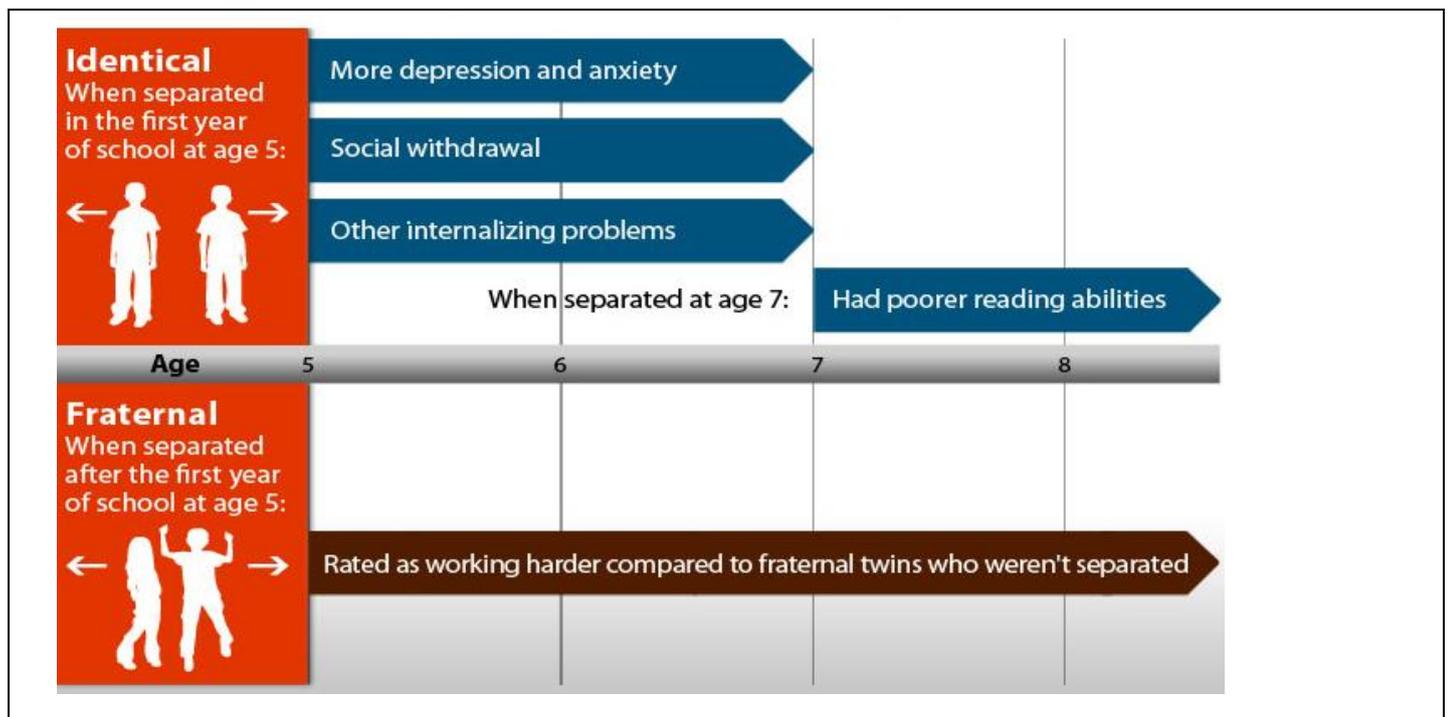


Figure 2.5: Monozygotic and dizygotic difference

Source: Marino (2012:4)

2.4.6 Parenting styles

Parenting styles may be defined as a collection of attitudes toward a child that are communicated to the child and create an emotional climate in which the parents' behaviours are expressed. Parenting practices, more specifically, refers to the techniques used by the parents to socialize their child and impose rules. Parenting styles thus provide an environment in which parenting behaviours influence a child's development (Frick, Barry & Kamphaus, 2009:280).

Papalia et al., (2006:312) refer to Baumrind's model of parenting styles. According to this model three types of parenting styles can be distinguished and typical behaviour patterns of children raised according to each can be identified. Authoritarian parents value control and unquestioning obedience, while permissive parents value self-expression and self-regulation. Authoritative parents value a child's individuality, but also stress social constraints. The latter seems to enhance children's social competence, since they know what is expected of them and whether or not they are meeting those expectations. These children know the satisfaction of accepting responsibilities and achieving success. In contrast to this, children raised in authoritarian homes are so strictly controlled that they often cannot make independent choices about their own behaviour. In permissive homes, children receive so little guidance that they may become uncertain and anxious about whether they are doing the right thing (Papalia et al., 2006:313).

Raising a child is a challenging task. However, raising twins requires even greater levels of energy and effort over an extended period of time, especially in shaping twins' individuality by means of an authoritative parenting style. Baxter and Diaz (2012:16) discovered that overall levels of parental stress have been found to be higher in mothers of twins compared to mothers of singletons.

Cassell (2011:13) suggests that parents of monozygotic twins are influenced by the zygosity with regard to raising their twins as well as fostering individuality. Twins respond to the feedback from their parents and, as found in other research (Bacon, 2005:141-147), especially treatment by the mother. Monozygotic twins will often receive more positive feedback from their mothers if they take on the roles of being two halves of a whole. This type of reinforcement discourages a desire for monozygotic twins to separate and differentiate (Cassell, 2011:13).

Twins have to share the attention of their parents and are often encouraged by their parents to act as a pair. This influences the way in which twins develop socially and behaviourally (Bacon, 2005:141-142). Social structures, within which growth and development are facilitated, are constructed by parents. Penninkilampi-Kerola et al., (2005:522-523) go on to comment that parents' socio-economic status can be considered influential in terms of physical resources and security, but also with regards to structuring social patterns and attitudes. Parents with fewer resources and limited educational background are consequently less able to provide individual attention, and are more prone to be twin or unit oriented compared to being differentiation oriented.

2.5 COGNITIVE DEVELOPMENT

The Swiss psychologist, Jean Piaget, described cognitive development in children as the product of their efforts to understand and act on their world (Papalia et al., 2006:33). Cognition, therefore, refers to a thought process and the behaviour that reflects that process.

Twin status often coincides with several potential risk factors in relation to cognitive development. These risk factors include prematurity, low birth weight, assisted conception, birth complications and time spent in an incubator. Although these factors are not exclusively related to twins, they are more commonly identified among twins than in singletons (De Zeeuw, Van Beijsterveldt, De Geus & Boomsma, 2011:107) and can possibly influence classroom allocation of twins in the foundation phase – especially if only one of the twins is affected.

2.5.1 Mode of conception

The use of fertility treatment and *in vitro* fertilization (IVF) more often result in the conception of twins than naturally conceived multiples (Wright, Chang, Jeng & Macaluso, 2008:1). In accordance with this

study, Gleicher, Kushnir and Barad (2014:1069-1071) state that the rates of multiple pregnancy associated with fertility treatments are mostly due to aging of treated patients and clinical utilization of fertility-enhancing drugs, aside from IVF treatments. They also point out that these assisted reproductive treatments (ARTs) more than often result in twin and higher-multiple pregnancies.

Several other studies investigated the link between mode of conception and cognitive development, and found no evidence to account for differences in educational achievement between children born from assisted conception and children born from natural conception (Wilson, Fisher, Hammarberg, Amor & Halliday, 2011:219-230; Wagenaar, Huisman, Cohen-Kettenis & Delemarre-van de Waal, 2008:24-26). It has been found that IVF twins are somewhat more delayed than IVF singletons, but Wagenaar (2009:24-27) ascribes the delay in development to multiple birth rather than to IVF. According to his research cognitive ability seems related to parental education levels and maternal age at the time of birth rather than to mode of conception. Results from other research, however, indicate that the use of assisted conception techniques such as IVF affect the development of twins to experience more delay in some aspects of language ability in comparison to twins conceived spontaneously (Gucuyener, Arhan, Soysal, Ergenekon, Turan, Onal, Koç, Turkyilmaz & Atalay, 2011:948).

2.5.2 Birth complications

During any pregnancy and labour many complications may occur. There is a well-recognized increased occurrence of both maternal and fetal or infant complications associated with twin pregnancies – particularly longer-term risks – including cerebral palsy and developmental delay (Dodd, Crowther, Haslam & Robinson, 2012:965). Although women with a twin pregnancy are more likely to give birth preterm, approximately 46% will give birth after 37 weeks of gestation. Dodd et al., (2012:964) state that for women whose twin pregnancy continues beyond 37 weeks of gestation there is a higher risk of perinatal mortality with advancing gestational age. According to these researchers, various worldwide studies consistently indicate the lowest risk of perinatal complications for births between 36 and 38 weeks of gestation. These findings have led to a general acceptance among medical professionals that 37 weeks of gestation is considered term for a twin pregnancy, whereas 40 weeks of gestation is considered term for singleton pregnancies (Dodd et al., 2012:965). Other researchers also support the idea that, unless medically otherwise indicated, risk factors of birth complications are reduced when twins are born at 37 weeks of gestation (Sullivan, Hopkins, Weng, Henry, Lo, Varner & Esplin, 2012:257).

The American Pregnancy Association (APA) mentions that there are several complications that coincide with the often premature birth of twins. These complications include immature lungs, which are associated with respiratory distress syndrome, bronchopulmonary dysplasia and other breathing disorders. Apnea, or the absence of breathing, might be present in premature newborns. Infections and

pneumonia, jaundice and an inability to maintain body heat are various other complications that may occur. Premature newborns are born with gastrointestinal systems that are too immature to absorb nutrients safely. Cardiac disorders and conditions such as anaemia and sepsis are not uncommon in prematurely born twins (Beckmann, 2010:201).

Compared to singleton pregnancies, twin pregnancies are at higher risk for foetal anomalies and for chromosomal abnormalities (Chauhan, Scardo, Hayes, Abuhamad & Berghella, 2010:308). These researchers indicate that twin pregnancies are at higher risk of being complicated by hypertensive disorders, gestational diabetes, anaemia, preterm birth, ante- and postpartum haemorrhage, and even maternal death. In modern times most twins are born by means of caesarean section. Complications during labour are more frequently related with twin births than with singleton births. Learning disabilities, however, occur just as frequently in children born after caesarean section as in children born by means of natural birth. No association between intelligence and mode of delivery can be substantiated by research evidence (Khadem & Khadivzadeh, 2010:139).

2.5.3 Low birth weight and premature births

According to Chauhan et al., (2010:309), twins are undeniably more likely to be delivered preterm – that is before 37 weeks of gestation – than singletons. The increase of premature births is multifactorial, but can be categorized into three groups: medically indicated due to maternal-neonatal outcomes, spontaneous premature labour and premature rupture of membranes. Low birth weight and low gestational age, or premature birth, are the most significant risk factors for lower educational achievement of twins in the primary school and have a negative effect on scholastic performance. Twins with lower gestational age, therefore, perform worse in arithmetic, language and reading in general (De Zeeuw et al., 2011:113-114). In agreement, Treyvaud et al., (2012:779) report that, by school age, very premature and very low birth weight children have a greatly increased risk for internalizing problems, depression, anxiety, as well as attention-deficit/hyperactivity disorder. This might be explained by delayed cognitive development. Saigal and Doyle (2008:261-269) support the fact that early social-emotional difficulties are good predictors of later problems in very premature children.

Date of birth of prematurely born twins can influence the year in which they enter the foundation phase. The Twins and Multiple Births Association (TAMBA:2009) investigated the effect of prematurity and associated difficulties, as well as the effects of trying to keep up with older children as in the case of premature children whose birthday puts them in the “wrong” school year (Fraser, 2009:22). TAMBA reports that issues relating to the educational, social and emotional development of premature twins who start school early include toilet accidents, difficulties to dress themselves when changing for sports, learning and behaviour difficulties, tiredness, falling behind their peers academically and being emotionally immature compared to their peers. Fraser (2009:24) also mentions the influence of

prematurity as a determining factor when deciding whether to separate twins in terms of classroom allocation during the first school year. Prematurity is important in terms of academic expectancy during the primary school years, as the risk of long-term complicated residual effects for low birth weight often result in some type of disability affecting intellectual and neurological problems. These disabilities could include cerebral palsy, blindness, deafness or mental retardation (Parton, 2011:31).

2.5.4 Language development

Learning takes place by means of communication and language - writing, reading, listening and speaking - forms the basis thereof. Language function can be divided into five components: semantics (meaning of words), phonology (speech sounds), morphology (change in word meaning), syntax (phrases, sentences and clause combinations) and pragmatics (language use in social context). Adequate language skills are thus essential to experience academic success and learning (Van Noort-van der Spek, Franken & Weisglas-Kuperus, 2012:745-754). Children with language and speech delays frequently do not perform at grade level. They tend to struggle with reading, understanding and expressing language and have difficulty with tests. Language delay can lead to poorer awareness of language sounds, syllables, words, sentences and conversations.

In other words, language development will be affected in twins who are born prematurely and with low birth weight, and with associated complications such as overt brain damage, cerebral palsy and other mental handicaps. (Gucuyener et al., 2011:944). Even though many twins are not born prematurely and are without handicaps, Gucuyener et al., (2011:944-949) also found in their research that twins generally lag behind in language development when compared to singletons, despite being born after at least 34 weeks gestation with no apparent handicaps. Rutter, Thorpe, Greenwood, North and Golding (2003:326-341) arrived at a similar conclusion, noting that the language development of non-handicapped twins was lower than that of non-handicapped singletons. These findings are supported by Van Noort-van der Spek et al., (2012:746). According to these researchers, preterm births coincide with higher rates of problems in language functioning, compared with term-born children. Prematurely born children, who often include twins, performs significantly lower on simple as well as on complex language functioning. The presence of deficits in complex language functions may be an indication that the plasticity of the developing brain is limited (Van Noort-van der Spek et al., 2012:752). In their study, Guarini, Sansavini, Fabbri, Alessandroni, Faldella and Karmiloff-Smith (2009:639-645) found that less developed abilities in vocabulary, grammar and phonological awareness were found in prematurely born children up to the end of the preschool years and probably beyond.

The main risk factors for language developmental delays include prematurity, birth trauma, low birth weight, delayed motor milestones and feeding problems. These risk factors are more prevalent in twin and higher multiple births. Additional risks, which apply more for twins than for singletons, include being born into a large family, having siblings close in age, poor stimulation and frequent hospitalization. While singletons take their model for language from their primary adult caregiver, twins often spend more time with each other and less individual time with their caregiver or parent (Field, 2005), which indisputably will influence language development.

Twin language, or *idioglossia*, is most often seen in twins with immature or distorted language, and is higher in twins with speech and language difficulties than in twins with normal language development. Speech and language difficulties, including stuttering and late onset of speech are more common in twins than in singletons. A child is considered a late talker when he has an expressive vocabulary of less than 50 words at 24 months (Bowen, 2011). Language and speech delay in preschool children may increase their risk for learning disabilities when they reach school age, which implies difficulty with reading and writing in particular. It may even lead to lower IQ scores (Nelson, Nygren, Walker, & Panoscha, 2006:3) Since twins are often born prematurely (Gucuyener et al., 2011:944) and lag behind singletons in their language development (Bowen, 2011), it can be expected that the level of twins' language development will determine their educational needs at school, specifically in the foundation phase. Some negative long-term outcomes as a result of language disorders include social and behavioural problems, lack of school readiness and future academic problems (Wilson, McQuaige, Thompson & McConnachie, 2013:1217).

2.5.5 Intelligence Quotient (IQ)

Intelligence may be defined as the ability to acquire and apply knowledge and skills. Intelligence is perceived to be the best predictor of scholastic performance, as studies like that of Colom and Flores-Mendoza (2007:249) indicate. These researchers state that there is a high correlation between intelligence and abstract academic subjects such as mathematics and science. Intelligence correlates better with academic subjects that are hierarchically ordered in complexity and in the sequence of cognitive skills and knowledge necessary to learn new knowledge and skills (Colom & Flores-Mendoza, 2007:243).

Bowen (2011:113) remarks that the intelligence of monozygotic twins rarely varies by more than five points. On average, twins appear to have lower IQ scores than singletons, although only slightly. If then, there is a difference in IQ between twins and singletons, scholastic performance of twins will subsequently be influenced (De Zeeuw et al., 2012:108). IQ scores of dizygotic twins vary as much as any of the siblings in a particular family. Reduced prenatal growth, and lower gestational ages of twins

in general, may account for lower IQ in childhood. Classroom separation of twins may also affect academic achievement (DiLalla et al., 2009:511).

Furthermore, birth order seems to come into play where intelligence among twins and other siblings are concerned (De Zeeuw et al., 2012:114). Twins with younger, non-twin siblings tend to obtain higher IQ scores than their siblings, while twins with older, non-twin siblings appear to have lower IQ scores.

In recent research Haworth, Asbury, Dale and Plomin (2011:1-10), found that genetic factors influence cognitive ability and therefore scholastic performance to at least some extent. With this in mind, together with the understanding that monozygotic twins share 100% of their genes, it can be deduced that monozygotic twins are likely to perform similarly academically, providing that there are no significant disability or discriminatory factors present in one of the twins. Dizygotic twins, who only share half of their genotypes, are less likely to perform alike on academic levels, although it cannot be ruled out that they will perform equally. Haworth et al., (2011:6) additionally mentions the effect of non-shared environmental factors on twins' scholastic performance. A large section of academic achievement can be accounted for by non-shared factors such as different teachers, classrooms, activities or extra-curricular interventions.

In the light of the above mentioned statements, both zygosity and subsequent genetic factors, as well as exposure to non-shared environmental factors should be considered when allocating twins to the same or separate classrooms.

2.5.6 Reading and writing abilities

During the foundation phase emphasis is placed on the development of children's reading and writing abilities. They are taught basic sounds, spelling, word building, sentence construction and comprehension of written words. Poor levels of attainment in reading and writing at primary school are associated strongly with later low achievement (Meggitt, Bruce & Grenier, 2013:483).

Twins are more likely than singletons to suffer from reading and learning disabilities than singletons. Apart from a higher incidence of speech and language delays than singletons, twins tend to have a higher incidence of attention deficit hyperactivity disorder (ADHD) than singletons. This appears to be particularly prevalent in male twins. Some studies conclude that twin relationships are severely affected in terms of separation anxiety and generalized anxiety where ADHD in one of the twins exists (McDougall, Hay & Bennet, 2006:148-154; Baxter, 2013:14).

Furthermore, reading problems are often linked with difficulties in mathematical questioning where verbal components are present. Overlooked reading and writing disabilities or challenges due to poor

attentive abilities can easily cause twins to behave in socially undesirable ways. Even in the absence of hyperactivity, attention limitations may hinder academic progress (Grime, 2008:56-60). Grime (2008:58) highlights how twins can easily underachieve academically due to inattention which is caused by forced separation of twins into different classrooms. This occur when twins are then frequently wondering where their co-twin is and what he is doing.

Tully et al., (2004:121) noted that twins who were separated in terms of classroom allocation did not only experience more internalizing problems, but also had poorer reading abilities than non-separated twins. This is especially true for twins who were separated at the beginning of their school career. Lamb, Middeldorp, Van Beijsterveldt and Boomsma (2012:818-825) arrived at a similar conclusion stating that exposure to different teachers may affect problematic internalizing behaviour at school which influences reading abilities. This is linked with the fact that both teacher and classroom factors can act as environmental moderators. Another study, conducted by Byrne and Coventry (2010:32-42), indicated that there are higher correlations in terms of reading and spelling performance among twins who are allocated to the same classroom in comparison to twins allocated to different classrooms. In contrast to this, some researchers state that there is no difference in educational achievement between twins who share a classroom and twins who do not share a classroom during their primary school years (Polderman, Bartels, Verhulst & Huizink, 2009:36).

2.6 CLASSROOM ALLOCATION

The matter of twin classroom allocation in schools is commonly dealt with in two ways. The first can be considered an *organizational level approach*, whereby schools or departments implement a general policy regarding the separation of twins that is applied to all twin children. Decisions are made without consideration of twins' individual personalities, experiences, relationships and wishes. Assessments are often based on stereotypical perceptions and justifications for a generalized policy of separation. These stereotypes include the decrease of competition and comparison, the decrease of dominance of one twin over another, the development of individuality, the decrease of dependency and the development of separate friendships (Staton et al., 2012:197). This concurs with findings from research undertaken by Nilsson, Leonard, Barazanji & Simeone (2009:3-16).

The approach of general separation mainly seems to focus on risks, and not on the advantages of twinning. Although less common, some schools adopt an organizational approach where a general policy exists of placing all twins together. This view represents the assumption that all twins will benefit from being together in terms of facilitating a smooth transition to school, providing social support for each other and limiting practical, logistical issues such as work requirements and parent-teacher interactions (Staton et al., 2012:198).

The second approach can be referred to as an *individual level approach*. This perspective emphasizes the differences between individual twin pairs and considers each case according to the individual twin children's needs (Staton et al., 2012:197).

Faulkner (2009:1-6) is of the opinion that most schools follow rigid policies according to which all twins are separated. The underlying assumption is that physical separation at school is a prerequisite for twins to develop intellectual, emotional and social independence from each other. Lacina (2012:80-83) advocates that there is no simple solution to the dilemma many parents and twins face with regard to classroom separation, but suggests flexibility and cooperation with families to best meet the needs of each individual child. Educators are advised to reconsider the many benefits of having twins within their schools and welcome them as they would any other form of diversity.

2.7 PRACTICAL IMPLICATIONS

Deciding on the separation of twins into different classrooms may have certain practical implications for the twins themselves, as well as for their family of origin. This decision involves a thoughtful process. A decision should be made with the best interest of both children in mind, considering their personalities, abilities and interests (Jones & De Gioia, 2010:251).

Upon entering the foundation phase, families are typically faced with the matter of separation or non-separation of their twin children for the first time. Many twins have had little experience of being separated prior to the beginning of their school careers (Faulkner, 2009:3). To a large extent, the decision relies on the quality of each specific twin relationship, with the goal of creating optimal learning and developmental opportunities for each individual child. When the decision of classroom allocation is pending, it is arguably parents who hold the greatest knowledge about their children's abilities, preferences and relationship dynamics. It is therefore unavoidable that they become active agents in addressing the matter. Jones and De Gioia (2010:245) support the idea that the twins themselves should be involved in the decision making process.

Starting school is a developmental milestone for all children, but it may require additional emotional support for twins if they are separated for the first time. Twins, especially monozygotic twins, are often closely attached to each other and may struggle with the separation. School counsellors play an important role in supporting the wellbeing of learners and should be included in consultation with teachers and parents when deciding upon classroom allocation for any specific twin pair (Nilsson et al., 2009:18).

Research by Staton et al., (2012:205) found that factors considered by informed parents when making a decision on their twins' classroom allocation included rivalry, dominance, discrepancies in ability,

friendship, behavioural difficulties, language and communication. These parents perceived the recommendations of principals and other professionals, information from books and other parents of twins as subsequent to their children's personal qualities.

Furthermore, Staton et al., (2012:206) point out that parents who rate individual development as highly important belong to both groups – those opting for separation of their twins, as well as those choosing to keep them together. This implies that parents do not necessarily view separation as the only means for their children to develop individually. It is possible for twins to experience both separate and individual growth within the context of a shared classroom. This expresses parents' confidence in and expectations from the school to foster such opportunities. There are pedagogic alternatives to the simple structural solution that separation of twins presents. The decision regarding twin classroom allocation should therefore be viewed as a process rather than a single, once-off decision.

2.7.1 General considerations

Although evidence from research strongly suggests that separation of twins in the foundation phase is not always beneficial, very little research-based studies to guide and support teachers and educators exist. As a result, separation occurs based on a general assumption that it is the best practice for twins (Lacina, 2012:80-83). Suggested topics for discussions between parents, educators and twins when deciding upon separation or non-separation in terms of classroom allocation include age, independence and social skills, interaction with others, possible benefits for each individual twin, negative competition and comparisons between the twins themselves, and classroom support.

Fierro (2013:1-3) suggests that the consistency of educational experiences should be considered. From before birth twins share a similar environment. They spend the first years of their lives constantly in each other's presence and share living experiences. Being together is thus what they are comfortable with and what they expect. She warns that being allocated to separate classrooms can lead to jealousy, discouragement, competition and rivalry. Although the dynamics of specific twin relationships change and evolve as twins mature into separate individuals, they may still rely on each other when they are younger.

With regard to competition, Fierro (2013:1-3) explains that some twins can be highly competitive as a result of constantly being compared and living as simultaneous siblings. Competitive twins in the same classroom might fuel their drive to outperform each other, seeking extra attention, academic achievement or social standing. In such a case, it might be considered beneficial to separate twins. However, if they are able to channel it into positive results, sharing a classroom could be appropriate.

Another consideration according to Fierro (2013:1-3) is distractibility. When twins are able to work independently in the presence of each other, a shared classroom can be comforting. However, for some twins the presence of their co-twin can be a distraction, influencing effective learning negatively. The opposite is also true that for some twins being separated proves to be a distraction in itself, hindering the learning process. Twins are also often very similar in terms of learning styles. According to Fierro (2013:1-3) a classroom setting is most effective when the learning style of the student is compatible with the teaching style of the educator. Classroom separation may therefore be problematic when one twin experiences the advantages of a good match, while the other struggles with a non-compatible teacher-student relationship. These facts are supported by other research studies (Lamb et al., 2012:818-825; Byrne & Coventry, 2010:32-42).

In some instances only one classroom option is available, especially in smaller or private schools. If there is a compelling reason to separate twins, this will be a considerable factor during the decision making process. Faulkner (2009:4) advises that the existence of special educational, emotional or physical needs also requires consideration. He points out that stress in the family situation may influence the practicalities of separating or keeping twins together within the school structure. Twin children may be out of sorts due to a divorce, recent move, or loss of a close loved one. In light of the distress they are already suffering, minimizing additional stress that may occur as a result of twin separation is advisable.

2.7.2 Advantages and disadvantages

Twin allocation into separate classrooms can have various advantages and disadvantages. Although some have been discussed throughout this chapter, it was deemed significant to examine specific pros and cons in more detail.

The Twins Early Developmental Study (TEDS) is a renowned environmental research study that focused on the educational needs and experiences of twins and higher multiples at pre-school, primary school and secondary school level (Fraser, 2009:1-47). Results from this study convey counter-arguments to the general belief of educators and some parents that allocation of twins to separated classrooms is beneficial. Findings indicate that monozygotic twins have more problems as a result of separation than dizygotic twins, including internalizing problems such as nervousness, loneliness, and worrying and crying, but also externalizing problems such as poorer academic performance and reading abilities. The average effect of separation at the beginning of the primary school was still detectable seven years later, as indicated by this study (Fraser, 2009:26). It seems that when twins are separated when they enter into the foundation phase they tend to experience more emotional problems such as shyness, withdrawal, depression and anxiety compared to non-identical twins. Nilsson et al., (2009:18) concludes

that classroom separation may have consequences on both academic and emotional development, while Baxter (2013:14) refers to the existence of separation anxiety in twins.

Figure 2.6 below illustrates that being in the same classroom provides emotional reassurance of being together, contributing in terms of confidence, security and happiness, and is accordingly considered a benefit.

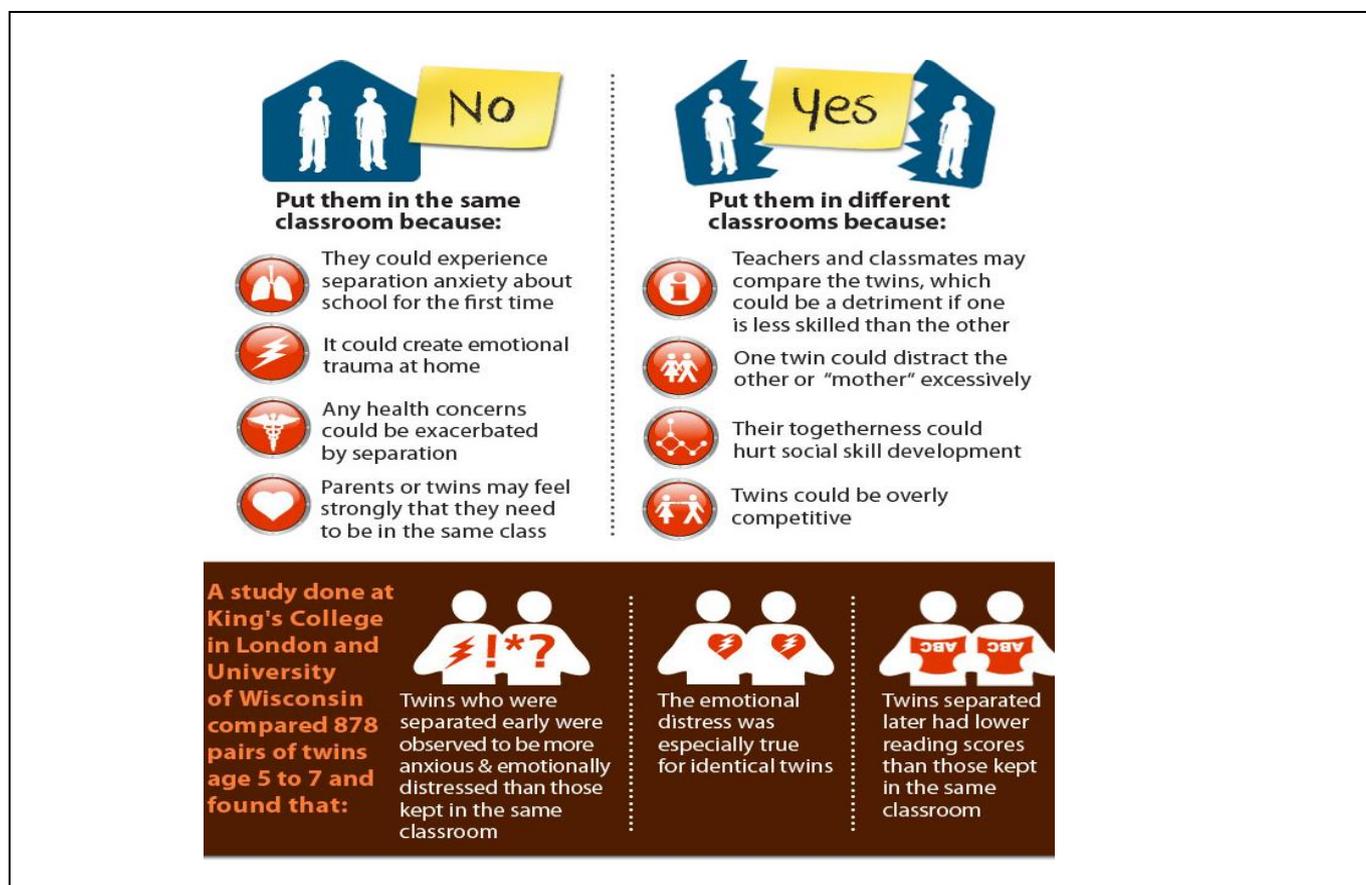


Figure 2.6: Considerations for classroom separation

Source: Marino (2012:2)

Twins sharing a class tend to settle in easier. Another benefit of sharing a classroom is that communication between home and school is often clearer and logistical problems are fewer. Twins also have the joy of shared experiences and the opportunity to discuss their school day together (Fraser, 2009:29-30).

Bacon (2012:313) states that for twins who look very alike being in a separate classroom may temporarily draw the attention away from their visible twinship. Classroom separation could then create opportunities for twins to form different friendships, and to identify themselves as belonging to different social groups. Many twins may feel overwhelmed by having to share everything in their lives. They often share clothes, bedrooms, chores and even time spent with a parent. If they particularly dislike sharing,

separate classrooms may mean some time away from each other and opportunities for them not having to share. Parton (2011:46) supports separation by mentioning that twins' constant togetherness may hinder their social development.

The opposite is also significant. Disadvantages of staying together include unhealthy competition over who of the twins is better at schoolwork, sport, music or making friends. Rivalry among twins can result in arguments, physical fights and teasing, sulking and sarcastic behaviour both at school and at home. Teachers and fellow learners often confuse monozygotic twins, and tend to compare twin children to each other. Twins themselves also have a natural tendency to compare themselves with each other. Comparisons can easily result in feelings of inferiority and lack of self-confidence (Fraser, 2009:32). In addition it may happen that one twin reduces performance to keep alongside the other, becoming weaker so that the weaker twin will "catch up".

When the dynamics of the twin relationship becomes skewed, it may happen that the more dominant twin bosses, answers for or takes over the less confident twin. In the event where the relationship between twins limits their abilities to develop their own identities, it may result in tension, anxiety and continuous fighting. On the contrary, a very closely bonded relationship may also cause difficulties in the event of twins being overly reliant on each other. When twins encourage each other into negative actions, behaviour can also deteriorate (Fierro, 2013:2).

In terms of homework, having twins share a classroom can be beneficial as well as detrimental. Twins may easily copy each other's work, or be left feeling that school work remains a competitive activity even at home (Fraser, 2009:33). Twins' educational progress may be influenced by parents' inability to do homework on a one-to-one basis – especially in homes with other siblings, or single parents. According to parents who participated in the previously mentioned TEDS-environment study (Fraser, 2009:35), twins' educational progress was further influenced by concentration difficulties and behavioural problems.

Grime (2008:80-83) reports that his research resulted in the identification of specific educational effects. The twins in his study reported that focusing was an issue for them while they were separated from their co-twin. Each of them reported a need to know where their co-twin was and a need to know that their co-twin was safe. Academic underachievement in separated twins also seems to be an educational effect, and is considered a disadvantage of separation.

2.7.3 Preparation for separate classrooms

Research suggests many reasons to separate twin children in school. If such a decision is made and twins are in fact going to be allocated to separate classrooms at school, it is vital that both twins be thoroughly prepared for this change.

Starting school is a major life event for most children. When being separated from your twin for the first time, this event can become overbearing for a twin child. This transition could create anxiety. Parton (2011:71) refers to some strategies to assist and support twins to successfully make the transition from always being together to adapting to separate classroom environments. He emphasizes that both twins' enthusiasm to learn should be encouraged, as well as their ability to make new friends, learn new schedules and settle into their individual routines.

Bernstein and Victor (2010:325) go on to discuss separation anxiety disorder (SAD) as it is classified in the DSM-IV-TR. Separation anxiety is normal for infants between six and thirty months of age, and typically declines between the ages of three and five years. SAD occurs when a child demonstrates developmentally inappropriate distress associated with the separation from an attachment figure. When separation is about to occur, children often resist by crying or hiding from parents. As discussed in 2.2.1, twins often view their co-twin as a prominent attachment figure, and SAD with regard to separation from their twin is thus possible. School refusal may coincide with SAD among twins and the root of the problem should be understood by parents and teachers. The existence of SAD among a specific twin pair will, therefore, impact a decision regarding classroom separation.

Fraser (2009:26-27) suggests that parents planning on separating their twins at the start of their school career prepare their children by arranging separate activities before they enter into school. This includes sleepovers or visits with grandparents on their own, being involved in activities such as ballet or soccer separately from each other and separate outings to shops. Separate visits to school and meeting their teachers separately beforehand are also considered helpful.

2.7.4 Promoting individuality when sharing a classroom

As mentioned elsewhere in this chapter, individuality refers to the quality or character of a particular person that distinguishes him from others of the same kind. Various notions support the central idea that separation into different classrooms is necessary for twins to develop individuality (Alexander, 2012:133). Alexander argues, however, that while educating twins in the same classroom teachers can still provide children with opportunities to develop their own personalities without being excessively subjected to sibling peers.

Alexander (2012:134) suggests that a physical difference, such as a birthmark, might be a simple way for teachers to distinguish between twins. The most common strategy for teachers and parents to encourage twins to develop as individuals when they share a classroom includes placing them at different tables or in separate groups. Placing them at different tables often naturally results in twins being less distracted by each other and copying work. It encourages an increase in self-esteem and confidence. Fraser (2009:28) supports this point of view by stating that special arrangements within the class or at home involves the encouragement of different reading books, activities and sports, separate appointments at parent evenings and individual copies of school notice letters. Parents and teachers can differentiate between twins by means of different hairstyles, book cases and wristwatches (Fraser, 2009:29).

2.7.5 Effects of forced separation

The term 'forced separation' is used in this study with reference to compulsory separation of twins into two different classrooms as determined by the school's policy. Twins are often forced into separate classrooms against the wishes of parents and the twins themselves.

Grime (2008:29-31) offers insight into the effects of forced separation of twins into different classes. His research indicated that twins who were forced to separate into different classrooms produced feelings of anger, sadness, fright and loneliness. Separated twins experienced a lack of focus as a result of an urge to know where their co-twins were and what they were doing. Not only do these strongly negative emotions hinder efficient learning and the ability to succeed in school, but they also influence twins' ability to form friendships and interact socially with peers. In addition, separate homework instructions and unequal educational exposure due to teacher differences emotionally impact on both twins and their families.

Tully, Moffit, Caspi, Taylor, Kieman and Andreou (2004:115-124) document the harmful effects of forced separation on twins' general scholastic progress, reading abilities and behaviour. No evidence supports the idea that separation of twins into different classrooms contributes to the intellectual or emotional development of these children (Lacina, 2012:81). Forced separation of twins in the foundation phase may lead to increased anxiety levels, night terrors and a general fear that something might happen to a co-twin. Van Leeuwen et al., (2005:384-391) support these findings stating that the influence of forced separation appears to be permanent. Most literature written by parents of twins refers to the experience of separation into different classrooms as being emotionally difficult for both twins as well as for parents themselves (Faulkner, 2009:1-6; Alexander, 2012:133-135).

2.8 THE ROLE OF POLICY REGARDING CLASSROOM ALLOCATION OF TWINS

According to the Department of Education in South Africa (OECD, 2008:38) the 1996 Constitution requires education to be transformed and democratised in accordance with the values of human dignity, equality, human rights and freedom, non-racism and non-sexism, and guarantees the right to basic education for all, including adult basic education. The Constitution determines that the three spheres of government – national, provincial and local – should function together in a distinctive, interdependent and interrelated manner.

When the South African Schools Act, No 84 of 1996 is consulted about the distinctive classroom placement within the foundation phase of South African schools on either national, provincial or local sphere, it is found to be lacking in its inclusion of this theme. Despite the many implications that schooling of twins might have on the holistic, individual development of twins, it is alarming that no consideration of the determining factors of schooling in the foundation phase, is made.

2.9 CONCLUSION

Literature suggests that there are two opposing reasons why twins should be kept together or separated in the classroom. Advocates for separation are of the opinion that a close twin relationship may hinder individual growth and development, while those supporting the perspective of keeping twins together in a classroom focus on the emotional support they can offer each other in an emotionally stressful environment (DiLalla et al., 2009:511). What becomes clear from the research available is that twin separation or non-separation is not a once-off decision that needs to be made, but rather an ongoing process with many factors that continuously impact the decision.

Chapter three presents the empirical research design.

CHAPTER 3

RESEARCH DESIGN

3.1 INTRODUCTION

This chapter accounts for the adopted research approaches, research design, data collection methods and analyses techniques used for the purpose of this study. All research studies are directed according to a set of beliefs, assumptions and hunches formed by the researcher's thinking and experience. A clear understanding of the research design is thus vital as it situates the research within a theoretical model.

McMillan and Schumacher (2006:9) define research as a systematic and purposeful act within which many different methods of data collection and analyses can be used. According to Marshall and Rossman (2011:55) research within the genre of education and social sciences involves the systematic process of trying to understand complexities of human experiences. This process is undertaken by asking applied and practical questions that are aimed at contributing to possible solutions of pressing challenges by using objective measures and techniques. Research is conducted for a variety of reasons, including to comprehend, portray, predict or control an educational or psychological phenomenon, or to empower individuals in such contexts (Mertens, 2010:2).

3.2 PURPOSE OF THE RESEARCH

The aim of this study was to determine the factors that should be taken into account when a decision is made to separate twins into different classrooms in the foundation phase. This gave rise to subsequent questions:

- Who are the parties involved in making decisions regarding the classroom placement of twins?
- Which considerations are being accounted for during the decision making process of separation or non-separation of twins?
- To what extent are placements of twins in classrooms, either together or separately, merely left to chance?
- Is the twin phenomenon fully understood by those making the decision to separate or not to separate twins?

3.3 RESEARCH METHOD

Terre Blanche, Durrheim and Painter (2006:6) state that methodology denotes how researchers may go about practically studying whatever they believe is worth knowing. Creswell (2008:202) stated that the selection of the research method is a critically important decision because it provides the researcher with the opportunity to critically consider how each of the various approaches may contribute to or limit the study. Methodology is a core component of a researcher's paradigmatic perspective and refers to the lens through which the researcher views the world (Terre Blanche et al., 2006:7). The research method also provides information regarding the relationship between the researcher and that which is being researched.

Matthews and Ross (2010:141) mention that the choice of research method should be determined by the research question and the aspects of the research topic that are the primary focus and interest of the researcher. Quantitative research methods are mainly concerned with collecting and working with data that is structured and that can be represented numerically. Qualitative research methods, in contrast, are primarily focussed on stories and accounts, including subjective understandings, opinions, beliefs and feelings. Data in this approach is typically collected through the use of an interpretivist epistemological approach. Data is constructed by the research participants in their own ways, and interpreted and structured by the researcher as part of an analytical process (Matthews & Ross, 2010:142-147). According to these criteria, it is evident and sensible that a qualitative research method with an interpretivist epistemological approach was applied in this study.

3.4 RESEARCH DESIGN

The design of the study is the plan which is to be followed in order to provide answers for the research objectives. The research design sets out the purpose of the research, the theoretical paradigm informing the research, the context or situation within which the research is conducted and the research techniques employed to collect and analyse data (Terre Blanche et al., 2006:8).

A qualitative approach was used to conduct an inductive research study. According to Creswell (2008:201) qualitative research is a system of inquiry seeking to build a holistic, mostly narrative, description of a social phenomenon. It takes place within natural settings and employs a combination of observations and interviews. Various strategies can be employed, of which a phenomenological perspective is one. A phenomenological approach seeks to explore, describe and analyse the meaning of individually lived experiences and usually entails in-depth interviews with individuals who have experienced the phenomenon of interest (Marshall & Rossman, 2011:20). Creswell (2008:205-207) goes on to comment that phenomenology seeks to understand the individual's reality however he perceives it. In essence the approach investigates the individual's perception of reality as he constructs

it. The researcher 'brackets', or puts aside all predispositions and assumptions (McMillan & Schumacher, 2006:26).

In qualitative research, the researcher becomes involved with the research participants (Grime, 2008:32). The use of phenomenological, semi-structured interviews allowed for the formation of personal relationships with the participants, as well as an opportunity to evaluate both their verbal and nonverbal responses. Grime (2008:32) points out that qualitative research is appropriate to use when variables are complex, interwoven and difficult to measure. The phenomenon studied in this research fits the description.

Phenomenology is rooted in philosophy and the researcher often has a significant personal interest in the phenomenon which is being studied (Creswell, 2008:207). My initial awareness and personal interest in this particular study was set out in chapter one.

3.4.1 The paradigm of a qualitative approach

A paradigm refers to a set of comprehensive systems of interconnected practices and thinking within which researchers define the nature of their enquiry along four dimensions: axiology, ontology, epistemology and methodology (Terre Blanche et al., 2006:6). Axiology refers to the nature of the ethical considerations involved in the research, while ontology refers to the nature of the reality that is being studied. Epistemology points to nature of the relationship between the researcher and what is to be known. Methodology is concerned with the way in which the researcher can go about obtaining knowledge and understanding (Mertens, 2010:10-11).

Qualitative research methodology falls within the constructivist paradigm, which holds the perspective that reality is socially constructed by the individuals who are actively involved in the research process. The constructivist paradigm grew out of the philosophy of phenomenology and the concept of hermeneutics, which is the study of interpretive understanding or meaning (Mertens, 2010:8-16). The purpose of this research study is to examine and understand the challenges that parents, educators and twins themselves are faced with when having to make a decision regarding classroom allocation. In understanding these challenges from an interpretive, inductive, constructivist paradigm, I was able to identify specific factors which need to be taken into account when such decisions are being made. Furthermore, a constructivist approach allowed the participants of this study to narrate their experiences in terms of their involvement in the twin phenomenon. Another research methodology or paradigm would not have made provision for this type of social construction.

3.4.2 Case study

A case study includes either a single case or a small number of cases, but each case is explored in detail and great depth (Matthews & Ross, 2010:128). A variety of different types of data about the case may be collected. Both cross-sectional and longitudinal data may be included. A holistic approach applies in the sense that the relationship between the component parts of the cases and the cases as a whole are all of interest to the researcher. Creswell (2013:97) explains that a case study involves the study of a case within a real-life setting or context. He perceives it as a methodology rather than a research design since the researcher explores a bounded case, or multiple bounded cases, through detailed, in-depth data collection. The gathering of data may involve multiple sources of information, such as interviews, observations, surveys and document analyses.

For the purposes of this study, three representative, or typical, cases were selected. These cases are viewed to represent many other similar cases. The twin population in South Africa, on which this study is based, is fairly large. Although the phenomenon of twins remains unique, the cases selected for in-depth research are representative of this population of twins in South Africa. It is for this reason that the cases are considered to be representative.

3.4.3 Selection of the sample

A research problem has bearing on some or other population. According to McMillan and Schumacher (2006:119), a population is a group of individuals, objects or events that conform to specific criteria and to which the researcher intends to generalize the results of the research. Mouton (2006:134) explains a population to be a collection of objects, individuals or events having some common characteristic that the researcher is interested in studying. For the purpose of this research study, the population concerns twins within the limits of the foundation phase in a primary school. However, it is impractical to include the entire population. Consequently, the researcher selects a sample from the population. The participants in this study were selected through purposive sampling, since the selection of information-rich cases for in-depth study was sufficient. Purposive sampling is done to enhance the usefulness of information gathered from small samples (McMillan & Schumacher, 2006:319).

A purposive sample is a sample of selected cases that will best enable the researcher to explore the research questions in depth (Matthew & Ross, 2010:154). Purposive sampling, as was applied in this study, was chosen as it is associated with an in-depth study based on the gathering of qualitative data. This study is focused on the exploration and interpretation of experiences and perceptions where the separation or non-separation of twins in foundation phase classrooms are concerned.

Stratified purposive sampling refers to a way of selecting a purposive sample by means of selecting from within groups of cases where there is some variation between the groups to enable comparison among the groups (Matthews & Ross, 2010:167). The population that is considered for this study is monozygotic and dizygotic twins currently in their foundation phase schooling in primary schools in South Africa. The sample is made up of groups of cases. Each case group consists of twins, parents and teachers directly involved in the education of the specific twin group. The literature research, as outlined in chapter two, indicated that gender, zygosity and age play a vital role in the decision making process of schooling twins together or separately. It is therefore significant that the sample for the purposes of this study included groups where these variables are accounted for in order to be able to compare cases with each other. Three pairs of twins were identified: monozygotic, same sex twins, dizygotic same sex twins and dizygotic opposite sex twins. All three twin pairs were in the foundation phase which placed them between the ages of six and nine years.

The school in its entity is considered one of the parties involved in decisions regarding classroom allocation of twins. As an investigation into the existence, or non-existence, of formal policies pertaining the topic was conducted, Head of Departments of the Foundation Phase, with consent from school principals, were included into case studies.

3.5 DATA COLLECTION

Data collection is a practical activity that is carried out within the constraints of time, space and resources. Data may be gathered through the help of a research tool, which is simply the means by which the data is collected, for example a questionnaire, interview or survey (Matthews & Ross, 2010:181). Foreshadowed problems indicate the focus for data collection (McMillan & Schumacher, 2006:343). Data collection includes interviews, but also takes field observations into account.

3.5.1 Interviews

An interview is a specific type of conversation between two or more people, where the conversation is controlled by the interviewer, or person who asks the questions. Interviews are one of the main data collection methods used during social research, like this study. Interviews may differ in the degree of structure and standardization within and between interviews (Matthews & Ross, 2010:219).

According to Bryman (2012:213), there are various types of interviews. He distinguishes, among others, between the following types:

- Structured interviews entail the administration of an interview schedule by an interviewer. The aim is to give all the interviewees the exact same context of questioning to ensure that replies can be aggregated. Open and closed questions are used.
- Semi-structured interviews refer to a series of questions that are in the general form of an interview schedule or guide, but are able to vary the sequence of the questions. The questions are frequently more general in their frame of reference compared to questions typically found in a structured interview. Participants are allowed to answer the questions or discuss the topic in their own way using their own words.
- Unstructured interviews consist of a broad list of topics, often referred to as an interview guide. The style of questioning is usually informal and the interviewee takes on a narrative role.
- Focused interviews use predominantly open questions to ask interviewees questions about a specific situation of interest to the interviewer.
- In-depth interviews are mainly unstructured interviews, but allow for semi-structured questions as well.

For the purpose of this study, semi-structured interviews were selected. Audio recordings were used and later transcribed. The research question, namely what factors determine decision making with regards to schooling twins together or separately in the foundation phase, requires exploratory research, as it aims to discover what participants think should be taken into consideration during this process.

3.5.2 Ethical measures

Matthews and Ross (2010:71-84) point out that all social research such as this study has ethical implications and dilemmas. They describe ethics as a set of rules by which individuals and societies maintain moral standards in their lives. Specific measures were taken to ensure the ethical soundness of this study.

3.5.2.1 Consent to undertake the proposed study

First and foremost, an ethical approval process was undertaken during which permission had to be gained from the supervising university, The University of South Africa. This process ensured that participants were not put at any risk by this study (cf Addendum A).

Informed consent refers to participants' understanding of what they are agreeing to participate in. It also involves their autonomous and informed decisions whether or not to participate in this study. Consent

was freely given by the participants of this study after clear, adequate information was made available to them about what the research entailed. Participation was voluntary and participants had the right to withdraw from the research study at any time.

I approached the Department of Education of Mpumalanga to gain permission for my intended research (cf Addendum B). Consent was necessary since I approached schools on their policies on schooling twins separately or together. Five schools from the Lowveld in Mpumalanga were invited to participate in this section of the research study. Meetings were set up with the foundation phase heads of department and interviews were held.

I also approached the school principal of one selected primary school for permission to conduct research with three case studies which he identified within his school (cf Addendum C). Subsequently I approached the parents of the identified twin pairs to obtain permission to conduct the inquiry (cf Addendum D). The children were also involved in the research study, and an assent letter was signed by each child, after the parent explained the process to him/her (cf Addendum E). With the permission from the parents I also approached the class educators who are directly involved in the education of the twins (cf Addendum F). These educators were also interviewed. All interviews were transcribed and the data analyzed.

3.5.2.2 Additional ethical considerations

Other important considerations that apply to this research study include protection from harm and data protection. Protection from harm was guaranteed in both physical and psychological dominions. The venue where data collection sessions took place was safe, neutral and comfortable, while precautions were taken not to harm the participants in any psychological way.

The semi-structured interviews were recorded and transcribed, which implies that the data collected during the interviews remained accessible for some time and were heard by the external transcriber. The transcriber agreed to secure the confidentiality of the data, while ensuring it is kept in a secure place. The data collected was handled in such a way that participants' privacy was protected. The use of pseudonyms was used to ensure confidentiality. The participants' wellbeing was considered in the following ways: they were made aware of the research topic and specific focus areas of discussion before the onset of the interview; interviews were conducted in a comfortable, secure environment; participants were given control of the audio recorder so that they were allowed to turn it off if any part of the interview upset them; and the interview was designed to lift the participant out of possible distressing discussions during the middle of the interview.

3.5.3 Measuring instruments used in the empirical investigation

In order to provide scope to the research and the collectable data, the qualitative measuring instrument of an interview guide was included during the semi-structured interview. An interview guide serves as an agenda for an interview with additional notes and features to aid the researcher (Matthews & Ross, 2010:227). While conducting a semi-structured interview the researcher needs to keep in mind that the participants must be allowed to reply in their own way and own words, and must be encouraged to express their opinions and feelings. The researcher needs to be flexible and adaptable, while ensuring that the same aspects of the research topic are discussed with all the participants. An interview guide is designed to assist the researcher in achieving these goals.

An interview guide was drawn up to assist in the semi-structured interviews carried out with the Heads of Department Foundation Phase of five different schools in the Lowveld in Mpumalanga, with permission from each school's principal to investigate each school's policy regarding schooling of twins separately or together during the foundation phase. This interview guide is outlined in table 3.1 below.

Table 3.1: Interview guide for semi-structured interview with Head of Department Foundation Phase of Lowveld schools.

Interviewing HoDs of primary schools in the Lowveld in Mpumalanga on their policies regarding schooling of twins separately or together during the foundation phase.
<p>1. Introduction</p> <p>Thank HoD for donating his/her time towards the interview and my research.</p> <p>Explain confidentiality – nobody else knows you are being interviewed, anonymity will be ensured, recordings will be kept safe and secure.</p> <p>Interview will be a conversation – give them control of audio recorder and explain how it works.</p> <p>Allow them to become comfortable.</p>
<p>2. How does the school view the separation or non-separation of twins in the foundation phase?</p>
<p>3. Does the school have any formal policy on schooling twins in the foundation phase specifically?</p>
<p>4. Does the school deem it necessary to have a policy like the above mentioned in place?</p>
<p>5. Who do they regard as active decision-makers during the process of allocating twins to separate or same classrooms?</p>

6. Ending

Thank HoD for time and willingness. Reassure confidentiality.

Switch off audio recorder.

Separate interview guides were designed to assist in the semi-structured interviews conducted with parents, educators and twins during this research study. They are outlined in table 3.2, 3.3 and 3.4 below.

Table 3.2: Interview guide for semi-structured interview with parents of twins

Interviewing parents of twins about the factors they considered when they were faced with making a decision on schooling their twin children in the same or separate classrooms.

7. Introduction

Chat about getting to the interview, how they are doing, etc.

Explain confidentiality – nobody else knows you are being interviewed, anonymity will be ensured, recordings will be kept safe and secure.

Interview will be a conversation – give them control of audio recorder and explain how it works.

Allow them to become comfortable.

8. Can you tell me about your twins? Age, zygosity, gender, position in family? Where do twins go to school? Are they currently allocated in same or separate classrooms?

9. Relationship type

Extreme individuals?

Closely coupled?

Mature dependents?

10. Pregnancy and birth complications

Mode of conception?

Premature?

Birth-weight?

Illnesses or complications during pregnancy?

Illnesses or complications after birth?

Milestone development?

Language acquisition?

11. Parenting styles

Authoritarian?

Permissive?

Authoritative?

12. Support network

Who else is involved in raising the twins?

What are those relationships like?

13. Initial attachment and emotional, social and behavioural development

How would you describe their emotional development up to now?

Social?

Has their behaviour changed since they started school? In which ways?

14. Telepathy

Would you say that the twins share a secret language, or telepathy?

Are they overly concerned about each other's health, safety and well-being?

How is this affecting their behaviour at school?

15. Friendships

Do they share friends?

How do their friends differ?

How easily do they make new friends?

16. Temperament and personality

Describe your twins' different temperaments and personalities

17. Co-twin dependence and individuality

How dependent are they upon each other?

What are your views on individuality vs viewing them as a unit?

18. Practical implications of separate or non-separate classroom allocation

What are advantages in your opinion?

Disadvantages?

19. Are you satisfied with current arrangements?

20. Were you consulted by the school in this decision?

21. Did you consult with the twins during your decision making?

22. How do you perceive the future of your twins' schooling?

23. Ending

What is the most important factor that you feel should be considered when making a decision?

Any other thoughts, beliefs, feelings or opinions you would like to add?

What, in your opinion, is the best part of being parents to twins?

Thank parents for time and willingness. Reassure confidentiality.

Switch off audio recorder.

Table 3.3: Interview guide for semi-structured interview with educators of twins

Interviewing educators who are directly involved in the schooling of the twins on which factors they feel were important in their recommendations of same or separate classroom allocation.

1. Introduction

Chat about getting to the interview, how they are doing, etc.

Explain confidentiality – nobody else knows you are being interviewed, anonymity will be ensured, recordings will be kept safe and secure.

Interview will be a conversation – give them control of audio recorder and explain how it works.

Allow them to become comfortable.

2. Are both the relevant twins in your class? Since when have you been teaching them?

3. Individuality

Can you distinguish between them? How?

How is individuality encouraged?

Seating arrangements?

Friends at school?

Preferences for certain subjects or activities?

4. Reading and learning abilities

How would you describe each twin's reading, writing, spelling and mathematical abilities?

5. Social and emotional development

How do you perceive the relevant twin's emotional state?

Socially?

6. Behavioural problems

Are there any specific behavioural problems present at school or in the classroom with regards to the relevant twins?

7. Stereotypes

What are your views on twins and schooling in general?

8. Training and education

Have you ever received any formal training or guidance in the handling of twins in the formal schooling setting?

9. School policy

Do you know what the school's policy is regarding twins and schooling?

10. Classroom allocation

Were you actively involved in the placement of the relevant twins in same or separate classrooms?

Who else was involved in the decision-making process?

Were the parents consulted?

Were the twins themselves consulted?

11. Ending

What is the most important factor that you feel should be considered when making a decision?

Any other thoughts, beliefs, feelings or opinions you would like to add?

What, in your opinion, are the most positive characteristics of this particular set of twins?

Thank educators for time and willingness. Reassure confidentiality.

Switch off audio recorder.

Table 3.4: Interview guide for semi-structured interview with twins

Interviewing the relevant twins who form the core of the case being studied on their opinions and feelings about separate or same classroom allocation during the foundation phase.

1. Introduction

Chat about getting to the interview, how they are doing, etc.

Interview will be a conversation – explain the audio recorder and how you are going to use it.

Prepare them for drawing pictures later during the session.

2. How do you both feel about being twins? What is your favourite and least favourite thing about having a twin?

Use of drawings if applicable.

3. Grade and classroom allocation?

4. Did any of the adults ask you what you wanted when they decided about classroom allocation?

5. How would you feel about being in the same class as your sibling?

Use of drawings if applicable.

6. How would you feel about being in a different class than your sibling? Having a different teacher?

Use of drawings if applicable.

7. Friendships

Do you have a best friend at school?

Who else are your friends?

Do you always play with the same friends at school?

8. Extra-curricular activities

What do you like to do outside of school?

Do you both do the same activities or different activities?

9. Individuality

Does your teacher get confused with the two of you?

Do your friends confuse you?

How do you feel about being referred to as “the twins”? Does it happen a lot?

10. Ending

What do you like best about having a twin sibling?

Thank you for sharing and drawing.

3.5.4 Procedure of data collection

The course of action followed in order to prepare for and collect the data included the following: initial contact with parents and educators and gaining permission in the form of written consent; setting up of data collection appointments; preparing interview guides; and conducting semi-structured interviews in individual settings.

The procedure for conducting the interviews was completed according to the guidelines given by Bryman (2012:217-225). These guidelines emphasize the importance of being familiar with the interview guide so that interview questions may be presented in a natural, comfortable manner. The research topic and reason for research was introduced to the participants and rapport was established between myself and the participants. I then commenced with asking the interview questions and recording the participants' replies. Although the questions were the same for all the participants, the sequence in which they were asked differed slightly and from interview to interview. In some cases it was necessary to probe and prompt the participants to elaborate on their comments and replies. Prompts were kept similar in all the interviews as far as possible. The interviews were ended off appropriately. The interview recordings were transcribed (cf Addendum D).

3.5.5 The interpretation of the data

In order to interpret the raw data, which is the data that has not been analyzed in any way but is presented in the form in which it was collected, it was necessary to re-familiarize myself with the data by reading through all the transcripts and research notes. Notes were made about specific aspects I wanted to come back to, interesting comments, answers and opinions, and further relationships I needed to explore.

The data had to be interpreted and meaning conveyed. The process of interpretation commenced with labelling the data, creating an index and initially coding and categorizing the data through the use of charts.

In the data analyses of the interviews it was aimed at listening for recurring themes, including any significant aspects that could shed light on the life-world and experiences of participants with relation to the initial research question.

3.5.6 Validity and Reliability

As a researcher one has the responsibility of validating one's findings (Creswell, 2008:209). The data collected during the research process is directed at answering the primary and subsequent questions pertaining the topic of the study. If this data is not verifiable the research findings are viewed as potentially invalid. Within qualitative research validity is not defined in terms of the extent to which the operational definition corresponds with the construct definition, but rather in terms of the degree to which the researcher can produce observations that are believable for himself, the subjects being studied and the eventual readers of the study (Terre Blanche et al., 2006:51-52). In the context of qualitative research validity refers to the coherence of all the elements in the network of meanings around a study. Coherence of elements in this study was strived for by the researcher.

Reliability refers to the dependable way in which the research was conducted. It points to the degree to which the reader might be convinced that the findings did indeed occur as the researcher claims they did (Terre Blanche et al., 2006:93). Reliability, or dependability in this study is established through the detailed descriptions and sensibly arranged explanations that show how certain actions, opinions and experiences in the form of data, was collected, analyzed and interpreted.

3.6 CONCLUSION

In this chapter, the development and implementation of the empirical investigation were discussed. The discussion of the ethical measures, consent to undertake the empirical investigation, measuring instruments and the modus operandi of data collection used in the empirical investigation were given. This section included the interview guides for the semi-structured interviews conducted with three separate case studies, as well as the interviews conducted with different school HoDs on the existence of policies regarding the schooling of twins in the foundation phase.

Chapter 4 will focus on the detailed analysis and interpretation of the data.

CHAPTER 4

RESULTS OF THE EMPIRICAL INVESTIGATION AND INTERPRETATION

4.1 INTRODUCTION

This chapter provides a discussion of the empirical study and the results thereof. The researcher will describe, summarise and interpret the results of the semi-structured interviews, as well as the observations and field notes made during these interviews, based on the research questions in chapter one. Only significant parts of the interview transcriptions were selected and translated to use as representations of the data. Complete transcriptions of the interviews are added in Addendum L.

4.2 DESCRIPTION OF PARTICIPANTS

The participants in this study were selected through purposive sampling, which means they were selected because of the knowledge and experience they held which were required for this study (Matthews & Ross, 2010:167). The participants consisted of the Head of Departments of the foundation phase from five different primary schools in the Lowveld of Mpumalanga. They were interviewed with the specific aim of investigating the existence and contents of formal policies with regards to classroom placements of twins in the foundation phase of primary schools. In addition, three sets of twins between the ages of six and nine years were identified as case studies. These cases comprised of at least one of the parents of the twins, the twins themselves and their educators. Participants were selected and the study was conducted with the permission of the Mpumalanga Department of Education, as well as the schools' principals. Permission letters and letters of consent are included in Addendums B – G.

All the participants were willing to partake and gave verbal and written consent to participate in the research study. They were all Afrikaans and English speaking. The participants were involved in semi-structured interviews which ranged between 10 and 45 minutes each in the language of their choice. Pseudonyms were used for the names of the schools as well as for individual participants.

Below are tables of the selected participants.

Table 4.1: Distribution of participants regarding policies in the foundation phase – pseudonyms were used as identification method

Interviews with regards to policies in the foundation phase of primary schools				
School	HOD	Sets of twins currently in grade 1	Sets of twins currently in grade 2	Sets of twins currently in grade 3
A	Mrs James	1	3	2
B	Ms Paul	2	1	0
C	Mrs Mostert	0	2	1
D	Mrs Sutherland	2	1	2
E	Mrs Nel	3	1	2

Table 4.2: Distribution of individual case studies – pseudonyms were used as identification method

Interviews with twin case studies regarding determining factors during placement						
Parent(s)	Twins	Grade	Educator(s)	Zygoty of twins	Gender	Classroom placement
Mrs Naudé	Nancy Natalie	1	Mrs James	Monozygotic	Girl–Girl	Together
Mrs Booysen	John Johnathan	3	Mrs Grobler Ms Lemmer	Monozygotic	Boy–Boy	Separate
Mr Moodi	Ahmed Ahmedah	2	Ms du Preez Mrs van der Walt	Dizygotic	Boy–Girl	Separate

4.3 CASE STUDIES

A brief background summary of each of the three case studies selected for this research study is provided. The use of pseudonyms were implemented in order to preserve confidentiality and maintain the privacy of the participants.

4.3.1 The Naudé twins

Natalie and Nancy are eight-year-old, monozygotic twin girls. They are currently repeating grade 1, and were allocated to the same classroom. They were born prematurely at 26 weeks by means of natural birth and weighed in at just over a kilogram each. Natalie was hospitalized for two months, while Nancy was able to go home after a month and a half. Natalie was born with a condition called atrial septal defect, which means that she had a hole in the wall between the two upper chambers of her heart, while Nancy suffers from shortened leg muscles. They were constantly ill as babies and were often hospitalized. Milestones were reached much later than expected. Mrs Naudé recalls that they were noticeably more content when they were together, even as infants, compared to when they were separated from each other.

Natalie and Nancy are positioned third and fourth in a family with four children. They are raised with their mother as their primary caregiver, as their father works outside of the home. Mrs Naudé feels that it is necessary for her and her husband to follow a strict disciplinary system and to have clear rules, but they also allow for reasoning about appropriate and inappropriate behaviour. Both parents share a healthy relationship with their children and their parenting style could be defined as authoritative (cf 2.4.6).

Both Natalie and Nancy, but more extensively Nancy, continue to receive occupational and physiotherapy. They have received intervention from both therapeutic and medical fields since birth. Natalie and Nancy are extremely dependent upon each other and can be defined as mature dependents (cf 2.2.2).

4.3.2 The Booyesen twins

John and Johnathan are nine-year-old, monozygotic twins from SiSwati background. They were born naturally at full term, with John being the firstborn and weighing in at 2,2 kg. Johnathan was the bigger, stronger infant and weighed in at 4,0 kg. Mrs Booyesen experienced severe emotional trauma during her pregnancy, as her husband passed away when she was three months along. She recalled feeling desperately sad during that time as she cried all through her pregnancy. She was supported, both then and now, by her in-laws and has a full time nanny who helps take care of the boys. Mrs Booyesen is a single parent who chooses an authoritative parenting style (cf 2.4.6).

John and Johnathan are the youngest of four children. They have two older sisters, who are also monozygotic twins. Tasha and Natasha are 19 years old and function as mature dependents (cf 2.2.2). This is also true for John and Johnathan, despite the fact that Mrs Booyesen views them as a unit, and treats them as such.

John and Johnathan were placed in the same class during grade one, but were separated in grade two and are currently also in two separate classrooms in grade three. They are both academically viewed as average learners and seem to be coping well on their own. Both the twins as well as Mrs Booyesen recalled that the adjustment period which they went through at first separation was traumatic for all of them. She explained, however, that they do see the benefits now and have learnt to accept the arrangement.

4.3.3 The Moodi twins

Ahmed and Ahmedah are eight-year-old, Muslim twins in grade two. They are dizygotic twins of the opposite sex. They were allocated to the same classroom in grade one, but were separated at the beginning of their grade two year. Ahmed and Ahmedah are currently placed with two different teachers.

The adjustment period at the beginning of the year was difficult for the both of them, but more so for Ahmed. He seems to be the more dependent twin, and has a stronger desire to be in the same class as his sister. There is a big discrepancy between Ahmedah and Ahmed in terms of academic progress and intellectual ability. These twins could be defined as being mature dependents (cf 2.2.2).

Ahmed and Ahmedah were born by means of caesarean section at full term without any complications. They were monitored in hospital for two weeks on account of their low birth weight – just over two kilograms each – but were otherwise healthy. No significant medical conditions are known with either of them. Ahmed and Ahmedah are the only children of their biological parents, but have fourteen older half-brothers and sisters. There is an age difference of thirty years between Mr and Mrs Moodi. In addition there is also a cultural merge, as Mr Moodi is Indian while Mrs Moodi is SiSwati. These aspects causes conflict in terms of discipline within the house, and as a result the twins are raised permissively (cf 2.4.6). They are primarily raised by their parents, but receive the support of their neighbours and community.

4.4 SEMI-STRUCTURED INTERVIEWS

The semi-structured interview strategy was implemented with two main objectives. Firstly, interviews were conducted with Heads of Department of the foundation phase in five different primary schools in the Lowveld of Mpumalanga. The objective during these five semi-structured interviews was to gain insight into the existence and compilation of formal policies regarding the classroom placement of twins within the foundation phase.

Secondly, interviews were conducted with selected case studies, which consisted of at least one parent of twins, educators of those twins, as well as the twins themselves. The objective during these semi-structured interviews was to seek information in the form of attitudes, beliefs, opinions and perspectives in order to answer the research questions. The main aims were to determine involvement of the various parties during the decision making process regarding specific classroom allocation of the twins in each case study, as well as to determine the most significant factors that play a role in determining classroom allocation in the foundation phase.

The scheduled interviews were held in neutral, non-threatening settings. Interviews were recorded using a digital voice recorder, with permission of participants. The interviews were conducted in participants' choice of language, with all participants being fluent in either English or Afrikaans. Captured data was transcribed verbatim (cf Addendum L) in preparation for analysis and interpretation. Confidentiality was ensured and, although the participants were called by their names during the interviews, pseudonyms were used during the transcriptions and all further use of the data. Additional notes and observations were made during the interviews.

Separate semi-structured interview guides with identified themes with specific reference to each set of participants were formulated in advance (cf Addendums H - K). The questions explored different aspects of the twin phenomenon which, according to the literature study conducted in chapter two, might present as significant factors when deciding upon schooling twins together or separately in the foundation phase. Although the questions were formulated beforehand, the researcher adapted and simplified the language and repeated or rephrased questions to ensure clear understanding for the participants. The questions often allowed for spontaneous, open discussions, thus the order in which questions were posed were adapted from interview to interview to ensure a smooth flow of conversation. Themes that were incorporated into the formulation of the semi-structured interview guides differs with reference to the participant population for whom it was designed.

4.5 CATEGORISATION OF RAW DATA INTO THEMES

The researcher made use of thematic analysis – a process of segmentation, categorisation and relinking of aspects of the data prior to final interpretation (Matthews & Ross, 2010:373). The transcriptions were translated and structured according to themes. The reader can refer to Addendum L for the translation of transcriptions.

The themes which were identified consisted of the following:

Theme 1: School policies regarding classroom allocation of twins

Theme 2: Parties involved in the decision making process

Theme 3: Factors considered during the decision making process

Theme 4: Understanding the twin phenomenon by those making decisions

Theme 5: Twin relationships and the effect on same or separate classrooms

Theme 6: Zygoty and scholastic experience

Theme 7: Emotional, social and cognitive factors influencing the general and scholastic functioning of twins

Theme 8: Practical implications of schooling twins separately or together

Theme 9: Parents' views on same or separate classrooms for their twins

4.6 DISCUSSION OF THE RESEARCH RESULTS

From the outcome of the individual semi-structured interviews and the participants' opinions, beliefs and perceptions, the researcher now attempts to address the research questions and specific aims as stated in chapter one.

4.6.1 Theme 1: School policies regarding classroom allocation of twins

In an attempt to ascertain what the policies of various schools are regarding classroom allocation of twins, the researcher first had to investigate whether or not such policies formally existed. In none of the cases did it become evident that policies were formally stated; however, each school felt that the way in which they handle the classroom allocation of twins works for them. Two of the schools involved in the research study admitted to the necessity of revisiting their current policy as a result of being part of this study. From the interviews conducted, it appears as if there are a wide spectrum of opinions and beliefs regarding twins in general. The two main sentiments fluctuate between separation on account of establishing individualism and independence, and placing twins together with the goal of maintaining emotional security. However, none of the policies are based on scientifically researched facts.

The HOD from school A explained that they placed twins together in grade one, but separated them in grades two and three. School A reconsiders separating twins in grade one when there are definite indications that placement in the same class is a disadvantage for one or both twins. In contrast to this, the HOD from school B clarified their school's preference to separate, with the slight inclination to reconsider and place twins together for a trial period. The HOD from school C is convinced that it is always best to separate and assured the researcher that there have never been any disadvantages at their school when acting according to their policy. The HOD from school D indicated a definite

predisposition to separate all twins, while the HOD from school E pointed out that there was no absolute policy but cases were handled as they presented themselves (cf Addendum L).

4.6.2 Theme 2: Parties involved in the decision making process

The researcher attempted to investigate who the parties are that are involved in the decision making process. This question was posed to educators, parents, twins and heads of departments (cf Addendum L). In all the interviews it was mentioned that the school primarily makes the decision, while parents' requests or queries are handled as they occur after classroom placement was made. It seems to be the prerogative of the head of department, together with the grade head and teachers, to decide upon same or separate classroom allocation. The participants in interviews 2 and 5 added that the school psychologist plays a role in assessing what is in the best interest of both twins. One of the participants also mentioned that in the event of mid-year enrolment from other schools, the previous school would be consulted.

In all the interviews participants mentioned that the classroom placement process was an automatic one. In some cases placement is merely left to chance, as pointed out by the participants in interviews 5 and 13a (cf Addendum L). It became clear that parents and the twins themselves were not consulted during the placement process. Where deemed necessary, the principal of the school is involved.

4.6.3 Theme 3: Factors considered during the decision making process

Various factors that seem to play a role during the classroom allocation of twins could be identified. The first factor that was highlighted was the emotional bond that exists between twins. DiLalla et al., (2009:509) explain that twins are born into a unique situation where they have a same-age sibling since the earliest prenatal period, resulting in a very close bond that sets their relationship apart from others. The participant in interview 12 pointed out that the emotional bond between twins is so strong that it would be detrimental for them to be separated (cf Addendum L), while another, from interview 1, indicated that their policy was based on establishing emotional security in an already new and strange environment and allowing the twins to adjust to their new environment at the start of their school career by placing them in the same class for this reason (cf Addendum L). In interview 2 the participant commented that their school only separates twins when they are emotionally strong enough (cf Addendum L).

Secondly, it came to light that individual development, which emphasizes placed on the independent functioning of twins, is a big consideration. Most participants were of the opinion that it is vital to separate twins in order to encourage independence. The participant in interview 2 relayed the case of dizygotic opposite-sex twins, where the girl dominated the boy completely. Once they were separated the boy

started to develop individually. Another participant, in interview 5, made mention of dizygotic twins where one was overly dominant. Once separation occurred, both developed individually (cf Addendum L). Klein (2008:2-3) supports this by stating that where individuality and independence are lacking, one twin can become dominant and the other one submissive or passive. However, the participant in interview 13b stated that reaching individualism is only possible when you feel emotionally secure (cf Addendum L).

A third factor that was identified by the participants is language preference. In two of the five schools that were involved in the research study, double medium tuition is offered. One class per grade is allocated to Afrikaans or English irrespectively, with the remaining four classes in that grade being taught in the opposite language. The language of the twins will thus be the main determining factor to separate or keep twins together. In addition to this, religion and cultural background also seems to play a role. In one of the schools there is a small Muslim population whom are all placed together in one classroom. If the twins are Muslim, their separation or non-separation might be influenced by this factor.

In addition to the above mentioned issues, gender seems to be another significant factor. Participants from interviews 3, 4, 5 and 13a and 13b referred to the fact that the boys prefer to play with boys, while the girls play with girls. In contrast to this it is the participants' perception that monozygotic, same-sex twins have a bigger desire to be together than dizygotic, opposite-sex twins (cf Addendum L).

The sixth factor that was highlighted by the participant in interview 13b, is that friendships play a role in the general functioning and classroom behaviour of twins. Elias and Schwab (2011:309) point out that social behaviour refers to the way in which children and twins specifically, behave within the physical and social environment of the classroom. She explained that with identical twins, of which one is in her class, there is a third party involved, a friend. She plays with both of the twins, but now with the one and then with the other. To place all three of them in the same class wouldn't work because the moment all three are together they fight terribly (cf Addendum L). The participant from interview 5 mentioned the same predicament with monozygotic twins with a shared friend, all in the same classroom, and referred to the ongoing battle that accompanies these friendships (cf Addendum L).

One participant furthermore indicated that the teachers' competency and experience with twins specifically should be taken into consideration when placing twins in the same or separate classrooms (cf Addendum L). The participant from interview 5 supported this notion by indicating that older teachers have more experience with twins in general.

Some participants also referred to the academic abilities of the twins as a determining factor that is considered when deciding upon separate or same classroom allocation. Three participants felt strongly that in the case of one twin being academically stronger than the other, it is best to separate them. They mentioned that one twin always carries the other one (cf Addendum L). According to DiLalla et al., (2009:511), classroom separation of twins may also affect academic achievement.

The participant in interview 12 made mention of the event of a disability with one of the twins in her class as a considering factor when making a decision on placement. She stated that perhaps the physical disability with the one of them makes them even more dependent on each other than other twins would normally be. She did not think that they would be able to handle separation (cf Addendum L).

4.6.4 Theme 4: Understanding the twin phenomenon by those making decisions

Furthermore, the researcher investigated the general understanding of the twin phenomenon among the participants, which included stereotyping, general assumptions, formal training and the general way in which twins were raised, viewed and educated. The researcher is of the opinion that one can make a well thought-through decision on classroom separation or non-separation only if the difference between twins and singletons are fully grasped and understood. As indicated in chapter one (cf 1.1 & 1.2.2), there are various facets which are unique to twin relationships and which creates unique educational issues not faced by singletons.

From interviews 1 and 13b it became clear that some participants were of the opinion that twins are emotionally dependent on each other and need each other to function. Others felt that one is always more dominant. The participant in interview 1 mentioned that the older twin is always the stronger one, while the younger twin is weaker. Interview 13b's participant stated that one of the twins always experiences some or other behaviour problem for which the well-behaved twin tries to compensate. One participant felt that twins are two halves of a whole, while another from interview 14b noted that they complete each other (cf Addendum L).

In none of the interviews was educators' formal training confirmed in the sense of courses, workshops or any other form of tuition on the handling of twins in the foundation phase (cf Addendum L). The participants in interviews 2 and 4 mentioned that parents often do not know how to encourage individualism amongst their twins either. The researcher was left with the idea that the understanding of the twin phenomenon among those having to make the decision on classroom allocation was mostly based upon subjective opinions and unsubstantiated beliefs.

4.6.5 Theme 5: Twin relationships and the effect on same or separate classrooms

Fraley and Tancredy (2011:308) state that twin relationships are often considered to be one of the most unique and intimate of interpersonal relationships. Relationship types were discussed in paragraph 2.2.2. It is meaningful to consider types of twin relationships when deciding on classroom allocation. This includes the way friendships are formed, telepathy between twins and co-twin dependence. Interview 2's participant mentioned a closely coupled set of twins who cannot function separately and were placed together despite a policy to separate twins. One of the participants, for example, indicated that they dress the same, that "they are one" and that they always go everywhere together. When these twins were initially separated at the onset of grade two, they were upset and distraught, unsure of how to cope without each other. The second monozygotic twin pair, who are together in a class, will not cope if they are separated, according to their educator and parents. The twins in the separated, dizygotic twin case study seem to have adjusted with more ease to their separation.

The participants from interviews 3, 4, 5, 13b and 14a described that the twins play together during break. Twins and parents from interviews 7, 8 and 10 indicated that they share some friends, but not all. The twins in interview 9 play only with one another. The participant in interview 6 reported that her twins are much calmer when they are together, and will search for each other if they are not. A similar comment was made by the participant in interview 5 when referring to identical twins who performed poorer academically while they were separated (cf Addendum L). The researcher is under the impression that togetherness amongst twins provides emotional readiness to learn. Webbink et al., (2007:573) support this point of view by stating that the presence of a co-twin can make them more confident in class, even if they are not together constantly.

4.6.6 Theme 6: Zygoty and scholastic experience

The participant in interview 1 mentioned that zygoty is an influential factor as those who are non-identical will most likely separate with more ease than identical twins, with reference to a stronger emotional bond between identical twins (cf Addendum L). From the interviews conducted and highlighted, it became evident that zygoty also influences academic functioning. Participants relayed that monozygotic twins performed in close relation to each other. They were either both average, both weak or both strong academic learners. In the event of the dizygotic twins who were discussed, one seemed to be stronger academically, while the other one experienced challenges.

4.6.7 Theme 7: Emotional, social and cognitive factors influencing the general and scholastic functioning of twins

The researcher investigated possible factors which might have an influence on twins' emotional, social and cognitive functioning in an attempt to determine the effect they might have on classroom allocation in the foundation phase. In interview 7, one of the participants indicated that emotional trauma during her pregnancy influenced the emotional state of the twins during infancy and perhaps later. The participant in interview 6 explained the complications that came with premature labour and other illnesses which caused delayed milestones and emotional development (cf Addendum L). The participants in interviews 3 and 13b both referred to the difference in cultures where emotional development and maturity are concerned. Both these participants as well as the participants in interviews 12 and 14b were of the opinion that it is not necessarily the stronger academic twin who is also the stronger one emotionally. In fact, research finds that the opposite is true.

The event of one twin failing a year while the other twin progressed to the next grade was discussed in interviews 1, 2, 3, 13b and 14b. In all of these cases it appeared that, although traumatic at the time of separation, it counts as an advantage for creating and developing individualism. The researcher is left, however, to ponder the emotional implications in the long run.

4.6.8 Theme 8: Practical implications of schooling twins separately or together

The researcher explored the practical implications of same or separate classrooms as a determining factor during the decision making process. The participants in interviews 2, 3 and 4 commented that homework and classwork are the same throughout the grade, with each teacher adding some of their own personality to it. In contrast to this the participant in interview 13b mentioned the stress it creates within the family when different teachers expect different ways of taking on the same project (cf Addendum L). The participant in interview 6 preferred the same set of homework for her twins, as it creates emotional support for both if they have to prepare things together. The participant in interview 12 supported this view and added that it is easier to do one set of homework with both, especially if there are other children with special needs in the family. In contrast the participants in interviews 4 and 14a point out that different aged children in different classes would mean different sets of homework, and there shouldn't be a distinction between this fact and the fact that some children happen to be twins in separate classes.

The participant in interview 13b referred to the practical implication of parent evenings where twins are in separate classes, stating that parents then tend to choose to see the teacher of the twin with the biggest crisis at that moment. The participants in interviews 4, 13a, 13b and 14a referred to instances where the more responsible twin brings letters, forms or money to school for both of them. The

participant in interview 14b felt strongly about encouraging responsibility and independent behaviour of twins within the same classroom and was of the opinion that it can be done.

4.6.9 Theme 9: Parents' views on same or separate classrooms for their twins

From the literature study in chapter two it became evident that parents are not being consulted during the decision making process of twin classroom allocation. In an attempt to understand parents' views on the matter, the researcher considered this theme as part of the empirical study. The participant in interview 6 recalled that her Nancy went for an operation and was absent from school for three months. During this time Natalie struggled with school work and her marks dropped. Her school work noticeably improved again when Nancy was back at school (cf Addendum L). In the same way, the participant from interview 7 mentioned that John is worried when Johnathan is sick, or the other way around, and that it probably influences their ability to concentrate (cf Addendum L). The participant from interview 6 felt strongly about wanting her twins to stay together in a class in the future, while the participant in interviews 7 and 8 indicated that they would support the decision of the school, whichever classroom allocation was chosen. The participant in interview 7 was initially upset about the separation, but has grown to see that it is best for her children as they are both happy.

Kostelnik et al., (2013:7) states that academic success strongly relies on a child's emotional and social strengths. It appears as though most parents want their twins to be happy at school and to achieve success academically. They are willing to take the lead from the school in terms of classroom allocation to ensure their children reach these goals.

4.7 CONCLUSION

In this chapter, the empirical investigation was discussed. The empirical research exploration, including the data analysis procedure and interpretation, were described. The different identified themes and categories were used to reflect on the knowledge, personal beliefs, and perceptions of the various participants. Thereafter, the results were used to address the specific questions and aims, as stated in chapter one, in order to answer the research question. It is possible that a different researcher may have chosen to identify and highlight different themes or may have described the themes highlighted here in a different manner. However, the themes identified in this research appear to be similar to those identified in previous research regarding the classroom allocation of twins to the same or separate classes.

A summary of the literature study and the conclusion of the empirical investigation will be presented in the fifth chapter. In addition, the limitations of this study and recommendations for further studies will be discussed.

CHAPTER 5

FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

This chapter presents a summary of the research study and explores the significance of the findings. The limitations are acknowledged and suggestions are made for future research.

5.2 PURPOSE OF THE RESEARCH

The principal objective of this study was to gain a comprehensive understanding of what aspects are considered as determining factors when having to decide upon the same or separate classroom allocation for twins in the foundation phase. The primary research question led to an investigation attempting to conclude whether informed decisions are being made and, if so, what exactly these decisions are based upon.

The aim of the study was to find possible answers for the following secondary questions:

- Who are the parties involved in making decisions regarding the classroom placement of twins?
- Which considerations are being accounted for during the decision making process of separation or non-separation of twins?
- To what extent are placements of twins in classrooms, either together or separately, merely left to chance?
- Is the twin phenomenon fully understood by those making the decision to separate or not to separate twins?

5.3 SUMMARY OF LITERATURE AND THE EMPIRICAL INVESTIGATION

5.3.1 Findings from the literature

The literature study in chapter 2 shed light on the complex nature of twinship. Barghols (2010:8) pointed out the differences between handling twins as a pair or unit versus developing them as individuals, while Hay and Preedy (2006:400) emphasise the existence of different twin relationships and how each one will influence classroom allocation. The literature study explained zygosity and the way in which monozygotic twins differ from dizygotic twin pairs. Different types of relationships were described (cf 2.2.2) with the statement being made that closely coupled twins will find separation traumatic, while

extreme individuals would benefit from being schooled in separate environments. It is, therefore, evident that the type of twin pair will be a determining factor in terms of classroom allocation.

The inclusion of the literature study regarding emotional development is that twins' primary emotional experiences are directly related to the family environment. It is for this reason that attachment to primary caregivers, as well as parenting styles, plays a significant role in understanding the twin phenomenon (Knight, 2010:242; Boyd et al., 2005:5). Researchers conclude that twin relationships are also attachments, which will significantly impact the way in which they function emotionally as they become older (Tancredy & Fraley, 2006:78-93; Cassell, 2011:4).

The literature study examined the phenomenon of telepathy among twins and highlighted that significantly more monozygotic twins experience telepathy compared to dizygotic twins (cf 2.3.3). This seems to be another reason why zygosity should be considered a determining factor when deciding upon classroom allocation.

Kostelnik et al., (2013:3-6) stressed the importance of optimal learning environments for children during the ages of birth to twelve years regarding emotional, behavioural and social development. In addition, according to DiLalla (2006:100-101), twins might be at risk for developing poorer social skills when they are separated from each other during this time. This is linked with friendships and co-twin dependence. The significance lies within the fact that academic achievement is predicted, amongst other aspects, by children's social experiences in the classroom. Friendships inside and outside of the twinship will, therefore, influence children's social and subsequently their academic experiences (cf 2.4.1). The literature study shed light on the challenges and advantages that come with friendships among twins and the effect thereof in terms of social behaviour in the classroom (cf 2.4.5). Furthermore, the literature concludes that monozygotic twins are more likely to be co-twin dependent than dizygotic twins (Fortuna et al., 2010:210). It also became evident that zygosity influences individuality (cf 2.4.3).

The literature review explored various factors which influence the cognitive development of twins. Among such factors are the parental education levels and maternal age at the time of birth, birth complications, premature births and low birth weight. These factors influence language development, as some researchers found that twins lag behind in language development when compared to singletons (cf 2.5.4). The literature also reviewed the intelligence quotient and general reading and writing abilities of twins. In the light of these investigations it became evident that both zygosity and subsequent genetic factors, as well as exposure to non-shared environmental factors, should be considered as determining factors during classroom allocation (cf 2.5.5).

According to literature investigation the matter of school policies regarding twin classroom allocation is mainly dealt with in two ways. The first is considered an organizational level approach by which all twins

are separated regardless of twins' individual composition. The second approach is referred to as an individual level approach by which each individual twin pair is considered before classroom allocations are made (cf 2.6).

Allocation to same or separate classrooms may have certain practical implications. The literature study showed the significance of involving the parent as well as the twins themselves during the decision making process (Jones & De Gioia, 201:245). Nilson (2009:18) emphasises the vital role that counsellors play in supporting the well-being of learners when twins are initially separated. The general considerations that accompany both decisions to separate or to school together include age, zygosity, independence and social skills, interaction with others, possible benefits for each individual twin, competition and comparisons, as well as classroom support (cf 2.7.1). Some researchers point out the negative effects of forced separation (cf 2.7.5), while others highlight the practical considerations when implementing the decision (cf 2.7.3).

In conclusion, the literature review highlighted that many factors come into play during the decision-making process of twin classroom allocation, and that it is not a once-off decision, but rather an ongoing assessment process.

5.3.2 Findings from the empirical study

The research design was presented in chapter three and the findings offered in chapter four. Three case studies with sixteen individual semi-structured interviews were conducted. The researcher made use of a semi-structured interview guide where identified themes were formulated in advance. Participant observations were obtained during the interviews; thereafter the data was analysed and interpreted.

The empirical study was designed to answer the main research question: What are the determining factors when deciding to school twins together or separately? From the empirical study (cf chapter 4) it became evident that the majority of schools apply the organizational level approach in dealing with a school policy regarding the classroom allocation of twins. Most schools opt to separate twins based on stereotypical perceptions and justifications for a generalized policy. These stereotypes concur with the literature study as they include the decrease of competition and comparison, the increase of responsibility and decrease of dominance of the one twin over the other, and assistance in developing individuality and separate friendships. Some individual participants exhibited a more objective perception on the effect of separation and viewed the emotional bond and security that comes with being a twin as weighing more. Most policies seem to be a result of individual opinions.

Furthermore, the majority of schools do not wish to alter their existing policies, nor do they want to implement a formal policy, as they feel the way in which they have always handled twin placements

were sufficient. Two of the schools indicated that it was necessary for them to reconsider their policies as a result of being involved in this research study.

Parents and twins are not involved in the decision-making process, but their requests will be listened to when applicable. In most cases, schools feel that they have the prerogative to decide upon classroom placement. In the event of parents being unhappy about classroom allocation, it will be addressed and reasons for the school's policy will be explained. However, nowhere during the empirical study did it become evident that counselling or support was provided to twins and families during initial separation. There were also no therapeutic follow-ups to assess the consequences of the decisions. Some participants reported on being upset by the separation at first, although they have since come to terms with the decision made by the school. Parties involved are the heads of department, grade heads and teachers. In some instances the school psychologist or head of academic department was consulted. One of the participants also indicated consultation with previous schools.

The appropriate classroom allocation is primarily based on experience of teachers who implement their school's policy the way it is determined by the school, and in some cases left to chance. However, none of the participants were formally trained or educated in the phenomenon of twins or their scholastic experiences. In addition, it also became apparent that the beliefs and convictions of different educators within the same department differ from each other. Two of the participants indicated a need for workshops or courses on the topic of twins.

It became evident that many educators of twins, although not all, were unaware of the birth and medical history of the twins they were involved with, as well as of the effect that possible complications could have on the twins' current academic progress. From the empirical study it became clear that monozygotic twins tend to perform similarly academically, although one might be slightly stronger emotionally than the other. Dizygotic twins seem to differ significantly in terms of their academic potential. Monozygotic twins also tend to exhibit a need to be together during the school day, whether at break or in the classroom. Dizygotic twins seem to function more spontaneously as individuals as they rather search out groups of friends from the same gender. Monozygotic twins also tend to search out each other rather than friends outside of the twinship.

Parenting styles and the way in which parents view their twins affects the general functioning and adjustment to the schooling environment of the twins. Parents of the monozygotic twins involved in the case studies were more inclined to view them as a unit.

Factors that seem to be determining when making a decision to separate or not to separate seem, first and foremost, to lie within the parameters of the school's policy. Language preference, religion, gender and cultural background play a part. Emphasis is placed on developing individuality in most schools, in

addition to creating responsibility and independence. Additional factors that were identified are zygosity, disabilities, friendships and the competency of the teachers.

5.4 EDUCATIONAL IMPLICATIONS AND RECOMMENDATIONS

From the literature study it is evident that the separation of twins – especially monozygotic twin pairs – could be traumatic and emotionally unsettling for one or both twins. Paragraph 2.3.1 explained the significance of attachment theory and described how twins often view each other as primary attachment figures. The differences in twin relationship types were discussed in paragraph 2.2.2. Paragraph 2.4 highlighted that academic success relies strongly on the emotional well-being of a child. Yet, from the empirical study it became clear that emotional support is not provided to twins or families during the time of initial classroom separation. No preventative measures or preparation for separation are available before the separation into separate classrooms takes place.

- It is therefore recommended that a priming conversation takes place with parents as well as with twins before classroom separation occurs. It is further recommended that parent guidance and counselling be available for families during the course of the adjustment period. Therapeutic intervention may be valuable for the twins.
- Furthermore, it is recommended that the decision to separate be monitored and follow-up discussions with teachers and parents be scheduled.

From the empirical study it came to the fore that parents and twins were not primarily part of the decision making process. However, it did prevail that parent queries following classroom allocations would be heard and explanations for specific allocations and policies would be offered. Faulkner (2009:3) points out that when the decision of classroom allocation is pending, it is arguably parents who hold the greatest knowledge about their children's abilities, preferences and relationship dynamics.

- It is recommended that parents be involved in the decision making process from the onset.

A stereotype refers to a widely held but fixed and oversimplified image or idea of a particular type of person or thing (Hinton, 2013:7). The empirical study provides evidence that most policies and reasons upon which policies are based strongly rely on individual opinions and ideas. In addition, some classroom allocations of twins are left to chance (cf 4.5.2). None of the participants in the empirical study recall having received any training or education regarding the phenomenon of twins (cf 4.6). As indicated in chapter one (cf 1.1 & 1.2.2), there are various facets which are unique to twin relationships and which create unique educational issues not faced by singletons.

- It is therefore recommended that educators and parents attend workshops or short courses on this topic in order to assist them with making informed decisions on classroom allocation of twins in the foundation phase.

5.5 LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FURTHER RESEARCH

In addressing the research problem, the primary aim of the study was to achieve an ample understanding of how involved parties view the determining factors during the decision making process to school twins together or separately in the foundation phase. Although this research study, as part of a dissertation of limited scope, brought significant awareness to light and attained a great deal, several limitations were identified which calls for further attention.

- The first limitation was the fact that the sample size of the population which it presented is small. Only three case studies were selected, in addition to the exploration of only five schools' policies on classroom allocation of twins. These case studies and interviews were limited to the Lowveld of Mpumalanga, and cannot necessarily be generalized to case studies and research conducted in other provinces. Although the sample size was sufficient for this study of limited scope, further studies with larger sample sizes are recommended.
- The second limitation links with this, in the sense that generalizations cannot be made as this study was qualitative in nature with the aim of understanding the beliefs, opinions and perceptions of a limited number of case studies.
- Thirdly, a qualitative research method does not rely on well formulated methods of analyses. This can easily lead to unreliable or invalid conclusions, despite the thematic analyses, categorization and systematic interpretation conducted in this study. Research on the effects of both separation and non-separation of twins in a quantitative manner might be insightful.
- A fourth limitation of this research study is the fact that it focussed on twins only and not on higher multiple classroom allocations. This study was limited to mono- and dizygotic twins and their scholastic experiences. The exploration of scholastic experiences of higher multiple children with reference to classroom allocation is proposed.
- Fifthly, this study was limited to classroom allocation of twins in the foundation phase. Despite valuable insights gained from this study, the effects of classroom separation or non-separation in the intermediate and senior phases were not investigated. It is suggested that the effects of classroom allocation on intermediate and senior phase learners be investigated.
- Although the study succeeded in determining the factors which are and should be considered during the decision making process of twin classroom allocation, this study did not formulate guidelines or step-by-step instructions on how to deal with classroom allocation. Further research might be valuable in terms of implementing and verifying the impact of such guidelines.

5.6 CONCLUSION

Previous research demonstrates that fixed policies in the school systems across the globe appears to campaign for the separation of twins based on the belief that separation is vital for the development of individualism. This was found to be the case during this research study as well, with some schools more reluctant to consider alternative options on merit than others. During this research study various aspects were considered as determining factors when deciding upon classroom allocation of twins.

Despite the limitations of this study, it nonetheless succeeded in creating an awareness among educators that the twin phenomenon proves to be more complex than meets the eye. It highlighted the factors that come into play when dealing with twins and deciding upon specific classroom allocation, whether it be to separate or not to separate. It furthermore emphasized that any decision to separate twins within the first few years of school should be taken with care and planning. The needs and experiences of each child in a twin pair, along with the input from parents, in conjunction with the highlighted facets pointed out as determining factors, should rather be considered on a case-by-case basis.

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Research Ethics Clearance Certificate

This is to certify that the application for ethical clearance submitted by

CS Malan [40847497]

for a M Ed study entitled

Determining factors of schooling twins together or separately in the foundation phase

has met the ethical requirements as specified by the University of South Africa College of Education Research Ethics Committee. This certificate is valid for two years from the date of issue.

Prof KP Dzvimbho
Executive Dean : CEDU

Dr M Claassens
CEDU REC (Chairperson)
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Reference number: 2014 MAY /40847497/MC

19 MAY 2014

ADDENDUM B: PERMISSION LETTER FROM MPUMALANGA DEPARTMENT OF EDUCATION

Christie Malan

Intern Educational Psychologist
BEd (US); BA. Psych (UNISA); BEd Hons. (UNISA)
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Head of Department
Department of Education
Private Bag X 11341
Nelspruit
1200

Dear Mrs Mhlabane,

PERMISSION TO CONDUCT RESEARCH IN LOWVELD SCHOOLS

I am currently enrolled at the University of South Africa for a master's degree in education (MEd School Guidance and Counselling) under the supervision of Dr Soezin Krog. A requirement in part fulfilment of the degree is that I complete a dissertation of limited scope that involves research. The title of my dissertation is: *Determining factors when schooling twins together or separately in the foundation phase.*

The study aims to examine the existence and content of school policies regarding classroom allocation of twins, as well as to identify the determining factors which should be taken into consideration when a decision upon classroom allocation is made. The possible outcome of this study is to provide guidelines to parents, educators and counsellors to support all the relevant parties involved in this decision making process.

I would like to request permission to conduct a research study with three sets of twins in the foundation phase, their parents and educators. In addition I would like to interview the heads of department of the foundation phase of five different schools on their school's policy regarding twin placement and schooling. My aim is to answer the following questions:

- Who are involved in making a decision upon classroom allocation of twins in the foundation phase?
- What are the policies of schools regarding twin placement and schooling?

- What are the views of twins on being educated in same or separate classrooms?
- What are the views of the parents of twins on classroom allocation?

Participants will be identified by the HOD of the foundation phase and consent will be gained from all parties involved. Individual semi-structured interviews will be conducted with the HODs, parents, educators and twins. These interviews will take place over a period of two weeks. No foreseeable risks or discomfort to the participants are expected, but will be dealt with professionally in the unlikely event that some distress might occur. The research project will be conducted with ethical approval of the University of South Africa (UNISA). The final report of the study will be submitted as a dissertation of limited scope.

I hereby confirm that I will adhere to the following ethical considerations:

1. The participants' names will not appear at any point of information collection, nor in the final report of the data. Pseudonyms will be used in order to protect their privacy.
2. All information will be dealt with confidentially and written consent will be requested from parents.
3. Children will be requested to sign an assent form after the research procedure have been explained to them by their parents.
4. The participants partake voluntarily. They have the right to withdraw at any point of the study, for any reason and without any prejudice.
5. The schools' names will not be mentioned in the research study or in any publication which might be generated from this study.
6. Although participants may gain therapeutic value from the research process, no compensation, gifts or reimbursements will be offered to participants.

You are encouraged to ask any questions at any time regarding the nature and the methodology of the study.

Kindly complete the following:

I, _____ grant permission to Christie Malan to conduct the research.

HEAD OF DEPARTMENT

DATE

RESEARCH STUDENT

DATE

education

DEPARTMENT: EDUCATION
MPUMALANGA PROVINCE

Private Bag X 11341
Nelspruit 1200
Government Boulevard
Riverside Park
Building 5
Mpumalanga Province
Republic of South Africa



Litika eSifundzisa Umyango weFundo Departement van Oonderwys Umyango wezaMfundo

Enquiries: Dr MC Pieterse
Tel. 013-7665875
Fax. 086-562-4730
E-Mail: m.pieterse@education.mpu.gov.za

**TO: MS CHRISTIE MALAN
INTERN EDUCATIONAL PSYCHOLOGIST**

CC: UNIVERSITY OF SOUTH AFRICA

**FROM: MS PN MBATHA
DIRECTOR: INCLUSIVE EDUCATION & EDUCATION SUPPORT**

**SUBJECT: APPLICATION TO CONDUCT RESEARCH IN SCHOOLS
SITUATED IN THE MPUMALANGA LOWVELD**

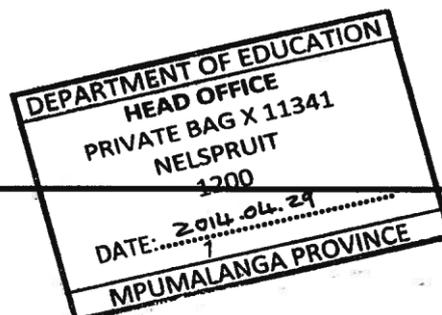
Permission is hereby granted to Ms. C Malan, currently enrolled at the University of South Africa for the degree (M. Ed-School Guidance and Counselling) to conduct a research study with three sets of twins in the foundation phase, their parents and educators. It would be appreciated if the identified schools could offer their full support and cooperation.

It would be valued if the research results could be shared with the Mpumalanga Dept of Education.

Regards


MS PN MBATHA
DIRECTOR: IE & ES

2014/04/29
DATE



Sisonke Sifundzisa Sive


MPUMALANGA
A Pioneering Spirit

ADDENDUM C: PERMISSION LETTER FROM PRINCIPAL

Christie Malan
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e-mail: christie@luidkeels.info

The Principal

XXXXXXXXXX

XXXXXXXXXX

XXXXX

XXXX

Dear Principal,

PERMISSION TO CONDUCT RESEARCH WITHIN THE FOUNDATION PHASE

I am currently enrolled at the University of South Africa for a master's degree in education (MEd School Guidance and Counselling) under the supervision of Dr Soezin Krog. A requirement in part fulfilment of the degree is that I complete a dissertation of limited scope that involves research. The title of my dissertation is: *Determining factors when schooling twins together or separately in the foundation phase.*

The study aims to examine the existence and content of school policies regarding classroom allocation of twins, as well as to identify the determining factors which should be taken into consideration when a decision upon classroom allocation is made. The possible outcome of this study is to provide guidelines to parents, educators and counsellors to support all the relevant parties involved in this decision making process.

I would like to request permission to conduct a research study with three sets of twins in the foundation phase, their parents and educators. In addition I would like to interview the head of department of the foundation phase on your school's policy regarding twin placement and schooling.

My aim is to answer the following questions:

- Who are involved in making a decision upon classroom allocation of twins in the foundation phase?
- What are the policies of schools regarding twin placement and schooling?

- What are the views of twins on being educated in same or separate classrooms?
- What are the views of the parents of twins on classroom allocation?

Participants will be identified by the HOD of the foundation phase and consent will be gained from all parties involved. Individual semi-structured interviews will be conducted with the HOD, parents, educators and twins. These interviews with the educators and HOD will take place over a period of one afternoon after school hours. Interviews with parents and twins will be arranged individually. No foreseeable risks or discomfort to the participants are expected, but will be dealt with professionally in the unlikely event that some distress might occur. The research project will be conducted with ethical approval of the University of South Africa (UNISA). The final report of the study will be submitted as a dissertation of limited scope. I hereby confirm that I will adhere to the following ethical considerations.

1. The participants' names will not appear at any point of information collection, nor in the final report of the data. Pseudonyms will be used in order to protect their privacy.
2. All information will be dealt with confidentially and written consent will be requested from parents.
3. Children will be requested to sign an assent form after the research procedure have been explained to them by their parents.
4. The participants partake voluntarily. They have the right to withdraw at any point of the study, for any reason and without any prejudice.
5. The schools' names will not be mentioned in the research study or in any publication which might be generated from this study.
6. Although participants may gain therapeutic value from the research process, no compensation, gifts or reimbursements will be offered to participants.

You are encouraged to ask any questions at any time regarding the nature and the methodology of the study.

Kindly complete the following:

I, _____ grant permission to Christie Malan to conduct the research.

PRINCIPAL

DATE

RESEARCH STUDENT

DATE

ADDENDUM D: HEAD OF DEPARTMENT FOUNDATION PHASE CONSENT FORM

Christie Malan

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Dear HOD: Foundation Phase

I am currently enrolled at the University of South Africa for a master's degree in education (MEd School Guidance and Counselling) under the supervision of Dr Soezin Krog. A requirement in part fulfilment of the degree is that I complete a dissertation of limited scope that involves research. The title of my dissertation is: *Determining factors when schooling twins together or separately in the foundation phase.*

The study aims to examine the existence and content of school policies regarding classroom allocation of twins, as well as to identify the determining factors which should be taken into consideration when a decision upon classroom allocation is made. The possible outcome of this study is to provide guidelines to parents, educators and counsellors to support all the relevant parties involved in this decision making process.

In order for me to conduct the study, permission has been granted by the principal of your school.

I would like to request your consent to partake in this research study by granting an interview on your school's policy regarding classroom allocation and schooling of twins. My aim is to determine who are involved in making a decision upon classroom allocation and what guidelines are being followed. My expectation is that this research study may lead to the compilation of guidelines to assist teachers, parents and counsellors during their decisions to separate twins into different classrooms or educate them together within the same classroom.

An individual semi-structured interview of no more than one hour will be conducted and will take place over a period of one afternoon after school hours. Interviews will be recorded and transcribed. No foreseeable risks or discomfort to the participants are expected, but will be dealt with professionally in the unlikely event that some distress might occur. The research project will be conducted with ethical approval of the University of South Africa (UNISA). The final report of the study will be submitted as a dissertation of limited scope.

I hereby declare that I will adhere to the following ethical conditions:

1. Your name will not appear at any point of information collection, nor in the final report of the data. Pseudonyms will be used in order to protect your privacy.
2. All information will be dealt with confidentially.
3. Your participation in this research study is voluntarily. You have the right to withdraw at any point of the study, for any reason and without any prejudice.
4. The schools' names will not be mentioned in the research study or in any publication which might be generated from this study.
5. Although you may gain therapeutic value from expressing your views and perceptions during the research process, no compensation, gifts or reimbursements will be offered.

You are encouraged to ask any questions at any time regarding the nature and the methodology of the study. Your suggestions and concerns are important. Please feel free to discuss these with me at any time.

Thank you for participating in this research study. Kindly complete the following:

I, _____ consent to participation in this research study.

HEAD OF DEPARTMENT

DATE

CHRISTIE MALAN

DATE

ADDENDUM E: PARENT CONSENT FORM

Christie Malan
Intern Educational Psychologist
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Dear Parent

I am currently enrolled at the University of South Africa for a master's degree in education (MEd School Guidance and Counselling) under the supervision of Dr Soezin Krog. A requirement in part fulfilment of the degree is that I complete a dissertation of limited scope that involves research. The title of my dissertation is: *Determining factors when schooling twins together or separately in the foundation phase.*

The study aims to examine the existence and content of school policies regarding classroom allocation of twins, as well as to identify the determining factors which should be taken into consideration when a decision upon classroom allocation is made. The possible outcome of this study is to provide guidelines to parents, educators and counsellors to support all the relevant parties involved in this decision making process.

In order for me to conduct the study, permission has been granted by the principal of your children's school.

I would like to request your consent to partake in this research study by granting an interview during which your experiences, perceptions and opinions about the schooling of your twins will be explored. My aim is to attempt to understand the phenomenon of twins compared to the life world of singletons, and especially the effect of the educational environment on the functioning and development of twins. In addition I would like to request your consent for your twins to participate in this study as well, as their input would have invaluable significance in this research study.

Individual semi-structured interviews will be conducted with you and your twins, and will take place over a period of one afternoon after school hours. Interviews will be recorded and transcribed. No foreseeable risks or discomfort to the participants are expected, but will be dealt with professionally in the unlikely event that some distress might occur. The research project will be conducted with ethical approval of the University of South Africa (UNISA). The final report of the study will be submitted as a dissertation of limited scope.

I hereby declare that I will adhere to the following ethical conditions:

1. Neither you nor your children's names will appear at any point of information collection, nor in the final report of the data. Pseudonyms will be used in order to protect your privacy.
2. All information will be dealt with confidentially.
3. Both your and your children's participation in this research study is voluntarily. You have the right to withdraw at any point of the study, for any reason and without any prejudice.
4. The schools' names will not be mentioned in the research study or in any publication which might be generated from this study.
5. Although you may gain therapeutic value from expressing your views and experiences during the research process, no compensation, gifts or reimbursements will be offered.

You are encouraged to ask any questions at any time regarding the nature and the methodology of the study. Your suggestions and concerns are important. Please feel free to discuss these with me at any time.

Thank you for participating in this research study and for the opportunity to incorporate your children, _____ and _____ in the study.

Kindly complete the following:

I, _____ consent to participation in this research study and dually give consent for my children to partake in the study as well.

PARENT

DATE

CHRISTIE MALAN

DATE

ADDENDUM F: CHILD ASSENT FORM (ENGLISH AND AFRIKAANS)

Dear _____

You have been selected to participate in a research project, which is about helping others understand what it is like being a twin. The project is about deciding when it is good for twins to stay together in one classroom, and when it is good for them to split up into different classrooms with different teachers. The name of the research project is: *Determining factors of schooling twins together or separately in the foundation phase.*

You and your twin brother or sister will be interviewed separately from each other. Your parents will also get a chance to be interviewed, and we will find out what your teacher thinks about your classroom placement as well. An interview means that you will be asked questions about how you feel about school and being part of a twin pair. There will be a special voice recorder that will record everything we talk about during our interview, so that I can later write everything down that is important.

Your name and the name of your parents, your brother or sister, your teacher and your school will not be mentioned anywhere in the research project. Instead, we will use made-up names to protect your privacy. There is no expected danger for you to participate in the project, but you have the right to withdraw at any point of the study if you feel uncomfortable in any way. It is not compulsory for you to participate. You will not be rewarded for taking part in the project, but your participation will be very highly appreciated.

It is very important that you first talk to your parents about taking part in this research project before you write your name at the bottom of this form. Once you have decided that you would like to participate, and you have signed your name, I will give a photocopy of this form to your parents as evidence. Your parents will also be asked to give their permission for you to participate.

You are welcome to ask any questions at any time if you do not understand something. Thank you for being a part of this special research project! I look forward to doing research with you.

NAME OF PARTICIPANT

DATE

CHRISTIE MALAN

DATE

Beste _____

Jy is gekies om deel te neem aan 'n navorsingsprojek wat ander sal help verstaan hoe dit is om deel van 'n tweeling te wees. Die projek gaan daarvoor om te besluit wanneer dit goed is vir 'n tweeling om in dieselfde klas te wees, en wanneer dit goed is vir hulle om eerder in twee verskillende klasse met twee verskillende juffrouens te wees. Die naam van hierdie projek is: *Bepalende faktore van onderrig van tweelinge saam of apart gedurende die grondslagfase.*

Jy en jou tweelingboetie of -sussie gaan deelneem aan 'n onderhoud – elkeen op sy eie. Jou ouers gaan ook 'n kans kry om aan 'n onderhoud deel te neem, en ons gaan ook uitvind wat jou juffrou daarvan dink dat julle saam of apart in 'n klas skoolgaan. 'n Onderhoud beteken dat jy vrae gaan antwoord oor hoe jy voel oor skool en om een van 'n tweeling te wees. Daar gaan 'n spesiale stemopnemer wees wat alles waaroor ons gesels gaan opneem, sodat ek later alles wat belangrik is kan neerskryf, sonder om iets te vergeet of uit te laat.

Jou naam en die name van jou ouers, jou boetie of sussie, jou juffrou en jou skool sal nêrens in die navorsingsprojek genoem word nie. Insteede daarvan gaan ons opgemaakte name gebruik om julle privaatheid te beskerm. Daar is geen verwagte gevaar daaraan verbonde om aan hierdie navorsingsprojek deel te neem nie, maar jy het die reg om enige tyd te onttrek as jy op enige stadium ongemaklik voel. Dit is nie verpligtend vir jou om deel te neem nie. Jy gaan nie enige spesiale belonging ontvang as jy besluit om deel te neem nie, maar jou deelname sal beslis baie waardeer word.

Dit is baie belangrik dat jy eers met jou ouers oor hierdie navorsingsprojek gesels, voordat jy jou naam onderaan hierdie vorm skryf. Wanneer jy besluit het dat jy wel graag wil deelneem, en jy jou naam geteken het, sal ek 'n afskrif van hierdie vorm vir jou ouers gee. Jou ouers moet ook eers toestemming gee op 'n aparate vorm dat jy wel aan die projek mag deelneem.

Jy is welkom om enige tyd enige vrae te vra wat jy dalk mag hê oor die navorsingsprojek. Baie dankie dat bereid is om daaraan deel te neem. Ek sien baie uit daarna om saam met jou navorsing te doen!

NAAM VAN DEELNEMER

DATUM

CHRISTIE MALAN

DATUM

ADDENDUM G: EDUCATOR CONSENT FORM

Christie Malan
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Dear Foundation Phase Teacher

I am currently enrolled at the University of South Africa for a master's degree in education (MEd School Guidance and Counselling) under the supervision of Dr Soezin Krog. A requirement in part fulfilment of the degree is that I complete a dissertation of limited scope that involves research. The title of my dissertation is: *Determining factors when schooling twins together or separately in the foundation phase.*

The study aims to examine the existence and content of school policies regarding classroom allocation of twins, as well as to identify the determining factors which should be taken into consideration when a decision upon classroom allocation is made. The possible outcome of this study is to provide guidelines to parents, educators and counsellors to support all the relevant parties involved in this decision making process.

In order for me to conduct the study, permission has been granted by the principal of your school. I would like to request your consent to partake in this research study by granting an interview during which your experiences, perceptions and views of educating the identified twin/s will be explored. My aim is to attempt to understand the phenomenon of twins compared to the life world of singletons, and especially the effect of the educational environment on the functioning and development of twins.

Individual semi-structured interviews will be conducted and will take place over a period of one afternoon after school hours. Interviews will be recorded and transcribed. No foreseeable risks or discomfort to you as a participant are expected, but will be dealt with professionally in the unlikely event that some distress might occur. The research project will be conducted with ethical approval of the University of South Africa (UNISA). The final report of the study will be submitted as a dissertation of limited scope.

I hereby declare that I will adhere to the following ethical conditions:

1. Your name will not appear at any point of information collection, nor in the final report of the data. Pseudonyms will be used in order to protect your privacy.
2. All information will be dealt with confidentially.
3. Your participation in this research study is voluntarily. You have the right to withdraw at any point of the study, for any reason and without any prejudice.
4. The schools' names will not be mentioned in the research study or in any publication which might be generated from this study.
5. Although you may gain therapeutic value from the research process by means of expressing your views and experiences, no compensation, gifts or reimbursements will be offered.

You are encouraged to ask any questions at any time regarding the nature and the methodology of the study. Your suggestions and concerns are important. Please feel free to discuss these with me at any time.

Thank you for participating in this research study. Kindly complete the following:

I, _____ consent to participation in this research study.

FOUNDATION PHASE TEACHER

DATE

CHRISTIE MALAN

DATE

ADDENDUM H: INTERVIEW GUIDE – HEAD OF DEPARTMENT FOUNDATION PHASE

Interview guide for semi-structured interview with HODs - Foundation Phase.

Interviewing HODs of primary schools in the Lowveld in Mpumalanga on their policies regarding schooling of twins separately or together during the foundation phase.

24. Introduction

Make the participants feel welcome.

25. How does the school view the separation or non-separation of twins in the foundation phase?

26. Does the school have any formal policy on schooling twins in the foundation phase specifically?

27. Does the school deem it necessary to have a policy like the above mentioned in place?

28. Who do they regard as active decision-makers during the process of allocating twins to separate or same classrooms?

29. Ending

Thank participant for time and willingness. Reassure confidentiality.

Switch off audio recorder.

ADDENDUM I: INTERVIEW GUIDE – PARENTS

Interview guide for semi-structured interview with parents of twins

Interviewing parents of twins about the factors they considered when they were faced with making a decision on schooling their twin children in the same or separate classrooms.

1. Introduction

Make the participants feel welcome.

2. Can you tell me about your twins? Age, zygosity (i.e. identical or fraternal), gender, position in family? Are they currently allocated in same or separate classrooms?

3. Relationship type

Extreme individuals?

Closely coupled?

Mature Dependents?

4. Pregnancy and Birth Complications

Mode of conception?

Premature?

Birth-weight?

Illnesses or complications during pregnancy?

Illnesses or complications after birth?

Milestone development?

Language acquisition?

5. Parenting styles

Authoritarian?

Permissive?

Authoritative?

6. Support network

Who else is involved in raising the twins?

What are those relationships like?

7. Initial attachment and emotional, social and behavioural development

How would you describe their emotional development up to now?

As toddlers and preschoolers?

Social?

Has their behaviour changed since they started school? In which ways?

8. Telepathy

Would you say that the twins share a secret language, or telepathy?

Are they overly concerned about each other's health, safety and well-being?

How is this affecting their behaviour at school?

9. Friendships

Do they share friends?

How do their friends differ?

How easily do they make new friends?

10. Temperament and personality

Describe your twins' different temperaments and personalities

11. Co-twin dependence and individuality

How dependent are they upon each other?

What are your views on individuality vs. viewing them as a unit?

12. Practical implications of separate or non-separate classroom allocation

What are advantages in your opinion?

Disadvantages?

13. Are you satisfied with current arrangements?

14. Were you consulted by the school in this decision?

15. Did you consult with the twins during your decision making?

16. How do you perceive the future of your twins' schooling?

17. Ending

What is the most important factor that you feel should be considered when making a decision?

Any other thoughts, beliefs, feelings or opinions you would like to add?

What, in your opinion, is the best part of being parents to twins?

Thank parents for time and willingness to participate in the research study. Reassure confidentiality.

Switch off audio recorder.

ADDENDUM J: INTERVIEW GUIDE – EDUCATORS

Interview guide for semi-structured interview with educators of twins

Interviewing educators who are directly involved in the schooling of the twins, on which factors they feel were important in their recommendations of same or separate classroom allocation.

12. Introduction

Make the participants feel welcome.

13. Are both the relevant twins in your class? Since when have you been teaching them?

14. Individuality

Can you distinguish between them? How?

How is individuality encouraged?

Seating arrangements?

Friends at school?

Preferences for certain subjects or activities?

15. Reading and learning abilities

How would you describe each twin's reading, writing, spelling and mathematical abilities?

16. Social and emotional development

How do you perceive the relevant twin's emotional state?

Socially?

17. Behavioural problems

Are there any specific behavioural problems present at school or in the classroom with regards to the relevant twins?

18. Stereotypes

What are your views on twins and schooling in general?

19. Training and education

Have you ever received any formal training or guidance in the handling of twins in the formal schooling setting?

20. School policy

Do you know what the school's policy is regarding twins and schooling?

21. Classroom allocation

Were you actively involved in the placement of the relevant twins in same or separate classrooms?

Who else was involved in the decision-making process?

Were the parents consulted?

Were the twins themselves consulted?

22. Ending

What is the most important factor that you feel should be considered when making a decision?

Any other thoughts, beliefs, feelings or opinions you would like to add?

What, in your opinion, are the most positive characteristic of this particular set of twins?

Thank educators for time and willingness to partake in the research study. Reassure confidentiality.

Switch off audio recorder.

ADDENDUM K: INTERVIEW GUIDE – TWINS

Interview guide for semi-structured interview with twins

Interviewing the relevant twins who form the core of the case being studied, on their opinions and feelings about separate or same classroom allocation during the foundation phase.

11. Introduction

Make the participants feel welcome.

12. How do you both feel about being twins? What is your favourite and least favourite thing about having a twin brother or sister?

13. Grade and classroom allocation?

14. Did any of the adults ask you what you wanted when they decided whether to keep you and your twin together in one class, or to let you go to two different classes?

15. How would you feel about being in the same class as your sibling?

16. How would you feel about being in a different class than your sibling? Having a different teacher?

17. Friendships

Do you have a best friend at school?

Who else are your friends?

Do you always play with the same friends at school?

18. Extra-curricular activities

What do you like to do outside of school?

Do you both do the same activities or different activities?

19. Individuality

Does your teacher get confused with the two of you?

Do your friends confuse you?

How do you feel about being referred to as “the twins”? Does it happen a lot?

20. Ending

What do you like best about having a twin sibling?

Thank you for sharing your feelings.

Thank you for partaking in the research study.

ADDENDUM L: TRANSLATED TRANSCRIPTIONS ACCORDING TO THEMES

THEME 1: SCHOOL POLICIES REGARDING CLASSROOM ALLOCATION OF TWINS

Interview 1: HOD – SCHOOL A

- R: What is your school's policy in terms of separating or placing twins together in a classroom?
- P: We have a very strict rule not to separate twins in grade 1. My personal opinion is that the emotional bond between them is so strong that it is to their detriment to separate them. That is the basis on which we handle it in grade 1. In grade 2 and 3, the policy is to separate them. The staff members involved with these two grades feel that the twins tend to carry each other. You always get a weaker and a stronger one, and the weaker one of the two is always reliant on the stronger one. In grade 2 and 3 they prefer to separate them and place them with different teachers, but in grade 1 we prefer to keep them together for that exact reason – for the stronger one to help the weaker one to cope.
- R: In other words you feel that their dependency on each other determines their classroom allocation?
- P: Yes, to make the adjustment of formal schooling easier, we keep them together in grade 1. When we see that it is an inappropriate situation for which ever reason, we consider separating them.

Interview 2: HOD – SCHOOL B

- R: Could you please tell me what your school's policy is regarding the placement of twins in the foundation phase?
- P: I don't think we have a fixed policy in this regard. It depends...there is no rigid rule that determines that they MUST be separated or they MUST be placed together. We handle each case on merit, but we prefer to separate, and we do so in most cases. In all the years of teaching at this school we have never had unhappiness with the way we handle it. We don't have masses of twins, but they are there and they do pass through the foundation phase in a consistent manner. The way we have handled it up to now has worked. It does not matter to us teachers whether they are separated into different classrooms or not, but we feel strongly about the best interest of the children.

Interview 3: HOD – SCHOOL C

- R: How do you address the issue of classroom placement of twins in the foundation phase of your school?
- P: Well, from experience we have noticed that when it comes to twins one is ALWAYS stronger than the other one, and one is ALWAYS in the other's shadow. That is why our policy is to always separate them. We do not keep them together. Most parents don't have a problem with that, and if they do, we explain it to them.

R: Have you ever found yourselves in a situation where you have separated twins, but later realised that it didn't work? That perhaps the decision had to be reconsidered and that the twins would be better off together?

Participant shakes her head and indicates a definite no as answer to the question.

P: We have really never found that the one is so dependent on the other that it was necessary to reconsider a decision.

Interview 4: HOD – SCHOOL D

P: Our policy is to separate twins. We allow twins to be placed together in grade R, but when we start with formal education in grade 1, we separate all our twins. We feel that it is necessary for them to develop their own individuality and they cannot do that when they are placed in the same class. It is better for them to be separated.

R: Are there any special cases that you would consider differently?

P: No. We have always separated twins and this has always worked for us.

Interview 5: HOD – SCHOOL E

P: We don't really make formal decisions about twin classroom allocations. We divide learners into various classes according to academic ability...classes are made up out of mixed ability groups. Sometimes twins are placed together and sometimes apart. The next year the combination of learners differs, so if the twins were placed separately this year, they might be together next year.

THEME 2: PARTIES INVOLVED IN THE DECISION MAKING PROCESS

Interview 1: HOD - SCHOOL A

R: With reference to reconsidering the placement of twins when one or the other is being disadvantaged when they are in the same class, who is involved in the decision-making process?

P: Of course we will first discuss it with the parents, and then also the teachers involved. It is a team that decides what will be best for them. We did this once after both twins had to repeat a year. The second year we decided to separate them.

R: Do parents mostly want their children to be kept together, or do some parents ask for their twins to please be placed in separate classrooms?

P: We have never had that, no.

R: So most parents prefer for their twins to be kept together in the same class?

P: They don't really ask, because it is our policy to keep them together. We simply place them together. I think, if parents do have a request, one should look at the reasons why they request their twins to be placed separately. Then one will have to deal with it accordingly, but we have never had a request like that in the past.

- R: If I understand correctly, the parents generally follow the lead of the school and accept what is recommended by the school in terms of classroom placement?
- P: Yes, yes.
- R: You mentioned earlier that classroom allocation is a team decision. Who forms part of this team?
- P: It is usually the principal, foundation phase head of department and current teacher, as well as the new teacher who will be implicated by the separation. Sometimes we ask the opinion of the head of our educational department, but it is usually an internal decision within the foundation phase department.

Interview 2: HOD – SCHOOL B

- R: When a decision is being made concerning classroom allocation, who is involved in the process at your school?
- P: It is basically the principal, foundation phase head of department, involved teachers and the school psychologist. This is the team who decides about any placement about any child in the department, in any case.
- R: I take it you refer to placement on account of academic skills and progress?
- Participant nods her head.*
- R: What is the procedure in the event of a set of twins enrolling in the middle of the year, from a different school? And who is involved in that process?
- P: Then we will enquire from the previous school about placement up until then, their emotional dependency, etc. Usually the principal will interview the parents first.
- R: So the parents are included in the process?
- P: In such a case, yes. In most cases, whether it is at the beginning of the year or the middle of the year, parents request that twins be placed together. We then give the parents an opportunity to explain why, and we also explain to them why we feel strongly that they should rather be separated. Usually an experimental period is agreed upon during which they are placed in separate classrooms, and it has never been necessary to place them back together.
- R: Do you ever include the twins themselves in terms of asking their preferences for being placed separately or together?
- P: They are too small. We rather rely on the parents if they come from a different school. If they are from our own pre-school department, we discuss it with those teachers to hear if they are very dependent upon each other or not.
- R: So it remains the educators' prerogative to ultimately decide upon classroom placement?
- P: That's correct yes. If parents come with a valid, good reason why their twins should not be separated, we will place them together with the understanding that if the situation becomes problematic, they will be separated.

Interview 3: HOD – SCHOOL C

- R: Who is involved in the decision-making process?
- P: It is an automatic procedure – all twins are separated. So nobody in particular is responsible. It is our school's policy. We divide the children absolutely heterogenically.
- R: Have you ever encountered parents requesting for their twins to please be kept together in the same classroom?
- P: No, not really. The parents accept our system and the decision of the school. When we do have an enquiry, which hardly ever happens, we explain to them that it is the policy of the school to separate, and then they accept it.

Interview 4: HOD – SCHOOL D

- R: Do you think parents are aware of your policy?
- P: I think parents who are implicated are most probably aware of it, since it has always been the way things have worked with us. We don't give parents the option to choose if they want their twins placed together or separately, since children often behave differently at home than at school. The other reason is that they will always choose for their twins to be together, since they are emotional and sentimental about their children...
- R: Could you please explain what you mean?
- P: Parents often have this idea in their heads that their twins cannot function without each other...They often handle these two individual, separate children as one human being, and then they work against individual development. In fact, they are feeding the "oneness". Their behaviour towards their children can often convince the twins that they cannot live without each other. They have to do everything together...and actually they have the ability to function on their own, but they do not realize it.

Interview 5: HOD – SCHOOL E

- R: If you say that you are sometimes aware of twins that need to be separated or need to be kept together, who is part of this discussion?
- P: Usually the teachers that has worked with the twins during that year, and the school psychologist and usually the head of department.
- R: Are the parents consulted?
- P: It depends on the involvement of the parents. If they are parents who come to school to discuss certain aspects, we will consider it. Then we will all discuss the matter and make a cohesive decision about placement. But if there are no definite reasons or requests from the parents, it is usually not necessary to involve them. We handle it case by case as it presents itself. Sometimes we will be able to tell what works best, especially when the twins were together in grade 1 and separate in grade 2.
- R: Do the twins themselves have any say whether or not they want to be in same or separate classes?

P: No. We do not include any learners in the placing process. They hear at the end of each year in whose class they will be the following year. Then they have the holidays to get used to the idea.

Interview 6: PARENTS OF TWINS – SET 1

R: Did the school consult with you regarding the classroom placement of your twins?

P: No, they decided. I am happy with the arrangement. I want them to be together.

R: Did anyone consult with Natalie and Nancy about what they would like?

P: No. We as parents decide about that.

R: If there ever came a time where one of them was suffering to keep up the pace, while her sister progressed, would you consider separating them?

P: Yes. I think it is the parents' responsibility to speak to the school and decide in conjunction with them.

Interview 7: PARENTS OF TWINS – SET 2

R: Were you consulted when they decided to separate John and Johnathan?

P: No. They were just placed in different classes when they started grade 2.

R: How did you feel about their separation?

P: Ah, first I did not understand why. I was very upset. But now it is all right, because I saw as time went on that it was good for them to separate.

R: Would you have preferred for the school to speak to you before they made the decision?

P: I think the school knows the best, so it is fine now.

Interview 8: PARENTS OF TWINS – SET 3

R: When the school separated Ahmed and Ahmedah at the beginning of grade 2, did they consult with you first, to ask your opinion on the matter?

P: No, no. They decided.

R: And were you happy with the decision?

P: I was happy, because I know my son is slightly weaker, so I know he must get extra help at home in the afternoons...

R: Do you find that he is becoming more of an individual person now that they are in separate classes?

P: I think so, yes.

Interview 9: TWINS – SET 1

R: Has anyone ever asked you if you wanted to be together in a class, or separately so that you each have your own teacher and be in two different classes?

T1: No, nobody has ever asked me that.

R: How about you, Natalie?

T2: No.
R: And if I asked you today if you would like to have your own teacher or –
T1: I want to be with my sister!
R: And you, Natalie?
T2: Yes, with my sister in the same class.

Interview 10: TWINS – SET 2

R: Did anybody ever ask you if you wanted to be in the same class with the same teacher, or if you wanted to be in different classes with different teachers?
T1: No. They just put us in different classes at the beginning of grade 2.
T2: Nope. Nobody asked.
R: And when they separated you at the beginning of grade 2, how did it make you feel?
T1: I was very worried about my brother. And I cried.
T2: Yeah, me too.
R: Did you miss each other?
T1/T2: Yes.
T1: We missed each other, but now we are used to it.
R: If you have a say, would you like to be in the same class as your brother next year, or do you want it to stay the way it is now?

John thinks for a while before he answers.

T1: We can separate if we have to.
R: And if you can choose?
T1: If we can choose...it doesn't matter, because we can still play together at school and at home.

Interview 11: TWINS – SET 3

R: Did anyone speak to you and ask you if you wanted to be in different classes in grade 2?
T1/T2: No.
R: What did it feel like to you when they put you in different classes at the beginning of the year?
T2: We were not upset about it, because we have different friends and they went with us to our classes. So my friends were in my class and my sister's friends were with her in her class.
R: And if you could have a choice about next year?
T1: Different classes.
T2: Yeah, different classes again.

Interview 12: EDUCATOR OF TWINS – SET 1

R: Who was involved in terms of placing Natalie and Nancy in the same classroom with you?
P: Well, we only have one Afrikaans class, so they were automatically placed together. There are no other options this year. The parents weren't involved.

Interview 13a: EDUCATOR OF TWINS – SET 3

R: Are the parents involved when you separate twins?

P: No, it is more of an unspoken, unwritten law to separate. When parents are unhappy about it, we will have a conversation between them and the teacher. Our grade head feels very strongly about separation, so that is what we do. In grade 3 one of the twins who were separated with us in grade 2, happened to be placed together again this year, so it is not something that the grade 3 teachers feels as strongly about as we do.

R: In other words, it is left to chance?

P: Yes, you could say so.

R: With you in grade 2, do you have a conversation with parents before hand to explain that you are going to separate them, and why?

P: No, we simply separate them.

R: Are the twins prepared in any way?

P: I think we hope that the parents will deal with it.

R: So, the twins themselves are not part of any process of classroom placement?

P: No, because then we have to ask every other child as well in whose class they would like to be. I think it will only be natural for twins to want to be in the same class. I think we as adults have to decide what is best for the children. You could probably talk to them about it, but are they really at an age where they are able to understand?

Interview 13b: EDUCATOR OF TWINS – SET 3

R: Were you involved in the decision-making process of Ahmed and Ahmedah's classroom placement?

P: No, I received my new classlist with them already being separated into different classes. In fact, I have one of each of three sets of twins in my class. I feel that it is not beneficial for any of the three sets to be separated. They are all unsure of themselves. They go looking for each other at every chance they get. They want to be together...

R: Are you aware of any specific policy regarding twin placement?

P: I am not entirely sure. I know there have been discussions about it in the past so I assume they are attending to a proper policy.

Interview 14a: EDUCATOR OF TWINS – SET 2

R: Are you aware of any policy at the school regarding the placement of twins in the foundation phase?

P: As far as my knowledge goes, the school feels that twins should be separated.

R: Were John and Johnathan' parents involved in any way in the decision to separate them into different classes this year?

P: Perhaps in grade 1 or 2, when they were separated for the first time, but not this year and not where I was involved, either.

Interview 14b: EDUCATOR OF TWINS – SET 2

R: Were you involved in the decision-making process to separate John and Johnathan this year?

P: No, not at all. They were separated in grade 2 and it is supposed to stay that way.

THEME 3: FACTORS CONSIDERED DURING THE DECISION MAKING PROCESS

Interview 1: HOD – SCHOOL A

R: What do you consider the main reasons for placing twins together or separately in a classroom?

P: You know, twins are extremely finely tuned towards each other's emotional needs. Sometimes, when the one has pain somewhere, the other one is able to sense it.

R: Do you experience this with the twins in your school?

P: No, not really. I think they are still too small, but I have seen these reality shows on television about twins, and there they said that if, for example, one is in Timbuctoo, and has an accident, the other one will sense that something is not right. My personal opinion is that the emotional bond between them is so strong that it is to their detriment to separate them. They are automatically placed in the same classroom in grade 1, but in grade 2 and 3 it also depends on the language preference of the learners, as well as the cultural background.

Interview 2: HOD – SCHOOL B

R: What are your beliefs about placement of twins?

P: At the moment, for example, we have grade 2 girls in the English class. We only have one class per grade for English speaking learners, and four Afrikaans classes. So they are together... We also have twin boys in grade 1 and we have separated them. A while ago we had boy-girl twins, of whom the parents requested not to separate them from each other for no definite or clear reason. Here the school decided, no, they were together in grade R and now it is time to separate them. The boy was very shy and timid, while the girl was dominant. She spoke and thought and acted on his behalf. When she was separated from him, he started to develop into his own. Today he is doing really well... Our main aim is to develop two individual children, otherwise they stay dependent upon each other for live....You see, one is always willing to be the least. We don't one to live within the other's shadow.

R: Do I understand correctly when I say that in the event of twins being emotionally strong enough, you prefer to separate them?

P: Yes, we prefer to separate them.

Interview 3: HOD – SCHOOL C

R: The main reason for your school's belief to separate is to encourage individualism, is that right?

P: Definitely. Years ago, when I started to teach, I had twin boys in my class. The one was a little stronger academically than the other, while the other had other stronger qualities. For me as a teacher it was a very difficult situation when I had to call the one to my table to show him where he made mistakes. I could always see how the other twin's eyes were on us, making it unpleasant for the boy I had to correct. I really feel that it is best to separate twins.

Interview 4: HOD – SCHOOL D

R: According to your policy it is in the best interest of the twins to be separated so that each one may develop individually. Do I understand this correctly?

P: Yes, that is correct. Like I've said, this policy works for us.

Interview 5: HOD – SCHOOL E

R: In other words whether twins are placed separately or together in a class is mainly left to chance?

P: You could say so, I suppose. If we are aware of a certain set of twins who HAS to be together, or HAS to be separate, we will consider that, but otherwise twins are divided into classes like any other learner.

Interview 12: EDUCATOR OF TWINS – SET 1

R: Should one keep Natalie and Nancy together in one class in the future or separate them in your opinion?

P: I think it will be very traumatic for them to separate. They are emotionally dependent of each other to function optimally.

Interview 13a: EDUCATOR OF TWINS – SET 3

R: What is in your opinion the main reason for feeling so strongly about separating twins?

P: To encourage individuality, and you cannot accomplish that effectively in the same class.

Interview 13b: EDUCATOR OF TWINS – SET 3

P: Something else that plays a role with placement of twins in my opinion is friendships. With the identical twins, of which one is in my class, there is a third party involved, a friend. She is also in my class. She plays with both of the twins, but now with the one and then with the other. To place all three of them in the same class, wouldn't work, because the moment all three are together, they fight terribly...Another thing that comes to mind is the fact that our SiSwati population seems to be emotionally forced to mature, than our Afrikaans or English children. It is like they receive less emotional babying than our children...

R: So cultural differences between race and language play a role in general emotional maturity?

P: Definitely. And also the competency of the parents. Involvement and understanding from the parents' side makes a huge difference in a child's ability to cope at school. The SiSwati learners are perhaps stronger emotionally, but academically they are weaker.

R: So in your opinion, what is the factor that carries most weight when having to make a decision about classroom placement of twins?

P: Emotional security. If you are emotionally healthy, you will develop into a healthy individual, but it is very difficult to reach your potential without it.

Interview 14a: EDUCATOR OF TWINS – SET 2

R: What would you say is the most important factor to consider when you decide upon classroom allocation of twins?

P: If it were my children, I would have wanted them in separate classes, because I believe you have to raise two individual children. If you have children of different ages you will have them in different classes anyway, so you have to learn to handle what comes your way. You have to listen to every child's stories and recollection of information.

Interview 14b: EDUCATOR OF TWINS – SET 2

R: In your opinion, what is the most important considerations when having to decide upon classroom placement of twins?

P: It is difficult for me to identify one thing only. If I look at the twins who are currently together in my class, it is really something special and beautiful. They are not completely dependent upon each other, but you can notice a special bond. And then, of course, you want them to grow into their own individual people.

THEME 4: UNDERSTANDING THE TWIN PHENOMENON BY THOSE MAKING DECISIONS

Interview 1: HOD – SCHOOL A

P: My personal opinion is that there is such a fine emotional bond between the two that it is emotionally traumatic for twins to be separated. They need each other to cope.

R: In other words they are dependent on each other?

P: Yes, and it is usually the older one that is stronger, and the youngest one of the two that is weaker.

Interview 2: HOD – SCHOOL B

R: Has there been any formal training, workshop or course for teachers regarding the handling of twins in the foundation phase?

P: No. It is nowhere addressed. I do not know if perhaps it forms part of the psychology training, but it is definitely not included as part of any teaching qualification. The psychologist at our school

usually listens to all the involved teachers' opinions and perspectives regarding a specific set of twins, and then takes the lead on further discussions. Her summary carries the most weight.

R: Even though you take the parents' needs and requests into consideration, you ultimately decide what is best for the specific set of twins under discussion.

P: Definitely. We also often experience that the parents don't seem to have the "know how" to understand that they should encourage individual development.

Interview 4: HOD – SCHOOL D

R: If I understand you correctly, you are saying that the way in which parents raise their twins, and the parents' own perceptions and prejudice about twins, influences the general functioning of the twins?

P: Yes. Parents are often unaware, and sometimes uneducated, regarding the handling of twins. The HAVE to learn to be independent from each other.

Interview 6: PARENTS OF TWINS – SET 1

P: I do not compare my children with each other, because they are each their own person, with their own personality...

R: So you view them as independent individuals, not as a unit?

P: No, they are completely separate from each other. They are not that identical, or so together all the time, that one cannot function without the other.

Interview 7: PARENTS OF TWINS – SET 2

R: Do John and Johnathan function as two individual separate people, or do they do everything together?

P: Everything together...They are a unit.

R: And do you raise them as one?

P: Yes, they are one. They go together.

Interview 8: PARENTS OF TWINS – SET 3

P: Ahmed and Ahmedah have nicknames. The boy, we call "Boetie" – he is the mother's favourite. And the girl, she is "Poppie", but nowadays I hear her mother is calling her "Dollie". She is young and beautiful.

R: And do you handle them as two separate individuals, or do you handle them as a set all the time?

P: Sometimes, I will take them separately and talk to them, but I encourage them to be together, because one day, when I am not here any longer, they will have to take care of each other, too. The future lies with them...You have to raise them properly.

Interview 12: EDUCATOR OF TWINS – SET 1

R: I would like to ask your opinion on what would be the best for Natalie and Nancy specifically in terms of classroom placement in the future. I ask this in light of your school's policy that twins are separated in grade 2 and 3.

P: I do not agree that they should be separated. I think, for them specifically, it would be very traumatic on an emotional level. I also realise from the conversation we've just had, that Nancy is much more emotionally dependent on Natalie than we realized before. Perhaps the physical disability with the one of them makes them even more dependent on each other than other twins would normally be. I don't think they will be able to handle separation.

Interview 13a: EDUCATOR OF TWINS – SET 3

R: What is your opinion on classroom placement of twins?

P: I feel it is better to separate them and place them in different classrooms, because the one will always piggy back on the other one. The stronger one always takes responsibility, while the other one never learns to become independent. My experience is also that if one is a slow learner, the other one will ask permission to help their brother or sister...I think it is much harder to learn to be an individual if they are placed within the same classroom...Especially when they come to grade 4, the pace is so fast that there isn't time to shape them individually...We have to shape them as quickly as possible for them to be ready to handle the pace in grade 4. I hear what the grade 1 teacher says about it being new and strange at school, but I strongly feel they should be separated from grade 2...They cannot live together and work together and stay in the same house when they are adults one day. They will have to separate at one stage or another.

R: Is there, in your opinion, more behaviour problems with Ahmed and Ahmedah, or any of the other twins, in comparison with single children at school?

P: No, but there is always one of the twins with some or other behaviour problem. What happens then, is that the one without the behaviour problem compensates for the one who does have challenges – they cover it...I don't think one should try to break the bond between twins, but I do feel one must encourage individuality.

R: Has the handling of twins ever been a topic during your formal education or training?

P: No, not that I can recall.

Interview 13b: EDUCATOR OF TWINS – SET 3

P: My experience is that all the twins, from the three separated sets in my class, has more self-confidence when they are together than when they are apart. Perhaps it is because they have been together since birth, but I can see that they are all feeling insecure on their own...It makes a difference with small things, like having a way of confirming myself by checking with my twin to see if I understood what the teacher said.

- R: Have you received any formal training in any of your pre- or post-grad courses or workshops regarding the handling of twins?
- P: No...I really think teachers will benefit from attending workshops to equip them in this area. I think it will help a lot.
- R: In other words you think this is an area for further development?
- P: My observation is that you are better able to handle situations that you have been exposed to before in your life. Before I became involved with twins in the schooling environment, I would have thought that it is better to separate them in order to encourage individuality. The more I work with twins and see what happens to them as a result of separation, the more I feel that they need emotional security for them to fully develop – especially still in the foundation phase...but the competency of the teacher is very important...A decision must be taken with the child's best interest in mind for his holistic development as a person, his self-image.

Interview 14a: EDUCATOR OF TWINS – SET 2

- P: My opinion is that one twin is always stronger than the other. The stronger one then takes on the role of teacher, both at school and at home.
- R: So one is always dominant?
- P: Yes, and the other lives in that one's shadow. And they remain there. It is like he believes that he is second best.
- R: Have you ever received formal training regarding twins?
- P: No, I don't think so...no, nowhere.

Interview 14b: EDUCATOR OF TWINS – SET 2

- P: I have mixed feelings about separation or non-separation. At the moment Johnathan is in my class, and he is one of a set of identical twins that are separated, but I also have another set of twins who is a boy and a girl, and they are not separated. They are together in my class. I think Johnathan is slightly stronger academically than John, as he used to piggy back on his brother. I can't say how they would behave when they are now placed together in a class, but they definitely look each other up during break times. The boy-girl twins in my class...the boy is stronger academically, but the girl is stronger emotionally. They complete each other. She will take care of forms and money that must come to school, and he will help her with her work when he sees she is struggling.
- R: Do they help each other with homework?
- P: I don't think so, since his will sometimes not be done, and hers is. She is the more responsible one.
- R: Do you remember if the handling of twins was ever a topic during your formal training?
- P: No, I don't think so. I can't recall ever discussing this as a topic.

THEME 5: TWIN RELATIONSHIPS AND THE EFFECT ON SAME OR SEPARATE CLASSROOMS

Interview 2: HOD – SCHOOL B

- P: I told you earlier about a very dependent set of twin girls. They do not even go to the toilet on their own.... They don't even play with other children.
- R: They are so closely coupled that they function as one.
- P: In all my years of teaching experience, this is definitely the worst case I have seen. Not one of them are talkative. They just stare, and they walk together, hand-in-hand, the whole day long. There is no communication or reactions to the outside world whatsoever. I am very concerned...

Interview 3: HOD – SCHOOL C

- P: My general observation with twins are that some prefer to play with each other during break time, while others don't play together at all.
- R: I assume that they are more prone to have other friends when they are in separate classes with separate classmates?
- P: Maybe that is the reason, but some, despite being in separate classes, will go look for their brother or sister during break. Not so much the boys – they just all play soccer together without a care.

Interview 4: HOD – SCHOOL D

- P: I find that identical twins are more prone to play with each other during break times. Perhaps it has to do with the fact that the boys and the girls play separately during break, so it is easier for twins of the same sex to also play together.
- R: Do you find that they play exclusively with each other?
- P: There is a bigger need for other friends with the boys. They play running and ball games in groups. The girls play differently. We have one set of identical twin girls. Although they are doing well academically and emotionally in separate classes, they still look for each other during breaks.

Interview 5: HOD – SCHOOL E

- R: Do you detect a pattern regarding twins and friendships?
- P: The identical twins in grade 1 have a friend that plays with them alternatively. It is not nice when there are three friends, because one is always excluded. There is an ongoing battle...If I have to think about the other twins we have in the foundation phase, I think it also depends on the gender of the twins. Boys play with boys, and girls play with girls. It probably has to do with the developmental stage they are at when they identify with peers of the same sex.

Interview 6: PARENTS OF TWINS – SET 1

R: Please explain the relationship between your twins.

P: They are mostly together. They play together and so on.

Participant seems unsure of what to answer.

R: Let's say, for instance, you go to the shops. Do both always go with you, or both always stay home?

P: No, sometimes I take one with me and the other stays with her dad.

R: In other words there is a bond between them, but they can still function on their own?

P: Yes.

R: What was it like when they were babies?

P: When one had to stay behind in hospital it was tough. They could sense that something was wrong and that one sister was gone. They cried for each other. They missed each other. When they were finally both home, the doctor advised us to put them together in one crib for them to bond. If I allowed one to sleep in the one room of the house and the other in another room, they would wake after five minutes. They slept a lot longer when they were together.

R: Are they still like that? Calmer when they are together?

P: Yes. If Nancy plays somewhere, and Natalie somewhere else, they will go look for each other. One will look for the other until she found her, otherwise they will be upset the whole time. They need to know where the other one is.

R: Do they allow others to play with them?

P: They don't have a problem playing with separate friends.

Interview 7: PARENTS OF TWINS – SET 2

R: Are they able to do some things independently of each other?

P: Yes, they are at school in different classes, but they still play together in break time and at home.

R: Do they share friends?

P: They have the same friends, but sometimes John will play with one and Johnathan will play with a different friend.

R: Do you think they find it difficult to make friends?

P: No, they have a lot of friends.

R: How would you describe their different personalities?

P: They are both good boys. John talks a lot – he talks the most of the two. Johnathan has the higher self-esteem.

R: Many people believe that there is a special twin language, or telepathy, between twins. What is your opinion about that?

P: Well, like today, Johnathan is sick, and his is not at school, but John is at school. He is probably very worried about his twin brother. Because John is asthmatic, he is sometimes hospitalized. Then Johnathan does not want to go to school. When the one cries, the other one will also start to cry. When one gets up in the night to go to the toilet, the other one will also go to the toilet. If

one wants to drink water, the other one also wants to drink water. When one is sick, the other one will also become sick.

R: Does the emotional bond between them affect their academic work, do you think?

P: Maybe, because one is worried and then he does not want to concentrate well.

R: Would you say that they are very dependent upon each other?

P: Yes. They always want to know where the other one is. They are very reliant on each other.

Interview 8: PARENTS OF TWINS – SET 3

R: How do Ahmed and Ahmedah get along with each other? Are they good friends?

P: Very good. Very good...

R: Do they have a lot of other friends or are they mostly each other's friends?

P: Oh, no! I was telling my wife the other day, "Let's open up a free nursery", because there are forever children over here. I even hire a jumping castle for them to play on, but then...you know, my daughter is a little bossy...

R: I see, she is the more dominant one between the two.

P: Yes, but my son is a little bigger. He is slightly heavier than her, but she is thin and small. But very, very clever! I even bought them bicycles, so they come home and they play on their bicycles. They are good friends. If the son falls, the daughter cries.

R: Do you experience that with them a lot?

P: Yes, but they are also different...

R: Do they have completely different interests?

P: Yes, he likes the computers and playing games, but she likes to draw.

R: I see. In terms of emotional development, you said that Ahmedah is bossier. Is she also the more responsible one?

P: Yes, she is.

Interview 9: TWINS – SET 1

R: Nancy, what do you like most about having a twin sister?

T1: That me and her can play and race bikes together.

R: Natalie, what do you like most about being a twin?

T2: That we can play x-box together, and go to the same school.

R: Who is your best friend at school, Nancy?

T1: My sister.

R: And yours, Natalie?

T1: My sister.

R: Are you each other's best friends?

T1/T2: Yes!

T2: That is the first friends that we have.

R: And who else do you play with?

T1: Nobody.

R: Do you sometimes invite friends to your house to come and play?

T1: No.

R: Do you always play just with each other?

T2: Yes, and sometimes with my brother.

T1: And my sister.

R: Tell me, do the teachers and the other children at school call you by your names, or do they call you "the twins"?

T1: They call us by our names.

Interview 10: TWINS – SET 2

R: Can you tell me, John, do you like having a twin brother?

T1: Yes, because then we can always play together.

T2: But sometimes we fight.

T1: And sometimes my brother bosses me around, then I get angry at him.

R: Is there something that you like most about having a twin brother, Johnathan?

T2: Well, if I was in a different grade than my brother, then I wouldn't be able to play with him in break time, because the grade 3's and the grade 4's are not allowed to play on the same playground...

R: Are you guys best friends?

T1/T2: Yes.

R: And are you guys each other's only friends, or do you have other friends as well?

T1: We have many friends. We have some friends that are the same and some friends that we don't share.

T2: There are some friends in my class that only I play with.

T1: We also help each other. Like, the other day I was riding a bicycle. It was a girl's bicycle, she is our friend. But then I was wearing long pants, and the one part of my pants went into the chain. Then I fell and I got hurt here.

Participant shows his scar before continuing.

T1: Then my brother got so angry at the girl whose bicycle it was. He gets angry when someone teases me or hurts me.

T2: Yes, we always help each other.

Interview 11: TWINS – SET 3

R: Tell me something, does it ever happen that one of you two get sick, and then the sick one stays home while the other one goes to school?

Both nod their heads.

R: What is that like?

T2: We miss each other.

R: What about friends at school? Do you each have your own friends, or do you share friends?

Both answers simultaneously.

T1/T2: Yes, but sometimes we play all together.

R: So you have some friends that you share?

T1: We don't mind share some friends, because we also have our own friends that we don't share.

R: Do you have to share other things, besides friends?

T1: Sometimes it is too dark, or sometimes they iron in my room, then I go to sleep with my brother.

T2: She is frightened there by her room. She dreams a lot and she is scared.

R: So is it your job to protect your sister?

T2: Yes, ma'am.

Interview 13a: EDUCATOR OF TWINS – SET 3

R: Can you comment on their friendships? Do they play mostly together or apart?

P: Definitely apart. Ahmedah is one of very few Muslim girls in the grade, so she struggles to make friends. She is able to speak SiSwati, since her mother is SiSwati, so she mostly mingles with the other SiSwati girls. She and her brother doesn't play together during break, because the boys and the girls play separately as a rule. The fact that they are twins from the opposite sex plays a role here.

Interview 13b: EDUCATOR OF TWINS – SET 3

P: What I pick up is that they all go and look for each other during break time. They want to be together.

R: All of them?

P: Yes. Even though the identical girls I mentioned earlier also, and especially, look for each other, they can have a few good fights as well. Ahmed and Ahmedah are much more peaceful. They hardly ever fight.

Interview 14a: EDUCATOR OF TWINS – SET 2

R: Do you experience that John misses his brother during the school day?

P: On the playground, yes. They definitely play together, and if some else hurts either one of them, they will defend each other.

Interview 14b: EDUCATOR OF TWINS – SET 2

R: There is plenty of stereotyping with regards to twins and telepathy. What is your opinion? Is this something that is definitely present with all twins?

P: I would like to know! Whether or not it is telepathy, or whatever, there is definitely a special bond between twins. It is different from the bond that exists between a regular brother and sister of different ages.

THEME 6: ZYGOSITY AND SCHOLASTIC EXPERIENCE

Interview 1: HOD – SCHOOL A

P: It also makes a difference in terms of classroom allocation if they are identical twins or not. I think those who are non-identical will most likely separate with more ease than identical twins. I don't think the emotional bond is as strong as it is with identical twins.

Interview 5: HOD – SCHOOL B

P: This year we have non-identical twins in grade 1. The girl is academically much stronger than the boy...I think it will be good for them to separate next year. We've had it last year as well. Non-identical twins of which the girl was the weaker one, and we decided to separate them this year. It was difficult at the beginning, especially for the weaker one, but if I look back now on her growth this year, I think it was good move. She never used to talk much. Now she is really warming up. Then, we also had identical twins in grade 3 last year, and they were separated. They just didn't settle. Their grades also decreased. The parents came to ask if we could place them in the same class this year in grade 4, and from what I understand things are much better for them now.

Interview 12: EDUCATOR OF TWINS – SET 1

R: How do Natalie and Nancy compare academically?

P: Natalie is stronger at this stage. Nancy currently experiences more down days than before. The first and second term were good terms for them, but systematically they are starting to experience more and more challenges. Both of them have good and bad days, but not always on the same days. It's like they take turns. I also think the support they receive at home affects their school work. I can clearly see when mom didn't help them with homework or preparation...Nancy is more talkative in class, but Natalie is very introverted. She will answer questions, but otherwise she will keep to herself and do her work. Natalie makes more mistakes than Nancy.

R: You mentioned that Natalie is more emotional than Nancy in general.

P: Yes, I think Nancy has higher self-esteem than Natalie. As we are talking about it now, I wonder if it might have something to do with Nancy's physical closeness to her mother. Since she struggled to walk for so long, her mom used to carry her, or hold her, much more than was the case with Natalie. Perhaps that relates to the anxiety she now experiences when she does not immediately see her mom when school lets out in the afternoons...

Interview 13a – EDUCATOR OF TWINS – SET 3

- R: Ahmedah is in your class. How do you experience her in general?
- P: She is more responsible one. If money has to come to school, she will bring both hers and her brother's. She keeps their tuck-shop money and only gives it to him when it is time to buy.
- R: Is she the stronger one academically?
- P: Definitely. She is much stronger than her brother academically. Emotionally as well...There is another set of twins in our grade, of which one is with me and the other with a different teacher. They are identical girls. Between them, both are academically weak, but one is also emotionally more mature and responsible than the other one. The weaker one between those two will never cope without her sister. She is also the more impulsive one...If I look at how the weaker one has grown on her own in a class this year, she definitely became a stronger individual.
- R: Do you think there is a big difference between identical and non-identical twins?
- P: Yes, I think so. Last year I had another one of an identical twin boys in my class – John and Johnathan. When they were separated initially, John cried a lot and was very worried about how he was now going to cope without Johnathan. It was amazing to see the transition at the end of the year. He became a responsible individual.
- R: About Ahmedah and Ahmed, does one have a better attention span than the other?
- P: Yes, he has ADHD for sure, but she doesn't.
- R: And the other set of twins you referred to just now? Do you think there is a tendency towards attention deficit with one of them?
- P: In that case I think they both have a degree of attention deficiency and hyperactivity.

Interview 13b: EDUCATOR OF TWINS – SET 3

- R: Of the three sets of twins in your class, of which all are separated, are they all identical twins?
- P: One set is identical, the other two are boy-girl twins.
- R: If you have to compare the two – identical versus non-identical twins – is there a bigger need for a friend with one group than the other?
- P: Yes, there is definitely a bigger need for a friend with the identical twins. The girl in my class has searched for her sister from day one, and still does. The other sets of twins gradually accepted being in different classes. What does happen, however, is that the non-identical twins later on in the year start looking out for each other, where they didn't at the beginning. I have a hunch that it is related to the academic load that increases as the year continues.
- R: Do you find that Ahmed and Ahmedah search out each other as only friends?
- P: No, not really. I think it makes a difference that they are twins of the opposite sex. At our school, boys and girls play separately from each other. The identical twins, of which one is in my class, search out each other much more. It is easier for them, because they are both girls. What I have

to add, however, is that neither of the three sets of twins have exceptionally strong personalities. They all function as socially below-average learners.

R: And emotionally?

P: They are also less emotionally mature than one would expect at their age.

Interview 14b: EDUCATOR OF TWINS – SET 2

R: How would you describe Johnathan' general academic ability?

P: Average...if you consider the amount of attention that goes lost, one wonders about his true potential.

R: Do you suspect a degree of attention deficit?

P: No, I just think he is a typical boy. I don't think it is necessarily attention deficit...

R: Do you perceive them to be very dependent upon each other?

P: They are a support system for each other. If Johnathan loses his sharpener, for example, it is not such a big catastrophe, since he knows his brother has one that he will be able to use.

R: John and Johnathan are identical twins, but the other set of twins in your class are not. Do you think that this plays a role in terms of emotional dependency?

P: Yes, it does make a difference. It makes sense too, since identical twins were initially one egg which divided into two.

THEME 7: EMOTIONAL, SOCIAL AND COGNITIVE FACTORS INFLUENCING THE GENERAL AND SCHOLASTIC FUNCTIONING OF TWINS

Interview 1: HOD – SCHOOL A

R: Have you ever had an incident where one of a twin had to repeat a year on the grounds of poor academic progress and not meeting the assessment standards, while the other one progressed to the next grade?

P: I have had a situation in my class once where the one who failed eventually ended up in the LSEN class, while the other one continued through his grades. He was also the quieter one between the two brothers, while the one who progressed was more outspoken and busy.

R: Was there any behaviour, social or emotional backlogs present with one or the other as a result of this separation?

P: I've lost contact with them, but I cannot remember that there were any problems. I do think, however, the brother who progressed to the next grades, eventually realised that his brother in the LSEN class was different from him. There was a definite separation and each went their own route. The brother in the LSEN class was actually very happy there. I don't think it affected him much.

Interview 2: HOD – SCHOOL B

P: We have two girls placed together in a grade 2 classroom. One of them had to repeat last year, but the two are so overly dependent upon each other. They really cannot even go to the toilet without each other. The belief of our school is to develop individuality, and therefore we prefer to separate, but in this instance it would make no sense for one to stay behind and the other to move to the next grade. They simply cannot function without each other. It is the stronger academic one who would have had the worst time emotionally to cope without her sister. They really exist as one human being. In this case we allow them to continue together, because they will be phased out by the system somewhere in the future anyway. Whether it means that both will have to fail or maybe rather attend a special school... If you separate them you will have two absolute wreckages. Even if they were to be in two classrooms right next to each other, it wouldn't work. They don't even play with other children. In another case, we had opposite sex twins who are now much older. One is in high school, the other one is here with us in grade 7. When they were in the foundation phase, the girl simply couldn't keep up with the academic pace, while her brother did well. We kept her behind while he continued. That was a good thing for her, since she is now a strong grade 7 individual.

Interview 3: HOD – SCHOOL C

P: In the past we had twins that were both academically so weak, that you almost got the idea that the two of them "share" a brain. We have also had situations where the one fails and the other one passes the year. That is always traumatic, but most of the time they seem to catch up to each other again, as the one who passed this year stays behind the next.

R: Am I correct in saying that your experience of twins at this school is that they are mainly both poor academic achievers?

P: Yes. Well, of course you will have some twins where one is intelligent and the other one not, but we have never had that with us. In our experience they are either poor achievers or both are strong...We have also never really had emotionally dependent twins with us. In today's economic situation where both parents have to work, the children are much more independent...Each one has to fend for himself. They come to school with busses and taxis from who knows where, with older learners. I really find them independent.

R: It sounds to me as if the feeding area your school caters for has an influence. You do not really experience a difference between twins or single children when it comes to independency.

P: They have to be independent, since they are expected to take care of themselves to a large extent.

R: Do you experience that there are greater academic challenges amongst twins than singletons?

P: Years ago I had triplets in my class. Shame, their IQ's were literally too low to really determine – hence my earlier comment that they seem to “share” a brain. So, yes, I do think that there is more challenges among twins than singletons, although many singletons are also cognitively low functioning. Parents are often upset if one twin has to stay behind while the other progresses to a next grade. Then it happens that the one who progressed, starts to battle and fails the year, and the two catch up with each other again.

Interview 5: HOD – SCHOOL E

R: Does the school provide any emotional support for twins who have been separated from each other for the first time?

P: The school psychologist will attend to them if the need arise, but usually things sort themselves out. They are sometimes a little unsure at the beginning, but the soon settle and adjust.

Interview 6: PARENTS OF TWINS – SET 1

R: Are there any syndromes or disorders formally diagnosed with either of the twins?

P: Just the shortened leg muscles with Nancy, and the hole in the heart with Natalie.

R: How does each one's condition influence her quality of life?

P: Natalie is hundred percent now. She can do everything and carries on. Nancy is improving. She is able to walk unassisted now. First she was in a wheelchair, then she walked with a walking frame. Now she can do it on her own. Not correctly yet, but she gets physiotherapy to help her.

R: Did they also reach their developmental milestones later than the expected norms?

P: Yes, they did. Natalie a little earlier than Nancy, but Nancy was only able to start sitting independently at around two years...Language development was also delayed.

R: I would like to know more about their emotional development. How would you describe it? Do you think that, since their other milestones were delayed, they are also less mature emotionally?

P: Probably not exactly on a typical grade 1 level, but almost, I think.

R: Did they adjust well to school in general?

P: With Natalie, even now, she expects me to be there when school comes out. If I am a few minutes late she becomes panicky. Other than that she is fine.

R: Is Natalie typically the one who is more sensitive emotionally?

P: No, Natalie is actually the stronger one emotionally. Nancy is more of a softy.

Interview 7: PARENTS OF TWINS – SET 2

R: Apart from the emotional trauma during your pregnancy, did you experience any complications during birth?

P: No, but John had to stay in the hospital for three weeks after they were born. He was healthy, but he was just small.

R: Do John and Johnathan suffer from any chronic illnesses now?

- P: No. Just John, he is asthmatic. But they are healthy boys.
- R: It sounds like they reached their developmental milestones within the expected norms. Was that the case with all their milestones?
- P: Yes, everything was fine. There were no problems. Only that they cried a lot as babies. I think it was because I cried every day when I was pregnant with them. They really cried a lot.

Interview 8: PARENTS OF TWINS – SET 3

- R: Were there any complications during your wife's pregnancy with the twins?
- P: No, both the twins and the mother was healthy...
- R: Can you recall if the twins were born at full term?
- P: Yes, she was exactly nine months and one week pregnant when they were born.
- R: And there were no disabilities, syndromes or diseases, or any other health related issues with either one of them when they were born, or now?
- P: No, just the occasional flu here and there, but they have no chronic medical conditions.
- R: Do you find that one is more emotional in general than the other? Does one cry more easily?
- P: The girl. She's bossier, but she cries more. Any small thing, she will cry about it. But she stops quickly, too.
- R: Ahmed and Ahmedah was in the same class in grade 1...and then they were split up in grade 2. What was that like for them? Was it emotionally traumatic for them?
- P: The boy was a bit weak. So, in grade 1, we had to get a tutor for him to help him with his school work.

Interview 9: TWINS – SET 1

- T2: We don't like sports, because then we are away from our mother.
- R: And do you like it best to be close to your mom?
- T1/T2: Yes.
- R: Natalie, do you miss mom when you are at school during the day?
- T2: Yes.
- T1: That is why she always cries.
- R: Does she cry for her mommy?
- T1: Yes.
- R: What do you do when she cries for her mommy, Nancy?
- T1: I call my teacher and tell her.

Interview 10: TWINS – SET 2

- R: You said that you liked school, John. Do you and Johnathan compare marks and school work with each other?
- T1: We are equally good at math, but my brother is better at reading than me.

- R: Does that bother you at all?
T1: No, it's fine. It doesn't bother me.
T2: We read different books, and we have to do our own homework.

Interview 11: TWINS – SET 3

- R: Do you like being in two different classes?
T1 nods her head.
T2: I don't like it.
R: Can you tell me why?
T2: Because then my sister is far from me.
R: Would you like her to be close to you?
T2: Yes.
R: In grade 1 you had your sister in the same class as you. Did you like that better?
T2: Yes...she helped me with my work. And also, when I tell the teacher something then the teacher thinks I am lying. Then my sister tells her the truth.
R: And then your teacher believes you. That is important to you that she believes you.
T1: When he doesn't know how to do his sums then I tell him, "Count! Count with your fingers. Five on one hand and five on the other hand makes ten".
R: A-ha. So you helped to teach him.

Interview 13b: EDUCATOR OF TWINS – SET 3

- P: At this stage one of the sets of twins in my class is going to fail the year, both the boy and the girl. With the identical set of twins in my class, one is going to pass and the other not. What makes it even more difficult is that the weaker academic one is the stronger one emotionally. So in this case it is going to be detrimental for both of them.

Interview 14b: EDUCATOR OF TWINS – SET 2

- R: Do you find that the emotional security from being together in the same class improves their academic progress?
P: I think so, because if I look at the twins currently together in my class, I notice that when I ask the boy something, the first thing he does is to quickly glance at his sister for confirmation that it is okay to answer. Then he is able to answer the question.

THEME 8: PRACTICAL IMPLICATIONS OF SCHOOLING TWINS SEPARATELY OR TOGETHER

Interview 2: HOD – SCHOOL B

- P: We explain to parents that things work the same in the separate classes, but that homework will differ from one teacher to the next.
- R: In other words, if one twin is with you and the other with the teacher next door, they are going to do the same classwork, but not the same homework.
- P: Yes, that is done according to each teacher's personality and the way in which she leaves her personal mark on her learners' work... Also, for a mother to have to listen twice to the same stories about what happened in class that day, and to do the same homework twice, I think, is pretty boring...

Interview 3: HOD – SCHOOL C

- R: Does homework and class work differ much between separate classes?
- P: No, the whole grade weekly receives their homework page, which is pasted into the homework books, with every day's homework. Every teacher of course adds her own flavour to it...Our preparation is the same, but our presentations differ according to different personalities amongst teachers. In the end, we all follow the CAPS curriculum and we all have to get the same work done.

Interview 4: HOD – SCHOOL D

- R: Does classwork and homework differ much between classes in the same grade?
- P: It is basically the same, but each teacher presents it differently...
- R: Do you think that the practical implications of different classes and teachers makes it difficult for the family to cope?
- P: Perhaps it is a bit of a bigger challenge, but I think it is part of individual development...most parents have more than one child anyway, who are according to their different ages in different classes, and then parents have to make provision for different needs.

Interview 6: PARENTS OF TWINS – SET 1

- R: Who is involved with the raising of your twins?
- P: No one, it is just me and my husband...I am a full-time mom, so I am the primary caregiver.
- R: I can imagine that it is sometimes convenient for you to have both in the same class?
- P: Yes, especially with things like...Natalie will come and tell me that Nancy doesn't have a pencil at school. Then I will put one in her bag. Also with things they have to remember. It helps me to put all the pieces of a story together with the information I get from both of them.
- R: Do you find that it is also easier for you as parents to have one teacher, one set of rules, the same homework, etc.?
- P: Yes, especially with tasks. Even though we don't do each one's exactly the same as the others, it is easier to do it together. Like learning a poem. When we have a choice we choose to learn the same poem. It saves time and helps them if they can learn it together...Then they help each

other. It is much more fun for them. School work is difficult for them, especially speeches and things. Sometimes I feel, wow, doesn't the teacher realise I have TWO children in her class? It is double the work.

Interview 7: PARENTS OF TWINS – SET 2

R: Did you have any support when they were small, and now?

P: My in-laws...I have a nanny. She is there every day. And it is the same nanny from when they were born.

R: What are the relationships like between the boys and everyone who helps you take care of them?

P: They listen to them. They are good boys. They like them all. We have no problems.

Interview 8: PARENTS OF TWINS – SET 3

R: Is there anyone else, apart from you and your wife, and an occasional tutor, involved with raising Ahmed and Ahmedah?

P: No, it is just us. But they are both very independent. They can make some tea or coffee, or toast. They are not a lot of work.

Interview 12: EDUCATOR OF TWINS – SET 1

R: I can hear that you do not view Natalie and Nancy as a unit. What are the steps you take to ensure that they develop individually within the classroom?

P: Nancy sits in the front, with Natalie behind her, to her left, which I don't think is necessarily the ideal situation...They don't have a lot to do with each other in class, because I do not allow it. Not one of my students are allowed to caucus with each other, because we are such a big class. I have taught them that when we work, we work. Then everything that happens on my table is my department, and I have no business with what happens next to me. The same rule applies to Natalie and Nancy. They function on their own. They do not copy from each other, nor do they ask each other for advice or help. Everyone does their own work.

R: How do you think separation to two different classes in the future might impact the household in this specific case?

P: You know, they have an older brother who also struggles academically, and needs a lot of individual attention from mom. I definitely think that it would be better for the mother if the twins were to stay in the same class.

Interview 13a: EDUCATOR OF TWINS – SET 3

R: Would you please comment on the practicalities of two different classrooms, in terms of homework, classwork, etc.?

P: Even though homework is the same, it is presented differently, with different particular outcomes or expectations. If one's homework, from one teacher, looks different from the other's homework, then it is impossible for the two to copy from each other at home.

R: How do you feel about extra-curricular activities?

P: I think one should encourage different activities and friendships...they already live together, probably has the same school bags, lunch boxes, pencil cases, etc., so what do you gain by only separating them into different classrooms? You have to encourage separation everywhere.

Interview 13b: EDUCATOR OF TWINS – SET 3

R: Your opinion is to keep twins together in the same class. How do you think one can encourage individual development in such case?

P: I think it strongly depends on the knowledge and competence of the teacher to handle them as individuals in the class. For instance, not to seat them next to each other, and to divide them into different groups for group work...I also think it helps the parents if they are placed together. I have a friend in Gauteng, whose twins are currently in grade 4. Initially they were separated when the school year started, but she eventually went and asked the school to place them together again. She experiences that the teachers do things in such different ways that it creates so much anxiety and stress to meet everyone's needs. One twin argues it has to be done this way, while the other says it has to be done in a different way, according to different instructions from different teachers. It creates a lot of pressure for the family.

R: From a practical point of view, it is easier for the twins to be placed together?

P: Yes. With parent evenings as well. It is difficult to get to both teachers, especially if there are other children in school as well. Mostly parents then choose to see the teacher where the problem is biggest. That also depends a lot on parents' involvement with their children.

Interview 14a: EDUCATOR OF TWINS – SET 2

P: I think John's mother sees Johnathan as the more responsible one between of the two. He used to be the one to bring John's money or letters to my class, but I've put a stop to it. They now bring their own money and letters.

Interview 14b: EDUCATOR OF TWINS – SET 2

R: How do you promote individuality with the twins who are currently together in your class?

P: They do not sit next to each other. I really also try not to involve the other when one is being reprimanded or questioned. It is difficult, because it is almost natural to ask the girl why her brother didn't do his homework, for instance. I also try not to give the one's responsibilities to the other. For example, when the boy forgets his shoes in the class, I won't call the girl to fetch it for him. He must take responsibility for his own things.

THEME 9: PARENTS' VIEWS ON SAME OR SEPARATE CLASSROOMS FOR THEIR TWINS

Interview 6: PARENTS OF TWINS – SET 1

R: Would you prefer for Natalie and Nancy to stay together in the same class?

P: Yes. They compete against each other in a positive way, encouraging one another...They are good for each other. Last year Nancy went for an operation and couldn't attend school for three months. During that time, Natalie moaned and groaned about going to school. You could also see a difference in her school work and marks. When Nancy went back to school, Natalie's attitude and grades picked up.

Interview 7: PARENTS OF TWINS – SET 2

R: What do you want for John and Johnathan in the future? Do you want them to stay separated or would you want for them to be placed together in the future?

P: I think it is fine to be separate.

R: Do you have a reason why you feel that is better for them to be separated?

Participant shrugs and thinks a while.

P: They are used to it now. They look happy. They are coping well now at school.

Interview 8: PARENTS OF TWINS – SET 3

R: Are your twins currently placed in the same or separate classes?

P: They are separate...Why? Because the girl is one hundred percent smarter than the boy. He is doing okay, but now I need someone to teach him and help him with his school work in the afternoon.

R: In other words, academically Ahmedah is stronger than Ahmed.

P: Yes...

R: Was your experience when they were together in the same class that Ahmedah used to carry Ahmed in terms of academic and emotional development?

P: I suppose it could be possible, but it didn't bother either one of them. She used to say we should put him with her in her class so that she can look after him and help him with his work.

R: Do you think that it is important for the school to consult with the parents before they make a decision to separate twins into different classrooms?

P: No, I think it is fine for the school to deal with it. But, we would like to have meetings with them to hear if the children are progressing and if they are reaching their goals.

R: Do I understand correctly when I say that you don't have a preference whether your twins are placed separately or together in a classroom? It is more important to you that the school needs to do whatever must be done in order for both your children to progress?

P: Yes, whatever is best for them. What is good for them is good for us. We parents have to guide our children according to our standards.