

**THE ACADEMIC SELF-CONCEPT  
OF LEARNERS WITH HEARING IMPAIRMENT  
IN TWO SOUTH AFRICAN PUBLIC SCHOOL CONTEXTS:  
SPECIAL AND FULL-SERVICE INCLUSION SCHOOLS**

**ANNA-BARBARA DU PLESSIS**

**UNIVERSITY OF PRETORIA, SOUTH AFRICA**

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SPECIAL AND FULL-SERVICE INCLUSION SCHOOLS

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ANNA-BARBARA DU PLESSIS

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of the  
FACULTY OF EDUCATION  
UNIVERSITY OF PRETORIA  
SOUTH AFRICA

Supervisor  
PROF AC BOUWER  
UNIVERSITY OF PRETORIA  
SOUTH AFRICA

Co-supervisor  
PROF JA HATTIE  
UNIVERSITY OF AUCKLAND  
NEW ZEALAND

PRETORIA, SOUTH AFRICA

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Regrettably, the author/artist/creative mind behind this picture could not be traced, and could, therefore, not be cited.

***“... wat is die mens dan dat U aan hom dink,  
die mensekind dat U na hom omsien?  
U het hom net ‘n bietjie minder as ‘n hemelse wese gemaak  
en hom met aansien en eer gekroon ...”  
(Psalm 8:5,6)***

***“A person who doubts himself  
is like a man who would enlist in the ranks of his enemies  
and bear arms against himself.  
He makes his failure certain  
by himself being the first person to be convinced of it.”  
(Dumas, in Ferreira, 1992:77)***

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## SUMMARY

The Education White Paper 6 has set South Africa on the course for implementing a policy of inclusive education and participation in its schools. It is argued that an essential criterion to establish the congruency between the inclusive education and participation policy and its implementation is the academic self-concept (ASC) of learners. The ASC is influenced by context, thereby including all the systems which contribute to context, such as the education, school, class and social systems. As the product of different factors in various systems, the ASC may have significant diagnostic value in a school and class system. For this study, the ASC of learners with hearing impairment (HI), as an example of an impairment to be included in schools, was explored, involving two public school contexts: special and full-service inclusion schools.

The research design incorporated a multi- and mixed method design, as quantitative data, to measure, describe and analyse the nature of the ASC of learners with HI, was augmented with qualitative data, to further explore the nature of the relation between the ASC and HI, especially in respect of the dynamics of the ASC. The investigation entailed developing and administering ASC questionnaires to Grade Seven learners with and without HI in special and full-service inclusion schools, observing classroom interactions, conducting interviews with the principals, educators and learners with HI, and collecting background information on the learners with HI.

In answer to the main research question, *What is the ASC of Grade Seven learners with HI in the contexts of special and full-service inclusion schools?*, the data suggested that school context (full-service inclusion or special schools) did not play a primary role in influencing the ASC of learners with HI. The *first sub-question* related to the role HI plays in the ASC of Grade Seven learners in the two school contexts. The results suggested that HI greatly influenced the first language ASC (LASC) of the learners with HI in the special school and one of the full-service schools. HI did not seem to play a strong role in the mathematics ASC (MASC) of learners with HI, provided that there was adequate and effective support for the learners with HI. The *second sub-question* addressed the outcome(s) related to the ASC of Grade Seven learners with HI, which could be regarded as indicative of the successful conversion of primary schools to full-service inclusion schools. The results suggested that a general ASC (GASC) and LASC which are moderately lower than the GASC and LASC of the learners with no HI, and a MASC that is similar to the MASC of the learners with no HI, is acceptable. The *third sub-question* addressed guidelines to improve the conversion of primary schools to full-service inclusion schools. From the data, early identification of HI,

appropriate technical and early specialised learning support, and the accessibility and knowledge of educators appeared to contribute the most to the ASC of learners with HI. Understanding some of the functional and accidental limitations of the research places the findings and conclusions in perspective.

### **KEY WORDS**

Academic self-concept (ASC)

Inclusive education and participation

Barriers to learning and participation (BLP)

Hearing impairment (HI)

Effective learning environments

Special schools

Full-service inclusion schools

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## LIST OF ABBREVIATIONS

AAC	augmentative and alternative communication
ASC	academic self-concept
ASCs	academic self-concepts
ASCQ	academic self-concept questionnaire
BFLPE	Big-fish-little-pond Effect
BLP	barriers to learning and participation
DEAFSA	Deaf Federation of South Africa
EASC	English academic self-concept
EASCs	English academic self-concepts
ENT	Ear, Nose and Throat
EWP 6	Education White Paper 6
FET	Further Education and Training
GASC	general academic self-concept
GASCs	general academic self-concepts
GDE	Gauteng Department of Education
HI	hearing impairment
I/E	internal / external
L1	first language
LASC	first language academic self-concept (either Afrikaans or Sepedi)
LASCs	first language academic self-concepts (either Afrikaans or Sepedi)
MAM	mean of achievement marks across all learning areas
MASC	mathematics academic self-concept
MASCs	mathematics academic self-concepts
NCSNET	National Commission on Special Needs in Education and Training
NCESS	National Committee for Education Support Services
OBE	outcomes-based education
RSA	Republic of South Africa
SHQ	Song and Hattie Questionnaire
SAT	Stanford Achievement Test
SASA	South African Schools Act
SDI	Self-Description Inventory
SBST	school-based support team
SGB	school governing body
SSPS	Self-concept Scale for Primary School Pupils
TASC	Total Scale

## CHAPTER 1

### A SPECIAL CHAPTER: INTRODUCING THE WHAT AND WHY OF THE RESEARCH

The concepts *inclusive education and participation* and *special needs* surface from a quagmire of educational concepts as two current national and international polemical educational concepts. Key questions relate to the meanings of *inclusive education and participation*, and specifically what *inclusive education and participation* means in the South African context. It is highly likely that there are differences in the policy and practice of *inclusive education and participation* in different countries, such as in developing and developed countries. A major issue in the inclusive education debate is whether education can be inclusive but not participative, or participative but not inclusive (Department of Education, 2001: 16, 19; Sayed, 2003: 6; Väyrynen, 2003: 39, 41). Further, it is not always clear who is included to participate, and who is excluded from participation; and who has the power to include and exclude. Most important, is whether inclusion or exclusion creates the most effective learning environment for the learner.

Similarly, further questions relate to the meanings of the currently somewhat questionable concept *special needs in education*<sup>1</sup>, and specifically what *special needs in education* means in the South African context. Again, it is highly likely that there are differences concerning the concept *special needs* in different countries, such as in developing and developed countries. Within the context of each policy implementation it should be considered afresh who has special needs, when needs become special, and when needs cease to be special. It also needs to be spelled out *where* special needs could be provided for and who are to make the provision. The role of impairment and disability in conceptualising the term *special needs* and the influence of our own experience of impairment on our thinking should be considered. Most importantly, the implications that our beliefs hold for learners purportedly with and without special needs should bear serious contemplation.

Regardless of being exposed to inclusive or exclusive educational practices, and/or being categorised as having special needs or not, all learners have an *academic self-concept*: an opinion, based on self-perceptions of themselves as learners and of the quality of their academic work. One should consider what academic self-concept entails in South Africa specifically. Given the demographics and degree of Westernisation of South Africa, the

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<sup>1</sup> Please refer to 2.4.1 for a discussion of the term *special needs*.

prevalence of, or mutual (in)dependence between, an individualistic academic self-concept and a collective academic self-concept should be considered. The macro and micro processes contributing to the formation of the academic self-concept of learners and the factors influencing the academic self-concept require contemplation, as well as the role that school context plays in the accuracy of the academic self-concept. It is uncertain what would be better: an unrealistically high academic self-concept, or a realistically low academic self-concept. It is highly likely that a high and low academic self-concept give evidence of certain factors and conditions in a school. Therefore, it is argued that the academic self-concept of learners with special needs might give evidence of the school context the learners find themselves in.

The key issue of this thesis is, *How does academic self-concept reflect the practices of inclusive education and participation in different school contexts?* Once the usefulness of knowledge of the state of the academic self-concept has been established for inclusive education and participation practices, one could use this learner-centred indicator to confirm, modify and/or contribute to future inclusive educational practices.

## 1.1 ORIENTATION

The inclusive education and participation policy of South Africa is founded on internationally accepted beliefs (Emanuelsson, 1998: 95-96, 104; Keefe & Davis, 1998: 57) and was developed to address and redress the various disparities in education, specifically special needs education (Department of Education, 1997: 105). Prior to 1994, apartheid policies led to disparities in the availability, accessibility, resourcing and quality of special schools. Special schools that accommodated so-called non-white learners with impairments were fewer in number, less accessible, less well resourced, and of a poorer quality than special schools for white learners with impairments (Human Sciences Research Council, 1987: 69-74, 80-81). Currently, special schools are still unable to provide education for about 80% of all learners with impairments (Department of Education, 2001: 9; for an example in Kwazulu-Natal, see Muthukrishna, Farman & Sader, 2000: 87). This situation poses a serious threat to the aim of Quality Education for All (Department of Education, 1997).

The South African government has taken several legislative measures to address the various educational challenges of providing quality education for all, particularly for learners experiencing barriers to their learning and participation. First and foremost, the Bill of Rights in the Constitution enshrines the notion of equal access to basic education for everyone and prohibits unfair direct or indirect discrimination on several grounds, including race and

disability (Republic of South Africa (RSA), 1996a: sections 9(1), 9(3) & 29(1)). Equality in access to basic education and avoidance of discrimination subsequently formed the building blocks of the long-awaited Education White Paper 6 (EWP 6), *Special Needs Education: Building an inclusive education and training system*, that was finally published in July 2001 (Department of Education, 2001: 11).

The worth of the inclusive education and participation policy, as stated in the EWP 6 (Department of Education, 2001), will ultimately depend on the congruency between policy and practice. Several dangers are possible in a matter-of-fact implementation style: for example, without continuous reflective thought about and evaluation of the process, the learners experiencing barriers to learning and participation (who should derive benefit from the policy by attending full-service inclusion schools), could actually be inflicted harm. It therefore seems important to ascertain how learners experiencing various barriers to learning and participation (BLP) judge their academic abilities if class peers make fun of them, if educators are seen to adapt (or neglect to adapt) the learning material for them, or if they perceive themselves inferior to those peers who master the learning content without any accommodations. Further, it is also important to ascertain how learners without BLP judge their academic abilities if they see learners experiencing BLP achieve good marks.

It is argued that an essential criterion to establish the congruency between the inclusive education and participation policy of South Africa and its implementation is the academic self-concept (ASC) of all learners. The ASC of learners is influenced by their context and, therefore, by all the systems that contribute to their context: the education, school, class, family, social, personal and value systems, and less directly, the political and economic systems. Examples of factors found in the systems that may contribute to the ASC are attitudes of educators and peers towards learners, acceptance of learners and their abilities, reward and punishment systems adhered to by the school and the educator, the influence of significant others and reference groups, feedback from others, the amount of difficulty experienced in class, and school marks (Hattie, 1992: 48, 250; Kotzé, 1993: 6; Marsh & Yeung, 1997a: 49; McCreary-Juhász, 1992: 212; Nthoba, 1999: 26). The ASC can, therefore, be regarded as the product of different factors in various systems and may have significant diagnostic value in a school and class system. Being the product of various factors in various systems, the ASC can also be regarded as an indicator of the 'health' or wellness of a system, especially the individual, class, school and education systems.

Not only is the ASC the product of various influences, it is also a powerful predictor of academic behaviour. A reciprocal relationship appears to exist between academic

achievement and ASC, implying that academic achievement can influence the ASC and, in turn the ASC can influence the academic achievement (Ferreira, 1992: 74; Grobler, Myburgh & Kok, 1998: 49; Marsh & Yeung, 1997a: 49; Marsh & Yeung, 1997b: 693, 714-715; Nthoba, 1999: 27; Strein, 1993: 280). There is much research, moreover, that demonstrates that subject-related ASC relates significantly more strongly with subject and eventual career choice than academic achievement (Marsh & Yeung, 1997a: 49; Marsh & Yeung, 1997b: 694, 709, 715; Martin & Debus, 1998: 517). In other words, ASC has more predictive value than academic achievement, and (subject-related) ASC can have significant influence on all learners and their future.

One of the factors that may contribute to ASC, is the various BLP. In this study, hearing impairment<sup>2</sup> (HI), as an example of a barrier to learning and participation, is selected to explore the relationship between the ASC and BLP in a comparative study involving two public school contexts in South Africa. A major focus of this thesis is to ascertain how HI contributes to the ASC of South African learners, and whether learners with and without HI perceive their HI, or hearing ability, differently in different school contexts. Additionally, as the ASC is influenced by many factors in many systems, the ASC of learners with HI may be an indicator of the congruency between the inclusive education and participation policy of South Africa and its implementation.

## 1.2 PROBLEM STATEMENT

The main question addressed in this thesis is, *What is the ASC of Grade Seven learners<sup>3</sup> with HI in the contexts of special and full-service inclusion schools?* The following sub-questions are posed:

- In special and full-service inclusion schools, which role does HI play in the ASC of Grade Seven learners?
- What outcome(s) related to the ASC of the Grade Seven learner with HI could be regarded as indicative of successful conversion of primary schools to full-service inclusion schools?
- What guidelines could emerge to improve the conversion of primary schools to full-service inclusion schools in order to maintain and/or enhance the ASC of learners experiencing HI specifically, and BLP generally?

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<sup>2</sup> The reasons for selecting HI as the field of study are explained in Chapter 4 when the research design is addressed.

<sup>3</sup> Chapter 4 addresses the specific choice of Grade Seven learners as participants in the study.

### 1.3 AIM OF THE RESEARCH

The aim of the study is to investigate the ASC of learners with HI, (as an example of a barrier to learning and participation) in special and full-service inclusion school contexts. Understanding the ASC of Grade Seven learners with HI in different school contexts, will contribute to an understanding of whether and how the ASC of Grade Seven learners is indicative of the success of the conversion of primary schools to full-service inclusion schools for Grade Seven learners, and eventually possibly for other school grades. The findings of the research might provide educationists, educational leaders, managers, and educators generally, with information as to what is required to improve the conversion of schools to full-service inclusion schools, and to minimise an inappropriate implementation of the South African inclusive education and participation policy from casting up additional academic, social and emotional barriers before thousands of learners with impairments already experiencing barriers to their learning and participation.

The investigation broadly entails administering ASC questionnaires to learners with HI in special and full-service inclusion schools, observing classroom interactions and conducting interviews with the principals, educators and learners with HI.

### 1.4 CLARIFICATION OF TERMINOLOGY

#### 1.4.1 Orientation

Clarification of terminology is especially relevant when one engages in the inclusion – exclusion debate. Slee (2001: 169) warned that *“we do need to examine the way in which the uses and abuses of language frame meanings that disable and exclude. It is the problem of language and meaning that lies at the heart of the inclusive educational project.”* His last statement is, of course, debatable. For the purposes of this research, premature closure of meaning by definition is risky and can indeed lead to imprecise understanding (Kaplan, 1997: 113). Instead of offering final definitions, the clarification of terminology offers only brief, preliminary and conditional descriptions to prevent major misunderstandings between the reader and the author. Such descriptions are based on the notion of convergent reduction sentences which draw on open concepts to describe the meaning of a word (Hattie, 1992: 5-6).



#### 1.4.2 Academic self-concept (ASC)

This notion will be explored more fully in Chapter 3, and here it is noted that *academic self-concept* refers to a person's self-perceptions of him- or herself as a learner and of the quality of his or her academic work (adapted from Marsh & Yeung, 1997b: 692).

#### 1.4.3 Barriers to learning and participation (BLP)

The term is derived from *barriers to learning and development* (as used in the EWP 6, Department of Education, 2001) and *inclusion and participation* (Muthukrishna, 2000). According to the report on Quality Education for All (Department of Education, 1997: v, 12), the term *barriers to learning and development* refers to any obstacle that may hinder the learner from accessing educational provision and that may contribute to learning breakdown. Barriers to learning and development may be located within the learner, such as learning and visual impairment and emotional breakdown; within the school, such as learning through an additional language; within the education system; or within broader family, social, economic or political contexts. Muthukrishna (2000) qualified the term *inclusion with participation* to stress the notion that inclusive education that provides access to schools without creating the opportunity to participate in the full range of school activities is not inclusive education at all.

*Barriers to learning and participation* (BLP), therefore, are obstacles within the learner, the school, the education system, and/or the broader family, social, economic or political contexts that may hinder the learner from accessing and participating in educational provision. Learners who experience BLP are often referred to as *learners with special educational needs* (Department of Education, 1997: 11), although the term is unacceptable within the new framework of thinking followed by the Department of Education (Department of Education, 2002: 275).

#### 1.4.4 Hearing impairment (HI)

*Hearing impairment* refers to any type (conductive, sensorineural, mixed or central) and degree and range (slight, mild, moderate, severe or profound across different speech frequencies) of hearing loss that a person may experience, whether the hearing loss is fluctuating, temporary or permanent, or bilateral or unilateral. The hearing loss is to such an extent that it affects communication (Deaf Federation of South Africa (DEAFSA), n.d.; English, 1995: 19; Kapp, 1991b: 333-343; Smith, 1998b: 210-204; Watson, 1999a: 1-4). HI is an example of a barrier to learning and participation.

#### 1.4.5 Inclusive education and participation

Inclusive education and participation is a system of education where learners who experience BLP, including impairments, are included in education in ordinary/regular schools in their neighbourhood in age-appropriate ordinary/regular classroom settings with other learners. All learners are provided with support and instruction that meet their individual strengths and needs and allow for participation in the full range of school activities (based on Porter, 2003).

#### 1.4.6 School contexts

*Context* refers to the circumstances wherein a person or an object is functioning (Plug, Meyer, Louw & Gouws, 1989: 187). It follows that the school itself, as unit of study, can be understood better by considering the surrounding conditions, whether legislative, economic, educational and/or social, wherein the school is functioning and which may influence, and be influenced by, the dynamics of the school. In this study, *school context* refers to the way of functioning of the type of public school as specified by South African policy and legislation, namely special, ordinary and full-service inclusion schools (Department of Education, 2001: 22; RSA, 1996b: Chapter 3(23-24)).

#### 1.4.7 Special schools

Special schools are schools that provide specialised teaching and support outside the mainstream of education to learners with a moderate to severe degree of impairment or other BLP. Currently in South Africa there are special schools for learners with visual impairment, hearing impairment, learning impairment, physical impairment, epilepsy, moderate and severe intellectual impairment, autism, hospital needs and behavioural disorders.

#### 1.4.8 Ordinary schools/Regular schools

*Ordinary* schools are public schools that provide education in accordance with a policy-directed curriculum. As stipulated in the South African Schools Act (RSA, 1996b: section 5(1)), “*a public school must admit learners and serve their educational requirements without unfairly discriminating in any way*”. Limited specialist support services are provided at some ordinary schools, often afforded by the parents. Five years after the SASA the EWP 6 (Department of Education, 2001: 21) used the term *mainstream* schools when referring to

ordinary schools. For some advocates of inclusion, *mainstream* refers to a time when learners were streamed according to ability; for others, no school is an ordinary school, as schools provide in the unique needs of their learners. In order to minimise confusion and unconstructive debate, the term *regular* school will be used in this study. The ultimate purpose of the education legislation in South Africa is that schools should be able to deal with all kinds of learners, and that the differences in school context will become less marked.

#### 1.4.9 Full-service inclusion schools

*Full-service inclusion* schools are schools equipped and supported to provide for the full range of learning needs among all the learners, as envisaged by the EWP 6 (Department of Education, 2001: 22), therefore including learners who experience barriers of impairment. In South Africa, only 30 primary schools countrywide have been selected to participate in the pilot phase of converting regular schools to full-service inclusion schools. Once the pilot phase has been completed, the number of regular schools involved in the conversion will be expanded in accordance with lessons learnt and available resources (Department of Education, 2001: 43). The term *full-service inclusion school* should be a temporary term in the transition to providing quality education for all, and will probably fall into disuse as the implementation of education policy progresses.

### 1.5 IMPORTANCE OF THE STUDY

The South African inclusion/exclusion debate is confounded with issues of human rights, ideology, policy and practice, and pragmatism, all substantiated with such results of studies done mostly in overseas countries. As it was argued in 1.1 that the ASC of learners may be an essential criterion to establish the congruency between an inclusive education and participation policy and its implementation, an exclusively South African study to research the ASC of learners with impairment is required. The study will contribute to the development of ASC theory and inclusive education and participation discourses not only in South Africa, but internationally, thus contributing to the emergence of clearer knowledge and praxis regarding ASC and inclusive education and participation.

### 1.6 OUTLINE OF THE CHAPTERS IN THE THESIS

In **Chapter 1**, the context of the South African inclusive education and participation policy has been looked at briefly. The important role that ASC might play in determining the congruency between inclusive education and participation policy and implementation has

been posed, followed by the problem statement, aim of the research, clarification of terminology and the importance of the study.

**Chapter 2** presents the broad perspectives on the study, before presenting an understanding of special educational needs and barriers to learning and participation, focusing on HI. Different viewpoints to provide effective learning environments for learners who experience BLP are discussed, ending with the South African legislation and policy documents which attempt to create effective learning environments for all South African learners.

**Chapter 3** presents the different self-concept models, followed by the theoretical framework of the notion self-concept as used in the study, the development and change of the self-concept and an understanding of the ASC. A South African notion of self-concept is contemplated, as well as the self-concept of learners with HI.

**Chapter 4** presents the research design employed to investigate the ASC of Grade Seven learners with HI in special and full-service inclusion schools, and includes the results of the pilot study. A methodological grounding of the research is also presented, incorporating developing an ASC questionnaire, conducting interviews and making classroom observations. Ethical principles adhered to during the study are also addressed.

**Chapter 5** reports the data collection and analysis, and results and findings. The interpretation of the results and findings is an integration of a quantitative analysis of the ASC questionnaires, augmented by a qualitative analysis of the interviews and observations.

**Chapter 6** presents a summary of the research, the conclusions in respect of theory and practice, limitations of the research and recommendations for future research.

## CHAPTER 2

### HEARING IMPAIRMENT AS A BARRIER TO LEARNING AND PARTICIPATION: A THEORETICAL BACKGROUND TO EFFECTIVE LEARNING ENVIRONMENTS

*“Making special schools ordinary: Is this inspirational or confused thinking?”*

(Westwood, 2001: 7).

#### 2.1 INTRODUCTION

To avoid regarding BLP, HI and the ASC (in Chapter 3) as isolated phenomena and thereby oversimplifying the concepts, it is imperative to bear in mind the contexts in which the concepts operate. BLP, HI and the ASC of learners are formed and influenced by the context in which the learners find themselves and, therefore, by all the systems that they are part of: the education, school, class, family, social, personal and value systems and, less directly, the political and economic systems. In an attempt to validly reflect the many interdependent and interrelated, complex, multi-systemical and multi-factorial intricacies that form and influence HI and ASC, a *bio-ecological perspective* will be maintained on HI and the ASC. The implications of adopting a bio-ecological approach to education in South Africa are briefly mentioned in 2.2 to justify selecting the bio-ecological theory for a broad perspective on the study.

Complementing the recognition of strengths in diversity, and the collaborative, positive and preventative nature of inclusive education and participation, the tenets of an *asset-based approach* will also be recognised throughout the study. The asset-based approach is briefly contemplated in 2.3.

Once the broad perspectives of the study have been posed, the relevant theories will be dealt with. Theories are logical, coherent suppositions that either explain phenomena or are systematic descriptions of the relations among facts relating to the phenomena (Plug *et al.*, 1989: 362). Although similar phenomena can be located across the world, the explanations for and understandings of their existence might be different in different contexts. The different contexts might also result in the phenomena themselves having different appearances. Therefore, care must be taken before applying theoretical frameworks developed internationally to seemingly similar phenomena locally.

Chapter 2 further addresses internationally accepted, albeit disputed, theoretical frameworks for the phenomenon *special educational needs*, followed by an understanding of *BLP*, and an explanation of the various South African systems in understanding *BLP*, especially in the contexts in which the participants of the research find themselves. (Chapter 5 will give a description of the various contexts involved in the research, as a first step in the analysis of the ASC of learners with HI.) HI, as an example of a barrier to learning and participation, is then looked at, once again also with reference to the South African context. Thereafter, the main viewpoints on an effective learning environment to deal with BLP are discussed and contrasted, namely *exclusion* and *segregation*, *mainstreaming* and *integration*, and *inclusive education and participation*, and are related to the public school contexts in South Africa. Finally, the South African solution to BLP and effective learning environments is explained in the form of South African legislation and relevant policy documents.

## 2.2 BIO-ECOLOGICAL PERSPECTIVE

The ecosystemic perspective on human development preceded the bio-ecological perspective on human development. The ecosystemic theory is a synthesis of the *ecological* (Bronfenbrenner, 1979) and *systems* theories; hence its name. Essentially, the *ecological theory* concerns the interdependence and relationships of organisms [*sic*] (here, persons - such as learners, educators and parents) and their physical environment (such as the family home and school building). The *systems theory* considers the important role that context plays in understanding phenomena. According to systems theory, different levels and groupings of the social context are viewed as systems, such as the educational, political, economic, individual and social system. A system consists of different parts or subsystems, for example a school as a system has parts or subsystems such as the learners, the educators, the curriculum and the classroom. The functioning of the whole system is dependent on the interaction among all the subsystems. To understand the whole, the relationships among the subsystems need to be examined (Donald, Lazarus & Lolwana, 1997: 36; Hoskins, 1995: 151). To understand the social context, one needs to look at the dynamic, reciprocal relationships among the various systems, and their various subsystems.

Bronfenbrenner (1979: 3-4, 7-8, 22, 25, 26; 1986: 723-724; Swart & Pettipher, 2005: 9-15) categorised the different levels of systems, particularly those involved in the process of child development. The *microsystem* refers to systems in which learners are closely involved, for example the family, school and peer groups. Individuals, significant others and events closest in a learner's life, continuous face-to-face contact and reciprocal influences are found in the microsystem. It would be the microsystem that is primarily responsible for forming and

influencing the ASC of learners. The *mesosystem* refers to the interrelations among the systems in which learners are involved, and is, as such, a system of microsystems. The *exosystem* refers to other systems in which a learner is not directly involved, but which may influence or be influenced by microsystems, for example local education bodies and employment conditions of the parents. The *macrosystem* refers to beliefs and ideologies that influence and may be influenced by all the other systems (see also Persson, 1998: 111), for example human rights, democracy and inclusive education policy. The *chronosystem* refers to normative transitions in life such as school entry and adolescence, and non-normative transitions such as severe illness and accidents. Transitions influence the learner's development over time, and may influence ASC and the experience of impairment.

In order to understand the functioning of the systems in the bio-ecological perspective, it is necessary to take note that each system plays a role in sustaining the other systems. Furthermore, each system can consist of different parts or subsystems which interact with the whole, but the whole is more than the sum of its subsystems and systems. All the systems are dynamically interdependent on, related to and in interaction with one another. This means that changes in one system will influence other systems, which in turn will influence yet other systems. Change, therefore, is a continuous, reciprocal and cyclical process. Tension occurs when change in one system or subsystem cannot be accommodated in the other systems or subsystems. When major tension among systems or subsystems occurs, the survival of the whole is threatened. (Bronfenbrenner, 1979: 41; Donald *et al.*, 1997: 34-39; Hoskins, 1995: 39; Swart & Pettipher, 2005: 9-15).

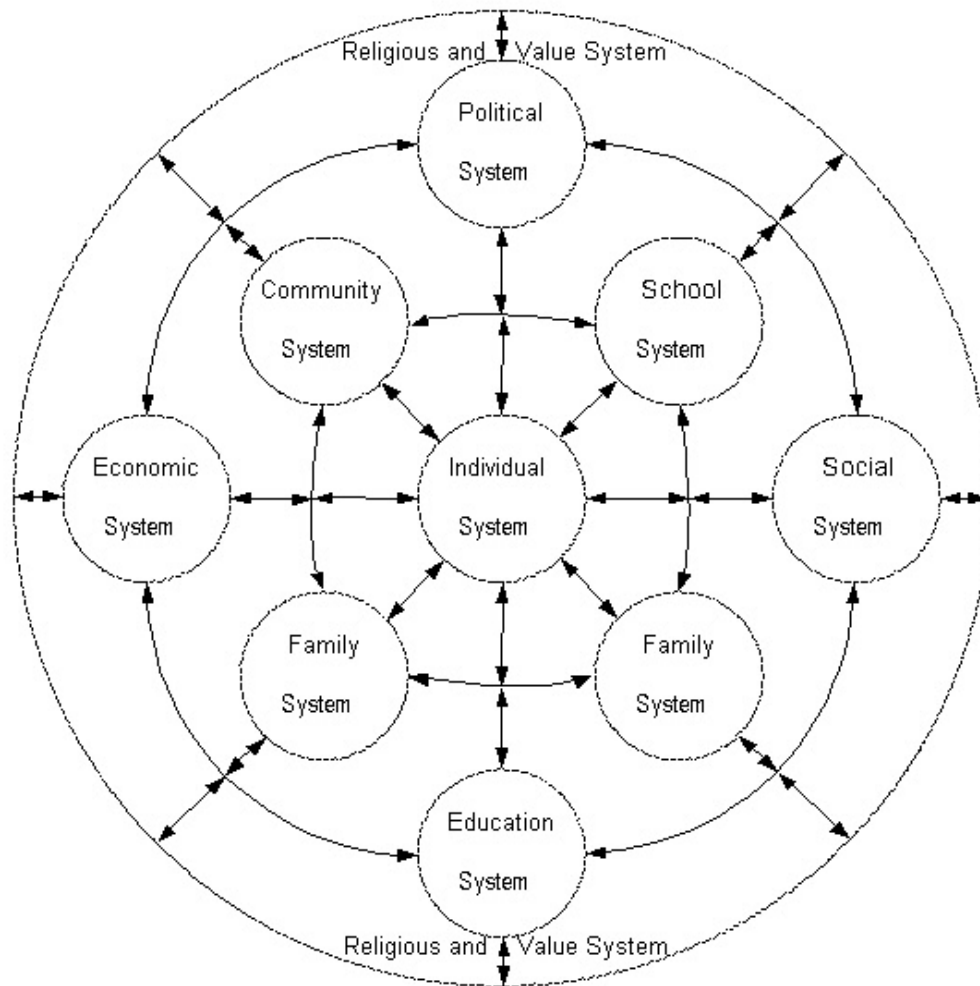
The bio-ecological perspective, therefore, shows how individuals and groups at different levels of the social context are connected in dynamic, interdependent and interacting relationships with systems and subsystems 'above', 'below' or 'next' to them (Donald *et al.*, 1997: 34, 39; Swart & Pettipher, 2005: 9-15). In this study, the ASC will be regarded as a 'currency' which describes the dynamic, interdependent and interacting relations among the systems, especially the individual system and the education system. The various systems operant in South Africa which bear relevance to BLP, HI, ASC and inclusive education and participation, will be discussed in more detail in 2.4.3.

Figure 2.1 is an attempt to represent the complexity of the systems in the bio-ecological perspective in a diagram.



Figure 2.1 The bio-ecological perspective\*

(based on Berkhout & Bondesio, 1992:90; Donald *et al.*, 1997:35, 37)



\* Dotted lines, and not solid lines represent the systems, to indicate that systems cannot be demarcated unambiguously. The 9 systems have been chosen specifically to present education in context. All the various systems cannot be represented in one figure. The placement of the systems in the diagram has been done arbitrarily, and can change, according to the perspective held by the viewer. There are two family systems to indicate that more than one of some systems, such as the family, school and community systems, can exist. These systems, with their different subsystems, can also influence one another.

The bio-ecological perspective holds several implications for education in South Africa. Firstly, the bio-ecological perspective connects individuals to all the systems and subsystems in which they are involved. Changes in the individual system can be very powerful in bringing about change in the relationship and influence of other systems on other persons and systems. An educator, convinced of the virtues of a certain education policy, can influence the learners in the class, and the school as a system.



Secondly, although the placement of the systems in Figure 2.1 could be a matter for discussion, it is clear that changes in the education system can also be very powerful in bringing about change in especially the individual, family, school, community, social and economic systems. By focusing on the education system, it is believed that change can be brought about more effectively in the post 1994 South Africa.

Thirdly, all the systems together form a whole, and the functioning of the whole is dependent on the interaction among all the systems and subsystems. Therefore, changes in the education system can address a wide range of needs in its subsystems and other systems. Instead of following a 'fix it' approach – fix the parts, fix the educators, fix the schools – the education system itself should be 'fixed' (Daniels & Garner, 1999: 1; Dyson, 2003; Kochhar, West & Taymans, 2000: 4; Smith, 1998a: 163) in order to optimally influence all the other systems connected to it. Therefore, the combined, co-ordinated effort of all the component parts of the education system, such as curriculum, instruction, assessment, professional development, program evaluation, leadership, management, governance, learning support, community and accountability (Smith, 1998a: 163), will ensure better outcomes for the education system overall that can in turn benefit virtually all the other systems.

Lastly, educationists must be aware of possible tension, when changes in the education system and schools cannot be accommodated in the other systems or subsystems (such as the classroom, family, community and social systems), for then the functioning of the other systems is also affected. The Education White Paper 6 (EWP 6) which relates to inclusive education was the last education policy document to be formulated by the Department of Education. The changes to be brought about by implementation of the EWP 6 influence the implementation of other policy documents, such as the admission policy, curriculum (especially curriculum adaptation), assessment, even health and welfare, retrospectively. If the changes suggested in the EWP 6 cannot be accommodated, tension will ensue. Chapter 6 reports on tension in the education system related to the implementation of inclusive education policy.

### 2.3 ASSET-BASED APPROACH

The bio-ecological perspective emphasises recognition of a broad context when trying to understand phenomena. It remains, however, possible to consider the systems and subsystems in the broader context primarily in terms of their limitations and needs, and of what is troublesome or problematic. This 'needs-based' approach stands in stark contrast to an asset-based approach to situations which focuses on capacities, skills and assets within

the systems and subsystems. The asset-based approach does not ignore the deficiencies in systems or subsystems, but addresses the deficiencies by focusing on strengthening the assets in the systems or subsystems. With the strong focus on assets, the asset-based approach empowers the members of the system to take charge of their system and not to wait for outside 'experts' or professionals to rectify the deficiencies (Eloff & Ebersöhn, 2001: 148-150; Kretzmann & McKnight, 1993).

In a country such as South Africa, where resources are scarce, the asset-based approach holds much promise. Deficiencies are often perceived to require outside resources. With the asset-based approach, the assets inherent in the system, but often unrecognised, are mobilised to achieve goals. Assets can comprise, among other things, people, relationships, knowledge, expertise, facilities, resources, services, financial means, time and/or collaboration (Bouwer, 2005: 51-52). According to Eloff and Ebersöhn (2001:150), the needs-based approach is focused on surviving the *status quo*, and therefore seldom associated with real change or development. They were of the opinion that the needs-based approach is inefficient in addressing the challenges of modern day society and particularly inadequate in the South African context.

According to the asset-based approach, ways to successfully implement inclusive education and participation and address HI in schools can be sought in the already existing assets and capacities of the learners, the schools, the educators, the families and the communities. Learners, educators, parents and members of the communities can be made aware of their assets and possibilities to contribute to real change in the contexts of the lives of the learners. Assets, however, can only contribute to change if they can be accessed (Bouwer, 2005: 52-54). Assets might be available to learners with HI, but if the learners cannot access the assets (because of fear for the educator, shyness, lack of communication skills, time constraints in school, financial problems, lack of hearing aids, uninformed parents *et cetera*), the assets are rendered worthless. The full consequences of the asset-based approach include not only identifying assets, but facilitating access to assets.

## 2.4 UNDERSTANDING SPECIAL EDUCATIONAL NEEDS AND BARRIERS TO LEARNING AND PARTICIPATION

### 2.4.1 Special educational needs

In many countries, *special needs* and *exceptionality* are used in relation to each other. *Special needs* are seen as exceptions to 'ordinary' educational needs requiring specialised

educational intervention if successful education is to take place (Donald *et al.*, 1997: 68; Lipsky & Gartner, 1999:21). *Exceptionality* assumes that a problem inside the learner, for example physical, sensory, cognitive or other deficit, causes special need (Donald *et al.*, 1997: 68-69). In developed countries learners with special needs make up approximately 10% of the school-going population (Donald *et al.*, 1997: 68).

The term *special educational needs* seems to have different definitions in different settings. Persson (1998: 109) questioned to what needs special education should respond. For example, should special education respond to the needs of the learner, the needs of the system, or both? Ainscow (1998) gave a short, but meaningful answer to this question in saying that the term *special educational needs* referred to learners whose progress was a matter of concern.

Two important matters come to the fore. First, Ainscow (1998) did not define *special educational needs* in terms of the learners alone, but in terms of their expected progress. Hence, *special educational needs* are not identified in the learners, for example as hyperactivity or disability, but rather in their lack or slowness of progress. Second, it seems that when there is not a need for concern about the learner's progress anymore, the learner does not have *special educational need* anymore. *Special educational needs* need not be a lifelong label. This is in agreement with the view of Donald *et al.* (1997: 15) who claimed that learners with special needs might require special help and support to *overcome* contextual, social and individual disadvantages and difficulties which they face.

Not everyone in South Africa is in favour of the term *learners with special educational needs*. According to the Quality Education for All Report (Department of Education, 1997: 11), the term implies that there are two distinct categories of learners: those with ordinary needs and those with special needs. The latter category, whose needs historically have not been met adequately, resulted in a separate, sometimes inadequate system of education, exclusion from the regular (mainstream) system, and/or learning breakdown. The adjective *special* also fails to denote exactly what is regarded as special. "*Thus the notion of learners with 'special educational needs' has become a catch-all phrase to categorise all those learners who somehow do not 'fit into' the mainstream education system ...*" (Department of Education, 1997:11). *Special educational needs* will, therefore, not be used in the study, except when the term is used in a quote, used in respect of legislation prior to 1997, or explained otherwise.

#### 2.4.2 Barriers to learning and participation (BLP)

A more descriptive term had to be found to replace and improve on the term *special educational needs*. Because the Quality Education for All Report (Department of Education, 1997) acknowledged that a range of needs exist among learners and within the education system, *barriers to learning and development* was adopted. The term refers to “... *factors which lead to the inability of the system to accommodate diversity, which lead to learning breakdown or which prevent learners from accessing educational provision.*” (Department of Education, 1997: 11-12). The term does not lead to dividing the education system into a special and a regular school system like the term *special educational needs* has often done in South Africa. Also, it gives a better description of needs to be addressed than the rather vague term *special* (also see Booth, Ainscow, Black-Hawkins, Vaughan & Shaw, 2000: 13). The term also replaces the term *exceptionality*, which assumes that *special educational needs* originate from inside a learner, and disregards the external factors that also can lead to *special educational needs* (Donald *et al.*, 1997:69). Learners who experience barriers to learning and development are, therefore, learners who, for a variety of reasons, need special assistance to access the curriculum, assessment and examinations (Gauteng Department of Education (GDE), 2000a: 2).

An alternative notion is to consider the *barriers to learning and participation* (BLP) as a more encompassing way of conceptualising *special* or *exceptionality*. BLP locates obstacles within all of the learner, the school, the education system and/or the broader family, social, economic or political contexts that may hinder the learner from accessing *and participating* in educational provision. BLP was clarified in 1.4.3.

#### 2.4.3 The systems involved in South African BLP

##### (1) Introduction

It is estimated that between 40% and 50% of the school-going population in South Africa could experience BLP and thus require educational support, especially in the early stages of compulsory schooling (Donald *et al.*, 1997: 70). In some areas in South Africa, especially where the social and economic systems are unable to meet the demands of the other systems, the prevalence of a need for educational support is much higher even than the estimated 40% to 50%. These conditions often occur in historically disadvantaged, that is traditionally black, areas. In other areas in South Africa, especially where the social and economic systems are in harmony with the other systems, educational support requirements are much lower than 40% to 50%. These conditions often occur in historically advantaged,

that is traditionally white, areas. The disparity in prevalence relates to the historically enhanced support of white schools and the lack of access to education, employment, health, housing and wealth opportunities of the majority of black people in South Africa prior to the end of apartheid in 1994.

(2) The various systems

The following discussion covers the proximal-distal division of the bio-ecological model in accordance with Figure 2.1.

(a) *Religious and value system*

A religious system largely influences the values upheld by the people claiming association with the religion. Religious systems propagate values regarding human life, right and wrong, labour, children *et cetera*. People who claim not to be religious, also have value systems that influence their actions. When there is congruence between the values endorsed by persons and their actions, the values will largely influence their decisions, actions and attitude concerning issues in the political, economic, education, social, community, school, family and individual systems. Values are of special concern in respect of BLP and effective learning environments for diverse learner needs. Values regarding human life, children, human rights, education, diversity, impairment, equity and effectiveness, amongst others, influence the choice and implementation of an effective learning environment.

(b) *Political system*

The Bill of Rights, as contained in the Constitution of the Republic of South Africa, protects the values of human dignity, equality and freedom (RSA, 1996a: 7). These values are fundamental in decisions regarding education, including the provision of education to learners who experience barriers to their learning and participation (refer to 2.8.2).

Not only does the political system make laws and policies, it also allocates funds to the various departments. According to the White Paper on Special Needs Education, human resources accounted for 85% to 90% of the budget for education at the time (Department of Education, 2000b: 20). The current average staffing rate in special schools was 1:10, and could not be expanded in the future (Department of Education, 2001: 39). The assumption was made that in the near future 'needs' would exceed 'means' (Department of Education, 2000b: 20). Already the expenditure on special schools had decreased from 2.85% of the total education budget in 1999/2001 to 2.82% in 2000/2001 (Department of Education, 2001: 38). Financial restrictions directly influence the provision of quality education for all learners, including those who experience barriers to their learning and participation. According to the

South African Schools Act (SASA) it is the responsibility of the governing body of a public school to take all reasonable measures within its means to supplement the resources supplied by the State in order to improve the quality of education provided by the school to all learners at the school (RSA, 1996b: section 36). The feasibility of and the practicalities involved in such a statement leave much room for discussion.

(c) *Economic, social and community systems*

The Quality Education for All Report (Department of Education, 1997: 12) recognised the relationship between education provision and socio-economic conditions in a society. The Report (Department of Education, 1997: 12-15) cited lack of access to basic services; poverty and underdevelopment; physical, emotional and sexual abuse; violence and HIV/AIDS as examples of conditions linked to both the economic and social systems, and therefore the community as well, which could disadvantage learners. The learners' socio-economic background reflects the wealth-status of their parents, and therefore the economic resources available to them, including money, medical care (from pre-natal to the present), housing, stimulation during early childhood, nutrition, education, school facilities, a place to study and exposure to a variety of enriching experiences. Lack of such resources could contribute directly to many BLP.

(d) *Education and school system*

The education system, and therefore schools as well, are influenced by the economic, social and political systems and in turn deliver a 'product' to those systems, namely learners. Learners must master certain levels of knowledge, skills and values to be productive citizens who can contribute to the development and expansion of the economic, social, political, community, school and family systems (based on Department of Education, 1997: 11). Limited funding, large numbers of learners with diverse needs, discrepancies in the skill level of educators, limited facilities *et cetera* continue to burden the South African education system, and therefore influence the quality of the 'product' delivered.

Previously in South Africa, some learners who experienced BLP did not receive the same education as learners in the mainstream, with the result that many of them did not master the required levels of knowledge, skills and values to cope with and contribute to the other systems, and became dependent on the systems for welfare. According to the Department of Education (2000b: 4; 2001: 9), only about 20% (N=64 200) learners with disabilities or impairments out of a total of 400 000 learners with disabilities or impairments were at the time accommodated in about 380 special schools. That left potentially 80% of learners with disabilities or impairments unaccounted. Additionally, the Department of Education

estimated that up to 70% of all learners were adversely affected by barriers in the education system (Department of Education, 2000b: 20).

*(e) Family system*

Every family system is unique in its composition of family members. Families range from single parent families, to nuclear families where both biological parents are present, to extended families, to restructured families, to children's homes and substitute parents. There are even many child-led families in South Africa on account of the AIDS pandemic. The family system in itself may, therefore, contain BLP and these must be addressed.

Some families value education and training highly, some only for the boys in the family; some families do not understand the value of education and training and do not motivate or even involve family members to seek education and training. In some households, learners must do chores that leave them no time for homework. The culture of learning is often passed on from generation to generation, thereby continuing either an unfavourable or favourable prognosis for the future of the children.

Family values regarding impairment may influence the learner with impairment significantly in his or her development. In families that reject impairment, learners with impairments will have to deal with much more when coping with the barrier of impairment than learners with impairment in families that tolerate and accept impairment. Similarly, learners without impairments can be socialised by their families to be either prejudiced or fair in their dealings with people with impairments.

*(f) Individual system*

The individual system comprises the physical, biological, emotional, social, psychological, cognitive and spiritual characteristics of a particular person – characteristics which are inborn (intrinsic), as well as acquired and shaped through the influences of experiences and the other systems (extrinsic). An important component of Bronfenbrenner's bio-ecological model is to understand that people, also learners, play a vital role in their own development, and that people are not passive entities on whom systems merely impact extrinsically (Swart & Pettipher, 2005: 12).



(3) Special educational needs / BLP revisited in the light of the systems

Donald *et al.* (1997: 69-73) suggested two perspectives on special educational needs<sup>1</sup> which incorporate a systemic approach to the special educational needs and BLP. Firstly, the phenomenon can be regarded in terms of the internal, external or interactive factors which lead to the special educational needs, or the educational support required. Secondly, special educational needs can be regarded in terms of the source of origin.

Considering the first perspective, an *internal factor* resides in an individual (for example, difficulty in hearing), but can often be the by-product of poverty and social disadvantage. Under conditions of poverty and social disadvantage the risks of developing physical, sensory, neurological and cognitive impairments and difficulties in learning are higher than in developed countries (Donald *et al.*, 1997: 69). An internal factor, such as difficulty in hearing, is a BLP and may require additional educational support. An *external factor* resides outside an individual, and can therefore be located in any of the other systems. A policy or practice of teaching and learning in a second language is an example of an external factor (located in the political and educational systems or the decision of parents) that may be a BLP and may require additional educational support. In practice, it is often very difficult to determine whether a special educational need is exclusively internal or exclusively external, as these factors are in continuous interaction. When *interaction* between internal and external factors occurs, the need for educational support is often aggravated (Donald *et al.*, 1997: 69). For example, in an advantaged context, there would be ways to identify and assist a learner with a HI from an early age, thereby enabling the learner to participate more fully in learning at the school. In a disadvantaged context, the learner with a HI would probably go unidentified and unassisted, thereby paving the road to successive failures at the school because of lack of participation (see Chapter 5 for an example).

Further examples of social and interpersonal barriers resulting from a combination of internal and external influences across all the systems, and becoming BLP in need of special educational support, are youth problems of alcohol or drug abuse, sexuality, violence, and prejudice on the basis of race, class, gender, culture, disability, religion, ability, sexual preference, illness or other characteristics (Department of Education, 1997: 15; Donald *et al.*, 1997: 72). Negative attitudes towards learners, often based on prejudice, fear and lack of knowledge, often result in the labelling of learners. Labelling impacts on the self-esteem of the learner and categorises the learner, without considering the role of the various other

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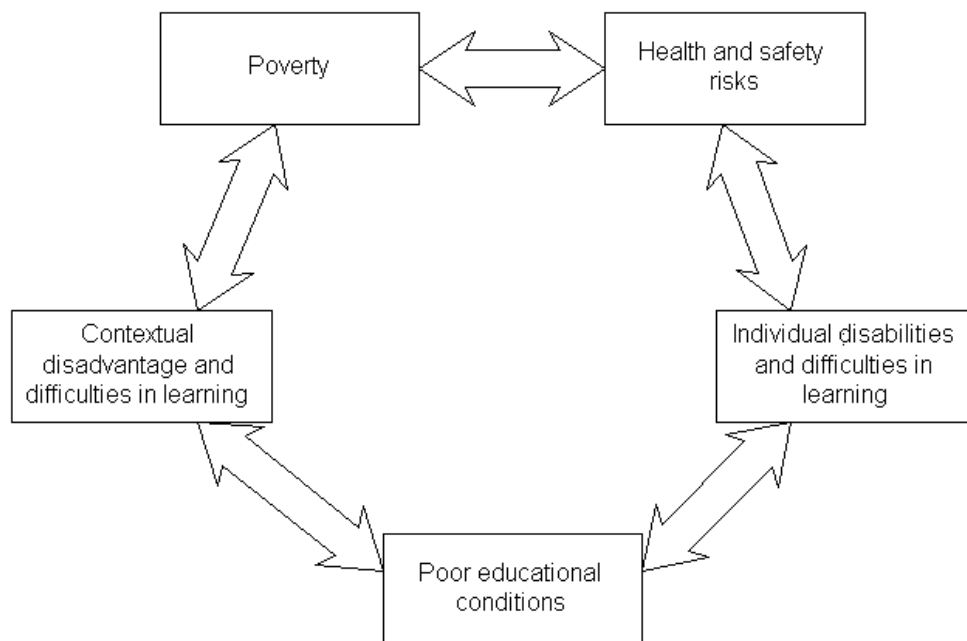
<sup>1</sup> Donald *et al.* (1997) do not regard the term *special educational needs* in the narrow way associated only with intrinsic factors. The two ways of classification that they propose are indicative of the similarity between their term *special (educational) needs* and *barriers to learning and participation*. Although the two terms are not used as synonyms, the relation between them should be clear.



systems involved. Examples of labels are ‘drop outs’, ‘slow learners’, ‘repeaters’, ‘the AIDS-kid’, ‘the blind learner’, ‘the disabled learner’, ‘the kid whose father is in jail’, ‘the stutterer’, ‘the fat one’ and ‘the poor one’ (based on Department of Education, 1997: 15).

The second perspective on special educational needs involves considering the source of origin. Some systems contribute more than other systems to the existence and maintenance of certain special educational needs (Donald *et al.*, 1997: 70-71). One system external to the individual that is the origin of many BLP and forms the context of much need for educational support is the economic system, including the condition of poverty (Donald *et al.*, 1997: 71, 150-152). Donald *et al.* (1997: 144) presented a cycle of poverty (refer to Figure 2.2) that shows the interactive influences of the various systems on one another, whilst maintaining the condition of poverty and the potential for BLP.

Figure 2.2 The negative cycle of poverty, health and educational support requirements (Donald *et al.*, 1997: 144)



The Quality Education for All Report (Department of Education, 1997: 12-15) mentioned the following socio-economic BLP: lack of access to basic services, poverty and underdevelopment, and factors which place learners at risk, such as abuse, substance abuse, teenage pregnancies, political violence, high levels of mobility because of urbanisation and evictions, unsafe schools because of violence and crime, a lack of provision of basic amenities at schools, and natural disasters like floods and the HIV/AIDS pandemic.

Too often, however, such socio-economic factors are considered 'less obvious' and are 'assumed to be normal' and thus somehow deemed acceptable. Mamlin and Harris (1998: 395) noted:

*“a child travelling in a speeding car that hits a brick wall, resulting in brain injury or paralysis, is clearly recognized as entitled to services for the resulting disability. For how long, at what ‘speed’, and with how little support can a child ‘travel’ in poverty ...before sustaining harm to their [sic] physical, psychological, or cognitive development significant enough to be considered a disability?”*

Another system that forms the context of many needs for special educational support, is the education system itself. Poor teaching, inadequate resources or specific educational policies and practices (such as learning through a second language) can cause learners to require educational support and thereby act as BLP (Donald *et al.*, 1997: 71, 157-160; Smith, 1998a: 162). The Quality Education for All Report and the EWP 6 (Department of Education, 1997: 16-19; 2001: 7, 19) expanded the list of BLP which exist within the education system to include the following: an inflexible curriculum which includes incorrect style and pace of teaching, inappropriate lesson content, inadequate classroom management and organisation, insufficient materials and equipment, and inflexible and inappropriate assessment processes; language and communication problems which include second language learners, the absence of sign language for learners who are deaf and the general absence of augmentative and alternative communication (AAC) strategies for learners who are non-speaking because of the severity of their impairment; inaccessible and unsafely built environments which include inaccessibility of buildings for wheelchair users and lack of safety for learners who are deaf and blind; inappropriate and inadequate provision of support services which include unequal distribution of services, lack of support, inappropriate support (when focusing on the learner instead of the system where the barrier is located) and lack of access to individualised intervention to address BLP; lack of enabling and protective legislation and policy which include inflexible policy regarding age limits, legislation which fails to protect from discrimination and legislation which fails to provide for minimum standards which accommodate diversity; lack of parental recognition and involvement; lack of human resource development strategies which include lack of ongoing in-service training of educators which often leads to insecurity, uncertainty, low self-esteem and lack of innovative practices in the classroom; and negative attitudes to and stereotyping of difference. A number of BLP in the education system have been addressed through recent policy documents.

(4) Conclusion

Permanent BLP in the learner or in the systems should be addressed through enabling mechanisms and processes (Department of Education, 1997: 12), for example hearing devices or reform respectively. Sometimes BLP are temporary in nature (also see Ainscow, 1998 in 2.4.1). Learner needs should be monitored and met by all systems in an attempt to prevent the harmful effect of both permanent and temporary BLP (based on Department of Education, 1997: 12).

## 2.5 UNDERSTANDING IMPAIRMENT

### 2.5.1 Impairment

It is necessary to distinguish between the terms *impairment* and *disability*. Although the two terms essentially refer to the same situation(s), the nuances associated with each portray subtle differences in their understanding. *Disability*, such as physical, sensory, neurological and mental disability, generally refers to conditions that have some clear intrinsic, physically identifiable basis (Department of Education, 1997: 18; Donald *et al.*, 1997: 72). Although the Quality Education for All Report acknowledged disabilities as explained above, the Report stressed that most learners with disabilities required educational support because of barriers in the learning environment or social context that prevented effective learning from taking place (Department of Education, 1997: 18; Donald *et al.*, 1997: 72). The requirement is that, regardless of so-called internally located problems, learners with disabilities should not experience barriers to their learning and participation, because the education system should adapt to meet their needs.

*Disability* tends automatically to be interpreted against the frame of ability, in other words, ability and disability are seen as opposites of each other: a person is either able, or disabled; a person has the ability, for instance, to hear, or a person has a hearing disability and therefore cannot hear. One implication of contrasting disability with ability is that it sides with a needs-based approach that focuses on the deficiencies and limitations of persons and not on their strengths, capacities and abilities. Another disadvantage is that the term *disability* locates the origin of the disability solely in the individual and denies the possibility that other systems might be involved in the condition. Further, *disability* does not imply any differences in the degree of severity. Some people may experience their barrier in respect of hearing to be greater than others', but the term *hearing disability* is applied to all cases.

Although the term *impairment* acknowledges an intrinsic challenge, it is less disabling than the term *disability*. *Impairment* does not conjure up the opposing images of being able and not being able in the way that *disability* does, although care must still be taken not to associate impairment with limitations and deficiencies (refer also to Watson, 1999a: 2). As the term *impairment* does not focus on dis-ability, the term allows recognition of origins other than the individual system for the impairment. Also, *impairment* recognises various interpretations of the degree of severity of the impairment. In extreme cases, impairment can progress to become a disability. In such cases, learners with impairment are disabled by the systemic context to the extent that they are no longer able. In the words of Yoshinaga-Itano (in Johnson, 2003a): “*Deafness is a sensory difference. It only becomes a disability when the system fails.*”

The use of the term *impairment* reminds of the social perspective on impairment, or disability, as used colloquially. From the social perspective the main issue of disability is not the sensory, physical or neurological impairment, but the social implications thereof. Impairment affects interaction with people, primarily not through its disabling effect, but through the attitudes and reactions of the people to impairment (Biklen, 2000: 337; Chimedza, 2001: 122). Impairment may prevent learners from mastering social skills and acquiring knowledge at an expected rate and in an accepted form. The difference in the social and natural development leads to social deprivation as a result of society’s response to the impairment. The social deprivation which learners with impairments experience can negatively affect their entire developmental progress. The social interaction, or the lack thereof, therefore has a disabling effect, leading to impairment becoming a disability (Biklen, 2000: 340; Chimedza, 2001: 124, 126; Clark, Dyson & Millward, 1998: 158-159; Gindis, 1995: 159-160; Slee, 2001:175). According to Vygotsky, *disability* is not subjectively perceived as *disability* until it is brought into the social context (Gindis, 1995:159). It is through the perceptions of people that impairment is viewed as disability. Vygotsky’s approach to learners with impairment was to search for strengths, and not to pinpoint or dwell on dysfunctions (Gindis, 1995:164). This focus links with the tenets of the asset-based approach.

The implication of Vygotsky’s viewpoint is that if educators cease to look at impairment as disability, but see strengths, and promote healthy social interaction, then disability, like beauty, will only be in the eye of some beholders. Viewpoints are often reflected in proverbs used by the people, as will be explained in 2.5.2.

One could be of the opinion that neither *impairment* nor *disability* does justification to the value of human dignity, because the possibilities of limitations and in-ability are too prevalent

in both terms. Disability may merely be a different way of being. Experiencing an in-ability does not imply that there are no (other) abilities, for indeed, people experiencing impairment develop and utilise different abilities than people without impairment. It may be more appropriate and accurate to coin a term *dif-ability* (*different ability*) instead of the more commonly used, but derogatory, term *disability*.

### 2.5.2 General African perspectives on impairment

Within the South African context it is necessary to take into consideration the perspectives of various cultures and language groups on impairment and on the ensuing requirements for educational support. The language usage of a group, including aspects such as choice of words and proverbs, reveals much about the perspective of that group on impairment. Devlieger (1999: 439, 440, 449-451), for example, examined a sample of 55 African proverbs for their meanings of impairment. The proverbs were collected from the Luba and Songye in Zaire, from the Shona and Ndebele in Zimbabwe, from the Chewa in Malawi, from the Wolof in Senegal, from the Swahili in Tanzania and from the Luvale, Nyanja and Chitonga in Zambia.

In his analysis, Devlieger (1999: 441, 442, 447) found evidence of acceptance and respect for impairment. He deduced that a normative principle underlies many proverbs in the different languages in the sense that they strongly warn against laughing at persons with an impairment since laughing invites unfortunate events such as impairment to happen: "*Laugh at a deformed person and you will bear a deformed child*". He also found proverbs referring to the person with the impairment as a source of integrity, or as someone with unexpected capacity or as a source of family connectedness. Some proverbs give credit to persons with a physical impairment as being clever in finding solutions for activities that would seem difficult or impossible: "*A deformed person is clever, he supports himself against a wall when dancing*" (Devlieger, 1999: 443). Other proverbs mean to raise hope and to encourage: "*God has not killed you, He has something for you*", "*Where there is a deformed person, there is someone who might have died but did not*" and "*Better disabled than dead*" (Devlieger, 1999: 443).

However, Devlieger (1999: 446) also found evidence in proverbs for acceptance of the limitations associated with impairment, for example "*A blind person should not lead a walk*". Such a perspective can have far-reaching consequences for the education of learners with impairments. The issue is a matter of deciding whether to accept these limitations, or to

assist the learner with the impairment to compensate for the limitations, or to make adaptations to the education of the learner in order to ensure quality education for all.

Finally, Devlieger (1999: 446) found evidence of proverbs advising restraint from interacting with, helping or associating with people with an impairment: “*You who walk with a deformed person, will also be deformed*”. Chimedza (2001: 123) similarly concluded that “... *the marginalization of persons with disabilities in sub-Saharan African societies is suggested by the wide spread use of derogatory words ...*” Once again these views have serious implications for education. The way in which people, and educators and learners specifically, view impairment, will determine their attitude and behaviour towards learners with impairment in the education system.

## 2.6 UNDERSTANDING HEARING IMPAIRMENT

### 2.6.1 Prevalence

As with many other countries and other impairments, the prevalence data of people with HI in South Africa are contradictory and inadequate. In the recent census, 383 408 people with HI (0.94%) were counted out of a possible 40 583 573 inhabitants of South Africa (SignGenius, n.d.: on-line doc.). According to statistics of the Deaf Federation of South Africa (DEAFSA), however, there are presently 1 500 000 people with HI in South Africa (SignGenius, n.d.: on-line doc.). The reasons for the underrecording are, amongst other things, that parents do not report their children as being hearing impaired, and that a large number of people with HI never filled in a census form (Department of Education, 2001: 14; SignGenius, n.d.: on-line doc.). The number of children of school-going age with HI seems to be unknown, although SignGenius (n.d.: on-line doc.) reported that each of the 42 schools for the Deaf in South Africa has a waiting list larger than their current learner enrolment.

### 2.6.2 Classification of HI

DEAFSA (n.d.: on-line doc.) distinguished between two groups of people with HI: people who are hard of hearing who have minimum to moderate hearing loss and whose primary communication is the spoken language, with or without the benefit of a hearing aid; and deaf people, who in turn can be divided into two groups depending on the time the hearing loss occurred – people with prelingual or congenital deafness and people with post lingual deafness, also called *deafened* people. People with prelingual or congenital deafness were

born Deaf<sup>2</sup> or became Deaf before the acquisition of language, have moderately severe to profound hearing loss, belong to the Deaf culture and use Sign Language as the prime mode of communication. People with post lingual deafness, or deafened people, have moderately severe to profound hearing loss after the acquisition of a spoken language, and rely upon the visual sense for additional information (DEAFSA, n.d.: on-line doc.; Smith, 1998b: 201).

Other sources classify HI according to the severity of the hearing loss and the anatomical location of the hearing loss. The severity of hearing loss is determined by intensity (degree of loss in respect of volume) and frequency (range of loss in respect of pitch). Usually, the scale of human hearing includes intensities from 0 to 130 decibels. Sounds lower than 1 decibel are usually not heard and sounds louder than 130 decibels are painful (Kapp, 1991b: 333; Smith, 1998b: 201, 204). HI can be classified as a slight, mild, moderate, severe or profound hearing loss, depending on the loss as indicated by decibels (Smith, 1998b: 202-203; Watson, 1999a: 3). The implications for learning of each of these hearing losses are discussed in 2.6.4. The frequency or pitch of sounds that impact on the ability to understand speech lies between 500 and 2000 Hz (Smith, 1998b: 203). Hearing loss below and above these frequencies will have less impact on the functioning of a learner in a classroom.

Three types of HI are usually identified when considering the anatomical location of the hearing loss: conductive, sensorineural and mixed hearing loss. *Conductive hearing loss* is attributed to the breakdown in conduction of sound from the ear canal, through the middle ear to the inner ear. Malformation or absence of the outer structure of the ear, blockage in the ear canal because of objects lodged in the canal or excessive wax build-up, and/or a closed ear canal can cause conductive hearing loss. The tympanic membrane, between the ear canal and the middle ear, which does not vibrate sufficiently because of tears or immobility, will also cause conductive hearing loss. In the middle ear, conditions that lessen the ability of the ossicles (hammer, anvil and stirrup) to vibrate, such as infection, will reduce the amount of sound conducted to the inner ear. Early medical or surgical treatment can correct conductive hearing losses. If left untreated, a permanent hearing loss may result (Donald *et al.*, 1997: 258-259; Kapp, 1991b: 336-337; Smith, 1998b: 204; Watson, 1999a: 4; Watson, 1999b: 8-9).

When the inner ear, cochlea and/or the auditory nerve in the inner ear has not developed adequately, has been damaged or is deteriorating, *sensorineural hearing loss* will occur. Damage or destruction of the receptors in the inner ear responsible for certain frequencies,

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<sup>2</sup> DEAFSA insisted in their document that Deafness related to prelingual or congenital deafness be spelt with an upper case letter *D* (DEAFSA, n.d.: on-line doc.).



will lead to hearing loss in the particular frequencies. Sensorineural hearing loss usually starts with hearing loss of the higher frequencies, before gradually progressing to the lower frequencies. Learners with sensorineural hearing loss will struggle to understand compound sounds, especially when low and high frequency sounds are combined. Sensorineural hearing losses may be complete or partial (Donald *et al.*, 1997:258; Kapp, 1991b: 337-338; Smith, 1998b: 204; Watson, 1999a: 4).

A *mixed hearing loss* occurs when conductive and sensorineural hearing loss take place simultaneously (Kapp, 1991b: 339; Smith, 1998b: 204). A fourth type of hearing loss, *central hearing loss*, does not relate to the causes of conductive or sensorineural loss. With central hearing loss, there is a disturbance in the cerebral cortex itself which hinders the perception, organisation and meaningful interpretation of sound (Kapp, 1991b: 338).

The hearing loss may affect only one ear or both ears, and is then further described as *unilateral* or *bilateral* respectively. In good listening conditions, the effects of unilateral hearing loss are much less noteworthy than the effects of bilateral hearing loss (Watson, 1999a: 4).

Information in respect of the degree of hearing loss, the range of hearing loss and the specific part/s of the ear not functioning properly can provide a good indication of the type of support that is required by the learner to participate more fully in learning.

### 2.6.3 Causes of HI

HI is caused by genetic and/or environmental factors. Genes cause most sensorineural hearing losses, although some conductive hearing losses occur when genetic influences cause malformation in the ossicles in the middle ear (Smith, 1998b: 207-208; Watson, 1999a: 4). Premature birth; viral infections such as rubella, infectious meningitis, encephalitis, mumps and influenza; blood incompatibility when a woman with Rh negative blood is carrying a foetus with Rh positive blood; blockage in the ear canal; otitis media when fluid builds up in the middle ear; bacterial infections such as syphilis; and other diverse factors in the environment such as certain drugs, otosclerosis, concussion, accidents, birth complications, neonatal jaundice and exposure to excessive noise levels can also contribute to hearing losses (Donald *et al.*, 1997: 259; English, 1995: 122; Kapp, 1991b: 338-343; Smith, 1998b: 208; Watson, 1999a: 4). Many of the causes of HI can be prevented through dissemination of knowledge, and much of the influence of environmental factors contributing to HI can be managed through medical care, thereby preventing permanent hearing loss.



#### 2.6.4 The effect of HI on learning and consequent requirements for educational support in the classroom

The following factors can affect the learning of learners with HI: age when loss occurred; cause of HI; severity of hearing loss; time of detection; a constant or progressive hearing loss; type of intervention, stimulation and treatment; support and assistance of family; experience of hearing loss; presence of additional impairment/s; general health condition; socio-economic circumstances, and individual personality differences (DEAFSA, n.d.: on-line doc.; Kapp, 1991b: 331, 350, 360; Smith, 1998b: 210). The functioning of learners with HI will determine the communication method the learner will prefer, the education method which will be best suited to the requirements of the learner, the assistive devices the learner will need and be able to afford, the career the learner will eventually be able to follow, the socialisation within society, and the learner's acceptance of and adjustment to the HI (DEAFSA, n.d.: on-line doc.; Smith, 1998b: 201). The learner with HI will probably encounter barriers in most areas of personal, social and academic development (Smith, 1998b: 198).

In school the process of reading and writing begins when spoken language is associated with written symbols. Learners with HI are likely to struggle with this process (Smith, 1998b: 198) as they will encounter a barrier(s) in acquiring spoken language and will require support to overcome or compensate for the barriers. Additionally, many learners with HI have a delay in their language development which makes the acquisition of new communicative skills and information difficult (Donald *et al.*, 1997: 258; Powers, 1999: 25-26).

Learners with HI can be supported in the classroom through assistive devices, by accommodative classroom procedures and with concessions in respect of assessment. *Assistive devices* are equipment or adaptations that are required to access the curriculum and participate in learning. When learning is forced to take place without the necessary assistive devices, learners with HI often experience disharmonious learning, followed by learning breakdown. Assistive devices for learners with HI can be hearing aids, frequency modulators worn by the educators which transmit their voices directly to the learners, or cochlear implants (Smith 1998b: 209). Different learners with HI need different assistive devices to participate in learning on an equal basis (Hoskins, 1995: 34), based on consideration of the factors that affect the learning of learners with HI mentioned above.

Educators must be aware of the possibilities and the limitations of assistive devices. A hearing aid, for example, merely amplifies sound, sometimes in a contorted way, and does

not restore 'normal' hearing the way spectacles usually restore sight. Hearing aids often amplify *all* sounds, including unwanted and distracting sounds such as classroom noise, children talking, chairs scraping and pencils dropping (Kapp, 1991b: 375; Powers, 1999: 19-20; Smith, 1998b: 210-211); therefore, classroom conversation is often difficult to follow as all sounds, not only the voice of the speaker, are amplified. Loud sounds, or high-pitched sounds may become too loud and painful, and cause irritation and headaches (Kapp, 1991b: 375). Hearing aids work well when the speaker is within two meters of the learner wearing the hearing aid and facing the learner, and both are in a quiet area (Powers, 1999: 19-20; Smith, 1998b: 211).

Some educators are concerned that learners will use the assistive devices as crutches. In answer to the issue, Hoskins (1995: 35) said: "*If we had a pile of crutches available ... my guess is that the only people who would use them would be the people who need them.*" Although this statement may be true in the literal sense of the word, some learners do tend to rely on crutches in a figurative sense. It is easier to use a pocket calculator than to understand and learn the multiplication tables. It is easier to ask someone's assistance than to look up a word in the dictionary. Learners who experience true difficulties must be assisted in a proper way, but learners who rely on devices because of laziness, insecurity *et cetera*, must be taught to optimise their real potential. Learners must be sure they cannot walk before they use the crutches. Learned helplessness must be recognised as a potentially disabling phenomenon.

*Accommodative classroom procedures* centre on supporting optimal hearing and reliance on visual cues such as articulation, facial expressions and hand gestures to augment hearing (Donald *et al.*, 1997: 271; English, 1995: 49). Firstly, preferential seating (Kapp, 1991b: 357) for learners with HI includes seating in the front of the class, but to the side, so that the learner with HI can scan everybody speaking (Johnson, 2003b). Often hearing can be supported if the learner sits with the better ear towards the educator (Smith, 1998b: 211). Secondly, educators can make accommodations in respect of their voice and speech: important words can be emphasised and words can be enunciated clearly (Smith, 1998b: 217). Thirdly, class peers can be of assistance to the learner with HI by checking whether instructions have been understood (Smith, 1998b: 218). Fourthly, classroom acoustics can be improved by limiting noises, such as noise from fans, air conditioners and the playground; improving the reverberation by covering hard surfaces, such as floors with carpets and windows with curtains; and limiting the distance between the educator and the learner with HI (English, 1995: 153; Powers, 1999: 19-20). Fifthly, general cues to support learners with HI include a gentle touch on the arm or shoulder of the learner with HI to obtain attention;

checking the facial expression of the learner with HI to be sure contact has been made before speaking; pointing at or touching a person or object being spoken about; and writing page numbers, homework assignments, announcements and new vocabulary on the board. Learners with HI often acknowledge that they have understood work, even though they have not. By asking them to repeat the work or instructions in their own words, misconceptions can be prevented. Older learners with HI can familiarise themselves with new work and words by reading through the work at home prior to the lesson. Learners with HI tend to tire more quickly because of the exertion to process auditory intake (English, 1995:49; Smith, 1998b: 217).

Comprehension increases significantly when the learner can watch the educator's face to speechread. Speech reading depends on the knowledge of the grammar and the vocabulary of the language spoken, demands great concentration and can be tiring over a long time. The educator can do the following, additionally to what has been mentioned above, to enhance speech reading: face the learner with HI as much as possible, limit roaming about the classroom when teaching, arrange the seating so that the learner with HI can see the face of the educator during instruction, speak clearly at a normal pace and volume without exaggerating mouth movements, keep hands away from the face while talking and the mouth uncovered, be in adequate light so that the mouth can be seen, be careful of standing against a window to prevent glare in the eyes of the learner with HI, speak in phrases, rephrase rather than repeat, use an overhead projector and not a chalkboard to facilitate face-to-face communication, do not expect a learner to speechread beyond 2 ½ to 3 meters. It is difficult for learners with HI to look at sources of visual information, such as maps and overhead transparencies, while simultaneously speech reading; therefore, by waiting with speaking until after the learners have looked, learners with HI will still have the opportunity to speechread. Dictation poses a similar problem: learners with hearing can write as they listen; learners with HI cannot write and speechread simultaneously. Class discussions are also difficult to follow for learners with HI. As learners with HI cannot hear well, they cannot locate the speaker to speechread, and therefore cannot follow the class discussion. A procedure to support learners with HI during class discussion would include identifying the speaker; repeating answers, questions and comments from other learners; ensuring little background noise; withdrawal to a quiet area; and controlling the pace of the discussion (Carter, 1998: 5; Donald *et al.*, 1997: 271; English, 1995: 49; Powers, 1999: 22-23; Smith, 1998b: 213-214; 218).

The degree of hearing loss may also give an indication of appropriate forms of support. Learners with *minimal* or *borderline* hearing loss usually have hearing losses of between 16

and 25 decibels. Even with a hearing loss of 15 decibels, learners can miss up to 10% of the instructions or conversation when the educator is further than a meter away or the class is noisy (English, 1995: 22).

Learners with a *slight* hearing loss usually have hearing losses of between 27 and 40 decibels. They may struggle to hear faint or distant speech. They can benefit from favourable class seating, hearing aids and speech therapy to contribute to speech development and correct faulty speech patterns that may have developed (English, 1995: 22; Smith, 1998b: 202).

Learners with a *mild* hearing loss usually have hearing losses of between 41 and 55 decibels. They may struggle to hear conversation unless the conversation is less than two metres away and face to face. It is estimated that learners with mild hearing loss may miss as much as 50% of classroom discussions if accommodations are not made, and a 55 decibel loss can cause the learner to miss up to 100% of speech information. They can benefit from amplification that hearing aids provide and speech therapy for speech development, maintenance and articulation problems (English, 1995: 22; Smith, 1998b: 202).

Learners with a *moderate* hearing loss usually have hearing losses of between 56 and 70 decibels. They may struggle to understand conversation unless it is loud. They will struggle with group work and one-on-one verbal conversation in school situations. Usually they also struggle to develop and maintain language skills. Some learners can benefit from a resource educator, hearing aids, auditory training, speech reading instruction and speech services (English, 1995: 23; Smith, 1998b: 202).

Learners with a *severe* hearing loss usually have hearing losses between 71 and 90 decibels. They may only hear loud voices if the noises occur very near the ear. They may also struggle to hear speech sounds adequately or accurately, even with amplification by hearing aids. They can benefit from special services (English, 1995: 23; Smith, 1998b: 202).

Learners with a *profound* hearing loss usually have hearing losses of 91 decibels or above. They usually are aware only of vibrations, but may hear some very loud sounds. Class seating becomes of the utmost importance, as they generally rely on vision as the primary source of communication. They can benefit from extensive special services to develop language skills and alternative forms of communication (English, 1995: 23; Smith, 1998b: 203).

Learners with HI can be supported in the classroom with *concessions in respect of assessment*. For some learners with HI it might be more appropriate to demonstrate their acquired knowledge and skills by using non-speaking modes of assessment (Hoskins, 1995: 96, 104). A discussion paper on criteria for allowing alternative methods of assessing learners who require educational support shed some light on this complex and controversial topic (GDE, 2000a: 5-9). The aim is to enable “*equitable assessment and examinations through developing assessment and examination concessionary measures for learners with special education needs [sic]*” (GDE, 2000a: 1).

The GDE has official documentation as to the general principles that can be applied if accommodations are to be implemented fairly during assessment procedures (GDE, 2000a: 1-5). Firstly, learners who need concessions to participate equally in assessments should be identified early to prevent unnecessary failure because of inappropriate assessment and examination. Concessions should not only be made at exit points. Secondly, the granting of concessions should never compromise the quality of the assessment and examination and no learner should ever be given an unfair advantage. Thirdly, the decision to grant concessions should be an educational decision based on recent and appropriate medical reports and significant educational reports. Fourthly, in order to ensure the just implementation of concessions, a uniform procedure must be followed. The procedure will probably include records to be kept at the school of the history of the applicant reflecting BLP and educational support needs; the history of concessions granted; relevant and recent reports from the principal, present educators and other professionals such as medical doctors, psychiatrists, psychologists and therapists; and reports from the education support service. Fifthly, emergency concessions should be limited to real emergencies, such as a broken arm.

Certain factors must be considered to select an appropriate form of concession (GDE, 2000a: 5): the nature and onset of the requirement for educational support or BLP, the nature of the content to be assessed, the type of assessment the educator has in mind, the usual way the learner does his/her work, and information of previous consultations and/or concessions.

There are guidelines governing the practice of concessions to ensure their fair implementation. Learners who are deaf and lack adequate reading skills and/or have incomprehensible speech may make use of a scribe (*amanuensis*) and do assessments orally *via* the scribe. The assessments may take place in a suitable separate room, and not in the examination room among the other learners. Trained educators, trained scribes and/or

sign language interpreters may assist the learners, as long as they remain neutral and impartial. The scribe and the learner each receive a copy of the question paper. The scribe uses Sign Language to communicate the question and writes down the learner's signed answer verbatim. During external examinations a continuous cassette recording can be made and kept until after the results are known. When a learner applies for amanuensis, an application for extra time can also be made (Burns, 1998: 89, 207; GDE, 2000a; Powers, 1999: 28). In a USA study which determined the amount of extra time learners with impairments required to complete the Stanford Achievement Test (SAT), learners with HI needed 95 minutes extra time on 150 minutes of test taking using regular print. The study did not take into account the severity, onset and type of hearing loss and the author warned that different learners with HI might need different amounts of extra time before they could compete fairly with other learners (Burns, 1998: 207).

#### 2.6.5 Conclusion

Bearing in mind the different statistics available regarding HI in South Africa, HI is an often-overlooked reality in South African schools. Learners resident in poor socio-economic areas with the compounding influence of poverty and lack of access to medical services are especially prone to the causes of HI, without sufficient medical or educational support resources to prevent, overcome or deal with the barriers of HI. The role that educators can play in supporting learners with HI becomes central in resource-deprived areas. Although the many requirements for educational support by learners with HI may seem to focus on deficits, the requirements do not focus on eliminating the hearing loss, but on optimally using the available hearing ability and supporting the learners to participate more fully. Learners with HI *"should be seen in terms of their strengths, in their ability to access the curriculum through a different modality and even language from other pupils, rather than simply deficient in their ability to hear."* (Gregory, 1999: 41)

## 2.7 DIFFERENT VIEWPOINTS ON AN EFFECTIVE LEARNING ENVIRONMENT

### 2.7.1 Orientation

There are different opinions as to what constitutes an effective learning environment for a learner with an impairment, depending on the quantity and quality of learner participation, facilitation and learning focused upon. Over the years, there have been several 'models' of the effective learning environment, including exclusion, segregation, mainstreaming, integration and inclusion. Different types of schools exemplify the different models of an

effective learning environment and all have proven to be an effective learning environment for some learners. It might be that some of the school contexts in the study relate to these models. Given the context of education in South Africa, a question stemming from this study would be, which learning environment(s) would be most effective for most learners with impairments in South Africa?

## 2.7.2 Exclusion and segregation

### (1) Orientation

*Exclusion* as an educational practice occurs when learners are removed from a place or community, such as taking certain learners out of a regular school and placing them in a specialised school. *Segregation* is the enforced separation of groups of learners within a school, such as having special and regular classes in one school. *Exclusion* and *segregation* represent different viewpoints of creating an effective learning environment, but they share underlying values.

### (2) Values underpinning exclusion and segregation

*Exclusion* and *segregation* recognise diversity, but are based on the value of homogeneity. According to these models, homogeneity of abilities within a school (or class) can create more effective, comfortable and appropriate teaching situations. Learners who are too different from the regular group and the perceived homogeneity of the school are believed to need special education (Skrtic, 1991: 152). In such an approach to diversity, diversity can easily be regarded as deviancy (Kugelmass, 2001: 48). Emanuelsson (1998: 99) judged rather scathingly that by excluding and segregating learners who have special educational needs, the needs of the system are considered and not the needs of the learner.

Identification of learners to be excluded or segregated is based on identification of deficits in the learners' abilities, or backlogs in their skills acquisition (Clough & Corbett, 2000:12; Emanuelsson, 1998: 97; Muthukrishna & Schoeman, 2000: 317). The deficits or backlogs are identified in relation to what is perceived as *normal*. The general features of most other learners become the norm.

### (3) Rationale of exclusion and segregation

Most regular schools in South Africa declare themselves to be unable to address the different needs of some learners and prevent learning breakdown (Department of Education, 1997:25). The rationale of removing learners with needs that "cannot" be addressed in regular schools and grouping learners with similar deficits and backlogs together, is that



more effective, comfortable and appropriate teaching situations can be effected, with specially trained educators to deal with the needs of the excluded and/or segregated learners. Often educators in regular schools express that they feel overwhelmed by the demands of different needs on their teaching strategies, lack knowledge of the accommodations they are expected to make, have no or limited support structures to turn to, are concerned about time and curriculum constraints, experience assessment problems, are afraid of possible disruption of the learning of other learners, and feel that the progress of the other learners could be compromised (Engelbrecht, Swart & Eloff, 2001: 256, 258; Galloway, 1989:85; Swart, Engelbrecht, Eloff & Pettipher, 2002:183-185; Smith, 1998b: 313-314).

(4) Consequences of exclusion and segregation

Good special schools and classrooms are able to offer good learning programmes with the educational support required by the learners: accommodations to access the curriculum, assistive devices, and specialised educator competence (Department of Education, 1997: 25). Since the learners to be excluded or segregated are identified on the grounds of deficits in their abilities, or backlogs in their skills, their tuition often tends to focus on compensating for or eliminating these. In following the medical-deficit approach to support (Department of Education, 1997: 25), the achievements of the learner with impairments are compared with those of other learners and the aim is to help him or her to perform like the other regular learners.

The opposite can also happen. Often learners with impairments in special schools or classes do not feel increasingly *normal*, but tend increasingly to feel the differences between themselves and other learners. Hence, their self-concepts can be influenced negatively. Learners in excluded or segregated educational settings are often denied the opportunity to learn the social skills needed to interact appropriately with their peers in the regular educational setting. Children often have to leave their families when still very young, to stay in a school hostel far away in order to receive specialised support. Rural and disadvantaged areas typically lack special schools and support services. Nor are the learners in excluded and segregated educational settings necessarily exposed to the general curriculum, which makes moving back into the general education system very difficult and restricts career opportunities (Department of Education, 1997: 25; Fisher, Roach & Frey, 2002: 65; Hoskins, 1995: 23). Persson (1998: 115) suggested that the result of placement in a segregated or excluded setting is mostly a widening of the gap between special and regular education.



(5) In conclusion

Prior to 1994 in South Africa, special schools for white learners with impairments were very well resourced. Only a few schools for black learners with impairment existed and these were routinely under resourced (Human Sciences Research Council, 1987: 69-74, 80-81; Muthukrishna & Schoeman, 2000: 316). Recent statistics indicated that of the possible 400000 learners with impairment, only 64 200 learners were accommodated in 380 special schools (Department of Education, 2001: 9). If special schools were to be provided for the learners with impairments not supported in the education system, it was calculated that in excess of 1600 special schools would have to be built, staffed and supported. Therefore, considering other models of effective learning environments for learners with impairments is an issue of ideology as well as efficacy. Although special schools perform an important role for many learners, additional options of supporting all learners will have to be found so that the *“process through which the learner, educator and professional support services populations become representative of the South African population, is accelerated.”* (Department of Education, 2001: 9).

### 2.7.3 Mainstreaming and integration

(1) Orientation

*Mainstreaming* and *integration* are two further viewpoints on creating an effective learning environment. These could be regarded as the educational practices currently followed in most regular schools in South Africa, albeit often by default rather than decision. *Mainstreaming* is an educational practice that gives all learners equal access to the school: learners who experience impairment are admitted along with all others, but few or no measures are taken to support them in their learning. *Integration* as an educational practice also gives all learners equal access to the school and, additionally, helps learners who experience impairment to adapt to the requirements of the education system to participate on a more equal basis. *Inclusion*, to be discussed in 2.7.4, also gives all learners equal access to the school, but then adapts the education system to accommodate all learners to participate optimally in the learning.

(2) Values underpinning mainstreaming and integration

The viewpoints share underpinning values, such as accepting diversity and equality, although the extent to which the values are applied, differs. Another value is democracy (Daniels & Garner, 1999: 1; Emanuelsson, 1998: 95). In a democratic educational setting learners are viewed and accepted as equals to participate in all experiences offered by the school. Because of the nature of some barriers, some learners, however, are unable to

participate fully unless special support is provided. It can be questioned whether acceptance as equals has really taken place, or whether a different class membership system operates for some learners, when they merely have free access to the school without the necessary support or when support is focused on their meeting the demands of the school. Although equality does much to repair the damage wrought by diversity seen as deviancy, equality still does not ensure full participation in all experiences offered by the school.

(3) Historical course

Learners in special education settings such as exclusive special schools and segregated special classes, do not always share the same curriculum as learners in regular education settings. Mainstreaming and integration of learners with impairments started when educators placed such learners in regular education settings so that they could benefit from exposure to the regular curriculum and social interactions (Hoskins, 1995: 23). The preconditions for placement in general education settings, however, included that the learners had to demonstrate that they could fit into the regular class (Biklen, 2000: 341, 344) and education system with its fixed curriculum and standards. The education system was not required to change or adapt and often the placement was only for a portion of the day (Hoskins, 1995: 24).

(4) Consequences of mainstreaming and integration

In many schools in South Africa, the ethos of accepting learners with impairments but not supporting them, has led to many learners being unconditionally accepted, but simultaneously also being dumped in a school which is unable, unwilling or unaware of learners' needs to offer opportunities and/or accommodations to enable full participation and to facilitate progress of the learners. These learners attend school, but often do not keep up with class friends. The ever-widening gap between them and the rest of the class, and the experiences of failure often contribute to a dwindling academic self-concept.

In other schools, in an attempt to help learners who experience impairment to adapt to an integrative education system, they are sometimes placed in pull-out programmes or self-contained programmes for part of the school day and/or receive special services such as speech, physical and occupational therapy. In pull-out programmes, learners who experience impairment spend less than 50% of the day outside the general classroom in a specialist classroom. In self-contained programmes, learners who experience impairment spend more than 50% of the day in a specialist setting, and join the general classroom for a small part of the day (Fisher, Roach & Frey, 2002:66; Keefe & Davis, 1998: 55). Often programmes devised to assist learners in an integrated classroom to adapt, are actually

counter-productive in causing learners to be labelled by peers and educators, thus resulting in a segregating classification system of learners (Persson, 1998: 114). Some authors criticise pull-out programmes because of their apparent fragmentation, overlapping and lack of coordination of curriculum content (Fisher, Roach & Frey, 2002:66).

(5) In conclusion

Despite compulsory education in South Africa since 1996 (RSA, 1996b: section 3(1)), many learners with impairments, and without, have so far remained outside the education system. Where learners with impairments were enrolled in regular schools, the schools were often ill equipped and under-resourced to provide the support required, leading to learning breakdown and perpetuation of the stereotypical perception that learners with impairments are unable to cope in regular schools and should receive separate specialised education (Department of Education, 1997: 24-26).

#### 2.7.4 Inclusion

(1) Orientation

The problem of providing effective learning environments for all learners, with and without impairments, in the South African education system, led to various inquiries, reports and new policies. The inclusive education policy is a solution proposed and accepted after years of deliberation in an attempt to provide effective learning environments for all learners. *Full-service schools* is the term used in the policy documents to refer to public schools following the inclusive education policy. According to the policy, *full-service schools* would receive resources to meet the needs of all the learners in the school. This section aims to deal with the concept of inclusion as understood by many educators and academics locally and internationally, the values underpinning inclusive education, research supporting inclusive education, the South African rationale for a policy of inclusive education and opposing viewpoints to inclusive education. The implementation of the South African inclusive education policy is addressed in 2.8, where South African legislation and policy documents to create effective learning environments come under scrutiny.

(2) The concept

In the South African context, the EWP 6 (Department of Education, 2001: 16) stated that inclusive education and training was about acknowledging that all children and youth could learn, and that all children and youth needed support in their learning; that it was about making education structures, systems and learning methodologies able to meet the needs of all the learners and that it acknowledged and respected all differences in learners; that it was

broader than formal schooling and included learning in the home and community, and formal and informal learning; that it was about changing attitudes, behaviours, methodologies, curricula and learning environments to meet the needs of all learners; and that it was about maximising the participation of all learners in the culture and curriculum of the school, and uncovering and minimising the BLP.

The concept of inclusive education and training as put forward by the South African Department of Education is encompassing and thus exceedingly broad. All children and youth are included as being in need of forms of special support. To realise this view of inclusive education as an effective learning environment, sufficient support for all learners will have to be made available. True to the nature of inclusive education, it is acknowledged that education structures, systems and learning methodologies should be changed to meet the needs of all the learners. This is unlike the models of mainstreaming and integration, where the learners are required to make the desired adaptations to the education structures, systems and learning methodologies (Donald *et al.*, 1997: 20). All differences in learners are acknowledged and respected, seemingly irrespective of school placement. Inclusive education is considered broader than formal schooling and includes communities and informal learning. The notion of participation in the culture and curriculum of the school is made explicit. Many of the descriptors of inclusive education and training will require extensive advocacy, reform, goal setting, training and research to realise. Implementing inclusive education seems to involve changing both attitudes and behaviours and developing new skills. It appears as if inclusive education and training might be regarded by some not only as the solution to the South African education problems, but also as a way to address many social problems. The question arises whether inclusive education is not overrated and being considered as a panacea for South African problems.

Sailor (Kochhar *et al.*, 2000: 7) proposed six requirements of inclusive education to consider when including learners who experience BLP. First, placement of learners is to be in schools close to home, whereby learners are educated in their community schools, thereby providing opportunities for social inclusion in the community as well. Second, each school and each class contains the same proportion of learners who experience barriers to their learning and participation as that which is found in the community. Third, a zero-reject philosophy is upheld, such that every school serves all the learners in its district. Fourth, age- and grade-appropriate placements are to be made. Fifth, cooperative learning and peer instruction will be implemented and, sixth, learning support will take place in an integrated environment. The educators and all the learners in the classroom share the resources available for learning support.

As with the South African policy, Sailor's description of inclusive education goes beyond application in education only, to include the community as well. Sailor assumed that all schools would have the resources to include all learners and meet their educational requirements, and disregarded the rights of parents and learners in deciding where to attend school.

In a study (Keefe & Davis, 1998: 58-61), participants in an American week seminar on inclusive education were asked to write down what they understood in the concept *inclusion*. The researchers sorted their definitions into eight categories: all learners belong together; placing learners with impairments in general education classrooms; inclusion in the classroom and the community; the least restrictive environment; support and services in the regular classroom; age-appropriate participation; choice of participation in activities; and the same as mainstreaming.

Most responses fell in the first three categories, indicating a global view of *inclusion*, as all learners belonging together in the classroom and in the community. Some participants underscored the importance of placement with support. Only a few participants thought inclusive education and mainstreaming to be synonymous, indicating that the majority of participants understood inclusive education to entail more than mere mainstreaming (Keefe & Davis, 1998: 61-62). It is noteworthy that participants with less background of inclusive education focused on inclusive education as a set of actions that an educator has to perform in a regular classroom. The participants with more training in inclusive education focused on inclusive education as an attitude or belief system (Keefe & Davis, 1998:61). One should consider whether action and attitude are isolated concepts, or whether attitude reflects a deeper understanding of the actions to be implemented.

According to Ainscow (1998), inclusive education is an approach to the development of schools, in response to the diversity of all the learners who attend. Although it is often thought that inclusive education focuses exclusively on learners with impairments, inclusive education actually alters the philosophy for educating all learners (Salend, 1999: on-line doc.). Inclusive education must therefore strive to meet the requirements of all of the diverse learners who attend the school, not only learners who experience BLP.

Some proponents of inclusive education distinguish between *full* and *partial* inclusion. In *full inclusion*, learners who experience BLP receive all their education in the inclusive classroom setting. In *partial inclusion*, learners who experience BLP receive education in the inclusive

classroom setting only for part of the day while the rest of the day is spent in other programmes. Although this practice seems similar to that of integration, the difference is that with inclusive education, whether full or partial, the attitude is that each learner has membership in the classroom and will be supported, but will also be expected to contribute (Lipsky & Gartner, 1999:13; Watson, 1999a: 2). Even though some learners attend speech, occupational and/or physical therapy sessions, academic support or enrichment, they are still considered as full members of the class (Bélanger, 2000: 235; Keefe & Davis, 1998: 56-58), and the educator and other learners are still required to make the necessary accommodations for them to learn and participate optimally. *Partial inclusion* is similar to the concept *optimal inclusion* used by Smith (1998b: 18) when referring to the most satisfactory type and level of inclusion for each individual learner.

Inclusive education is a concept, but it is defined by means of context. This means that inclusive education is implemented differently in different contexts, implying that different conceptions of inclusive education indeed exist (Dyson, 2003; Keefe & Davis, 1998: 58).

### (3) Values underpinning inclusive education

Equity as a principle is related to democracy, and can be explained as treating individuals fairly in respect of their diverse needs, rather than necessarily treating all individuals the same. Inclusive education can then be described as 'equitable education', in which adaptations are made to meet the requirements of all the learners (Hoskins, 1995: 35; Hutchinson & Martin, 1999).

Inclusive education is also based on beliefs regarding the right of access of all learners to the curriculum, that is full participation. The description of inclusive education in the South African EWP 6 (Department of Education, 2001) as well as the Keefe and Davis study (1998) include learner participation. If learners are not enabled to access the content of the curriculum as well as all assessment tasks and questions, then true inclusive education is not taking place. Biklen (2000: 348) concluded that learners with impairments recognise barriers to their participation as discriminatory.

It was said that integration and mainstreaming are based on recognition of diversity. Differences in highly valued human characteristics and qualities, such as intelligence or the ability to spell correctly, are often devalued and viewed as deviancies, deficits or abnormalities (Ainscow, 1998; Emanuelsson, 1998:96). Where mainstreaming and integration recognise diversity and differences with the aim to eliminate these, inclusive education actually *celebrates diversity* (Keefe & Davis, 1998: 57; Lipsky & Gartner, 1999:17;

Muthukrishna, Farman & Sader, 2000:92). All learners are acknowledged as unique, and the school must be developed in ways that can take advantage of the diversity and differences, which can then be recognised as opportunities for learning rather than as problems to be fixed (Ainscow, 1998). Diversity becomes an asset to the inclusive school and classroom. Everyone belongs and is accepted (Emanuelsson, 1998: 104; Keefe & Davis, 1998: 57). “*Normality in groups is characterised by diversity.*” (Emanuelsson, 1998: 96).

In contrast to the approach of remediation in mainstreaming and integration which complies with the deficit-model, the process of learning support as found in inclusive education complies with the asset-based approach to educational support requirements and BLP. The principle of learning support acknowledges and focuses on the strengths of the learner and strives to support the learner to be the best he/she can be, without comparison with other learners.

#### (4) Research supporting inclusive education

Research findings vary on the impact of inclusive education on learners who experience BLP (Salend, 1999: on-line doc.). Differences in results are probably related to different assumptions about inclusive education, different inclusive practices and different research methods. Kochhar *et al.* (2000: 37-40) provided extensive lists of benefits and consequences of inclusive education.

##### (a) *Academic consequences*

Inclusive education has been found to improve academic performance. In an American national study on inclusive education, school districts reported that placement in inclusion programmes led to academic gains for learners who experience BLP. Academic gains were measured in terms of improved performance on standardised tests, mastery of goals designed to assist learners with educational support requirements, grades, on task behaviour and motivation to learn (National Centre for Educational Restructuring and Inclusion, 1995 in Salend, 1999: on-line doc.).

Learners with learning impairments in an inclusion programme showed significantly greater gains in reading than their peers in segregated resource rooms, although no significant differences between the two groups were noted in terms of their mathematical progress. A significantly greater number of learners with mild learning difficulties in inclusive classrooms progressed in reading at a rate that paralleled their grade level peers without impairments, than did learners with mild learning impairments in segregated resource rooms (Salend, 1999: on-line doc.). For learners with severe learning impairments in inclusive or segregated



resource settings no significant differences in the reading or mathematics progress were found (Waldron & McLeskey, 1998 and Shinn, Powell, Good & Baker, 1997 in Salend, 1999: on-line doc.).

Marston (Salend, 1999: on-line doc.) found that learners with impairments who received support in the inclusive classroom supplemented by services in the resource room in a collaborative effort between the classroom educator and the special needs educator, had made significantly greater gains in their reading performance than learners who received support in either the inclusive classroom or the pull-out programme. The findings seem to confirm the importance of consistent support for learners who experience BLP.

In the American national study on inclusive education mentioned previously, the school districts also noted that placement in an inclusion programme resulted in fewer incomplete assignments, more positive interaction with peers, and improved attitudes toward school and learning (Salend, 1999: on-line doc.). Inclusive education appears to improve the ability to keep up with the everyday pace and conventions of instruction and to provide opportunities to utilise learning support in the regular education environment.

*(b) Social consequences*

In two separate studies (Fryxell & Kennedy, 1995 and Kennedy, Shukla & Fryxell, 1997 in Salend, 1999: on-line doc.), improved sociability was found for learners with severe impairments in inclusive classrooms: learners with severe impairments educated in inclusive classrooms had more social contacts and richer friendship networks that included peers without impairments, provided and received more social support than their peers who were educated in self-contained classrooms, and had more lasting social relationships with learners without impairments.

In an inclusive classroom, learners who experience BLP are more likely to follow the model of the appropriate social behaviour of peers (Daniel & King, 1997: 68; Hoskins, 1995: 26). Inclusive education appears to facilitate more appropriate social behaviour and real life skills because of higher expectations in the inclusive class and the imitation of peers (Daniel & King, 1997: 68; Donald *et al.*, 1997: 239; Down Syndrome South Africa (DSSA), 1999: 5). Inclusive education has been observed to heighten enjoyment of social interaction in the larger classes and offer a wider circle of support, including the social support of classmates without impairments.



(c) *Consequences for educators and schools*

Some educators feel that they benefit by working in inclusive classrooms, by recognising how individual differences influence the learning of all learners, and not only of those experiencing the more obvious BLP. This recognition increases their use of instructional modifications (Smith, 1998a: 163). The typical claims are that inclusive education improves the ability of educators to adapt to different styles of learning and facilitation; promotes alternative assessment strategies; increases tolerance for differences; provides educators with knowledge about how to apply specialised educational strategies to learners who are not impaired, but need extra support; provides joint orientation and training to general and special educators; reinforces a holistic view of the learner; stimulates sharing of resources among schools; and promotes collaboration among schools (Department of Education, 2001: 18, 20, 49; Engelbrecht, Swart & Eloff, 2001: 258).

(d) *Consequences for parents of learners who experience BLP*

Inclusive education can provide parents with a broader support network, can involve parents as equal partners in the educational planning process, can make parents feel less isolated from the rest of the community (DSSA, 1999: 5), and can provide the child with neighbourhood schooling (Donald *et al.*, 1997: 239).

(e) *Consequences concerning the attitudes of learners experiencing BLP*

Learners experiencing BLP have specific concerns about inclusive education as well. Some learners with learning impairments mentioned anxiety about the academic and recreational activities they were missing when pulled out of their classrooms, although they felt the special education setting to be supportive, enjoyable and a quiet learning environment in which they could receive the academic assistance and extra help which they felt they needed (Padeliadu & Zigmond, 1996 in Salend, 1999: on-line doc.).

Some learners with learning impairments felt embarrassed when they had to leave their classroom for specialised learning support. They felt they had to fabricate stories to justify to their friends why they were leaving the classroom. They also felt themselves the targets of name-calling and were concerned about completing work assigned while they had been pulled out of their classrooms (Albinger, 1995 in Salend, 1999: on-line doc.). For a learner who requires educational support, catching up with work missed might prove too difficult a task.

In a similar study, sixth and seventh grade learners with learning impairments expressed feelings of anger and frustration associated with being isolated from classmates in a special

education setting. They felt victimised because of physical attacks, name-calling and ridicule from class members and educators, and they felt misunderstood, betrayed, unappreciated and oppressed by educators and class and family members (Rein & Button, 1995 in Salend, 1999: on-line doc.).

Guteman (1995, in Salend, 1999: on-line doc.) interviewed secondary school learners who had been placed in a self-contained classroom. They expressed concern about their status and the loss of friends, and felt stigmatised and personally deficient. They perceived the education in the self-contained classroom as low-level, unrelated to their lives, repetitive, unchallenging and ineffective. They, however, also had negative perceptions of inclusive education, based on previous negative experiences of being included.

*(f) Consequences for learners without impairments*

It is important not to forget that inclusive education may also have an effect on the learners who do not experience specific BLP and who, therefore, do not have educational support requirements in the traditional sense of the word. In an inclusive classroom, learners who do not 'qualify' for special education services, but who do experience subtle barriers to their learning and participation, are accommodated in the classroom, on the grounds that basic instructional modifications are made to suit every learner in the class. By selecting only a few learners as qualifying for 'special' learning support, there is an emphasis on raising achievements for some learners (those selected) at the expense of others (those who barely do not qualify for special education services) (Ainscow, 1998; Hoskins, 1995: 24).

In one study quoted by Salend (1999: on-line doc.), placement in an inclusive classroom did not seem to interfere with the academic performance of learners without educational support requirements in respect of the amount of instructional time allocated and engaged, the rate of interruptions to the planned activities, and the learners' achievement test scores and report cards. On the contrary, the researchers found that the mathematics and reading performance of learners without impairments in the inclusive classroom was significantly better than that of their peers in traditional classrooms.

Some learners who do not experience BLP, however, do have concerns about being in an inclusive classroom. They are concerned about communication difficulties with some of the learners, as well as physical and behavioural characteristics of some of the learners who experience BLP (Salend, 1999: on-line doc.). In another study quoted by Salend (1999: on-line doc.), on the other hand, older learners without impairments showed willingness to form friendships with their peer learners with severe impairments and believed that inclusive

education facilitated the development of such friendships. Strategies for promoting friendships were suggested, such as using co-operative grouping arrangements, sharing information about impairments, and initiating social activities that promote interactions amongst all the learners (Salend, 1999: on-line doc.).

Furthermore, learners at an inclusion-based school showed an increase in acceptance, understanding and tolerance of individual differences, whereas learners at a non-inclusive school were more likely to engage in stereotyping, and to have negative perceptions of diversity and learners with impairments (Donald *et al.*, 1997: 239; DSSA, 1999: 5; Hoskins, 1995: 26; Salend, 1999: on-line doc.). Learners also learn to deal effectively with learners with different abilities, backgrounds and experiences – life skills necessary for the workplace (Hoskins, 1995: 26). Inclusive education facilitates the learning of more realistic and accurate views of learners with impairments (DSSA, 1999: 5).

(g) *Outcomes for communities*

Inclusive education is said to teach communities to appreciate diversity (DSSA, 1999:5) and to “unburden society” by producing learners with impairment who have developed their full potential and can make contributions to society (DSSA, 1999: 5).

(5) South African rationale for inclusive education

At least two reasons are considered for the implementation of inclusive education policy in South Africa. Firstly, besides the leading role of the political system, the interaction among the economic, social and education systems and subsystems in South Africa created the need for a change in the education system from the perspective of efficacy. The South African education system was not able to serve all learners. Some learners requiring special educational support did not receive any schooling, for example learners who could not reach specialised schools because of lack of transport or long waiting lists, but were not attending a regular school either. The number of learners requiring educational support far exceeded the available specialised facilities. Limited funding made it impossible to extend provision of dual education services for learners who experience BLP, and those learners who do not. Because of the increase in the population and the inability of the economic system to provide adequate resources to everyone, poverty and the conditions associated with poverty, have furthermore led to an increased number of learners requiring special educational support on account of both their disadvantaged circumstances and a higher prevalence of impairments.

Secondly, after 1994, the quality of education for all learners needed to be addressed (2.7.2 (5) and 2.7.3 (5) dealt with some of the reasons why the *status quo* was unacceptable). In

South Africa, the rationale is twofold for inclusive education based on an improved quality of education: an improved quality of education through inclusive education can be to the benefit of more learners, which in turn can benefit the whole country.

(6) Opposing viewpoints

Several complaints have been noted against practicing inclusive education (Daniel & King, 1997: 68-69; Keefe & Davis, 1998: 56; Snyder, 1999: on-line doc.). Firstly, arguments go that teaching as if 'one size fits all' ignores the individual needs of learners experiencing BLP. Many learners experiencing BLP are best served in non-inclusive settings, and were removed from regular education classrooms in the first place because they were not well served there. Educators in regular education may lack the skills for the appropriate support and assistance to adequately meet the diverse needs of all the learners. With the additional demands of teaching learners who are experiencing BLP, the needs of low, average and high potential learners are often neglected. Secondly, in an attempt to adapt classes to accommodate all learners, learners not requiring special educational support may experience boredom, whereas learners with educational support requirements may experience frustration in trying to keep up. As a result, achievement test scores may decline, and the educators will be held responsible. Thirdly, learners requiring medical care, such as the changing of catheters, or interventions, such as the handling of disruptive and uncontrollable behaviour, may negatively affect the class in both academic and social respects. Fourthly, inclusive education is perceived to be primarily concerned with the socialisation of learners who are experiencing BLP, and not with their academic achievement. Fifthly, inclusive education is viewed as simply a way of reducing the costs of special education programmes. Lastly, inclusive education is suspected of actually limiting the choices of parents and learners.

#### 2.7.5 Conclusion

The orientation on effective learning environments in 2.7.1. concluded that, given the context of education in South Africa, the question remains as to which learning environment(s) would be most effective for most (if not all) learners in South Africa. Exclusion, segregation, mainstreaming, integration and inclusion are different models by which to create an effective learning environment. Each model has its advocates and critics. Many learners throughout the world have been taught in each of these learning environments and many learners can laud the school context they were in. The aim here is not to pronounce one model as superior to the others, but to achieve some understanding through the study of the influence

of two of the models, exclusion and inclusion, on the ASC of learners with HI. The EWP 6 that promoted inclusive education and training stated

*“a wider spread of educational support services will be created in line with what learners with disabilities [sic] require. This means that learners who require low-intensive support will receive this in ordinary [regular] schools and those requiring moderate support will receive this in full-service schools. Learners who require high-intensive educational support will continue to receive such support in special schools.”* (Department of Education, 2001: 15).

From the EWP 6 it appears as if inclusive education and training is not about promoting full-service inclusion schools as the only effective learning environment. With the aim of supporting all learners to full participation according to their educational needs, it appears as if at least regular, full-service and special school models have a place in South African education. The (most) effective learning environment(s) for learners with HI, however, still has to be established. The investigation of the ASC of learners with HI in special and full-service schools is an attempt to determine where the educational needs of learners with HI optimally can be met.

## 2.8 SOUTH AFRICAN LEGISLATION AND POLICY DOCUMENTS TO CREATE EFFECTIVE LEARNING ENVIRONMENTS

### 2.8.1 Orientation

The bio-ecological perspective connects the learner to all the systems and subsystems with which the learner is involved. Changes in the education system can achieve effective learning environments and optimally influence all the other systems connected to it. This section deals with the Constitution of the Republic of South Africa and policies related to education and its component parts that assume that their implementation will contribute to the creation of effective learning environments.

### 2.8.2 Constitution of the Republic of South Africa, 1996

The Constitution of the Republic of South Africa starts by presenting the values on which South Africa is built (RSA, 1996a: section 1 (a-d)):

- (a) *“Human dignity, the achievement of equality and the advancement of human rights and freedoms.*
- (b) *Non-racialism and non-sexism.*
- (c) *Supremacy of the constitution and the rule of law.*

- (d) *Universal adult suffrage, a national common voters roll, regular elections and a multi-party system of democratic government, to ensure accountability, responsiveness and openness.”*

Not only are the values crucial to understand the Constitution, they are also echoed in all the ensuing policies, including the EWP 6, regarding the education of learners who experience BLP. The values stated in (a), namely human dignity, the achievement of equality and the advancement of human rights and freedoms, as elaborated in the Bill of Rights in the Constitution (RSA, 1996a: sections 7 to 39), have special relevance.

According to the Bill of Rights, every person has an inherent *dignity* and the right to have his or her dignity respected and protected (RSA, 1996a: section 10), also in educational situations. The Bill of Rights certainly does not recognise differences in worth amongst learners with differences in abilities. For example, learners with HI may have unclear speech, such as nasal speech or a monotone. Such differences in speech may never cause educators or learners to disrespect the dignity of a learner with HI by being impatient, failing to involve him/her in discussions, or even mocking him/her.

*Equality* is a condition of two or more people being the same (equal) or being treated the same (equally), regarding all comparable characteristics. Equality in education refers mostly to structural issues, such as equal access to and equal distribution of resources (Donald *et al.*, 1997: 30).

According to the Bill of Rights, everyone is the same before the law and has the right to the same protection and benefit of the law (RSA, 1996a: section 9 (1)). Section 9 further states:

*“Equality includes the full and equal enjoyment of all rights and freedoms. To promote the achievement of equality, legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination may be taken”* (RSA, 1996a: section 9 (2); also refer to Department of Education, 1997: 41).

Indirect unfair discrimination can easily occur in schools and one of the groups at risk is certainly learners with impairments. Two aspects of avoidance of unfair discrimination regarding learners with impairments relate to the admission policy and the provision of assistive devices and special learning support. According to the South African Schools Act (SASA), a public school must admit learners and serve their educational requirements without unfairly discriminating in any way (RSA, 1996b: section 5 (1)). The National

Education Policy Act - Admission policy for ordinary public schools (RSA, 1998a: section 22 - 25) encourages schools to make their facilities accessible as far as practically possible to learners who require support, and also to make provision for arrangements if a school cannot provide the necessary learning support for such learners: the principal of the school is required to refer the application for admission to the head of the education department, who will arrange for consultation and assessment with the parents, educators and other support personnel concerned, before the learner may be admitted to another school.

According to the National Education Policy Act – Age requirements for admission to an ordinary public school, the age requirements for learners with special education needs [*sic*] who are admitted to ordinary (regular) public schools are the same as for other learners in ordinary (regular) public schools (RSA, 1998b: section 6). The age norm per grade is the grade number plus 6. For example, the age of a learner in Grade One should be  $1+6=7$  years; the age of a learner in Grade Nine should be  $9+6=15$  years (RSA, 1998b: section 3). Only the head of an education department may exempt a learner entirely, partially or conditionally from compulsory attendance if it is in the best interest of the learner (RSA, 1996b: section 4 (1)). There is little guidance, however, as to what are the “best interests” of a learner to be excluded from a learning environment (Department of Education, 1997:45).

According to the Bill of Rights, “*equality includes the full and equal enjoyment of all rights and freedoms*” (RSA, 1996a: section 9 (2)). Some learners can only have the same, full enjoyment as other learners with the use of assistive devices. For example, some learners with HI can only access the oral learning content and assessments if they may use hearing aids. Equality in the face of diversity logically leads to the term *equity* which refers to treating learners fairly, rather than treating them the same. It is fair to give learners with HI the same opportunity to access learning content by providing hearing aids and all forms of support necessary for enhanced communication. It is unfair to expect them to show mastery of the learning content if they cannot access the content.

Everyone has the *human right* to a basic education (RSA, 1996a: section 29 1(a)), meaning that everyone is entitled to and may claim education up to the basic level of adult basic education. ‘Everyone’ excludes no one. It includes all learners, also learners with HI.

The head of an education department and the principal must take into account the rights and wishes of the parents of a learner with special education needs, when they consider placement of such a learner (RSA, 1996b: section 5 (6)). Hereby parents are given a choice



in the placement of their children, and their rights and wishes can overrule the admission policy of any governing body of a school (Department of Education, 1997:44; DSSA, 1999:6).

The SASA makes the provision of support services mandatory (Department of Education, 1997: 44; DSSA, 1999: 7). The Member of the Executive Council responsible for education in each province, must provide education for learners with special education needs at regular public schools, where reasonably practicable (RSA, 1996b: section 12 (4)); provide relevant educational support services for such learners (RSA, 1996b: section 12 (4)); and take all reasonable measures to ensure that the physical facilities at public schools are accessible to disabled persons [*sic*] (RSA, 1996b: section 12 (5)).

By stating in Section 5 that no learner may be denied admission to any ordinary (regular) school on any grounds, the SASA took the first step towards a single inclusive education system for South Africa (Department of Education, 1997: 44). In Section 12, the clause '*where reasonably practicable*', however, still shifted the responsibility for provision of education onto the learner. Alternative wording suggested in the Quality Education for All Report was '*unless it cannot be made practicable*' or '*unless this would constitute an unjustifiable hardship*' (Department of Education, 1997: 44-45).

An issue that illustrates the consideration of practicability, concerns the language of learning and teaching. Everyone has the right to receive education in the official language or languages of his/her choice in public schools where that education is reasonably practicable (RSA, 1996a: section 29 (2); also refer to Department of Education, 1997: 42). It may be argued that some learners with severe HI cannot benefit from attending public schools because they cannot communicate fluently in any one of the 11 national languages used in the school. Section 6 (4) of the SASA (RSA, 1996b) makes provision for the use of a recognised Sign Language as an official language for learning purposes at a public school.

*"All citizens are equally entitled to the rights, privileges and benefits of citizenship, and equally subject to the duties and responsibilities of citizenship"* (RSA, 1996a: section 3 2(a & b)). If all learners are expected to fulfil their duties and responsibilities as citizens, all learners are expected to be prepared for the duties and responsibilities. Learners with HI are not considered lesser citizens than other learners; therefore they have the same duties and responsibilities, and are entitled to the same rights, privileges and benefits of citizenship.



### 2.8.3 Quality Education for All, 1997

The Quality Education for All Report is arguably the single most important report that changed the face of education in South Africa. The Report (Department of Education, 1997:i, 1) contained the results and proposals of a joint investigation by the National Commission on Special Needs in Education and Training (NCSNET) and the National Committee for Education Support Services (NCESS) into the challenge to (re)create an entire education system to recognise and address the diverse needs of the entire learner population, and to minimise, remove and prevent barriers to learning and development. Subsequent legislation and policy development, such as the EWP 6, followed up on the recommendations, principles and terminology contained in the report. The vision of the investigation was:

*“an education and training system that promotes education for all, and fosters the development of inclusive and supportive centres of learning that enable all learners to participate actively in the education process, so that they can develop and extend their potential and participate as equal members of society”*  
(Department of Education, 1997: 53).

In order to realise the above-mentioned vision, the Quality Education for All Report contained recommendations and strategies for the transformation of all aspects of the education system; the development of an integrated system of education; the provision of a range of schools for all learners; the infusion of ‘special needs and support services’ within the system; the development of a barrier-free physical environment at all schools; the pursuit of a holistic approach to institutional development; the development of a flexible curriculum to ensure access for all learners; the promotion of the rights and responsibilities of the parents, educators and learners; the provision of effective development programmes for educators, support personnel and other relevant human resources; the fosterage of holistic and integrated support provision; the development of a community-based support system; and the development of funding strategies that ensure redress, sustainability and access to education for all learners (Department of Education, 1997: i-ii, 54-68).

### 2.8.4 Tirisano document, 2000

The Department of Education published a Corporate Plan for January 2000 – December 2004 to outline who they are, what their core business is, how they go about fulfilling their mandate, what values underpin their work, and what they have been tasked to do by the Minister in the next five years (Department of Education, 2000a). The underlying policy

elements of the Tirisano<sup>3</sup> Document were access, success, quality, equity and redress (Department of Education, 2000c).

The Corporate Plan was supported by an Implementation Plan for Tirisano and individual performance agreements (Department of Education, 2000a; Department of Education, 2000c). The Minister had identified nine priorities which would enable the development of an education and training system to benefit South Africa (Department of Education, 2000c). The nine priorities had been organised into five core programme areas, of which one addressed school effectiveness and educator professionalism (Department of Education, 2000c). Priorities were that the schools became centres of community life, that conditions of physical degradation in South African schools were terminated, that the professional quality of the teaching force was developed, and that the success of active learning through outcomes-based education was ensured (Department of Education, 2000c). One project wanted all schools to meet the minimum physical and infrastructural requirements necessary to establish and support a conducive learning and teaching environment for all the learners, including those who experience BLP (Department of Education, 2000c). Another project aimed to improve budgeting for learner support materials and infrastructure development (Department of Education, 2000c).

Achieving the changes as envisioned in this document, will be a long and slow process. Although many of the changes are embedded in laws and policies, the willing participation, engagement, commitment, questioning and learning by all the individuals involved are prerequisites for the successful implementation of the intended changes (Department of Education, 2000c; Donald *et al.*, 1997: 17).

#### 2.8.5 Education White Paper 6. Special Needs Education: Building an inclusive education and training system, 2001

The Department of Education's understanding of inclusive education was discussed in 2.7.4 (2). The Education White Paper 6 (EWP 6) further outlines the vision for an inclusive education and training system on a national, provincial, district and school level. By following the guidelines and proposals in the EWP 6, inclusive schools can be established. The major steps of the implementation plan regarding special, regular and full-service schools and spanning 20 years are described below.

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<sup>3</sup> Tirisano means '*let us work together*'.

The *immediate to short-term steps*, for which three years were allocated, include completing the audit of special schools and implementing a programme to improve efficiency and quality; designating, planning and implementing the conversion of 30 special schools to special schools/resource centres in 30 designated school districts; designating, planning and implementing the conversion of 30 primary school to full-service schools in the same 30 districts as the special schools; and designating, planning and implementing the district support teams in the same 30 districts as the special and full-service schools (Department of Education, 2001: 42-43).

The *medium-term steps*, for which five years were allocated, include expanding the number of special schools/resource centres, full-service schools and district support teams created through the immediate to short-term steps in line with lessons learnt and available resources (Department of Education, 2001: 43).

The *long-term steps*, for which twelve years were allocated, include expanding provision to reach the target of 380 special schools/resource centres, 500 full-service schools and colleges and district support teams, and the 280 000 out-of-school children and youth (Department of Education, 2001: 43).

## 2.9 CONCLUSION

With the introduction of the bio-ecological perspective and the asset-based approach as a framework for interpretation of the findings of this research, the tone was set for a systemic understanding of the challenges that learners with impairments and their educators experience in schools. Different models to provide effective learning environments to deal with the challenges were considered, and the South African solution to provide effective learning environments for all its learners was looked at. In the past, learners with HI received special educational support in special schools. The current solution is to include learners with HI in full-service inclusion schools. The realities of providing equitable education and support to learners with HI to access the education opportunities are often overlooked in the efforts to implement inclusive education and participation policy within the time frame proposed in the EWP 6. The delayed implementation of the immediate to short-term steps, as proposed in the EWP 6, might not only be significant in portraying the capabilities and willingness, or lack thereof, of the education system to change, but might also give research such as this study the opportunity to inform future inclusive education policy implementation.

The study will be using the academic self-concept of learners with HI to investigate the effectiveness of two different learning environments. The academic self-concept as conceptualised for the study follows in Chapter 3, and the research design to investigate the effectiveness of the learning environments is explained in Chapter 4.

## CHAPTER 3

### ACADEMIC SELF-CONCEPT

#### 3.1 ORIENTATION

Self-concept is one of the oldest human sciences research topics and is elaborately discussed in an 1890 psychology textbook of William James (Marsh, Byrne & Shavelson, 1992: 45). Despite all the research, however, there exist several disparate conceptual models of *self-concept* and there are many so-called synonyms, such as self-identity, self-esteem, self-regard and self-perception (Byrne, 1996: 1-2, 7). These problems have impeded self-concept research in at least three ways: they obstruct the replication of research, it is difficult to agree on the best methods for measuring self-concept, and it can be difficult to connect the research hypotheses and results to a specific self-concept theory or model (Byrne, 1996: 7; L'Ecuyer, 1992: 101). Brinthaupt and Lipka (1992: 1) recommended that researchers simultaneously study the theoretical, developmental and methodological aspects of the self-concept considering that the three aspects are related to one another and each co-determines the other (also see Hattie, 1992: 3). In this study, the theoretical, developmental and methodological aspects of self-concept are incorporated (refer to 3.3, 3.6 and Chapter 4 respectively). The different self-concept models are discussed next, followed by the theoretical framework of the notion *self-concept* as used in this study, and an understanding of the academic self-concept.

#### 3.2 SELF-CONCEPT MODELS

A model is a structural representation of a theory enunciating the mutual interrelationships among the concepts and hypotheses (Kaplan, 1997: 116). Byrne (1996: 8) divided the theoretical models of self-concept into two groups: Models supporting the self-concept as a unidimensional construct, and models supporting the self-concept as a multidimensional construct.

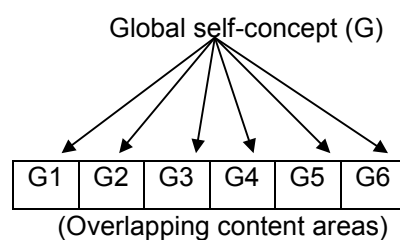
##### 3.2.1 Unidimensional model

The unidimensional model, also called the nomothetic (referring to the self-concept as a universal and generalised construct) model, is the oldest and most traditional way of viewing the self-concept (Strein, 1993: 274). In this model, the self-concept is seen as a

unidimensional and overarching construct that can be either positive or negative, and can influence behaviour in any situation (Burden, 1998: 292; Byrne, 1996: 9; Strein, 1993: 274, 276). For example, success on the sports field can lead to a better global self-concept, which in turn can lead to better academic achievements.

According to the unidimensional model, the self-concept does not consist of different dimensions, such as academic or social self-concept, but consists of overlapping content areas, such as academic achievement or appearance, and equal importance is given to each of the content areas, as represented in Figure 3.1. When using a measuring instrument based on the unidimensional model, the scores of each item are summed to get a global self-concept score. Recent research, however, has shown that the self-concept is not unidimensional, but multidimensional. Different people each attach unique measures of importance to each of the content areas; therefore, the simple sum of the scores may not be the appropriate way to reflect the self-concept accurately (Byrne, 1996: 13-14; Strein, 1993: 274, 276).

Figure 3.1 The unidimensional self-concept model (adapted from Byrne, 1996: 10)



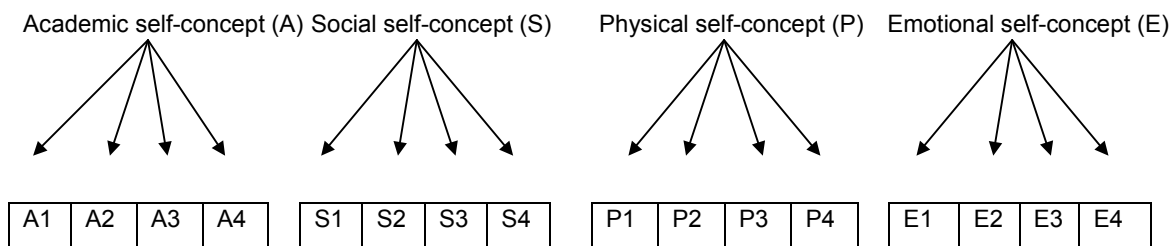
### 3.2.2 Multidimensional models

There are at least five permutations of the multidimensional model.

#### (1) Independent factor model

According to the independent factor model, the self-concept consists of different facets or dimensions which function independently from one another, as shown in Figure 3.2. The dimensions develop independently through experiences, abilities and interaction with significant other people and are not hierarchical, and subsequently there is no global self-concept. Little, if any, justification for the independent factor model exists in literature on the self-concept. Research has shown that there are correlations amongst the dimensions (Byrne, 1996: 15-16).

Figure 3.2 The independent factor model (Byrne, 1996:11)

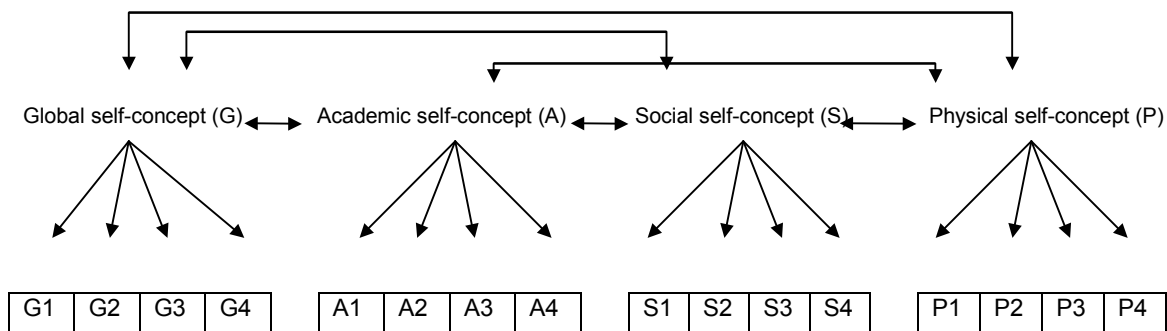


(1-4 represent the different items on each of the respective scales)

(2) Correlated factor model

According to the correlated factor model, the self-concept consists of different dimensions, such as academic and social self-concept, which shows positive correlations with one another. The global self-concept does not exist as an overarching global self-concept, but as one of the dimensions (Byrne, 1996: 16-17), as represented in Figure 3.3.

Figure 3.3 The correlated factor model (adapted from Byrne, 1996:10-11)



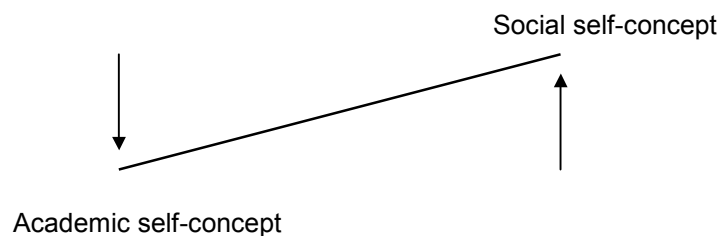
(1-4 represent the different items on each of the respective scales)

(3) Compensatory model

The compensatory model was originally developed to explain the self-concepts of learners with special educational needs, in this study termed learners who experience BLP (see 2.4.2). The model acknowledges the existence of a global self-concept and different subordinate self-concept dimensions. The dynamics, however, amongst the dimensions are unique in the sense that a low self-concept in one dimension is compensated for by a higher or exaggerated high self-concept in another dimension, as represented in Figure 3.4. The self-concept dimensions are thus inversely related to one another. For example, research found that a low academic self-concept of learners with special educational needs (BLP) was associated with a high social and physical self-concept. The inverse was also found, namely

that a high academic self-concept of learners with academic giftedness was associated with a low social and physical self-concept. The underlying principle is that the compensation is an unconscious attempt by the learner to still have an average feeling of well-being when low self-concept dimensions are experienced. Not many changes occur in the global self-concept, since changes in the self-concept dimensions are balanced in a compensatory way amongst the self-concept dimensions. The internal/external frame of reference model of Marsh (1986b, refer to 3.8.1) relates to the compensatory model. It is unrealistic, however, to accept that all learners with special educational needs (BLP) will have high social and physical self-concepts (Burden, 1998: 292; Byrne, 1996: 17-18; Hattie, 1992: 69; Strein, 1993: 278-279).

Figure 3.4 The compensatory model (adapted from Strein, 1993: 275)

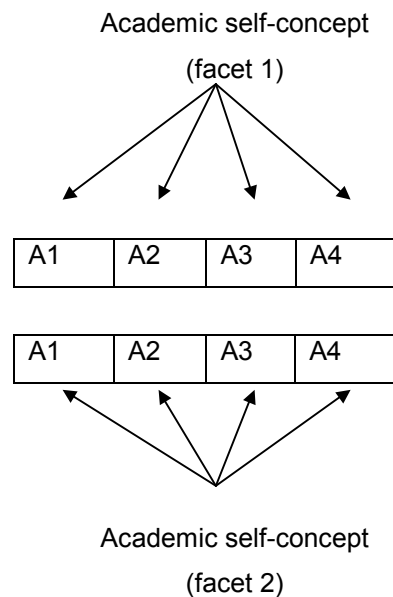


(4) Taxonomic model

Most of the self-concept models consist of a facet (global self-concept) with several levels (dimensions), such as academic, social and emotional self-concept. The taxonomic model has a factorial design, in other words there are at least two self-concept facets, each with at least two levels (dimensions) (Byrne, 1996: 20), as represented in Figure 3.5. The different self-concept facets form a cluster of self-perceptions about an aspect, such as academic self-concept. According to the taxonomic model, the clusters function fairly independently of one another. Criticism against the model is that the different groupings apparently do bear relation to one another (Strein, 1993: 278).



Figure 3.5 The taxonomic model (only academic self-concept is shown)  
(adapted from Byrne, 1996:12)



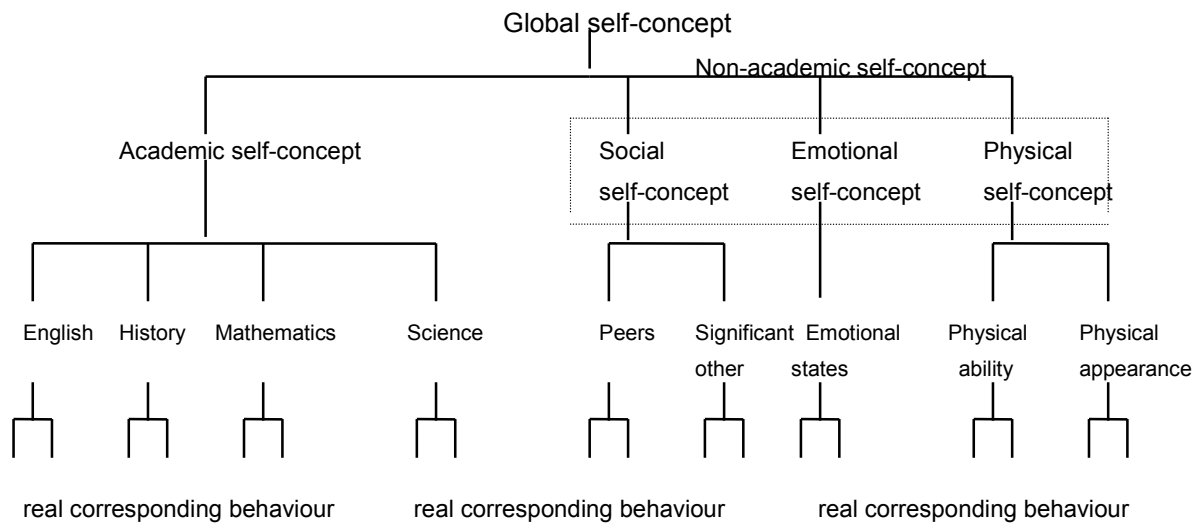
(1-4 represent the different items on each of the respective scales)

(5) Hierarchical model

Shavelson, Hubner and Stanton (1976) were the first researchers to create an empirically testable hierarchical self-concept model (Byrne, 1996: 22). The model has been expanded and changed, although the basic structure has stayed similar. The hierarchical model, as represented in Figure 3.6, can be described as a pyramid with a global self-concept at the apex. Intermediate level self-concepts, such as academic self-concept and social self-concept, follow beneath the apex. Beneath each of the intermediate level self-concepts, further specific self-concepts are found, such as subject-specific academic self-concepts like mathematics and first language self-concepts. Although the components of hierarchical models can differ, the pyramidal description applies for all hierarchical models. The self-concepts are found increasingly differentiated from the top to the bottom in the model. The foundation of the pyramid is made up of the behaviour that concurs with each dimension directly above (Byrne, 1996: 22; Hattie, 1992: 86; Strein, 1993: 276).

The self-concept dimensions are related to one another, but can be seen and studied as separate constructs, in other words, although there are correlations amongst the dimensions, each dimension operates as a separate construct to be interpreted and studied on its own (Byrne, 1996: 23-24). The hierarchical structure implies that the strength of the correlations amongst the self-concept dimensions varies in a fixed pattern. This can be explained by

Figure 3.6 The hierarchical model (Shavelson, Hubner &amp; Stanton, 1976: 413)



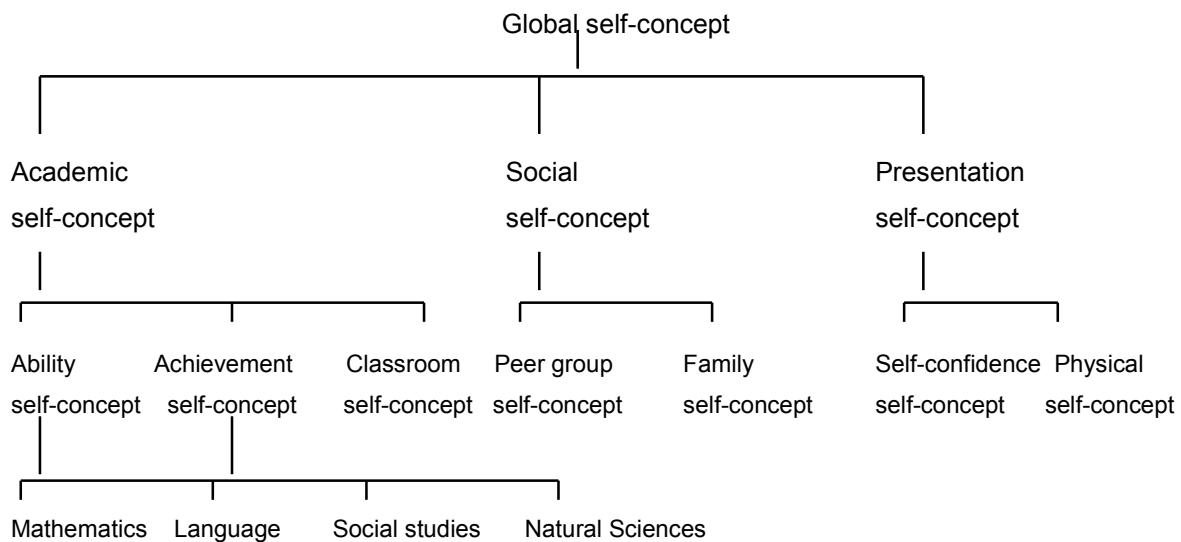
using the academic self-concept part of the model. Global self-concept correlates the strongest with academic self-concept, the second strongest with subject-specific self-concept, and the weakest with academic achievement, such as mathematics and English, which is the corresponding behaviour of the subject-specific academic self-concept. Academic self-concept correlates more strongly with subject-specific academic self-concept than with achievement. Subject-specific academic self-concepts, for example mathematics self-concept, correlate stronger with the corresponding academic achievement, for example mathematics achievement, than with non-corresponding academic achievement, for example history achievement (Byrne, 1996: 23-24; Lyons, 1989: 76, 80; Marsh, 1992: 40; Marsh, Byrne & Shavelson, 1992: 51, 70; Strein, 1993: 277).

The hierarchical model was subjected to multiple studies. Factor analyses were done, relations were investigated between self-concept and other variables such as achievement, degree and aspirations, and wider application of the hierarchical model to different genders and cultures (Strein, 1993: 276).

The Song and Hattie Scale, as represented by Figure 3.7, is also based on the Shavelson *et al.* (1976) model, but Song and Hattie (Byrne, 1996:31; Hattie, 1992: 83-84) made two changes. Firstly, the academic self-concept was divided into achievement, ability and classroom self-concept. *Achievement self-concept* refers to perceptions of actual achievement, for example 'I am proud of my report' and 'I am satisfied with my school work'. *Ability self-concept* refers to the extent that the learner believes that the learner is able to

achieve, for example *'I think that I have the ability to achieve good marks'*. *Classroom self-concept* refers to self-confidence in classroom activities, for example *'Most of my teachers do not understand me'* and *'I am worth nothing in the class'*. Subject-specific self-concepts are found under achievement and ability self-concepts. The second change was that they divided non-academic self-concept into social self-concept and presentation self-concept.

Figure 3.7 Song and Hattie's self-concept model (Byrne, 1996:31)

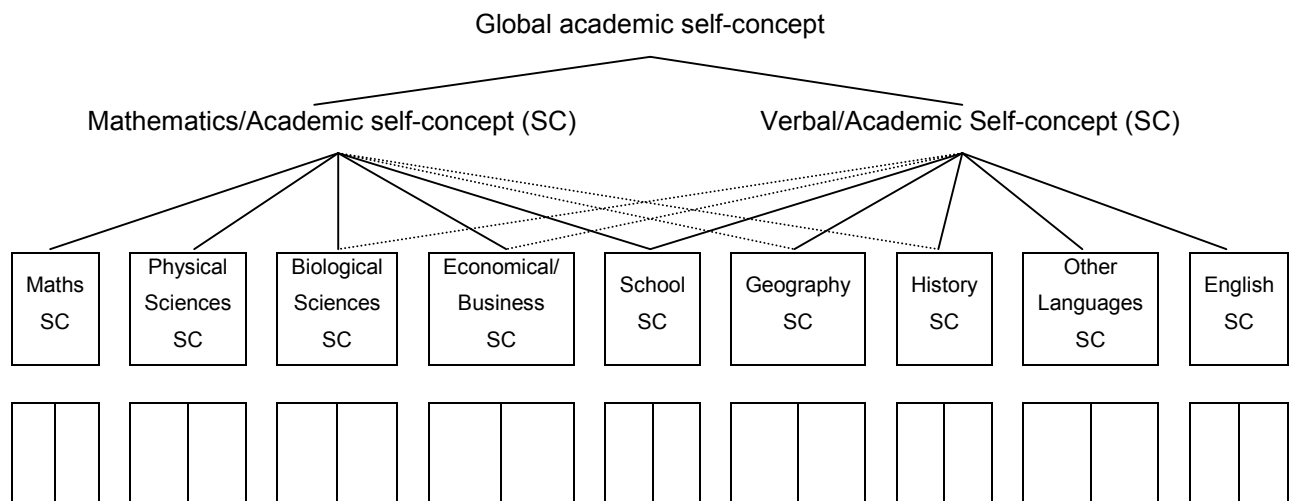


### 3.3 DEVELOPMENT OF THE THEORETICAL FRAMEWORK OF THE TERM SELF-CONCEPT AS USED IN THIS STUDY

The importance of a theoretical underpinning when developing instruments, is aptly stated by Byrne (1996: 43): “ ... a researcher either validates a theory by ensuring sound instrumentation or validates a measuring instrument by ensuring the soundness of the theory within which it was developed.” Kaplan (1997: 117) described theory as a number of hypotheses that are connected in a significant way and stated that each hypothesis must be understood against the background of the rest of the theory. Still, theory is just theory: “A theory ... is a policy, not a creed.” (Kaplan, 1997: 116). Knowledge of a theory can be developed by building out the theory, through its wider application, or by building it in, through intensifying and specialisation of the existing theory (Kaplan, 1997: 116-117). Therefore, theory should not be static, and should be both the starting and ending point of research. A model, as mentioned before, is a visual, structural representation of the theory wherein the mutual relationships amongst the concepts and hypotheses are made clear, and has as its aim the simplification of the theory (Byrne, 1996: 80; Hattie, 1992: 5; Kaplan, 1997: 116).

The theoretical underpinning of the notion self-concept as used in this study is based on the hierarchical model of Shavelson *et al.* (1976), in particular the adaptations by Marsh, Byrne and Shavelson (1988: 378), and the dynamic self-concept model of Jacobs (1981: 161; 1999). The Shavelson *et al.* model has been among the most tested and defended models (Byrne, 1996:83). Results of studies in other cultures support the hierarchical, multifaceted nature of the self-concept model (Hattie, 1992: 113; Marsh & Hattie, 1996; Mboya, 1993), although research has yet to be undertaken in any systematic way within various South African cultures. Figure 3.8 presents the academic self-concept part of the model.

Figure 3.8 The self-concept model of Marsh, Byrne and Shavelson (1988: 378)<sup>1, 2, 3</sup>

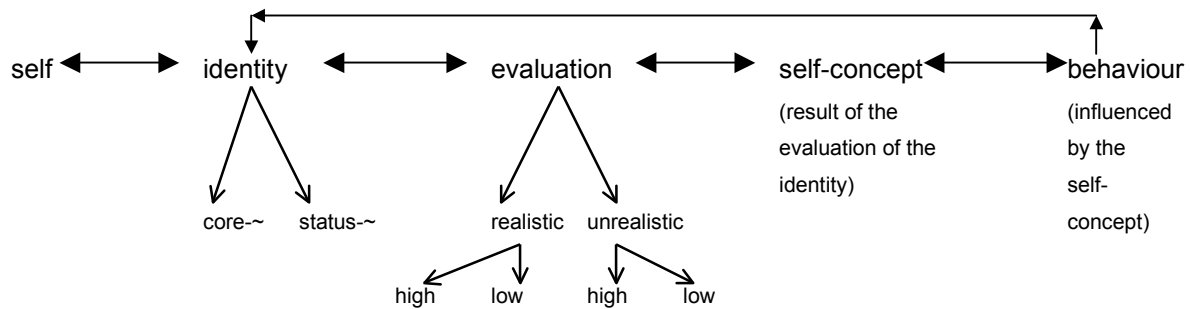


Jacobs regards the self-concept as the result of several processes as schematically represented in Figure 3.9:

<sup>1</sup> Core school subjects are selected to form part of the revised model. The subjects are ordered from a reasonably pure mathematics/academic component to a reasonably pure language/academic component (Marsh, Byrne & Shavelson, 1988: 377).  
<sup>2</sup> Criticism on the model has it that the decision of the core school subjects was arbitrary, and that no provision was made for a subject such as music (Marsh, 1990: 635).  
<sup>3</sup> The lines descending from the core subjects could represent components of those subjects. For example, the lines descending from mathematics could represent algebra, geometry and trigonometry, and the lines from English could represent prose, essays and grammar.

Figure 3.9

The self-concept model of Jacobs (1981: 161; adapted as in a personal interview with Jacobs, June 1999)



In Figure 3.9, *self* refers to all the person's characteristics (Plug *et al.*, 1989: 317), including the self-concept. A person's identity is the answer to a question such as *Who am I?* (Jacobs, 1999). Possible answers are: I am a girl. I am a learner. For each person there is a unique combination of answers to the question *Who am I?*. The answers are not static, and a person's identity can change in the course of time. The identity is thus unique, multifaceted and changeable. In different situations different parts of the identity can come to the fore (Byrne, 1996: 251; Jacobs, 1999) during which other parts of the identity are less prominent. Often a person attaches value of a greater or lesser extent to a certain part of the identity. The core identity (-ies) is the identity (-ies) to which the person attaches much value, and the status identity (-ies) is the identity (-ies) found on the periphery of importance and is therefore less significant for the person (Jacobs, 1999; also see Martin & Debus, 1998: 531).

For each identity, a person can develop a specific self-concept. Evaluation of the identity takes place in the light of the characteristics of the individual system and events that have happened in the systems surrounding the individual system: deflected meanings in the unconscious, influence of significant others such as parents, educators and peers, and praise and punishment received. The evaluation of the identity (McKay & Fanning, 1992:1) can be realistically high or low, or unrealistically high or low (Jacobs, 1999). The self-concept, which is the result of the evaluation of the identity, can, therefore, also be realistically high or low, or unrealistically high or low (Jacobs, 1999). When a mathematics learner with good intellectual potential and good marks evaluates his or her mathematics identity, the evaluation and resulting mathematics self-concept can be *realistically high*. A *realistically low* evaluation of mathematics identity and resulting low mathematics self-concept could originate from a mathematics learner with limited intellectual potential who achieves low marks in mathematics. Unrealistic evaluations are obviously also possible. What must be kept in mind, though, is that if the mathematics identity is a core identity, the evaluation thereof will influence the learner more than when a status identity is evaluated.

The self-concept of a learner influences his or her behaviour (Jacobs, 1999). There are ways of behaviour which are characteristic of learners with high and low self-concepts (see Botes, 1987: 42, 115-120, 122; Meintjies, 1998: 12; Nthoba, 1999: 63, 68; Scott, Murray, Mertens & Dustin, 1996: 289; Wiest, Wong & Kreil, 1998: 603). Behaviour originating from the evaluated identity, that is the self-concept, also feeds back into the identity and the evaluation thereof (Jacobs, 1999). The behaviour can confirm or contradict the core or status identity. The behaviour confirms the core or status identity when the learner still attaches the same worth and meaning to the core or status identity. When the learner decides or realises that what he or she has considered to be the core or status identity, does not have the same worth or meaning any more, that identity changes. Behaviour often confirms the evaluations which were made and can be regarded as a form of self-fulfilling prophecy. For example, learners can evaluate themselves unrealistically low, and then behave accordingly and therefore evaluate themselves unrealistically low (Jacobs, 1999). Learners, however, are not necessarily bound to these dynamics, but can change the meanings attached to identities, and change their evaluation and, therefore, their self-concept.

### 3.4 SELF-CONCEPT AND SELF-ESTEEM

Two self-terms often found in the literature that can cause confusion and ambiguity are *self-concept* and *self-esteem*<sup>4</sup>. Hattie (1992: viii) investigated the different manifestations of *self-concept* and *self-esteem* in the literature and maintained that the following words are used as synonyms for *self-concept* and *self-esteem*:

<b>self-concept</b>	<b>self-esteem</b>
self	self-regard
self-estimation	self-reverence
self-image	self-accepting
self-perception	self-respect
self-awareness	self-worth
self-imaginary	self-feeling
self-consciousness	self-evaluation

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<sup>4</sup> Confusion and ambiguity regarding the terms and their ascribed synonyms obviously also hold for academic self-concept, academic self-esteem *et cetera*.

Hattie offered striking criticism on the multitude of self-terms: “*We do not want to impose meanings on our language tools for our own convenience, nor do we want to invent new tools merely to serve a particular usage that could be idiosyncratic.*” (Hattie, 1992: 5).

One group of proponents of the concept *self-esteem* regard the *self-concept* and *self-esteem* as mutually exclusive concepts. According to them, *self-concept* or self-knowledge contains cognitive, descriptive components and answers the question ‘*Who am I?*’. *Self-esteem* or self-evaluation contains affective, evaluative components and answers the question ‘*How do I feel about who I am?*’ (Brinthaupt & Lipka, 1992: 3; Campbell & Lavalley, 1993: 4). *Self-esteem*, therefore, could be understood as a concept referring to self-respect, own worth or self-regard (Plug *et al.*, 1989: 317).

Another perspective holds that *self-concept* refers to a broad definition of the construct and includes cognitive, affective and behavioural aspects. *Self-esteem* is then regarded as a more limited, evaluative component of the self-concept. Brinthaupt and Erwin (1992:155-156) mentioned that some authors associate *self-concept* with self-description and *self-esteem* with self-evaluation of the self-description (for example, ‘*I do not like myself*’). According to them, self-description can contain evaluative (for example, ‘*I like reading*’) or non-evaluative (for example, ‘*I am an athlete*’) undertones. The self-evaluation refers to the measure in which a person likes his or her described self, or is satisfied with the described self, or refers to the discrepancy that exists between the ideal and real self. The question that arises now is how to separate the descriptive and evaluative components of the self, since a person can describe and evaluate him- or herself in one sentence. The inseparability of the descriptive and evaluative components shows that separation of the components can become a methodological problem.

Hattie (1992: 54, 171), among others, held a third perspective on the self-concept/self-esteem distinction. To him, the difference between *self-concept* and *self-esteem* lies in the degree in which the characteristic concerned is regarded as important. The self-esteem will only be affected when certain dimensions of the self-concept are regarded as important. For example, a boy may declare that he is not a good sportsman, which is evidence of a low physical self-concept. If the boy, however, does not regard sport as important, his self-esteem would not be strongly affected (refer also to core and status self-concepts in 3.3).

Byrne (1996: 6), however, pointed out that despite conceptual assertions that support the distinction between *self-concept* and *self-esteem*, research on construct validity has as of yet not been able to demonstrate conclusively a distinction between the two constructs.

Brinthaupt and Erwin (1992: 137-171) argued that the failure to differentiate the two terms is because most self-concept research use self-report instruments with items that elicit descriptive and evaluative responses, making it virtually impossible to separate the two constructs. It appears that a theoretical distinction exists between *self-concept* and *self-esteem*, but that it is difficult to distinguish between the constructs in practice (Hattie, 1992: 171, 247; McCreary-Juhasz, 1992: 227).

### 3.5 A FUNCTIONAL UNDERSTANDING OF SELF-CONCEPT

Definitions have as object the clarification and explanation of the meaning of concepts as they have been used in practice. Definitions are formed through a combination of concepts of which the meanings are already clear. Brinthaupt and Lipka (1992: 3) observed that self-concept definitions contain structural characteristics, processes, or both. They stated that researchers have described the self-concept as a schema, a multi-dimensional construct, a series of narratives, a linguistic description of subjective experiences or an extensive theory.

Hattie (1992: 5-6) argued against definitions and regarded the use of open concepts as a more desirable strategy to define/describe a concept. Psychologists who use open concepts, develop a system of convergent reduction sentences which are related to one another. A reduction sentence does not give a complete definition for the concept which it represents. It only determines the meaning of the concept partially or conditionally, without trying to be all encompassing, because the possibility exists that there may be applications outside the current investigated field. Concepts are therefore left 'open' for application in new contexts.

Since the self-concept model of Shavelson *et al.* (1976) forms an integral part of the theoretical underpinning of the study, it has relevance to take note of their understanding of self-concept:

*“Self-concept, broadly defined, is a person’s perception of him- or herself. These perceptions are formed through one’s experience with and interpretations of one’s environment and are influenced especially by reinforcements, evaluations by significant others, and one’s attributions for one’s own behavior.”* (Shavelson & Bolus, 1982: 3).

Although the Shavelson *et al.* model of self-concept focuses on the structure of self-concept, their understanding of self-concept focuses on the personal processes that constitute the self-concept. They place the self-concept within the individual system, and the factors which



may form and influence the self-concept in the individual and adjoining systems. It is important to note that the self-concept of a person is a perception, and as such cannot be argued with the person. Although the perpetuating nature of the relation between self-concept and behaviour is mentioned, the possibility for change is not explicitly contained in their understanding of self-concept. *“These self-perceptions influence the way one acts which in turn influences one’s self-perceptions.”* (Marsh & Yeung, 1997b: 692).

In the study, the understanding of self-concept of Shavelson *et al.* (1976) is accepted as a broad description of self-concept. In the light of recent research, perceptions of academic, social, emotional and physical dimensions can be read into the description.

Shavelson *et al.* (1976: 411-415), Marsh *et al.* (1992: 48-50) and Hattie (1992: 98-113, 242) identified a number of characteristics which further clarify the self-concept.

Self-concept is organised. People base their perceptions of themselves on a wide variety of personal experiences. To reduce the complexity of all the experiences, the individual organises the experiences into categories, thereby giving an organised or structured content to the self-concept.

Self-concept is multifaceted or multidimensional. The different categories formed by the person reflect the multifacetedness or multidimensionality of his or her self-concept. It appears as if the categories are not unique to each individual, but are shared by groups of people; therefore, a self-concept model can be constructed which contains, for example, academic, social, emotional and physical facets or dimensions. By explicitly naming a few dimensions, the possibility of idiosyncratic dimensions is not denied. Le Roux (1999: 223), for example, referred to physical, academic, social, value, family and psychic selves. Although researchers generally recognise the multidimensionality of the self-concept, there are differences concerning the specific dimensions and how the dimensions are structured (Hattie, 1992: 242; Marsh *et al.*, 1992: 53). Additionally, the dimensions of the self-concept can themselves be multidimensional (Byrne, 1996: xv) and can be divided into smaller and more descriptive subconstructs. Until the preadolescent stage, more self-concept dimensions develop with increasing age (Byrne, Shavelson & Marsh, 1992: 175, 191). Although the constituents of the self may be divided into many dimensions, it is most important to understand how each individual (re)assembles the dimensions into a conception of self. The dimensions of the self are interpreted by the individual in a manner that can allow for various dimensions to become more salient in the interpretations, understandings and decision-making, depending on the interpretation, judgement or decision to be made.

The unity is thus more related to the processing strategies used than to the constituent parts, an idea well explained by Wittgenstein (1958: section 67) as that the strength in the rope “*lies not in one fibre running throughout its length, but in the overlapping of many fibres*”.

Self-concept is hierarchical. The dimensions of the self-concept form a hierarchy with individual experiences of particular situations at the basis of the hierarchy, building up towards a global self-concept at the apex of the hierarchy. The conception of a hierarchy may give the impression that lower dimensions in the hierarchy can be added up to form the higher dimensions of the hierarchy. There is little evidence, however, to support this line of thinking (Marsh & Hattie, 1996).

The global self-concept is stable. Lower down in the hierarchy the self-concept becomes increasingly dependent on particular situations and therefore becomes less stable. At the basis of the hierarchy the self-concept varies as the situations vary. Changes in the lower levels of the hierarchy are probably attenuated by conceptualisations in the higher levels, which may make the self-concept show resistance against change. Hattie (1992: 115-116, 246-247) agreed with the view on stability of the self-concept: “... *we do not wake each morning as strangers to our self.*” (Hattie, 1992: 246). He mentioned that memory, habit and goals contribute to the stability of the self-concept in the higher levels of the hierarchy. On the other hand, the self-concept also has dynamic qualities and can change, and can also bring about change in behaviour.

Self-concept is a developmental phenomenon. Babies do not differentiate themselves from the environment. The self-concepts of young children are global, undifferentiated and situation-specific. As children develop and learn from experiences, they increasingly differentiate themselves from the environment. Also, as language concepts develop, concepts develop wherein to categorise the experiences. With increasing age the self-concept becomes more differentiated and multifaceted.

Self-concept is both descriptive and evaluative. A person develops a description of him- or herself in different situations, but also forms an evaluation of him- or herself in the situations. Evaluations can be made in the light of absolute standards, such as ideals, or relative standards, such as those of the peer group or significant others. The evaluations vary in importance from individual to individual, and from situation to situation.

Self-concept is unique, since each person ascribes meaning in a unique way, also to him- or herself. Unique factors can also influence each person in a unique way to ascribe meaning.

Self-concept also can provide direction for behaviour. Self-concept is not behaviour, does not control behaviour and does not explain all behaviour, but can be concluded from behaviour and can influence behaviour. Self-concept will probably have a greater influence on behaviour in situations where a person is not part of a group.

Self-concept can be culturally bound. There are two approaches regarding the relation between self-concept and culture: Self-concept varies little across cultures, or self-concept varies radically from one culture to another in accordance with the system of symbols used by the specific cultures (Hart & Edelstein, 1992: 299). Cultural differences relate to the worth or importance attributed to the self-concept, or certain aspects of the self-concept (Hattie, 1992: 189) (refer to 3.7).

### 3.6 DEVELOPMENT OF AND CHANGE IN SELF-CONCEPT

As the self-concept develops, it changes and as the self-concept changes, it can develop. The difference is therefore only functional in the sense that *development* refers to the formation of the self-concept with the course of time, and that *change* refers to the change in evaluation, that is, to combinations of high or low, and realistic or unrealistic.

When the description of self-concept, as stated by Shavelson *et al.* (1976: 411), is taken as a point of departure, it is clear that perceptions of the self, environmental influences, reinforcements, significant others and behaviour contribute to the development of the self-concept. From the dynamic self-concept model of Jacobs (1981, 1999) in Figure 3.9, it follows that the first requirement for self-concept development is the awareness of the self, followed by the formation of identities to be evaluated, resulting in perceptions of the self, hence a self-concept.

The development and formation of the self and self-concept commence at a very early age in life (Botes, 1987:25). Through the baby's interaction with other people, the baby gradually becomes aware of him- or herself in the environment. An identity develops, namely '*I as a child*'. The identity is evaluated, in other words a perception of the '*I*' is formed, and a self-concept originates; and this often very much depends on how the baby perceives the reaction of others towards him or her. Environmental influences, contingencies (reward and punishment) and significant others contribute to the way in which a child evaluates him- or herself. This implies that the primary education situation has a fundamental share in the formation of the self-concept. The experiences, pleasant or unpleasant, which children have during the early life phases, can have a lasting influence on their perceptions of

themselves during later years. The development of a high self-concept is predisposed by warm and democratic education styles. Children exposed to authoritarian education styles tend to form low self-concepts (Botes, 1987: 27, 33, 35; Hattie, 1992: 118; McKay & Fanning, 1992: 2; Nthoba, 1999: 18; Pretorius, 1992: 41, 46). As the child grows older, the range of experiences deepens and increases, cognition develops and vocabulary expands, more identities are formed which can be evaluated more variedly and a multidimensional self-concept originates.

The role of significant others in the development of the self and evaluation of the identities cannot be underestimated. Hattie (1992: 53) suggested that people become significant to a person when they exert a significant influence on the person, and not because they fulfil certain roles or fill a position of power. The child observes the behaviour of significant others towards him or her, and draws conclusions regarding their thoughts of him or her. In turn, the conclusions play an important role in the child's perceptions of him- or herself. This process links with the *'looking-glass self'* of Cooley – I see myself in the behaviour of others towards me (Ashmore & Ogilvie, 1992: 239; Botes, 1987: 26; Hattie, 1992: 17; Pajares & Schunk, 2002: 6; Wigfield & Karpathian, 1991: 235). The feedback can be regarded as important for the self-concept if the feedback is relevant to a self-concept dimension considered to be important by the person. If a learner has higher regards for his or her mathematics self-concept than his or her English self-concept, feedback with regard to the mathematics self-concept will be significant. Also, the significant other person(s) must be truly significant to the specific self-concept dimension, for example feedback on mathematics performance by the mathematics educator may have more influence on the mathematics self-concept of the learner than feedback on mathematics performance by the sport educator.

Ashmore and Ogilvie (1992: 237) expanded the role of the significant other by postulating that patterns of thought, feeling and behaviour, as embodied in relationships with significant others, are internalised consciously or unconsciously during the course of time. The internalised patterns form a basis according to which the identities relevant to the specific group of significant others are evaluated. The perception of the opinions of significant others, however, is not the only way in which the self-concept can be influenced. Some people have few or no significant other people in their lives, and must base their self-perceptions on less personal, ethnic or group role models (McCreary-Juhasz, 1992: 227), such as when a person compares him- or herself to an ideal self (McCreary-Juhasz, 1992: 205-206). The reference group to which the child belongs, for example the cultural, ethnic, gender and/or religious group, can influence the formation of the self-concept. The reference

groups denote the self in different ways and have specific expectations, norms and standards to which each group adheres. Any member of the group will be measured accordingly (Botes, 1987: 32). When the child regards him- or herself as part of a reference group, the child will evaluate the self according to the group's expectations, norms and standards, and will behave according to the group identity (McCreary-Juhasz, 1992: 207). The self can also be compared to external factors such as the mass media, film stars, historical events and other interest groups (McCreary-Juhasz, 1992: 206).

When children start school, the school environment makes a further contribution to the development of the self-concept, especially in areas such as the academic self-concept which does not figure prominently during the preschool years (Grobler, Myburgh & Kok, 1998: 49). The personality, principles, verbal and non-verbal communication patterns, and the global and subject-specific self-concepts of the educator can influence the development of the academic and subject-specific academic self-concepts of a learner (Botes, 1987: 34-35). Additionally to evaluations by the educator, evaluations by the class peers and the learners themselves can influence the development of their academic and subject-specific academic self-concepts (Botes, 1987: 10-11).

Marsh, Craven and Debus (1991: 389-391) found that children as young as five to eight years have multidimensional, hierarchically structured self-concepts, including academic self-concept and global self-concept. Therefore, it appears as if self-concept and academic self-concept develop before the age of eight years. It is not clear, however, whether these various self-concepts are integrated.

Byrne (1996: 155) and Hattie (1992: 62, 242) reported that some researchers are of the opinion that the young child describes him- or herself more in terms of objective, concrete characteristics, and the adolescent more in terms of subjective, abstract characteristics. It also appears as if there are individual differences in the way information is integrated, although younger children tend to integrate information about dimensions of themselves in a less sophisticated way than adolescents (Hattie, 1992: 243). The different levels of integration correspond with Piaget's stadia of cognitive development. The primary school child is mostly in the concrete operational phase. During the concrete operational phase the child develops and uses a coherent cognitive system which is mainly concrete. In the formal operational phase which follows, the adolescent develops abstract and logical thought and is able to draw conclusions (Meyer & Van Ede, 1990: 81).

During the middle childhood years (8-12 years), the self-concept structure of the child undergoes several important changes (Byrne, 1996: 52-53, 56, 85). First, the multidimensionality of the self-concept increases because of the development of cognitive abilities. The child is able to discern among academic, non-academic and other self-concept dimensions (Byrne, 1996: 85). Second, the child is able to make significant and trustworthy judgments regarding his or her global self-concept (Byrne, 1996: 53-54). Third, the child's descriptions of him- or herself change from concrete descriptions to descriptions denoting characteristics. During early pre-adolescence the characteristics indicate character or ability (for example honesty, cleverness); during later pre-adolescence the characteristics indicate interpersonal characteristics (for example friendliness, shyness) (Byrne, 1996: 53). Fourth, when a child judges him- or herself, the child makes use of social comparison (Byrne, 1996: 53-54, 85). The child compares him- or herself with children similar as well as different to him or her.

The adolescent uses increasingly abstract terms to refer to him- or herself and is able to integrate characteristics. For example, to create the characteristic 'sensitivity', characteristics such as friendliness, helpfulness, caring and good listening skills must be integrated (Byrne, 1996: 125). The adolescent is able to have perceptions of him- or herself in a specific role or situation. The situation will determine which self-concept dimension comes to the fore (Byrne, 1996: 125, 251). The situation specificity also implies that adolescents can have different perceptions of themselves in interaction with, for example, their peer group and parents. The finer dimensions of the self-concept are delimited clearer than with pre-adolescents (Byrne, 1996: 125).

Marsh *et al.* (1992: 81) reported that the global self-concept lowers in mean during pre-adolescence, but elevates gradually during late adolescence and early adulthood. The change in self-concept relates to the phases of development as described by Erikson. The primary school learner, or pre-adolescent, must acquire competence, but often inferiority (low self-concept) is the result. The secondary school learner, or adolescent, has the task to establish a trustworthy identity (Meyer & Van Ede, 1990: 64). As a trustworthy identity is established, the self-concept will elevate with increasing age.

Despite the dynamic process during which self-concept is formed, self-concept itself is rather stable and changes do not occur easily. A realistically or unrealistically high self-concept will not be changed easily by situations inconsistent with the self-concept (for example, a low mark in a test or unfair criticism by an educator) as the person will not attribute unfavourable meaning to the situations. The opposite is also true, as a low self-concept influences the

process of giving meaning (Grobler *et al.*, 1998: 50; Hattie, 1992: 237). Shavelson *et al.* (1976: 414) argued that many situation-specific experiences, inconsistent with the particular self-concept, must occur to effect change in the particular self-concept. It must be kept in mind, however, that the quantity of inconsistent experiences will not effect changes in the self-concept, but the way in which the identities are evaluated. In terms of Piaget's theory, assimilation and accommodation of new and existing perceptions must take place (Meyer & Van Ede, 1990: 78).

The accuracy of judgements of a person's own abilities and appropriate expectations can be of great value for the successful functioning of a person (Hattie, 1992: 250). If a person's expectations of achievement in a specific dimension are high, but the eventual results are much lower than expected, the specific self-concept may decrease. If low expectations are entertained, low achievements will have little or no effect on the self-concept. Expectations can thus contribute to changing the self-concept (Hattie, 1992: 43). Learners who have higher expectations of their abilities than they can achieve, will have lower self-concepts, but learners who have expectations in accordance with their abilities, will have higher self-concepts. It follows that learners with limited abilities can have high self-concepts, and learners with good abilities can have low self-concepts (Hattie, 1992: 219).

Feelings of inadequacy and failure can contribute to the formation of a low self-concept and successful achievements can contribute to the formation of a high self-concept (Botes, 1987:9). A difference, however, must be made between success and experiencing success. The way in which a situation is experienced, determines whether it will contribute favourably or unfavourably to bring about change in the self-concept (Botes, 1987: 9). If a person does not experience success, the self-concept cannot be influenced favourably. Experiencing success is reciprocally connected to expecting success. Expectations of children are often influenced by the feedback they receive. Children's expectations are related to those with whom they interact and the reference group to which the child belongs (Hattie, 1992: 45). Realised high or low expectations of others can also confirm, elevate or decrease the self-concept of the child.

Feedback, or the constant absence thereof, is one of the most powerful factors to change self-concept (Hattie, 1992: 251; McCreary-Juhasz, 1992: 212), provided that the feedback is internalised (Craven, Marsh & Debus, 1991:18). Feedback is especially important to indicate to a person which adjustments can be made in his or her perceptions so that the resulting self-concept can closely resemble reality (Hattie, 1992: 48, 250). Confirmation or disconfirmation of perceptions of the self, or the lack thereof, is often verbal, but can also be



non-verbal, for example facial expressions (a smile or a frown) or tactile (a hand shake or a spanking) (Hattie, 1992: 49). Self-concept can be confirmed in one situation but not in another (Hattie, 1992: 49), for example, an educator can make favourable comments on a report card, but parents may be dissatisfied with the report. The difference in feedback on the same issue may confuse a learner.

### 3.7 COLLECTIVE CONSCIOUSNESS IN AFRICA

So much has been published regarding the collective consciousness in the African culture (Kotzé, 1993: 1-20; Markus & Kitayama, 1991: 224-230; Mwamwenda, 1995: 424; Stevens & Lockhat, 1997: 254; Triandis, 1989: 509-510; Venter, 1999: 26-28, 31) that it is only fair to question whether an African person can have an individual self-concept? Perhaps self-concept is a Western concept. One might consider whether the collective consciousness extends evenly across all black ethnic groups or whether each group has an own collective consciousness. Given that experiences influence a person's self-concept, the question might be raised whether a collective history of experiences will also influence a collective self-concept, in addition to the effect on the individual self-concept.

According to Kotzé (1993: xiii) a collective consciousness does indeed exist in Africa. Specific experiences that generate a collective consciousness are deprivation in all areas, such as income, employment opportunities, stability, food, health, education and security, and living with others who also experience deprivation. In order to survive, groups must be formed and assistance must be given to group members (Kotzé, 1993: 3-5). The difference in consciousness between black and white people therefore lies in the disparate experiences of the two groups, and not in the difference in colour (Kotzé. 1993: xiii).

Communalism is founded in a concern for communal welfare. The basis of communalism is to lend priority and protection to the community and to respect the person in the community. To exist outside the community, is to be an outsider. Communalism also has to do with sharing with and helping one another (Mkabela & Luthuli, 1997: 18; Triandis, 1989: 509; Venter, 1999: 26, 31). Therefore, it appears as if communalism is the essence of collectivism, hence collective consciousness. For Mkabela and Luthuli (1997: 17, 18) communalism will help Africans to function once again in relation to one another, after the Western culture introduced an individualistic way of life to the Africans (Stevens & Lockhat, 1997: 253), where the value of the individual is emphasised above that of the group (Venter, 1999: 29). According to Mkabela and Luthuli (1997: 6), the inferior way in which Africans see themselves must be changed. Africans must appreciate and understand their identity,



humanness and history. “Africans have retained very little of their original culture. They lack deep understanding of this culture because of the inroads the Western world has made into their daily lives.” (Mkabela & Luthuli, 1997: 17). The authors regarded language as the core of the self-concept. By internalising a Western language in preference to an African language, Africans may come to see themselves in a Western image and then the foreign Western image becomes discernible in their doings. Language is a symbol of identity and group membership. When someone’s language is regarded as inferior, the person who uses that language is also regarded as inferior (Mkabela & Luthuli, 1997: 51).

From the above discourse it appears as if the collective consciousness of the African is being substituted by an individualistic self-concept. Therefore, one can indeed speak of the self-concept as well as the collective consciousness of the African. Stevens and Lockhat (1997: 254) were of the opinion that the socio-historic context rejects collectivism for black learners and encourages individualism.

All cultures seem to have a collective consciousness as well as an individualistic consciousness. Collective and individualistic consciousness, however, operate in different ratios in different cultures. It seems that, particularly earlier in the African culture (and by that the ethnic diversity is not denied), the collective consciousness was dominant and a personal or individual self-concept did not feature prominently. In individualistic cultures a collective consciousness can be detected, but the collective consciousness is subordinate to the personal or individual self-concept. The individual can decide which parts and how much of the collective consciousness he or she wants to make part of his or her self-concept (Kotzé, 1993: 6). Communities can in the course of time change the ratio of the two consciousnesses and move from a collective to an individualistic community or *vice versa*.

Triandis (1989: 507) observed three dimensions of the self to be common across all cultures: a private, public and collective form of the self. Depending on the complexity, level of individualism or collectivism and degree of looseness of the culture, the different dimensions of the self are found. Education practices in collectivistic cultures emphasise obedience, trustworthiness and the correct behaviour, in contrast to self-reliance, independence and creativity in individualistic cultures (Triandis, 1989: 510). Education practices have important implications for the development of the self-concept in different cultures.

According to Nthoba (1999: 3), learners from traditionally black residential areas often feel that everyone in the community with whom they compare themselves, are better than they, with the result that they have lower self-concepts. The African self-concept is traditionally

influenced by a Eurocentric approach (Nthoba, 1999: 26). A telling example of the European influence occurred during a research project in a traditionally black residential area (Du Plessis, 1999: 41-42). A foundation phase educator gave her learners the task to bring pictures of babies to school. Without exception the learners brought only pictures of white babies to school. The incident led the educator to the conclusion that black children regard themselves as inferior to white children (Nxumalo, 1999). When the development of the self-concept is kept in mind, one could reason that the cause for the perceived inferiority could be attributed to the black adults, since the black children evaluated themselves as they saw themselves in the eyes of the adults. It can also be speculated that those black children regarded not their parents, but white people, as significant others. Before delving too deep for complex explanations, one might consider that the learners, who were very poor, only had access to magazines discarded by white people. Still, the implications of bringing pictures of only white babies to a black school are profound for identity and self-concept formation and development.

Meintjies (1998: 12) claimed that a group of people who are subjected to serious oppression over a long period of time, will develop signs of a low self-esteem. In an investigation, it was found that black learners, especially Grade One learners, regard themselves significantly lower than white and Indian learners (Meintjies, 1998: 13). The black Grade One learners did not identify clearly with one of the possible ethnic groups (Meintjies, 1998: 13). On a preference scale and a scale that determines social satisfaction, black figures were placed last. Thus it appears as if Grade One learners are already aware of social stratification in South Africa (Meintjies, 1998: 13). Relating to the dynamics of the self-concept theory that posits that self-concept is the result of a person's evaluation of his or her identities in the light of the feedback received from the parents and the peer group, Meintjies said that a macro-social component must also be present during evaluation, which could explain why black learners prefer white learners above themselves (Meintjies, 1998: 14). By using social identity theory, Meintjies tentatively explained that persons with a low self-concept will identify with socially strong or successful persons in an attempt to improve their self-concept, hence the lack of identification of the young black learners with themselves (Meintjies, 1998: 14). According to Meintjies (1998: 15), the results of the investigation lent support to the idea that, as the collective or social self-concept of a group improves, the self-concept of the members of the group will also improve.

As postulated by Meintjies (1998: 12), it was supposed that discrimination will lead to black minority<sup>5</sup> group children evaluating their own group negatively and the white outsider group positively, resulting in low self-esteem for the black children. Research, however, proves the opposite, maybe as a result of social change and the black awareness movement (Kelly & Duckitt, 1995: 217). Kelly & Duckitt (1995: 217) found that self-esteem, own-group racial pride and total ethnocentricity were significantly higher for older (10-12 years) black children than for younger (6-8 years) black children. Their results further suggest that own-group and outside group attitudes of minority group children do not necessarily influence their self-attitudes (Kelly & Duckitt, 1995: 217, 221). A possible explanation for the results can be found in the way self-esteem and self-concept is formed, namely through interaction with parents, siblings and peers *et cetera* of mainly the own-group. Therefore, the outside group does not play an important role in the formation of personal self-esteem or self-concept (Kelly & Duckitt, 1995: 222).

### 3.8 ACADEMIC SELF-CONCEPT (ASC)

#### 3.8.1 Academic self-concept

Global self-concept cannot reflect the diversity of the various self-concept dimensions (Marsh *et al.*, 1992: 67). As can be seen from the discussion of the hierarchical self-concept model in Figure 3.6, the academic self-concept (ASC) forms part of the global self-concept. Based on the understanding of self-concept of Shavelson *et al.* (1976), ASC can be regarded as a person's perceptions of him- or herself as learner in an academic or school environment. Research findings (*inter alia*, compare the Internal/External model as discussed below, on the next page) have shown that also the global ASC cannot reflect the diversity of the various ASC self-concept dimensions; therefore, subject-specific ASC dimensions were built into the hierarchy (Marsh *et al.*, 1992: 67, 78). Following the understanding of self-concept of Shavelson *et al.* (1976), *subject-specific* ASC can be described as a person's perceptions of him- or herself as learner in a specific subject or learning area. *Academic self-concept*, *ability self-concept* and *self-concept of ability* are used as synonyms in the literature (Byrne, 1996: 2).

Strein (1993: 273) claimed that research currently utilises understandings of ASC which firstly focus on self-perceptions that include both descriptive and evaluative components (for example '*I can write well*') and secondly emphasise self-perceptions of behaviour rather than

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<sup>5</sup> Minority refers to minority rule, and not minority in numbers, as was previously the case in South Africa.

feelings (for example '*I do well in most of my school subjects*' rather than '*I feel bad about myself in the school*').

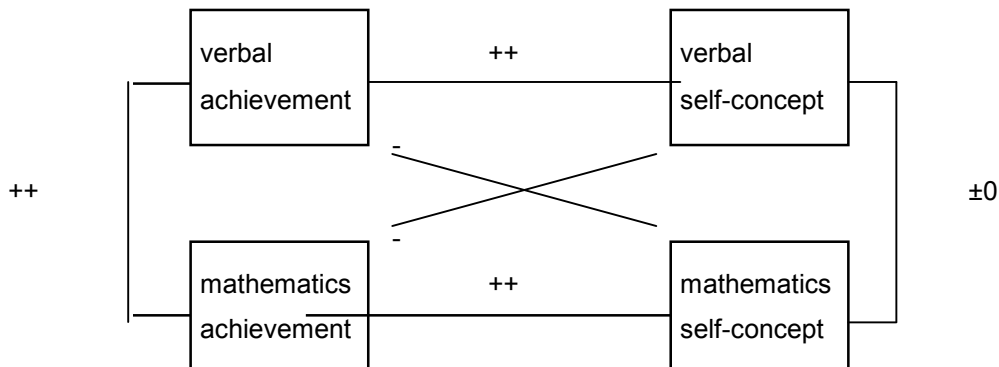
Verbal and mathematics achievements usually correlate with .5 to .8 (Marsh *et al.*, 1992: 68-69), although the correlation between verbal and mathematics self-concepts is much lower. This led to the modification of the Shavelson *et al.* (1976) model and to the development of the Internal/External (I/E) model of Marsh (1986b: 132-133), as represented in Figure 3. 10. According to the I/E model, verbal and mathematics self-concepts are formed in relation to both internal (I) and external (E) comparisons, or frames of reference. External comparisons occur when learners compare their self-perceptions of their verbal and mathematics abilities with the observed abilities of other learners in their frame of reference, for example learners in the same class or grade. The relative external perception is then used as a basis for ASC in each of the two areas. Internal comparisons occur when learners compare their self-observed mathematics abilities with their self-observed verbal abilities. The relative internal impression is then used as a second basis for ASC in each of the two areas. The following example will clarify. Suppose a learner has realistic perceptions of him- or herself as below average in both verbal and mathematics abilities, but that he or she performs better in mathematics than in verbal and other academic learning areas. This learner's mathematics abilities are below average compared to other learners (external comparison), but relatively better compared to his or her abilities in other academic learning areas (internal comparison). Depending on the importance ascribed by the learner to mathematics and other learning areas, the learner could have an average or above average mathematics self-concept, regardless of his or her below average mathematics abilities (Marsh, 1986b: 133).

The external comparison predicts a positive correlation between verbal and mathematics self-concepts. The internal comparison should lead to a negative correlation between verbal and mathematics self-concepts, since the verbal and mathematics abilities are compared with each other and the difference in abilities can contribute to a higher self-concept in a learning area. The collective influence of both sets of comparisons, depending on the relative strength of each, leads to the poor correlation (almost none) between verbal and mathematics self-concepts (Marsh, 1986b: 133-134).

The I/E model also predicts a negative direct effect of mathematics achievement on verbal self-concept, and of verbal achievement on mathematics self-concept. For example, a high mathematics self-concept is more probable when mathematics abilities are good (external) and when mathematics abilities are better than the verbal abilities (internal). It is therefore the difference between mathematics and verbal abilities which is predictive of mathematics

self-concept. High verbal abilities can essentially do damage to a high mathematics self-concept (Marsh, 1986b: 134), since the difference between the abilities would then be smaller. The lack of correlation between verbal and mathematics self-concepts is found across all ages (after Grade Three), both genders and academic and non-academic environments (Marsh *et al.*, 1992: 75).

Figure 3.10 The I/E model of Marsh (1986b: 134)



(++ correlations high positive; - correlations low negative; 0 correlations about zero)

Strein (1993: 280) maintained that ASC is actually self-assessment of relative academic abilities. He referred to the '*Big-fish-little-pond Effect*' (BFLPE) of Marsh and Parker (1984) and Marsh (1987). Marsh and Parker (1984: 213, 229) found that, although the socio-economic level of a school and academic ability correlate positively, the socio-economic level and academic ability have an adverse effect on ASC. The BFLPE was formulated to explain the phenomenon. According to the BFLPE, learners form their academic self-concepts by comparing their academic achievements with those of other learners in their class or school, but not with those in a broad frame of reference such as the community or the rest of the country (Marsh & Parker, 1984: 228; Strein, 1993: 280). ASC thus relates with the group that the learner uses as a standard to compare him- or herself to (Hattie, 1992:99). The BFLPE predicts that, for two learners with the same abilities, the learner in the academically better school will have a lower ASC than the other learner (Strein, 1993: 280), since the learners of the academically better school, with whom he or she compares his or her academic abilities to, do work of the same or higher quality than he or she does. The BFLPE relates to academic achievement as portrayed by class marks and not by achievements on standardised tests (Marsh, 1987: 291). It appears as if the BFLPE is greater on younger learners (Marsh, 1987: 291). The BFLPE is not contradictory to the fact that high achievers have high academic self-concepts. It simply posits that the inclusion of a learner in a school where the average ability is higher than in another school, could lead to a lower ASC which, in turn, could result in a slight decrease in marks and educational and career aspirations

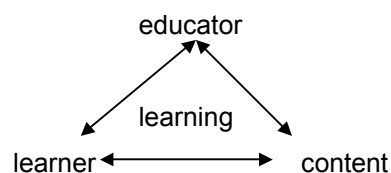
(Marsh, 1991: 470). An assumption based on the BFLPE is that transfer of a learner with HI from a special school to a regular school, would lead to a lower ASC.

Criticism of the BFLPE includes that there are no causal explanation models as to why this effect is occurring. The assumption of the BFLPE, that learners form their academic self-concepts only by comparing their academic achievements with those of other learners in their class or school, is too simplistic. Although the academic achievements of a class group contribute to the ASC of learners, feedback from educators, parents and peers, previous experiences, and expectations of the learners, parents and educators also contribute to the formation of the ASC.

### 3.8.2 Academic self-concept within the school system

Every school has its own culture and practices and gives meaning to policies in a unique way. Three mutually dependent and circularly reciprocal main components can be identified in the school system regarding school-based BLP, namely the parts played by the educator, the learner and the learning content, as represented in Figure 3.11. Each of the components contributes to the school context and can influence the academic self-concept of the learner to a greater or lesser extent.

Figure 3.11 A schematic representation of the school system components contributing to BLP



The situation, skills, knowledge and attitudes of the educator, the specific meanings that the educator attributes to the task of educating, and the school context in which the educator operates can influence the interaction of the educator with the learner and the content. Likewise, the situation, learning possibilities, experiences, language ability *et cetera* of the learner can influence the interaction of the learner with the educator and the content. Also, the nature and appeal or challenge of the content in terms of its cognitive, affective and normative demands can influence the way in which the learner and the educator interact with the content.

General factors that can influence the development and change of the ASC were discussed in 3.6. The focus now falls on the parts that the educator, the learner and the content play in the development and change of the ASC.

Learners' self-perceptions of ability and input relate to the feedback of the educators. Each educator has a pattern of interaction through which he or she gives an indication, verbally or non-verbally, of what his or her opinions of the learner are. The ability of learners to observe and interpret the non-verbal behaviour of educators is influenced by developmental and cultural factors. Younger children focus especially on the words and tone of voice of the educator. Learners find it easier to interpret the behaviour of educators of the same cultural background or language society (McCreary-Juhasz, 1992: 217). The type of feedback, the interaction amongst classroom context variables, differential treatment of learners by the educator, individual classroom experiences and a learner's interpretation of all these factors can influence the learner's evaluation of him- or herself (McCreary-Juhasz, 1992: 218). Given the role that the expectation and experience of success has on the formation of the ASC, educators can do much to let learners feel successful (Botes, 1987: 14).

The role that class peers play in learners' self-perceptions, has already been explained by the I/E model of Marsh (1986b) and the role of the significant other in 3.6. The learners' own influence on their ASC lies in the way that they evaluate themselves, and in what is used to make the evaluations, such as significant other, class peers and feedback. The support that learners experience at home can also contribute to self-perceptions as learners.

Also, the learning content can influence learners' ASC. If learners experience gaps in their knowledge of a learning area, it may happen that the following content is too difficult to understand, resulting in lower achievements, and consequentially affecting the subject-specific ASC. Culturally strange content will also be more difficult to understand. The way a learner gives meaning to the content may change the nature of the content. The interests of the learner can also predispose the learner to like certain learning areas more than others, and therefore pay more attention and perform better. The use of English as a language of teaching and learning may make learning unnecessarily complex for learners who have another first language (MacDonald & Burroughs, 1991: 27-31). Such learners do not understand the content very well, since they do not understand English very well. Often the educators themselves are not fluent in English. The result is that the learners' problems are not addressed (MacDonald & Burroughs, 1991: 19; Mkabela & Luthuli, 1997: 54).



### 3.8.3 Academic self-concept within the collective consciousness

In a collective culture, a group member will share the group's viewpoint of success and failure, because of harmony with the group. If group members regard the group as significant, each will use the group's viewpoint of success and failure as criteria when evaluating him- or herself (Botes, 1987: 32). One could consider what would be the criteria for academic success and failure in the collective consciousness?

The criterion applied by the collective consciousness for any success and failure is whether the welfare of the group is promoted. Academic achievement as such involves only the individual: it is the individual that achieves or does not. According to Kotzé (1993: 153), anything that threatens the survival of the group will compel the collectivistic group to take action to maintain the *status quo*. An achiever can disturb the *status quo*, because he or she becomes different from the rest of the group.

It could be deduced that high academic self-concept/achievement would only be acceptable in a collective community if the community regards academic achievement as a means to promote the welfare of the group. Currently there is increasing pressure on learners to perform well at school, since school has become a means to social mobility for the individual. The question now arises whether learners in a collectivistic culture regard academic achievement in terms of the personal social advantages achievement can affect or in terms of the broken cohesion if someone does achieve. Apparently there are still members of the collectivistic community who oppose an individual who rises above the others and who try to impair the achiever if he or she makes academic progress (Anonymous, June 1999). ASC can only become a reality in the collective consciousness when academic achievement is accepted by the collective consciousness. Mkabela and Luthuli (1997:22) stated that learners belonging to the African culture can improve their academic under-achievement by learning of their culture, thereby promoting understanding and consistency between the school and the home.

Research investigations regarding the self-concept of black learners belonging to the traditional collectivistic culture in South Africa indicated that the construct ASC, hierarchical and multidimensional, does indeed exist. Mboya (1994a: 167, 169; 1994b: 318, 320) developed the '*Self-Description Inventory*' (SDI) for high school learners (Mboya, 1993: 189-191), based on the Shavelson *et al.* (1976) model. Mboya's research findings indicated the multidimensionality of the self-concept of African adolescents, as well as age and gender difference in some of the self-concept measurements. The gender differences in self-



concept measurements were according to gender stereotypes. Mboya (1994a: 167, 169) also found different self-concept measurements for black and white learners on some of the self-concept dimensions, indicating that black and white adolescents might attribute different measures of importance to some of the dimensions of the self. Mwamwenda and Mwamwenda (1987: 71, 73-74) found that learners in Botswana (African learners; average age 13.9 years) with high self-concepts perform better than learners with low self-concepts regarding total performance, mathematics, English, science and social sciences performance.

### 3.9 (ACADEMIC) SELF-CONCEPT OF LEARNERS WITH HI

The ASC of learners with HI seems to be fairly undocumented and/or unresearched. In the field of impairment, the ASC of learners with learning and intellectual impairments has been researched more often (Al-Yagon, 2004; Dev, Smith, Lesczynski & Ladrigan, 2002; Humphrey, 2002; Spicer, 2004; Stone & May, 2002; Tracey & Marsh, 2002). Much of what can be said here of the ASC of learners with HI, is conjecture, based on available information. Most sources include general remarks regarding the self-concept of learners with HI such as '*their self-esteem/self-concept can be affected/poor self-concept*' (English, 1995: 171; Johnson, 2003a; Kapp, 1991b: 347; Powers, 1999: 30). No reference to HI and ASC could be found.

Social isolation appears to be one of the biggest challenges in the lives of learners with HI (Powers, 1999: 30; Smith, 1998b: 214). Learners who are socially isolated in class, are not only deprived of learning opportunities, but also of feedback. The power of feedback in the development and change of ASC was addressed in 3.6. Not only are learners with HI deprived of verbal feedback, but also their reliance on non-verbal cues may lead to faulty interpretations of the feedback, resulting in faulty self-perceptions of academic ability and progress.

If it is true that "*language aids individuals in making sense of their inner processes and coming to define their sense of what they are*" (Pajares & Schunk, 2002: 8), then learners with HI who often struggle to master language, will also struggle to make sense of what they are – their self-concepts. Also, in 3.6 it was stated that "*as language concepts develop, concepts develop wherein to categorise the experiences. With increasing age the self-concept becomes more differentiated and multifaceted.*" It might be that the self-concept of learners with HI is less differentiated and less multifaceted than that of their peers, because of the slower development of language concepts.

### 3.10 SUMMARY

Chapter 3 has provided a theoretical background to understand the nature, characteristics, and development and change of self-concept and academic self-concept. The self-concept is located in the individual system, but the multiple factors contributing to the self-concept reside in the individual and surrounding systems. Where the ASC is concerned, the school system plays an important role in the development and change of the self-concept. By investigating the ASC of learners with HI in different school contexts, it might be possible to conclude which school context is more conducive to developing a healthy ASC and therefore which school context reflects an effective learning environment for learners with HI. Chapter 4 presents the research design employed to investigate the relationship between ASC and HI in two South African public school contexts, namely special and full-service schools.

## CHAPTER 4

### RESEARCH DESIGN:

#### INVESTIGATING THE ACADEMIC SELF-CONCEPT OF LEARNERS WITH HEARING IMPAIRMENT IN DIFFERENT SCHOOL CONTEXTS

##### 4.1 INTRODUCTION

Chapter 4 presents the paradigm in which the research is situated and discusses ways in which the ASC can be probed. The research design is presented, the pilot study is discussed and the yardsticks of research, validity (credibility) and reliability (trustworthiness), are introduced. The methodological principles and processes underpinning the methods in the research design are considered. Finally, the ethical considerations of the research are contemplated.

##### 4.2 PARADIGM AND ASSUMPTIONS

Paradigms are basic sets of beliefs that guide action and feelings about the world and how the world should be understood and studied (Clark, Dyson & Millward, 1998: 173; Denzin & Lincoln, 2000: 19). Contained within the basic set of beliefs of the paradigm are assumptions regarding reality, knowledge of reality and the ways of knowing about that reality (Crabtree & Miller, 1999: 8; Plug *et al.*, 1989: 91, 219, 247). Ontology involves the assumptions regarding reality and seeks to determine the nature of everything that is. Epistemology concerns the knowledge of reality and is a philosophical approach to the origin, nature and boundaries of knowledge. Methodology contemplates the ways of knowing about that reality determined by the epistemology as approaches to formulating and studying methods employed to obtain knowledge (Henning, Van Rensburg & Smit, 2004: 15; Plug *et al.*, 1989: 91, 219, 247).

The study acknowledges that the ASC of learners with HI exist, but that the ASC is not an objective, singular reality that can be pinpointed exactly. The ASC of learners with HI is a complex, multifaceted reality that can be approximated by different methods, which highlight different facets of the ASC of learners with HI. The bio-ecological perspective on the study is evidence that the ASC of learners with HI is regarded as a construct interactive with and interdependent on the individual and the surrounding systems. Although the importance of knowing the ASC, often expressed as a number on a scale, is not denied, the study

emphasises that understanding of the ASC of learners with HI will contribute equally, if not more, to answers to the research question. Throughout the study, the human dignity of all the participants is acknowledged, and investigation of the research question is approached through the meaning that the participants ascribe to feelings and events in their lives. As the study assumes that reality is subjective and constructed, that there are many truths and that understanding is important, an interpretivist paradigm is followed.

Usually, interpretative studies use a variety of qualitative methods to investigate the research question. As both quantitative and qualitative methods are employed to investigate the ASC of learners with HI, the ways of knowing about and understanding the reality of the ASC of learners with HI in this study differs from methods usually employed in an interpretative study. It is argued that method is subordinate to the paradigm, and that the paradigm prescribes in which ways the method should be employed and knowledge derived from the method should be regarded and interpreted. A multi-method strategy enhances the trustworthiness of the study and highlights different facets of the ASC of learners with HI so that a more comprehensive understanding of the ASC of learners with HI can be achieved. It could, therefore, be argued that a pragmatic interpretivist paradigm is followed in that any method which contributes to understanding of the research question is used (based on Creswell, 2002: 562).

#### 4.3 WAYS IN WHICH THE ASC CAN BE PROBED AND THE SUITABILITY THEREOF FOR GRADE SEVEN LEARNERS, INCLUDING THOSE WITH HI

##### 4.3.1 Orientation

Two ways to probe self-concept, and therefore also ASC, are discerned, namely self-report and forming an inferred impression of self-concept (Botes, 1987: 15, 108). With self-report the participants are required to indicate in a direct or indirect way how they evaluate themselves by making or choosing an appropriate statement or response (Anderson, 1997: 887; Botes, 1987: 15; Meier, 1994: 42; Säljö, 1997: 101), for example when questionnaires (direct) or projection pictures (indirect) are implemented, or when interviews (direct) are conducted (Brinthaup & Erwin, 1992: 139). An inferred impression of self-concept is based on the choice of responses made by a person, such as an educator, after observing the behaviour of another person, such as a learner in a classroom (Botes, 1987: 15-16). An inferred self-concept can also be obtained subjectively through projection pictures, as the participant makes a choice of responses after observing the behaviour of another person in the projection picture.

(1) Self-reporting

There are a number of arguments supporting the use of self-report, one being that information is received on a first hand basis from the participant. The self-concept is a personal, complex and private construct; no other way than a person's own reporting can be suitable to probe the self-concept. Further, most of the published construct validity and other psychometric research of the self-concept are done on self-report measuring instruments (Byrne, 1996: xix-xx), self-reporting is the most often used (Brinthaupt & Erwin, 1992: 138), and self-reportings of participants have been proven as accurate predictors of behaviour in many circumstances (Brinthaupt & Erwin, 1992: 139).

Challenges with self-reporting include: a somewhat developed level of language and reading skills is required when questionnaires are implemented (Botes, 1987: 71); participants must be capable and willing to make known their self-concept (Botes, 1987: 71); and participants might select socially acceptable statements to represent themselves, rather than giving responses which are really applicable to them (Hattie, 1992: 247; Meier, 1994: 42). Therefore, learners might give responses that they think the educator would like, or that they think are 'correct'. Finally, a certain level of distancing from the self is necessary to consider the possible responses during self-reporting (Botes, 1987: 19). Children often find such distancing difficult.

Different self-report methods are found, based on two approaches: the reactive and spontaneous approaches. The reactive approach requires participants to react on one or more criteria, previously identified by the researcher as important, by evaluating themselves on a scale, for example through semantic differential scales, or true or false items (Brinthaupt & Erwin, 1992: 147, 149). Traditionally, participant(s) are gathered in a group, given paper and a pencil, and presented with oral or written instructions (Brinthaupt & Erwin, 1992: 148). The social interaction between the researcher and the participants is limited to the minimum and is mostly indirect, such as in giving instructions (Brinthaupt & Erwin, 1992: 148), even through a fieldworker. The reactive approach is popular, as the data are easily handled, the questionnaires easily scored and the participants 'easily' compared (Brinthaupt & Erwin, 1992: 153).

The spontaneous approach, on the other hand, expects participants to respond in a minimally structured format to a general or vague stimulus, such as during an unstructured interview or open-ended questionnaire. Questions such as "*Tell me more about yourself*" are asked. Traditionally, the participants are given a verbal or written stimulus in an individual or

group situation, and the participants must answer orally or write in response to the stimulus (Brinthaupt & Erwin, 1992: 148). Sometimes restrictions are set regarding the time, length and response format (Brinthaupt & Erwin, 1992: 147). The social interaction between the researcher and the participant is more direct, especially during an individual interview. The researcher takes the place of the questionnaire, is physically closer to the participant and there is more opportunity for non-verbal information to be communicated (Brinthaupt & Erwin, 1992: 148). It is alleged that participants find it more difficult to give socially desirable responses with a spontaneous approach (Brinthaupt & Erwin, 1992: 152). Often, however, participants do not spontaneously tell everything about themselves: they do not usually share personal information with people, they regard some information as unimportant, or they do not recall the information in the more focused experience of an interview (Brinthaupt & Erwin, 1992: 150). In the reactive approach, the researcher is able to access such information through direct questions. The spontaneous approach is less popular than the reactive approach (Brinthaupt & Erwin, 1992: 147), being more time consuming to conduct and to analyse. It is also accepted that the spontaneous approach requires participants to have certain intelligence and verbal abilities (Brinthaupt & Erwin, 1992: 149-150).

The reactive and spontaneous approaches, however, are not mutually exclusive. When projection techniques are implemented, a picture is given to elicit responses from the participant, but the ways of responding are spontaneous. It is also possible that the reactive and spontaneous approaches can probe different aspects of the self (Brinthaupt & Erwin, 1992: 154).

Brinthaupt and Erwin (1992: 140) mentioned three factors that can influence self-reporting. The first is *accessibility and organisation of self-relevant knowledge*. Self-reporting involves memory (Brinthaupt & Erwin, 1992: 140). To evaluate the self, incidences and the influence of significant others must be remembered and presented. Only that which can be remembered, can be used during self-reporting. The second is *contextual, situational and cultural factors which can create expectations and give leads*. The context and situation wherein participants find themselves, can influence self-reporting. The academic self-concepts of learners who received poor test results on the day the questionnaires are completed, can, for example, be influenced by the poor results. The low academics self-concepts (ASCs) of those learners should then be seen in the context of the poor test results. Sometimes different situations elicit different self-reportings. Individual open-ended interviews conducted by an educator would probably have different results regarding ASC than ASC questionnaires implemented by an independent researcher. Different contexts and situations may make different aspects of the self prominent (Brinthaupt & Erwin, 1992: 144).

Triandis (1989: 514) and Markus and Kitayama (1991: 226-227) found that participants belonging to an individualistic culture probably share their self-perceptions during self-reporting, but that participants belonging to a collectivist culture probably share their selves in relation to others during self-reporting.

The third factor to influence self-reporting is *individual and developmental differences*. Participants with previous experience of self-reporting (Brinthaupt & Erwin, 1992: 146) will be more familiar with answering questionnaires than participants without similar experience. Older children have better reasoning and information processing abilities than younger children (Brinthaupt & Erwin, 1992: 145-146).

## (2) Inferred self-concept

Arguments supporting data collection on self-concept by means of inference are: challenges regarding language and reading skills, willingness and the ability to self-report are largely ruled out when determining an inferred self-concept (Botes, 1987: 71); bias because of participants' cognitive abilities or motivation are also limited (Brinthaupt & Erwin, 1992: 138); and advocates of the inferred self-concept maintain that higher validity is found with alternative forms of measurement, such as educators assessing the self-concepts of learners and behavioural observation, than self-report measurements (Byrne, 1996: xix).

Challenges with an inferred self-concept include that an inferred self-concept does not necessarily refer to the same construct that self-concept questionnaires aim to measure. An inferred self-concept is not necessarily the same as the individual's self-concept, considering that people can act differently to what they think or feel about themselves, and that they can express their feeling through different actions. Self-reporting has to do with the unique perceptions of a person, regardless of the impression the person wants to make (L'Ecuyer, 1992: 100), and regardless of the style of expression and behaviour.

### 4.3.2 Questionnaires

The questions or items of a questionnaire can be structured or unstructured, meaning that the categories that the participant must choose from, can be specified or unspecified. A *structured item*, such as on gender, has specified categories, for example male and female (Wolf, 1997a: 422). Questions or items are dichotomous when there are two response categories and polytomous when there are more than two response categories (Byrne, 1996: 56). An *unstructured item* has an unspecified response, for example an item asking the participants how their weekend was spent (Wolf, 1997a: 422).



Questionnaires are a suitable medium to use with children, also with Grade Seven learners. There are a number of self-concept questionnaires for children, grounded on thorough research. In selecting an appropriate self-concept questionnaire, the target group must be kept in mind, and adaptations must be made to accommodate the context of the learners, as well as their HI (refer to Du Plessis, Bouwer & Grimbeek, 2001). Learners can be assured of their anonymity, which makes completing questionnaires acceptable to many learners. It is fairly easy to implement questionnaires in a school situation.

#### 4.3.3 Projection methods

Projective techniques are generally used in mainly clinical contexts for descriptive and assessment aims. Projective techniques use a wide variety of symbolic, picture, verbal and expressive stimuli to elicit responses from participants. Most of the projective techniques use instruments for concealed assessment and the participants are seldom aware of the psychological interpretations that will be made. As the participants do not experience their responses as self-revealing, the responses are relatively free of distortion and information is given of which the participants may be unaware (Walsh, 1997: 954-955). The responses are then coded and interpreted by persons specifically trained for the work. The responses are regarded as indicators of covert, latent or unconscious aspects of the personality which are not revealed by responses on self-reporting instruments (Walsh, 1997: 954). Projective techniques utilise the process through which people unknowingly ascribe their own conscious and unconscious urges, needs, perceptions, feelings, aspirations, attitudes and behaviours to others, or give meaning to ambiguous or unstructured stimuli by making use of their own desires, fears, experiences, impulses, needs and conflicts dominant in their personality. Projection requires a screen to project on. The projection media can serve as such a screen (Kapp, 1991a: 44; Walsh, 1997: 954-955).

Projection pictures are often used with children of all ages in private practice (see Byrne, 1996: 248 for a projective technique for self-concept measurement of pre-school children) and are therefore assumed suitable for Grade Seven learners, including learners with HI, provided that communication can take place. The situation is not threatening to the learner and there are no right or wrong responses. The projection pictures as an instrument may be culturally strange to some of the learners, but during a previous study (Du Plessis, 1999: 52) the principal and educators indicated that the learners are used to answering questions relating to pictures. Projection pictures provide mostly qualitative data in contrast to the quantitative data provided by the ASC questionnaires.



Limitations of projection pictures include the following (L'Ecuyer, 1992: 129): it is a time-consuming method in implementing the pictures as well as analysing the content, often only a global image of the self is obtained and some aspects of the self are more fully discussed than others.

#### 4.3.4 Observation

Researchers concerned about bias and inaccurate self-reporting of self-concept, can alternatively use behavioural observations. From the literature it can be concluded that the behaviour of learners with a high (academic) self-concept differs significantly from the behaviour of learners with a low (academic) self-concept (see Botes, 1987: 42, 115-120, 122; Meintjies, 1998: 12; Nthoba, 1999: 63,68; Scott *et al.*, 1996: 289; Wiest *et al.*; 1998: 603). Based on learners' classroom behaviour and their behaviour in the school environment, learners can be identified as learners with high or low academic self-concepts (ASCs) or subject-specific ASCs (Botes, 1987: 20-21).

Observation by the educator has been successfully used in determining the ASC of Grade Seven learners (Du Plessis, 1999: 85-87), but the educators complained about extra work and time constraints. The researcher could do participatory observation and sit in the classroom to make the observations (Nthoba, 1999: 9), but the researcher did not have fluent knowledge of all the languages used in all the classrooms and found it difficult to connect dialogue with behaviour. Also, the researcher was not acquainted with the learners. It was, therefore, decided not to implement observation as a way to investigate the ASC of learners with HI.

## 4.4 RESEARCH DESIGN AND PROCESS

### 4.4.1 A mixed multi-method research design

No single research method can investigate all the characteristics of a phenomenon in a changing and complex reality. Each research method could by its data suggest a different interpretation of the phenomenon. By employing different research methods and collecting and integrating different kinds of data, qualitative and/or quantitative, bearing on the same phenomenon, the blend of strengths and advantages of different methods counterbalances the weaknesses and disadvantages of the others, thereby rendering an interpretation of the phenomenon which illuminates and exposes the phenomenon in a richly contextualised way.

This process is called methodological triangulation (Creswell, 2002: 561, 564-565; Denzin, 1997: 318, 319; 321; 322; Zeller, 1997: 828). According to Denzin (1997: 319) and Zeller (1997: 827) interpretations that rely on triangulation would be stronger than interpretations that rely on a single method.

The research design addresses the aim of the study, namely to investigate the ASC of learners with HI in special and full-service inclusion school contexts. Quantitative data, to measure, describe and analyse the nature of the ASC of learners with HI in the two school contexts, including its strength and direction, will be augmented with qualitative data, to further explore the nature of the relation between the ASC and HI in the two school contexts, more specifically in respect of the dynamics. The research design is, therefore, both a multi-method and mixed method design, as both quantitative and qualitative data from different sources are combined (Creswell, 2002: 560).

The research design developed pragmatically and the course of the development is noted in Appendix A. The text refers to appropriate parts of the appendix to indicate where, why and how changes in the design had to be made to accommodate circumstances in the field.

#### 4.4.2 Sample selection steps

##### (1) Schools

The co-ordinator of the Education Support Services of a school district implementing inclusive education and participation policy in Pretoria, South Africa, identified several *full-service inclusion schools* in different socio-economic contexts. After a survey to select the barrier of impairment to be researched, two of the schools were approached to participate in the research (refer to A1 in Appendix A). The schools were situated in directly contrasting socio-economic contexts. One school, a predominantly white Afrikaans school, could be described as a historically advantaged white school, and the other, which had a majority of Sepedi speaking learners, as a historically disadvantaged black school. Many people, advocates and opponents of inclusive education alike, are of the opinion that abundant resources are required successfully to implement an inclusive education and participation policy. By including schools from radically different socio-economic contexts, more information regarding the accuracy of the position can be obtained. Additionally, multiple perspectives represent the complexity of the inclusive education and participation practice in South Africa (based on Creswell, 2002: 194). Creswell referred to purposeful sampling in which the researcher samples cases that differ on some characteristic, such as socio-economic context, as *maximal variation sampling* (Creswell, 2002: 194). To prevent

differences in provincial policy and policy implementation from influencing the data, other provinces and districts were not approached. Much variance is already present in respect of situation dynamics at schools, and the data should not be complicated further by additional variables.

For purposes of comparing the ASC of learners with an impairment in special and full-service inclusion schools with the ASC of learners in *regular schools* (refer to A2 in Appendix A), the co-ordinator of the Education Support Services who identified the full-service inclusion schools, was requested to identify and select the same number of context-similar regular schools as the full-service inclusion schools participating in the research.

A survey at the selected full-service inclusion schools indicated that each school accommodated a learner with HI in Grade Seven; hence the *special school* for learners with HI in the district was selected as the special school to participate in the research (refer to A3 of Appendix A).

In summary, five Grade Seven classes, one each in the following five schools, were involved in the research: two full-service inclusion schools, each school situated in a directly contrasting socio-economic context; two regular schools, each school corresponding to a full-service inclusion school in terms of a particular socio-economic context, and one special school for learners with HI.

## (2) Impairment

Two mutually dependent processes operated in the selection of a particular barrier of impairment for the research focus. Firstly, the types of special schools in the particular district and the barriers of impairment accommodated by them would determine a barrier of impairment to involve in the research. Because the field of study was restricted to a single district, only barriers of impairment which were accommodated in special schools in the district, were considered. Secondly, once the district had identified the full-service inclusion schools, a survey of the barriers of impairment at the schools would indicate the barriers of impairment found among the Grade Seven learners, and, hence, the barriers of impairment to be considered for the research (refer to A3 in Appendix A).

## (3) Learners

Grade Seven learners were selected to participate in the research. Several reasons led to this decision. Research by Schollar (personal communication, 1997) showed that Grade Seven learners understood the self-concept better than younger learners. In confirmation, a

study done by Le Roux (1999: 227) indicated that the ASC contributed the most in the proportion of variance of the total self-concept of the Grade Seven learners. Le Roux speculated whether Grade Seven learners might have a more realistic evaluation of their selves than learners in lower grades (Le Roux, 1999: 228). A previous study successfully involved learners in Grade Seven (Du Plessis, 1999). Also, diagnostic instruments to assess the ASC of learners in Grade Seven in different ways existed in rudimentary forms.

A class of learners, containing the learner with HI, was purposively selected from each of the two participating full-service schools. All the learners with HI in the Afrikaans class in the special school were selected. (The class also accommodated learners with learning impairment.) Learners from the English speaking class were not selected, as no other English-speaking learners participated in the study. There was not a class containing Sepedi-speaking learners in the special school. One class of Grade Seven learners was selected in each of the two regular schools for purposes of comparing the ASC. These two classes were selected by the principal of each school and could be considered a convenience sample. The criterion for exclusion of learners was barriers of impairment other than HI.

#### 4.4.3 Data collection

Data were collected by using quantitative research methods (survey to investigate the BLP at the participating schools, ASC questionnaires and achievement scores of all the participating Grade Seven learners) and qualitative research methods (non-participatory observation of the learners in the selected classrooms, interviews with the principals, educators and learners, and background information of the learners with HI). The third school quarter was devoted to data collection.

##### (1) Quantitative data collection methods

A self-developed *survey* format (Appendix B), based on the EWP 6 categories of BLP (Department of Education, 2001: 17-20), was implemented to analyse the incidence and degrees of severity of BLP, including barriers of impairment, experienced by the learners in each school across the two school contexts, to indicate the particular barrier of impairment to be focused on in the research.

Based on existing items in a locally developed self-concept questionnaire (Le Roux, 1983a, 1983b) and an internationally developed self-concept questionnaire (Hattie, 1992: 162-163), an ASC *questionnaire* (ASCQ) was developed to investigate the ASC of the learners in the

different school contexts. The ASC of all the Grade Seven learners participating in the research was determined by administering the ASCQ in the middle of the school year, when enough time had elapsed for the ASC to reflect the influence of the school context. Questionnaires were in the language in which the learners were most proficient, namely Afrikaans and Sepedi. Each questionnaire contained a section on general ASC (GASC), first language ASC (LASC) and mathematics ASC (MASC) (refer to 4.8 for the principles and process of developing the ASCQ).

Throughout the year, *learner achievement* in class influences ASC. The results of an objective norm-based test, implemented once during the year, would not portray the class achievements that continually influence the ASC during the year. Therefore, learner achievement, collected as scores allocated for different learning areas, for each learner in the sample, was collected (refer to 4.10 for the principles and process of using achievement percentages).

*Audiograms* of the learners with HI were collected to enhance understanding of the particular barriers each learner with HI faced in the classroom situation (refer to 4.10 for the principles and process of using audiograms).

## (2) Qualitative data collection methods

*Interviews* took place with principals, relevant Grade Seven educators and some Grade Seven learners. Interviews with the principals of the full-service inclusion and special schools contributed information on the process of implementing the EWP 6 policy in the full-service inclusion and special schools by individual, semi-structured in-depth interviews using pre-set, open-ended questions (refer to 4.11 for the principles and process of developing interview schedules).

It was assumed that the understanding and acceptance of the EWP 6 by the educators who taught the learners with HI would influence their classroom practice which, in turn, could play an important role in the ASC. The class, first language and mathematics educators were interviewed. At the start of the fieldwork at the full-service inclusion and special schools, the educators' knowledge, self-perception of skills and values in respect of inclusive education and participation, as presented in the EWP 6, were determined by individual, semi-structured in-depth interviews using pre-set, open-ended questions. Upon completion of the fieldwork, information about their classroom experiences was collected through a second interview, in verification of the interpretation of the classroom observations (refer to 4.11 for the principles and process of developing interview schedules).

Information was collected from the learners with HI, as well as other learners where the classroom observations indicated a need for further investigation. An interview strategy was adapted for learners in Grade Seven and took the form of administering projection pictures. The 'interview' addressed their experiences in the school and their ASC and verified the classroom observations (refer to 4.12 for the principles and process of developing projection pictures).

In the selected full-service inclusion and special schools, *non-participatory observation* of the first language and mathematics periods of the sampled Grade Seven classes took place according to a rotating schedule. The educators, their facilitation of learning, the behaviour of selected learners and the interactions taking place in the classrooms were observed. Where necessary, a Sepedi-speaking culturally congruent fieldworker acquainted with the culture of many of the learners in the classroom assisted with observations and explanations of the classroom interactions (refer to 4.13 for the principles and process of making classroom observations).

To gain some understanding of what might have contributed to their present ASC, *background information* was compiled of all learners with HI in the special and full-service inclusion schools. The background information included relevant family, school and health information, school reports available and examples of schoolwork done during the year in which the research was conducted (refer to 4.14 for the principles and process of compiling background information).

#### 4.4.4 Pilot study

The Afrikaans and Sepedi versions of the ASCQ and the interview schedule with the educators were piloted. The ASCQ was piloted in other Grade Seven classes of the research schools to control for variables as far as possible. One of the Grade Seven classes in the Afrikaans full-service inclusion school, not the class that would participate in the main study, and two Grade Seven classes in the Sepedi full-service inclusion school, neither one the class that would participate in the main study, were involved in the pilot study. The classes in the Sepedi school were heterogeneous in containing mother tongue speakers of Sepedi, Zulu and Tsonga, amongst others. In order to involve an adequate number of learners in the pilot study for the Sepedi version of the ASCQ, the Sepedi speaking learners from two classes were combined. Results of the pilot study which proved to be highly relevant are discussed in 4.9. All the relevant learners in both schools were given letters of

permission to be signed by their parents or guardians before they could participate in the pilot study (refer to 4.15 for ethical principles adhered to during the research).

It was not possible to pilot the ASCQ with learners with HI, as no additional Grade Seven learners with HI, besides the learners already selected for the study, were identified in the district. Therefore, the implementation of the ASCQ with learners with HI was discussed with the Afrikaans and mathematics educators at the special school for learners with HI. (The Afrikaans and mathematics educators were already involved in the study through participation in interviews and classroom observations.) The Afrikaans educator recommended allowing extra time, but the mathematics educator was not concerned about the learners with HI answering the same questionnaire as learners without HI, as she estimated their questionnaire answering skills and comprehension skills to be on par with those of other learners. The results of the pilot study regarding the ASCQ are discussed in 4.9.

Only the interview schedule of the first interview with the educators was piloted. It was argued that although similar questions were asked, each interview would run its own course. Projection pictures were piloted and administered during a previous study (Du Plessis, 1999: 73) and only slightly adapted to reflect the reality of the classrooms of the learners in the current study.

The first observation of a class in each learning area at each school was considered as a pilot observation, thereby maximising exposure of the relevant learners to the researcher. Because of the possible influence the researcher as observer could have on the learners and the educators, the data on the first observation of each learning area in a school would be carefully scrutinised, to account for possible observer influences and distortion, and thus for validity and reliability.

#### 4.4.5 Data analysis and interpretation

The results of the ASCQ underwent descriptive, validation, reliability and factor analyses. The transcripts of the interviews and observations, field notes and background information were analysed for recurring themes, school context, inclusive education and participation policy implementation, support procedures, classroom practices that facilitate learning for learners with HI and the ASC of the learners with HI.



To examine the ASC of learners with HI, quantitative and qualitative relationships and comparisons of data in the special, regular and full-service inclusion schools were determined by using the measurements of the ASC, and enriching the findings with classroom observations, educator and learner interviews and background information. An examination of the ASC of learners with HI would finally give judgement on the applicability of the ASC to indicate success in the conversion of primary schools to full-service inclusion schools. It was envisaged that principles of good full-service educational practice might be inferred that could underpin guidelines to improve the provision, processes and/or outcomes of the conversion of primary schools to full-service inclusion schools in order to maintain and/or enhance the ASC.

#### 4.5 VALIDITY AND CREDIBILITY

Validity is essential for any successful scientific study (Zeller, 1997: 822). In quantitative research, the validity of a measuring instrument relates to the evidence that can be assembled to defend the interpretations made from the scores of the instrument as appropriate, meaningful and useful (Creswell, 2002: 183; McMillan & Schumacher, 2001: 181, 239). Such evidence can include the reliability of the instrument, the defensibility of the meanings attached to the scores and, most importantly, the consequences of the interpretations of the test scores. The extent to which the content of the items of a measuring instrument corresponds with and is representative of the content of the construct that it is supposed to measure (McMillan & Schumacher, 2001: 240-241; Zeller, 1997: 824) can be part of the evidence used to defend the interpretation of the test scores.

A critical aspect of validity concerns the evidence that supports the relationship between the measurement scores and the way the theory anticipates the relations between the measurement scores (Zeller, 1997: 825). In respect of the ASCQ, this would involve clear specifications of a model of self-concept and the anticipated relationships between the various self-concepts, the quality of the indicators chosen to represent the self-concepts, the dimensionality of the indicators, and the choice of a response scale, such as a Likert scale (Zeller, 1997: 825-826). Should the expected pattern of correlations not emerge, there is one or more of at least four possible explanations: the indicators do not measure the concept which they are supposed to measure, the theoretical arrangement of the concepts was wrong, wrong procedures to infer the hypothesis from the theory were followed, and/or the indicators of the concept do not have construct validity (Creswell, 2002: 184; Zeller, 1997: 827). Zeller (1997: 827) mentioned that construct validity is established during the course of time and with lots of research. Byrne (1996: 67) warned that, considering the inevitability of



social change, determining construct validity should be a continuous process to which any measuring instrument, regardless of age and status, should regularly be subjected.

Construct validity involves two types of inquiry: the validation of a theory and the validation of a measuring instrument (Byrne, 1996: 42). In *validation of a theory* the researcher seeks empirical proof to support the hypothesised construct relations between facets of the same construct (intra construct studies) and between different constructs (inter construct studies) (Byrne, 1996: 42). Intra construct studies investigate the internal structure of the self-concept, such as the different dimensions (Byrne, 1996: 115; Hattie, 1992: 6; Shavelson *et al.*, 1976: 416). Inter construct studies attempt to indicate that the self-concept as a construct can be discerned from other constructs, for example academic achievement, and that the self-concept can relate to such other constructs (Byrne, 1996: 115-116; Hattie, 1992: 6; Shavelson *et al.*, 1976: 415). In *validation of a measuring instrument* the researcher seeks empirical evidence that the instrument does indeed measure that which it is supposed to measure (Byrne, 1996: 42-43). When a measuring instrument consists of several subscales, construct validity of the instrument is proven when the subscales show a factor structure which corresponds with the underpinning theory (Byrne, 1996: 42-43). The two processes, validation of a theory and validation of a measuring instrument, are therefore complementary (Byrne, 1996: 43). Therefore, a researcher can either validate a theory by creating good measuring instruments, or validate measuring instruments by basing them on solid theory (Byrne, 1996: 43, 240). In this study the latter option was followed.

Similar to quantitative research, it is argued that the validity of qualitative research relates to the evidence that can be assembled to defend the interpretations made from the results as appropriate, meaningful and useful. Similarly, such evidence can include the reliability of the data (precision), the defensibility and acceptability of the meanings attached to the findings, and the usability and consequences of the findings (Henning *et al.*, 2004: 146-150).

One way to ensure appropriate, meaningful and useful interpretations, is to ensure that the researcher and participants share mutual meanings in respect of the data (McMillan & Schumacher, 2001: 407). Mutual meanings can be enhanced by any combination of the following strategies in respect of data collection and analysis techniques: prolonged field work, multi-method strategies, participant verbatim language, low-inference descriptors, multiple researchers, mechanically recorded data, participant researcher, member checking, participant review and negative cases (Creswell, 2002: 280; McMillan & Schumacher, 2001: 407-410). In this study, multi-method strategies, participant verbatim language, multiple researchers (fieldworker), mechanically recorded data, participant review and negative cases

were employed to enhance validity of the qualitative research. When the results approximate reality, credibility has been achieved (McMillan & Schumacher, 2001: 166).

#### 4.6 RELIABILITY

Reliability refers to the extent to which measurements of a measuring instrument are consistent across the items or stable over time (Anderson, 1997: 892; Byrne, 1996: 38-9; Creswell, 2002: 180; McMillan & Schumacher, 2001: 244; Zeller, 1997: 823). The consistency of measurements is indicated by the reliability coefficient, often indexed by coefficient alpha, and it is desirable that such estimates of reliability exceed .8, or at least .7 (Creswell, 2002: 182; McMillan & Schumacher, 2001: 245, 248). Reliability of a questionnaire is a prerequisite for validity of the questionnaire, although the inverse is untrue (McMillan & Schumacher, 2001: 250).

Some qualitative researchers are of the opinion that one cannot achieve reliability in qualitative research, but that one must strive for trustworthiness in research. For others, reliability is subsumed in the process when striving for validity (Henning *et al.*, 2004: 151) (refer to 4.5) and could be said to refer to “*precision is all*” (Henning *et al.*, 2004: 147). Precision includes accurate and detailed dealing with responses of participants, and precision in procedures and documentation, whereby the research becomes potentially replicable (Henning *et al.*, 2004: 151). Reliability as precision then relates to the concept ‘authenticity’, which is the faithful reconstruction of participants’ multiple perceptions (McMillan & Schumacher, 2001: 415). In reconstructing data, the qualitative researcher must acknowledge his or her subjectivity and ensure a disciplined subjectivity through methodological strategies, such as peer debriefing and field journal keeping, which require meticulous self-scrutiny, also known as reflexivity (McMillan & Schumacher, 2001: 411-414). The part that a culturally congruent fieldworker plays in faithfully reconstructing data, contributes greatly to reliability and authenticity in the study. Reliability and authenticity can be linked to an important component of a quantitative understanding of reliability, namely consistency. Consistency in qualitative work lies in the internal logic and cohesion of the findings (Henning *et al.*, 2004: 151).

The aim is not to generalise findings from qualitative research, but to reflect the multiple perspectives and the unique context(s) of the research, thereby providing for the extension of findings, which facilitates understanding of similar situations and application of the findings in subsequent research or practical situations (McMillan & Schumacher, 2001: 414).

#### 4.7 DIFFERENCES IN LANGUAGE AND CULTURE

Differences in language and culture between the researcher and the participants can potentially influence the validity (credibility) and reliability (trustworthiness) of the research, by barring the way to ascribing mutual meanings. All cultural groups have their own conscious knowledge made up of the personal, interpersonal and nonpersonal meanings of the group. With questionnaires, the risk is often that the participants of a different culture and/or language do not understand or misunderstand the questions. During interviews and observations, the risk is increased when both the researcher and the participants can misunderstand or fail to understand questions, responses and non-verbal cues and behaviours. The researcher, belonging to another culture, may finally interpret the data according to his or her culture, thus leading to unreliable and invalid conclusions. For example, Markus and Kitayama (1991: 248) showed that researchers cannot assume that the same word in different cultures refers to the same emotional experience. It was decided to minimise the possible effects of differences in language and culture by employing a culturally congruent fieldworker<sup>1</sup> to implement the questionnaires, assist with the interviews, observations and projection pictures where applicable, and to consult with during the interpretation of data.

The possible effects of differences in language and culture when using questionnaires can be minimised by accommodating the questionnaire administration procedure and by rigorously attending to technical aspects during the translation process. In respect of the *questionnaire administration procedure*, the following was done. By ensuring that the questionnaire instructions were clear and self-explanatory, the researcher would have to rely less on verbal communication (based on Hambleton & Kanjee, 1997: 966). It could not be expected of Grade Seven learners, however, to complete a questionnaire without some guidance. Some participants in South African schools are not used to completing questionnaires. In the Afrikaans schools, the researcher, who is Afrikaans speaking, administered the ASCQ and in the Sepedi schools the ASCQ was administered by the culturally congruent fieldworker, who comes from the community, is familiar with the culture,

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<sup>1</sup> An MEd (Educational Psychology) student, Mr Ramodungoane Tabane, who was doing his internship at the Department of Education, was identified as a culturally congruent fieldworker. Eventually the fieldworker's research for his MEd dissertation dovetailed with the work done in this study, and a rich symbiosis developed between the two researchers. Mr Tabane's research topic concerns the generation of data during cross-cultural interviews. Briefly, the research design for his dissertation entailed attending all interviews for this study, following up in a second interview phase on data which emerged during the interview and which might be culturally related, and comparing the interview transcripts of the researchers representing the different cultures for hints of influence on data generation because of the culture of the interviewer.

language and dialect of the participants, has adequate questionnaire administration skills and experience, and who had had exposure to the administration procedure (based on Hambleton & Kanjee, 1997: 966). Further, because learners from different cultures might not be equally familiar with particular item formats, practice examples were provided and monitored (based on Hambleton & Kanjee, 1997: 966).

There are several reasons for *translating* existing questionnaires. Rather than developing a new instrument for participants of another language, besides financial and time advantages, translated questionnaires allow comparative studies among schools of different languages and cultures (Hambleton & Kanjee, 1997: 965-966).

Forward translation takes place when translators translate the measuring instrument from the original to the target language. Another group of translators then assess the equivalence of the two versions. Revisions are then made to the version in the target language to correct problems identified by the translators (Hambleton & Kanjee, 1997: 968). The best known and most popular way of translating research instruments is back translation. Translators translate the measuring instrument from the original to the target language. A second group of translators take the translated instrument (in the target language) and translate it back to the source language. The original and back-translated versions are then compared and assessed regarding their equivalence. If the versions appear similar, it confirms the equivalence of the translations. During back translation the quality of the translation into the target language can be monitored (Hambleton & Kanjee, 1997: 968). Back translation does not provide sufficient proof to support the use of the translated instrument in practice. Back translation is only one of the types of proof needed to confirm the equivalence of the translations (Hambleton & Kanjee, 1997: 968); however, back translation is recommended for small-scale cross-cultural studies (Hambleton & Kanjee, 1997: 968).

A shortcoming of back translation is that the comparison of the translations takes place in the source language. Therefore, it is possible that the translation in the target language is a poor translation, if, for example, the grammatical structures of the source language are retained. Such a translation will make the back translation easier and enhance equivalence between the translations, but poor translation in the target language remains hidden (Hambleton & Kanjee, 1997: 968). The culturally congruent fieldworker was able to identify poor translations and make suggestions for improvement.

Various aspects of instrument development, such as the choice of item format and stimulus material, basic vocabulary, sentence structure, general expressions and other aspects of the

questionnaire that would be difficult to translate, were kept in mind when developing the ASCQ in Afrikaans and Sepedi (Byrne, 1996: 50, 98; Hambleton & Kanjee, 1997: 967). Sentences in the passive voice and sentences with double negation (as found in Afrikaans) were also avoided as far as possible.

Dialects within a language can influence the validity of measuring instruments. During the translation process the researcher must decide whether the particular dialect is important, or whether the aim is to create a measuring instrument that can be used by all the dialects in a language (Hambleton & Kanjee, 1997: 967-968). Although the Afrikaans and Sepedi languages were kept as pure as possible to increase the applicability of the questionnaires in other schools, words of an Afrikaans and Sepedi vernacular, which were well known to the learners, were used where deemed necessary.

Sometimes words and expressions do not have equivalent versions in the target language, or do not exist at all in the target language. Decentering involves adaptations in the original instrument so that equivalent words and expressions can be used in the source and target language. Decentering works well when an instrument and its translated version are developed simultaneously (Byrne, 1996: 50; Hambleton & Kanjee, 1997: 967-968). (Refer to the pilot study in 4.9 when frequency categories had to be adapted to ensure comprehensibility in Afrikaans and Sepedi.)

#### 4.8 THE DEVELOPMENT OF AN ASC QUESTIONNAIRE FOR GRADE SEVEN LEARNERS, INCLUDING THOSE WITH HI: PRINCIPLES AND PROCESS

Firstly, the development of a questionnaire requires that the *variables* must be identified. Research questions, theories, previous research and discussions with experts can give direction in this regard (Wolf, 1997a: 423). Discussions about the research topic with people representing the group to complete the questionnaire, can also cast light on variables (Anderson, 1997: 888; Byrne, 1996: 105). Once identified, the variables must be formulated in question format (Wolf, 1997a: 423). It was decided to make use of existing ASC questionnaires in order to make a research contribution to the application of questionnaires across educational contexts. Local and international ASC questionnaires (Le Roux, 1983a, 1983b; Marsh, 1990 in Marsh & Yeung, 1997b: 698; Mboya, 1993, 1994a, 1994b; Hattie, 1992: 162-163) were evaluated to select the most appropriate ASC questionnaire. The study used academic self-concept variables and questions identified by the Song and Hattie Questionnaire (Hattie, 1992: 162-163) and the Self-concept Scale for Primary School Pupils (SSPS) by Le Roux (1983b). Each question can implicitly or explicitly be connected to the

ASC. To ensure that the learners understood the questions and gave valid and reliable responses, the questions were formulated in the language which the learners presumably understood best and could use best. In most cases that would be the first language of the learner; therefore, the ASCQ was developed in the first languages of the learners, namely Afrikaans and Sepedi.

Wolf (1997a: 423-424) suggested that a *pilot study* be done on a number of participants (between 30 and 50) who are representative of the group involved in the study. The questionnaire used during the pilot study often contains more questions than the final questionnaire, considering that the best questions will be selected from the pilot study. Based on the information obtained from the pilot study, items are now selected and refined and adaptations are made. If non-responses make up more than 5% of the sample, it is usually indicative of ambiguities in the items or inadequacies in the response categories (Wolf, 1997a: 425). If necessary, further adaptations should be made. The final questionnaire should not take longer than 30 minutes to complete, preferably 15 to 20 minutes (Wolf, 1997a: 425). Long questionnaires can lead to participant fatigue and/or insufficient cooperation, which may lead to careless and inaccurate responses (Wolf, 1997a: 422-423). The final ASCQ took approximately 45 minutes to implement, because of the adapted administration format for learners with HI. The results of the pilot study can be found in 4.9.

The *layout* of the questionnaire was also considered. The layout supports the participant to complete the questionnaire, by attending to aspects such as font size, sequencing of items and adequate spacing for responses (based on Wolf, 197a: 424).

Certain *developmental factors* were considered in developing the ASCQ. With self-reporting, the participant must be able to understand the questions or items and response categories correctly and to respond appropriately. A basic level of cognitive functioning and language and reading skills are necessary (Byrne, 1996: 56; Byrne *et al.*, 1992: 197; Hattie, 1992: 238, 240). Byrne (1996: 57) even recommended that the reading skills of learners be assessed before implementing a self-reporting questionnaire. In this study, the items on the questionnaire were stated as simply as possible to ensure readability and comprehension. Additionally, the items were read aloud, with the participants following on their questionnaires, to control for reading ability as a variable. The attention span of the participants was also kept in mind during the development of the questionnaire, as a poor or fluctuating attention span can lead to response bias, especially with young children and participants who have cognitive limitations (Byrne, 1996: 57). By limiting the number of



questions, and thereby the duration of the questionnaire, not only the effect of a short attention span, but also possible fatigue and boredom can be counteracted (Byrne, 1996: 58; Meier, 1994: 48). The memory abilities of the participants were also considered during the development of the ASCQ. Only that which the participant can remember, will be portrayed during self-reporting. Considering that recent events are often more accessible than events of the more distant past, self-reporting can easily be biased (Byrne, 1996: 58).

Participants must understand the *response formats* (Brinthaup & Erwin, 1992: 149). The inclusion of a neutral response option, for example '*I don't know*', '*Uncertain*' or '*Sometimes*' is debatable (Anderson, 1997: 893; Andrich, 1997: 879; Keats, 1997: 760). On the one hand, the participant can truly not know or be unsure. On the other hand, a neutral option can be a useful alternative if participants do not want to reflect their true feelings or attitudes, or do not understand the question (Anderson, 1997: 893; Andrich, 1997: 879). Some researchers are of the opinion that the number of unanswered items in the questionnaire increases when the neutral option is left out (Anderson, 1997: 893). In the current study, the ASCQ required participants to assess themselves on a time scale, namely never, a few times, sometimes, many times and always. The values 1, 2, 3, 4 and 5 respectively were allocated to the response options.

The decision to use five frequency categories of time in the ASCQ merits discussion. Some participants find it difficult to differentiate among more than three to five response options (Anderson, 1997: 892-893). Most participants feel more comfortable to assess themselves on a three-point continuum than on a two-point scale (Ashmore & Ogilvie, 1992: 259). In practice, two to twenty different response options are found. The greater the number of options, the more sharply the participants have to be able to differentiate and the more clearly the response options have to be circumscribed. The reliability increases as response options increase up to maximum of seven. Then reliability reaches a plateau. A decision on the number of response options depends on the nature of the assessment task and the training given to the participants (Wolf, 1997b: 962). An even number of response options prevents overuse of the middle '*uncertain*' option, but deprives the participant of a valid option. An uneven number of response options sometimes leads to misuse of the middle '*uncertain*' option. With five options, it was decided participants could have a middle option and a big enough variety of response options.

The validity of self-reporting is often threatened by *response bias*, that is to respond to items in such a way that the responses do not relate to the participants' true perceptions of themselves (Brinthaup & Erwin, 1992: 151-152; Hattie, 1992: 164). Response bias occurs

when some participants may want to avoid inadequate aspects of themselves, make a certain impression and/or postpone rejection (Hattie, 1992: 164). In this study, bias might have occurred if the learners did not believe that the results would be treated confidentially and if they felt they had to create a favourable impression of themselves and their educators. Unfamiliarity with the questionnaire format and cultural factors that compel learners to respond in a particular way may also contribute to bias.

Three general forms of response bias can be found: acquiescence, social desirability and extremity bias (Moskowitz, 1986: 307-308). Acquiescence is the tendency of participants to respond compliantly to questions or items in a questionnaire or interview, regardless of their own beliefs (Meier, 1994: 56). (On the other hand, some participants tend to respond unfavourably on all the items (Meier, 1994: 56)). Bias because of acquiescence can be countered by balancing positive and negative statements (Byrne, 1996: 59). For example, if participants must assess themselves on statements such as '*I do well in Mathematics*' and '*I do poorly in Mathematics*' by using a scale from 1 (never) to 5 (always), and they want to respond that they do well, they will have to select 5 for the first statement and 1 for the second statement to be consistent (Anderson, 1997: 893; Byrne, 1996: 103). Such statements are placed randomly in the questionnaire (Anderson, 1997: 893). Pre-adolescent children and children with poorer reading skills, however, are unable to respond appropriately to negative items, with the result that bias develops precisely because of the negative items (Marsh, 1986a: 45). Marsh (1986a: 47) also found that responses of older learners to negative items did relate to the responses to the positive items. The bias that can develop because of negative items correlates significantly with verbal ability. A statement with a negative connotation, for example '*I do poorly in Mathematics*', is better understood than a negative statement, for example '*I do not do well in Mathematics*' (Marsh, 1986a: 48).

Social desirability is the tendency of participants to respond to items in a questionnaire as they think the questionnaire administrator or community expects them to, regardless of their own beliefs (Anderson, 1997: 893). The gender, age, race and social status of the questionnaire administrator can influence the participants in this regard. Methods to manage bias because of social desirability are complex. One way to decrease socially desirable responses is by disguising the aim of the measuring instrument and the nature of the expected responses (Anderson, 1997: 893).

Extremity bias is the tendency of participants consistently to choose the extremities on a scale, such as consistently selecting the 1 or 5 on a five-point Likert scale (Byrne, 1996: 61). It is difficult to discern whether the selected extremities reflect the choice of the participant or



extremity bias. Extremity bias cannot be corrected by balancing positive and negative items, as both ends of the scale are affected (Byrne, 1996: 61).

Some participants maintain an impulsive response style and respond to items without any consideration (Meier, 1994: 56). By reading the instructions and items to the learners participating in this study, the effects of an impulsive response style will probably be minimised.

For insight in the selection and composition of items for the ASCQ used in the study, refer to Appendix C. The final questionnaire is found in Appendix D. A manual was written to manage questionnaire administration (refer to Appendix E for an English version of the manual).

## 4.9 RESULTS OF THE PILOT STUDY

### 4.9.1 Orientation

The pilot study of the ASCQ firstly aimed to establish the formulation of the frequency categories of time for the range of response options, which would be understood by most of the learners. The pilot study of the ASCQ secondly aimed to establish the format of the response sequence that would be most reliable and, thirdly, the reliability of each item under consideration for the ASCQ.

### 4.9.2 Formulation of the frequency categories of time

For the range of response options, the formulation of the frequency categories of time which would be understood by most of the learners had to be established. In both Afrikaans and Sepedi, three mixed order sets of frequently used, but different, words were compiled, that seemingly obviously distinguish among the frequency categories of *never*, *seldom*, *sometimes*, *often* and *always*. In each pilot class of learners, the learners were requested to arrange the three mixed-order sets systematically, every time starting with the word that means *never* and ending with the word meaning *always*. Table 4.1 contains the results of the Afrikaans speaking learners (N = 31) who participated in the Afrikaans pilot study.

Table 4.1 Variations and correct arrangements of mixed order Afrikaans formulations of frequency

Set	Number of participants	Variations	Correct arrangements	% Correct arrangements
1	31	17	7	22.58
2	31	13	11	35.48
3	31	14	15	48.39

The first mixed-order set yielded 17 variations. The large number of variations and the small number of correct responses suggest considerable confusion amongst the learners as to what the words in Set 1 really mean. Only 7 learners (22.58%) had the sequence correct (*Nooit, Selde, Soms, Dikwels, Altyd*). This was a finding of considerable importance for increasing both the validity and reliability of the ASCQ, since this set of terms is generally assumed to be clearly understood by one and all and is commonly seen in questionnaires. The second set yielded 13 variations, with 11 (35.48%) correct responses (*Nooit, Min kere, Partykeer, Dikwels, Altyd*). Set 3 yielded 14 variations, with 15 (48.39%) correct responses (*Nooit, Min kere, Partykeer, Baie kere, Altyd*), and was accepted as the formulation of the frequency categories of time to be used in the pilot and final versions of the ASCQ. Verbal explanations of the words were nevertheless included in the instruction manual of the questionnaire, in view of the fact that 51.61% of the pilot sample had failed to arrange this set correctly.

The results strongly suggest that the use of the term *keer/kere* (English: *time* as in *a few times, sometimes, many times*) clarifies understanding of frequency, since Set 3, containing *keer/kere* most, was arranged correctly by most participants. This raises the possibility that substituting *nie eers een keer* (English: *not even one time*) and *elke keer* (English: *every time*) for *nooit* (English: *never*) and *altyd* (English: *always*) may have further contributed to validity and reliability.

The compilation of three sets of Sepedi words denoting frequency was more challenging than the Afrikaans version. Apparently, Sepedi has even less distinction among the meanings of the various words, which clearly showed in the results. Inputs from the translator, the culturally congruent fieldworker as well as a Sepedi educator from a participating school were used in compiling the three sets of words, in what became an exercise in decentering (refer to 4.7). Table 4.2 contains the results of the Sepedi speaking learners (N = 46 and 51) who participated in the Sepedi pilot study.

Table 4.2 Variations and correct arrangements of mixed order Sepedi formulations of frequency

Set	Number of participants	Variations	Correct arrangements	% Correct arrangements
1	46	26	3	6.52
2	51	29	1	1.96
3	51	32	1	1.96

The first set yielded 26 variations, reflecting the high degree of confusion of terms amongst the learners, with only 3 (6.52%) correct responses (*A šinki, Ganyane fela, Nako engwe, Gantshi, Nako tšohle*). The second and third sets yielded 29 and 32 variations respectively, each with only 1 (1.96%) correct response (*Aowa, Ga mmalwa, Nako engwe, Kgafetsakgafetsa, Nako tšohle* and *Ga go bjalo, E seng gantshi bjalo, Nako engwe, Gantshi, Nako tšohle* respectively).

None of the sets by far therefore elicited enough unambiguous responses. An analysis was consequently made of how many learners were correct in respect of each individual word meaning *never, seldom, sometimes, often* and *always* in each of the three sets, as indicated in Table 4.3.

Table 4.3 Correct response choices for individual Sepedi formulations of frequency

Word meaning ...	Set 1 (N=46)	%	Set 2 (N=51)	%	Set 3 (N=51)	%	Sepedi word selected
... <b>never</b>	33 <sup>2</sup>	71.74	<b>34</b>	66.67	14	27.45	Aowa
... <b>seldom</b>	7	15.22	<b>25</b>	49.02	5	9.80	Ga mmalwa
... <b>sometimes</b>	15	32.61	<b>20</b>	39.22	13	25.49	Nako engwe
... <b>often</b>	<b>10</b>	21.74	9	17.65	5	9.80	Gantshi
... <b>always</b>	<b>11</b>	23.91	9	17.65	4	7.84	Nako tšohle

<sup>2</sup> An unfortunate mistake was picked up only after completion of the whole study: When the number of correct responses were expressed as a percentage of the number of learners participating in each set, it could be seen that the *never*-word in Set 2 had been incorrectly assumed to be chosen by more learners than in Set 1. *A šinki*, in Set 1, had actually elicited more correct responses than *Aowa*, in Set 2. It might be added that both words were understood by at least two thirds of the learners, indicating that both words were fairly well known. Further, *A šinki* was considered to be more of a slang expression than *Aowa*. Since the administration of the ASCQ included an explanation of the words used as frequency categories, the error has hopefully not impacted significantly on the reliability of the ASCQ in Sepedi.

The *never*-word positioned correctly most often (34 - 66.67% correct positionings; see footnote in Table 4.3) was contained in Set 2, as well as the *seldom*- and *sometimes*- words (25 – 49.02% and 20 – 39.22% correct positionings respectively). The *often*- and *always*-words positioned correctly most often were contained in Set 1 (10 – 21.74% and 11 – 23.91% correct positionings respectively). Therefore, the Sepedi words selected as answer options for the pilot and final versions of the ASCQ were taken from Set 1 and Set 2. Verbal explanations of the words were nevertheless included in the instruction manual of the questionnaire, in view of the high occurrence of error on all the words selected.

Another interesting puzzle should be mentioned. The same word yields different results in different sets: the *sometimes*-word, *nako engwe*, elicited 15, 20 and 13 correct responses in Set 1, 2 and 3 respectively; the *often*-word, *gantshi*, elicited 10 and 5 correct responses in Set 1 and 3 respectively; and the *always*-word, *nako tšohle*, elicited 11, 9 and 4 correct responses in Set 1, 2, and 3 respectively. The results imply that the learners' choice of word might possibly have been a function of the other words in the set or of increasing confusion, although the factor of guessing also merits consideration. The risk of doubtful validity and reliability of measuring instruments where frequency categories are used in black languages in general, and in the ASCQ specifically, should certainly be noted.

#### 4.9.3 The format of the response sequence

The more reliable sequence of response options also had to be determined before finalising the ASCQ. Section 4.8 mentioned the debate regarding inclusion of a neutral response option, for example '*Sometimes*' (Anderson, 1997: 893; Andrich, 1997: 879; Keats, 1997: 760). Half of the ASC questionnaires (N=42) in the pilot study contained the standard sequence of response options, as shown in Figure 4.1.

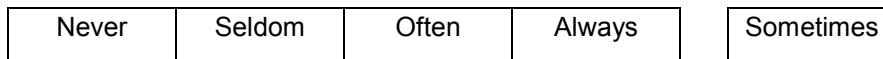
Figure 4.1 Standard response sequence

Never	Seldom	Sometimes	Often	Always
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In the other half of the ASC questionnaires (N=43) in the pilot study, the middle category '*sometimes*' was removed from the response option sequence and presented detached on the right, as shown in Figure 4.2, in an attempt to prevent the overuse of the '*sometimes*' category. This decision was supported by findings of Cronbach (1942, 1946, 1950 in Anderson, 1997: 893) who stated that the number of neutral responses decreases, and the

number of unfavourable responses increases, resulting in higher reliability of the scale in general, when the neutral response option follows the other options.

Figure 4.2 Neutral response option placed separately



The alpha coefficients for the two formats are presented in Table 4.4.

Table 4.4 Alpha coefficients for the standard and altered response sequences

ASC	Format 1 (standard sequence – Fig. 4.1)	Format 2 (altered sequence – Fig. 4.2)
General ASC (GASC)	0.4640	0.6395
1st Language ASC (LASC)	0.5696	0.6613
Mathematics ASC (MASC)	0.7598	0.7505
Total Scale (TASC)	0.8326	0.8235

The alpha coefficients in respect of the GASC and the LASC (the first two sections of the ASCQ) support the findings of Cronbach, namely that the altered sequence improves reliability. The differences between the two versions in respect of the MASC (the last section of the ASCQ), and the TASC are much smaller, but in favour of the standard sequence. It must, however, be kept in mind that the pilot study did not include learners with HI (refer to 4.4.4), who might have a less flexible application of vocabulary regarding the response options. As the ASC of learners with HI was the primary focus of the study, it was decided to retain the standard sequence of response options until verification of the findings with learners with HI, even though the alpha reliability coefficients obtained for the two formats during the pilot study favour the altered sequence. It should be noted that the reliability of both sequences increases with repetition, and that the difference in reliability for the TASC is small and in favour of the standard sequence.

#### 4.9.4 The items of the ASCQ

The origin of the items is indicated in Appendix C. Some of the words in the items were replaced to reflect more accurately the language used by and familiar to the learners (for example, *academic work* was changed to *schoolwork*, and *obtain* was replaced with *get*). Some words had to be replaced (decentering) to find equivalent forms in Afrikaans and

Sepedi (for example, *I dislike it ...* was replaced with *It is bad for me ...*). Some negative items were changed to positive items to facilitate comprehension, balance positive and negative items and/or keep the grammatical structure of the sentence the same in Afrikaans and Sepedi. The items were as follows:

Item number	Original item (refer to Appendix C)	Item as used in the pilot study <sup>3</sup>
1	I am happy with the schoolwork I do.	I am happy with the schoolwork <u>that</u> I do.
2	I am proud of my ability in <u>academic work</u> .	I am proud of my ability in <u>schoolwork</u> .
3	I am sure of myself in school tasks.	I am sure of myself in school tasks.
4	I am proud of my school report.	I am proud of my school report.
5	I feel good about my ability to do schoolwork.	I feel good about my ability to do schoolwork.
6	Most of my teachers do not understand me.	Most of my teachers do not understand me.
7	I am satisfied with my schoolwork.	I am satisfied with my schoolwork.
8	I think my ability is sufficient to cope with schoolwork.	I think my ability is sufficient to cope with schoolwork.
9	I feel worthless in class.	I feel worthless in class.
10	I feel good about my schoolwork.	I feel good about my schoolwork.
11	I think that I am capable of <u>getting</u> the results I would like to <u>obtain</u> in schoolwork.	I think that I am capable <u>to get</u> the results I would like to <u>get</u> in schoolwork.
12	<u>I dislike it</u> when my teachers ask me questions.	<u>It is bad for me</u> when my teachers ask me questions.
13	I have confidence in myself to do schoolwork.	I have confidence in myself to do schoolwork.

<sup>3</sup> Clauses were added to the second and third sections of the ASCQ to refer to the first language or mathematics, for example '*in the Sepedi class*', or '*mathematics schoolwork*'.

Item number	Original item (refer to Appendix C)	Item as used in the pilot study <sup>4</sup>
14	<u>Many of my lessons I do not understand well.</u>	<u>I understand most of my lessons well.</u>
15	I <u>do not</u> see myself as <u>the best</u> learner in class.	I <u>see</u> myself as <u>a good</u> learner in class.
16	I feel left out of things in class.	I feel left out of things <u>that happen</u> in class.
17	I think that I take <u>a longer time</u> than my <u>friends at school</u> to understand <u>the lessons</u> .	I think I take <u>longer</u> than my <u>classmates</u> to understand <u>schoolwork</u> .
18	I prefer it that other children do not see my work in class.	I prefer it that other children do not see my work in class.
19	<u>I would not be able to achieve better marks, even if I worked harder.</u>	<u>Even if I worked harder, I would not be able to achieve better marks.</u>
20	I think that the teachers <u>do not treat</u> me well.	I think that the teachers <u>treat</u> me well.

The retention and elimination of items were determined by considering the item-total correlation of each item in each section (GASC, LASC and MASC) in each language (refer to Table 4.5). The final selection of items had to be the same for each section (excluding the addition of clauses referring to school, the first language and mathematics in the different sections) and each language to enable comparison among the schools and learning areas. If an item did not perform well across all the sections and both languages, the item was either eliminated or changed.

<sup>4</sup> Clauses were added to the second and third sections of the ASCQ to refer to the first language or mathematics, for example '*in the Sepedi class*', or '*mathematics schoolwork*'.





The corrected item-total correlations show that the Afrikaans version of the ASCQ has a total of 9 items across the three sections (GASC – 5, LASC – 2, MASC – 2) which do not fulfil the minimum criterion of .2 for item-total correlations. The Sepedi version has 27 items across the three sections (GASC – 9, LASC – 10, MASC – 8) which do not fulfil the criterion. The <.2 correlations cluster in the Sepedi version of Question 11 and Question 15 and the Afrikaans and Sepedi versions of Question 16, Question 18 and Question 19. The language in Question 11 was simplified by removing the clause “*I think ...*” in both languages. Question 15 was accepted in the Sepedi version, because of the high correlation in the Afrikaans version. The low correlations in the Sepedi version might be attributed to a collective consciousness among the learners, especially in respect of a question requiring focus on the self such as “*I see myself as a good learner in class*”. Question 16 was retained, because the correlations for the LASC and MASC were deemed acceptable. Question 18 was eliminated. Even when looking at the means, Question 18 is noticeable as it produced four of the six lowest means. The word order of Question 19 was changed back to the original “*I would not be able to achieve better marks, even if I worked harder*”. Refer to 5.3 for the item-total correlations of the final version of the ASCQ.

The large number of <.2 correlations in the Sepedi version requires contemplation. One possible explanation might be that a collective consciousness prevails among the learners, especially in respect of questions requiring focus on the self, as mentioned above. Another possible explanation might lie in the fact that the researcher, and not the culturally congruent fieldworker, administered the pilot ASCQ, leading to words being incorporated in the ASCQ which were unfamiliar to many of the learners. The researcher implemented the pilot ASCQ in Sepedi, with some support beforehand from the fieldworker. It was only when the final ASCQ was implemented by the fieldworker during the main study, that the learners asked the fieldworker the meaning of some of the words in the items. It might be that the learners in the pilot study thought that if someone of another colour or language could speak their language, they should know the meanings of the words in their language; therefore, no questions were asked, even to the fieldworker. If this should be the case, the possible influence of language in cross-language studies needs to be acknowledged. Another possible explanation might be that the learners in the pilot study were not familiar with completing questionnaires. The low alphas of the Sepedi ASCQ, compared to those of the Afrikaans ASCQ, tend to support this explanation. The possibility of a measure of confusion in respect of the frequency categories with the Sepedi learners might also have contributed to the <.2 correlations in the Sepedi version. Finally, another factor to consider is that the language of teaching and learning for the learners in the Sepedi pilot group was mostly English, and not Sepedi. Only the first language, Sepedi, was taught in Sepedi. The

difference in the portrayed importance of their mother tongue and English in the classroom might have had an influence on the answering of the questionnaire. Consequently, the many < .2 items in the Sepedi ASCQ, with the most being in the LASC section of the Sepedi version, led to the addition of a fourth ASC section to the Sepedi ASCQ, namely English (EASC). The EASC was not analysed for the purposes of this study, but to only further investigate the self-evaluations of the Sepedi learners in different language learning areas. The relevance to ASC of data obtained from the EASC will, therefore, not be discussed in this study.

#### 4.10 THE USE OF ACHIEVEMENT PERCENTAGES AND AUDIOGRAMS: PRINCIPLES AND PROCESS

The accuracy of data was especially important in collecting achievement percentages and audiograms. The most recent school achievement marks available at the time of the data collection were used, which were the marks for the second school quarter. The learners in all the schools had received progress reports at the end of the second school quarter, implying that all the learners participating in the study were aware of their academic achievement for the second school quarter, which assumedly then contributed to their ASC in the third school quarter, during which the data were collected. School 1, however, followed a continuous assessment programme, and the learners were at all times informed of their progress. When the ASCQ was implemented in September 2003, all the learners in School 1 were aware of their progress during the third school quarter; therefore, for School 1, school marks of the third school quarter were collected as well.

The school achievement marks of the participating learners were collected in every learning area, not only first language and mathematics, as stated in progress reports. All the marks were given as percentages, except for the mean achievement mark (MAM) across all learning areas given by School 5, which was expressed in categories with the following values: 1: 0% - 39%, 2: 40% - 49%, 3: 50% - 69% and 4: 70% - 100. Only School 1 had supplied a MAM across all learning areas for each learner. For Schools 2 – 5, the MAM across all learning areas for each learner was calculated, by summing the marks achieved in each learning area and dividing it by the number of learning areas. A number of learners did not have a complete set of school achievement marks, because of absences from school. A MAM across all learning areas were then calculated for the available marks.

Using only the most recent audiograms and only audiograms drawn by qualified audiologists enhanced validity and reliability of data from audiograms. The audiogram of the learner with

HI in School 1 was drawn by a registered audiologist in private practice, the audiogram of the learner with HI in School 2 was drawn by a fourth year audiology student at the Department of Communication Pathology of the University of Pretoria, South Africa, under the constant supervision of a registered audiologist, and the audiograms of the learners with HI at School 3 were drawn by registered audiologists at the school, employed by the Department of Education.

#### 4.11 THE DEVELOPMENT AND USE OF INTERVIEWS: PRINCIPLES AND PROCESS

Through different techniques, the human act of conversation is transformed to a research method: the interview. The data obtained by implementing questionnaires lack the depth of information on the social contexts of the ASC of learners with HI that interviews can give (Tierney & Dilley, 2002: 454-455).

The participants (interviewees), who had been purposefully selected (Creswell, 2002: 207), consisted of the principals and the first language, mathematics and class educators. Participants decided on the time for their interviews. Interviews were conducted either in an office in the administrative block of the school or in the classroom of the educator (based on Creswell, 2002: 208).

The interviews in the study were conducted individually (Tierney & Dilley, 2002: 461) to allow opportunity for optimal expression by the participants, without the possibility of other participants inhibiting expression. The interviews were semi-structured in the sense that although there were pre-set open-ended questions, neither the wording nor the order of the questions was fixed and the questioning followed the lines taken by the participants, cues and interests (Creswell, 2002: 203-204; McMillan & Schumacher, 2001: 42, 269). McMillan and Schumacher (2001: 444) called this the *interview guide approach*. Interviews generally lasted between 60 and 90 minutes each. Questions were scrutinised to prevent leading questions from biasing the data (McMillan & Schumacher, 2001: 269). Note was taken of interviewer characteristics which might influence the course of the interview, such as age, gender, perceived socio-economic level and racial background of the interviewer (McMillan & Schumacher, 2001: 269-270).

Questions in the interview schedules aimed to elicit information by which the context of the learners with HI in the schools could be understood better, but also to understand meanings that the participants ascribed to the concepts of inclusive education and impairment. The

accuracy of 'facts' supplied by the participants was not verified, as the perceptions of the participants were regarded as more important and influential on the ASC of the learners in day-to-day teaching. Each interview started with a brief explanation of the study and assurance of confidentiality and anonymity outside the interview. The interviews with the *principals* included questions relating to general information about the school, the goals envisioned by the school, the support provided by the school, the role played by BLP and the progress of inclusive education and participation policy implementation at the school. The *first interview with the educators* included questions relating to their work with the Grade Sevens, challenges they experienced, support available and required, inclusive education, their understanding of ASC and teaching background. The questions asked during the *second interview with the educators* were aimed at understanding the classroom observations and included questions relating to their work and preparations, particular incident(s), inclusive education and observations regarding a particular learner(s). Interviews were concluded by thanking the participants, providing additional opportunity to ask questions to the researcher and once again emphasising confidentiality and anonymity (based on Creswell, 2002: 208).

The interviews with the principals started with general information regarding the school set-up. It was argued that principals were fully knowledgeable on this score and that sharing the information would break the ice and set a positive tone for the rest of the interview. The interviews with the educators started with a general question about how their days went. It was argued that such a question would convey interest in what the educator did. The question also brought an informal tone to the interview and made the transition to more complex questions easier. Questions on their teaching background were deliberately placed later in the interview, as these questions would suggest a question-answer-format for the rest of the interview and not a conversation (based on McMillan & Schumacher, 2001: 448-449).

The interviews with the school principals were conducted during the first two weeks of August. The educators responsible for the first language, mathematics and class education at School 1, 2 and 3 participated in interviews. In School 1 and 3, the relevant educators were contacted telephonically and the purpose and methods of the study were explained, as well as the implications of involvement for the educators. In School 2, the principal invited all the relevant educators, as well as the vice-principal (Senior Phase), the head of department of the Grade Seven classes and the school co-ordinator of special educational needs (*sic*) to an informal meeting where the necessary information was given and questions addressed. Initially it had been planned to complete the first educator interviews before the classroom observations commenced, but it was not possible, because of the hectic schedules of the

educators. The first educator interviews were conducted before and after school and/or during free periods as soon as the relevant educators could find time for the appointments. The second interviews with the educators had been planned to coincide with the completion of the classroom observations. By conducting the interviews so soon after the observations, it was hoped that the educators would still be familiar with the classroom activities which had occurred during the third school quarter. Once again, because of educators' busy schedules, many of the interviews were only conducted during the beginning of the fourth school quarter<sup>5</sup>.

The flexibility and adaptability of interviews allow probing, following up, clarifying and elaborating to enhance understanding of the matter being researched. Both verbal and non-verbal communication can be noted and incorporated into the data (McMillan & Schumacher, 2001: 267). Probing was done carefully, after enough time had elapsed for responding, without interrupting or expecting specific responses (Creswell, 2002: 208; McMillan & Schumacher, 2001: 271).

During the interviews brief notes were made of responses, non-verbal behaviour and specific questions or themes to follow up on. The interviews were also audiotaped, transcribed and analysed for themes related to the research question (based on Creswell, 2002: 203, 208; McMillan & Schumacher, 2001: 42, 270-271, 450).

Refer to Appendix F for an interview schedule of an interview with the principals, Appendix G for an interview schedule of a first interview with the educators and Appendix H for an interview schedule of a second interview with the educators.

#### 4.12 THE DEVELOPMENT OF PROJECTION MATERIAL: PRINCIPLES AND PROCESS

A problem with spontaneous responses is that some learners repeat excessively or perseverate on a specific response. Some responses might be irrelevant to the investigation from the perspective of the researcher (Brinthaup & Erwin, 1992: 152). Also, it would not be impossible for some learners to manipulate their responses. As with interviews, the gender, age, race and social status of the projection picture administrator can influence the learner during implementation of the projection pictures (Säljö, 1997: 101). Analysis of responses is

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<sup>5</sup> The GDE only grants permission for research to be conducted at schools until the end of the third school quarter. With permission of the school principals, as required by the GDE, however, the interviews were conducted.

made more difficult by the concern whether two researchers who analyse the same protocol, will draw the same conclusions (Säljö, 1997: 101).

As with questionnaires, firstly, the content of the pictures was determined. The content of the projection pictures was aimed to elicit responses from the learners regarding questions that related to the study. Each construction on the projection picture contributed to the aim of the study and was functional. Anything else might have functioned as inappropriate stimuli and influenced the responses. The pictures had to be appropriate for the age and surrounding environment of the learners. Separate pictures for boys and girls were developed corresponding to the developmental phase of the learners.

The development of the projective pictures in this study was an extension of the development of projective pictures in a previous study (Du Plessis, 1999). Initially, Picture X (Jacobs, 1981: 244) (refer to Figure 1 of Appendix I) was selected from a series of pictures used with white learners. The rationale behind the choice was that other stimuli, which might influence the participants inappropriately, were absent. The stark silhouettes were thought to present a sufficient cue to continue with projected content. In accordance with the ASCQ, three identical pictures were used for a general ASC, a first language ASC and a mathematics ASC. Captions of '*In the school*', '*In the Afrikaans/Sepedi class*' and '*In the mathematics class*' were added to the pictures in the respective languages of the participants to denote the different class contexts. The pictures were presented to an expert in the field of meaning attributed by black South African learners. The responses<sup>6</sup> indicated that the pictures were judged too dark for the intended participants, and containing the possibility of criminal connotations. The stationary and solitary figure could also be problematic. Based on the feedback, it was decided to alter the choice of picture.

Picture 2 ("*Teacher and children in the classroom - reveals attitudes towards teachers, classmates and the learning situation*") of the Bar Ilan Picture Test (Itskowitz & Strauss, 1977) was subsequently considered. It depicts a realistic and meaningful situation regarding learners in an educational setting (refer to Figure 2 of Appendix I). The picture was adapted to reflect some of the participants in the study (refer to Figure 3 of Appendix I). Comments by the experts consulted were that there were too few learners in the class and that the bookcase was inappropriate. Consequently, more learners were added to the picture, the classroom was filled with desks and chairs, the bookcase was replaced with windows and a

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<sup>6</sup> "*It's too dark ... criminal, you know ... if you think of the environment where the children come from.*"  
"*It's too solitary.*"  
"*It's stationary ... there isn't any movement.*"

chalkboard was added. The chalkboard provided the opportunity for relevant learning content to be entered, to optimally reflect a classroom in association with the learner's context. Two versions were developed: one version depicted a classroom in a regular and full-service school, and the other a classroom in a special school. The two versions were identical, except that the appearances of the learners in the pictures were adapted to represent the appearances of the learners in each school and that the latter picture card had fewer learners in the class to represent the smaller classes the learners in the special school were accustomed to. Each version contained separate picture cards for a girl interacting with either a male or a female educator, and a boy interacting with either a male or a female educator. The choice of a card during an interview with a learner would depend on the gender of the learner and the educator of the learning area under discussion. A line was added behind the ear of the learner standing next to the educator so that the resulting ambiguous double line could be interpreted either as a hearing aid or as merely part of the ear. Headings further situated the various pictures: pictures were available for school in general, the first language class and the mathematics class (refer to Figure 4 of Appendix I for an example of a final projection picture). All pictures were in an A4-size.

The learners were requested to tell a story about each of the pictures concerning what had happened before the time, what was happening now, what the feelings and thoughts of the people were, and what was going to happen afterwards. No time limits were set and responses were written down (Walsh, 1997: 956) and recorded on audiotape. The pictures were administered in the first language of the participants, namely Afrikaans and Sepedi. Where necessary, the culturally congruent fieldworker assisted. Open-ended questions were asked, but no previously set protocol of questions could be compiled, as the responses of the learners determined the ensuing questions. No leading questions were asked. The audiotapes were transcribed and translated, where necessary.

The projective pictures were administered in School 1 and 2 to the learners with HI and some of the learners who came to the attention of the researcher during the classroom observations, during the third school quarter. The projective pictures could only be administered to the learners with HI in School 3 during the fourth school quarter. Some of the responses of the learners led to some conversation about the school, classes, peers and educators, but the learners were not formally interviewed as the adults in the study had been.



#### 4.13 CLASSROOM OBSERVATIONS: PRINCIPLES AND PROCESS

Observations are precise sightings of participants and can focus on play, language, behaviour and/or any other aspect of development (Harding & Meldon-Smith, 1996: vi). Observations are a natural part of interaction and are present wherever people are in contact with one another (Botes, 1987: 76). Observations can be made in natural or artificial situations (Moskowitz, 1986: 300). *Natural situations* are situations where people usually find themselves and where they are unaware of being observed. Observations made in natural circumstances often have high face validity, but can be time consuming considering that the target behaviour does not necessarily occur often (Anderson, 1997: 891). Familiarity of the environment also contributes to validity: a child's play in a dentist's waiting room will probably be different than at home (Hobart & Frankel, 1994: 5). Harding and Meldon-Smith (1996: 5) and Meier (1994: 49) mentioned that people can change their behaviour if they are aware that they are being observed, such as trying to act in a socially desirable way (Anderson, 1997: 893). Reactivity is the possible distortion that takes place when people are aware they are being observed and perhaps want to impress the observer, or are influenced by the age, gender and/or race of the observer (Ball, 1997: 243-244; Meier, 1994: 49, 51). *Artificial situations* are situations unfamiliar to people, where they know that they are being observed. Research in artificial circumstances is often less time consuming, but it is difficult to generalise or extend conclusions (Anderson, 1997: 891).

According to Kaplan (1997: 115), observation and interpretation cannot be separated: "... *there is more to observation than meets the eye.*" What is observed, depends on the concepts and theories with which the observer regards that which is being observed. Behaviours and events that do not fit in with the concepts and theories, are often not observed or regarded as insignificant (Kaplan, 1997: 115).

The researcher attended the first language and mathematics classes of the Grade Seven classes selected at the full-service and special schools during the course of the third school quarter. The culturally congruent fieldworker sometimes accompanied the researcher to observations at one full-service school and could explain and interpret behaviour and events in context, thus expanding the researcher's understanding of the participants. Differences in observations were discussed and interpretations were eventually agreed upon.

At the start of every observation, a classroom map was drawn to record the class layout and the positions of the learner(s) with HI, the educator and the researcher. The classroom dynamics and the learner(s) with HI were observed. Field notes were made, in addition to



audiotapes of the conversation in the class. The audiotapes were transcribed and analysed for better understanding of the classroom context. Accurate field notes and audiotaped observations enhanced the reliability of the data. The validity of the observations was verified by asking the educators during the second interview to explain some of the incidents that occurred during the period of observation (refer to Taft, 1997: 73-74).

The classroom observations were initially scheduled on a rotation basis so that the researcher would make weekly observations of the first language and mathematics periods at School 1, 2 and 3, each observation at a school on a different day. A minimum of six observations of each learning area at each school during the course of the school quarter had been planned. To increase understanding of the class situation and to hone observation skills, one class of the class educator was observed once at two of the schools. The class educator of the third school was already participating in the study, and was, therefore, already being observed. It was argued that making continuous observations during the school term would produce a more accurate reflection of classroom practice during a school quarter than a week's observations *en bloc* at each school. It might also be that the learners would be less influenced by the presence of an observer who visited their classes regularly. Despite rigorous planning, the intended number of observations in each learning area at each school could not always be made on account of within-school factors such as an entrepreneurial day which led to shortened class periods, changes in the time-table and educators who were absent. At School 1, five observations were made of the Afrikaans class and six observations of the mathematics class. At school 2, four observations were made of the Sepedi class and five observations of the mathematics class. At School 3, four observations were made of the Afrikaans class and six observations of the mathematics class.

The classroom activities were audiotaped and transcribed, and data were augmented by the field notes made during the observations. Classroom activities which had been conducted in Sepedi were translated. The translations were checked by the culturally congruent fieldworker.

#### 4.14 THE COMPILATION OF BACKGROUND INFORMATION: PRINCIPLES AND PROCESS

Background information added to enhance understanding of the context of the ASC of learners with HI. Not all the learners with HI had background information in a written form, and additional measures had to be taken to obtain the necessary background information for

understanding and comparing (based on Creswell, 2002: 209; McMillan & Schumacher, 2001: 42). The compilation of background information was done only after the classroom observations had been made, as the classroom observations sensitised the researcher to the context of the learners and each learning area at each school.

Background information was obtained by consulting the official learner profiles kept by the schools. A learner profile contained school history, all available school reports, anecdotal comments from educators, a family profile and, where applicable, the history and specifics of the learner's HI, including an audiogram. In School 1 and 3, the researcher had access to the profiles of the learners. Selected pages from the profiles of the learners with HI were photocopied to clarify the context of the learners. School 2 did not have profiles, but the researcher conducted an interview with the mother of the learner with HI to try to obtain the school history, a family profile and the history and specifics of the learner's HI. This learner was also taken for an audiological assessment at the Department of Communication Pathology at the University of Pretoria to investigate her HI and obtain an audiogram. The parent of the learner with HI in School 1 was unavailable for interviewing purposes, and the parents of four of the six learners with HI in School 3 were resident in towns outside Pretoria. As the profiles of the learners in School 3 were comprehensive, it was decided not to conduct telephonic interviews with the parents.

The educators at each school were requested to identify books that would be exemplary of books of learners with high, average and low achievement in the particular learning areas (based on McMillan & Schumacher, 2001: 451-452). Selected pages were copied from the first language and mathematics books of the learners with HI, two high achievers, two average achievers and two low achievers in School 1, 2 and 3. Examples of their schoolwork contributed to a better understanding of their school marks.

#### 4.15 ETHICAL PRINCIPLES ADHERED TO DURING THE RESEARCH

Firstly, permission was obtained from the Gauteng Department of Education to conduct research in schools in their jurisdiction (refer to Appendix J). The permission stipulated several procedures to be followed, two of them being a letter to the District Senior Manager (refer to Appendix K) and feedback after completion of the research. Secondly, permission was obtained from the principals of the selected schools. According to the stipulations, the school governing board also had to be asked for permission, *via* the principal (refer to Appendix L for an English example of a letter addressed to the principals and school governing board). The letter of permission and the document in respect of the purpose and

anticipated outcomes accompanied the letter and have already been appended.). Lastly, permission was also obtained from the parents or guardians of the learners in the Grade Seven classes to be involved. By implication learners had a say in their participation. Letters of permission that explained the nature of the study were sent to parents or guardians. Anonymity and confidentiality were assured. Letters of permission were sent for participation in the pilot study (refer to M1), audiological assessment at the Department of Communication Pathology (refer to M2), participation in the questionnaires and observations at the full-service and special schools (refer to M3), participation in the questionnaires only at the regular schools (M4), and participation in the learner interviews (refer to M5) (refer to Appendix M for examples of the letters M1 to M5). The parents of one learner in School 1 and one learner in School 5 refused permission for their children to participate in the research. The learners were therefore excluded from the research. A document was also completed for the Faculty Research Ethics Committee.

Learners were requested to write their names on the ASCQ for purposes of correlation with school marks for possible future research in respect of ASC. Educators (and principals) were not identified by name and surname on the audiotapes made during the interviews or classroom observations, but by school and educator number. The researcher employed the services of a company to do the transcriptions of the audiocassettes. Each typist was requested to sign a statement regarding the confidentiality and anonymity of the participants and content of the audiocassettes (refer to Appendix N).

During the research, support was given to educators and learners where possible. Support to educators sometimes entailed supplying information in respect of their questions. Where possible, educators were empowered to deal with similar situations. Support to learners entailed audiological assessments and feedback to their parents. One learner required more support and, with the cooperation of the parents, she underwent several further assessments in respect of school placement, life orientation and guidance.

#### 4.16 CONCLUSION

Research methodology as a science incorporates two poles. As can be seen from Chapter 4, on the one hand research methodology comprises the study of specific research techniques with practical implications such as the interpretation of protocols and surveys or statistical computations. On the other hand, methodology comprises the philosophy of science, and concepts such as objectivity and truth with only indirect practical implications.

Methodology is then both a generalisation of techniques and a concretisation of philosophy (Kaplan, 1997: 112).

The challenge of the research has lain in taking multifactorial and multilevel account of the contexts that could impact on the ASC of learners with HI. The contexts of schools are never static and issues of change will always be operant, especially when the schools are beginning to implement the inclusive education and participation policy. Therefore, the research demanded the highest level of sophistication, seeking the synthesis of findings from both quantitative and qualitative research, and specialised clinical skills to reach an understanding of the ASC of learners with HI in an ever-changing context.

The mixed multi-method research design which allows for triangulation of data combines the advantages of each form of data. The quantitative data provide grounds for generalisation in respect of the ASC of learners with HI, and the qualitative data offer information about the context and dynamics of the ASC of learners with HI (based on Creswell, 2002: 566). Chapter 5 presents, discusses, and interprets the results for each form of data collection.

## CHAPTER 5

### RESEARCH RESULTS:

#### MAKING SENSE OF THE ACADEMIC SELF-CONCEPT OF LEARNERS WITH HEARING IMPAIRMENT IN DIFFERENT SCHOOL CONTEXTS

##### 5.1 ORIENTATION

The aim of the study is to investigate the ASC of learners with HI in two South African public school contexts, namely special and full-service inclusion schools. An aim of Chapter 5 is to present the quantitative data, attempting to measure, describe and analyse the nature of the relationship, including its strength and direction, between the ASC and barriers of HI in the two school contexts. Chapter 5 also aims to enrich the analysis of the quantitative data with an analysis of the qualitative data, thereby attempting to further explore the nature of the relationship, more specifically in respect of the dynamics, between the ASC and HI in the two school contexts. The findings derived from the quantitative and qualitative data will be integrated, synthesised and discussed.

##### 5.2 SAMPLE DESCRIPTION

###### 5.2.1 Schools

Table 5.1 indicates the schools participating in the study, in terms of school context, predominant first language of learners and historical educational status.

Table 5.1 Schools participating in the research

<b>School</b>	<b>School context</b>	<b>Predominant learner language</b>	<b>Historical educational status</b>
1	Full-service inclusion school	Afrikaans	Historically advantaged
2	Full-service inclusion school	Sepedi	Historically disadvantaged
3	Special school for learners with HI	Afrikaans	Historically advantaged
4	Regular school	Afrikaans	Historically advantaged
5	Regular school	Sepedi	Historically disadvantaged

## 5.2.2 Learners

Table 5.2 indicates the number of learners who participated in the study, in terms of school, gender and home language.

Table 5.2 Sample distribution: learners, as per school, gender and home language

	School	1		2		3		4		5		Total
	Gender	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	
<b>Home language</b>	Afrikaans	18	11			9	2	20	16			76
	Sepedi			14	18					11	7	50
	Tsonga			4	6					1	4	15
	Zulu			5	6					3	1	15
	Tswana									2	5	7
	South Sotho									1	1	2
	Venda									1		1
<b>Total</b>		18	11	23	30	9	2	20	16	19	18	166
<b>Total per school</b>		29		53		11		36		37		166

A total of 166 learners – 89 boys and 77 girls – participated in the study. In School 1, 3 and 4, 76 (100%) learners were Afrikaans speaking, 32 (60.38%) learners in School 2 were Sepedi speaking and 18 (48.65%) learners in School 5 were Sepedi speaking. The Grade Seven classes in School 1, 3 and 4 contained no learners whose home language was any of the indigenous languages of South Africa.

Of the learners in this study, 90 (54.22%) learners attended primary schools in traditionally black residential areas, lived in homes or squatter camps in these areas, had little or no contact with white peer groups, and had limited and indirect contact with white adults. The other 76 (45.78%) of the learners attended primary schools in traditionally white residential areas, lived in traditionally white residential areas, had little or no contact with black peer groups, and had limited contact with black adults. These inclusionary-exclusionary factors may have influenced the development of a collective consciousness and an individual self-concept in the two groups of learner participants in the study.

The mean ages of the learners, in years and months, are indicated in Table 5.3, and the frequency and distribution of ages in Table 5.4. The mean ages were determined as on the day the ASCQ was administered in the particular school. The dates for the schools were as

follows: School 1 and 5: 11 September 2003, School 2: 15 September 2003, School 3: 17 September 2003 and School 4: 12 September 2003.

Table 5.3 Age of learners\*

School	Gender	N	Mean Age	Standard Deviation	Standard error	Median	Minimum age	Maximum age
1	Boys	18	13y06m	00y07m	00y02m	13y04m	12y09m	15y05m
	Girls	11	13y04m	00y04m	00y01m	13y06m	12y10m	13y11m
	Total	29	13y05m	00y06m	00y01m	13y04m	12y09m	15y05m
2	Boys	23	14y06m	01y06m	00y04m	13y11m	11y09m	17y03m
	Girls	30	13y09m	01y02m	00y03m	13y09m	12y02m	16y06m
	Total	53	14y01m	01y04m	00y02m	13y10m	11y09m	17y03m
3	Boys	9	14y06m	00y09m	00y03m	14y03m	13y05m	15y08m
	Girls	2	14y01m	01y06m	01y01m	14y01m	13y00m	15y02m
	Total	11	14y05m	00y10m	00y03m	14y03m	13y00m	15y08m
4	Boys	19	13y05m	00y04m	00y01m	13y05m	12y11m	14y03m
	Girls	16	13y07m	00y07m	00y02m	13y06m	12y11m	15y05m
	Total	35	13y06m	00y05m	00y01m	13y05m	12y11m	15y05m
5	Boys	19	13y08m	01y01m	00y03m	13y06m	12y02m	16y08m
	Girls	18	13y00m	00y08m	00y02m	12y09m	12y03m	14y06m
	Total	37	13y04m	01y00m	00y02m	13y02m	12y02m	16y08m
1-5	Boys	88	13y11m	01y01m	00y01m	13y06m	11y09m	17y03m
	Girls	77	13y06m	00y11m	00y01m	13y04m	12y02m	16y06m
	Total	165	13y08m	01y00m	00y01m	13y06m	11y09m	17y03m
1,3,4 (Afrikaans)	Total	75	13y07m	00y08m	00y01m	13y06m	12y09m	15y08m
2,5 (Sepedi)	Total	50	13y11m	01y03m	00y02m	13y08m	11y09m	17y03m

\* Data were not available on all of the 76 Afrikaans speaking learners, hence N=75 in Table 5.3. Since some of the data will only be analysed for the Sepedi-speaking learners, data in respect of age are given only for the Sepedi-speaking learners in School 2 and 5.

Table 5.3 shows that the mean age of the boys (13y11m) is 5 months higher than the mean age of the girls (13y06m). The mean age of the boys is higher than the girls in all the schools except in School 4, where the mean age of the girls is 2 months higher than the boys. The youngest and oldest learners in the study are boys (11y09m and 17y03m respectively). There is an extensive age range in the study, which might have influenced the

Table 5.4 Frequency and distribution of age\*

Age	F	%	Cum f	Cum %	Age	f	%	Cum f	Cum %
11y09m	1	.61	1	.61	14y00m	2	1.21	124	75.15
12y02m	2	1.21	3	1.82	14y01m	5	3.03	129	78.18
12y03m	3	1.82	6	3.64	14y02m	1	.61	130	78.79
12y04m	4	2.42	10	6.06	14y03m	5	3.03	135	81.82
12y05m	3	1.82	13	7.88	14y04m	1	.61	136	82.42
12y06m	1	.61	14	8.48	14y06m	3	1.82	139	84.24
12y07m	5	3.03	19	11.52	14y08m	3	1.82	142	86.06
12y08m	1	.61	20	12.12	14y10m	1	.61	143	86.67
12y09m	5	3.03	25	15.15	14y11m	1	.61	144	87.27
12y10m	1	.61	26	15.76	15y00m	1	.61	145	87.88
12y11m	6	3.64	32	19.39	15y02m	1	.61	146	88.48
13y00m	6	3.64	38	23.03	15y03m	2	1.21	148	89.70
13y01m	7	4.24	45	27.27	15y04m	1	.61	149	90.30
13y02m	10	6.06	55	33.33	15y05m	3	1.82	152	92.12
13y03m	5	3.03	60	36.36	15y06m	1	.61	153	92.73
13y04m	10	6.06	70	42.42	15y08m	3	1.82	156	94.55
13y05m	7	4.24	77	46.67	15y11m	1	.61	157	95.15
13y06m	11	6.67	88	53.33	16y01m	2	1.21	159	96.36
13y07m	11	6.67	99	60.00	16y02m	1	.61	160	96.97
13y08m	6	3.64	105	63.64	16y03m	1	.61	161	97.58
13y09m	8	4.85	113	68.48	16y06m	1	.61	162	98.18
13y10m	3	1.82	116	70.30	16y08m	1	.61	163	98.79
13y11m	6	3.64	122	73.94	16y09m	1	.61	164	99.39
					17y03m	1	.61	165	100.00

\* The date of birth of one learner was unknown.

responses on the ASCQ and the projective pictures. The mean age of the Sepedi-speaking learners is 4 months higher than the Afrikaans-speaking learners. The mean age of the boys and girls in School 3, the special school, is higher than the boys and girls in the other schools (except for the boys in School 2, who have the same mean age as the boys in School 3). Section 5.6 deals case by case with the age of the learners with HI.

Since school is compulsory for learners in the year when they turn seven, learners can be expected to turn thirteen in Grade Seven. By September of Grade Seven the age of the learners who have never repeated a grade should range from approximately 12 years 9 months to approximately 13 years 9 months. Therefore, 20 learners (12.12%) in the study can be considered as under-age and 52 learners (31.52%) as over-age, as seen in Table 5.5. The under-age learners started school at the age of five or six, and the over-age learners may have started school late and/or repeated grades. Considering that one of the highest achieving learners in School 2 was already 16 years old, and that he probably had not repeated any grade, the culturally congruent fieldworker suggested that a temporary



absence from school because of cultural or household commitments, such as initiation school or herding, might also account for the learner's age. Table 5.5 indicates per school the number of learners who are under- and over-age, and at the expected (norm) age.

Table 5.5 Number of under-, norm and over-age learners in the study\*

School	Gender	N	Under-age		Norm age		Over-age	
			N	%	N	%	N	%
1	Boys	18	0	0%	16	88.89%	2	11.11%
	Girls	11	0	0%	10	90.91%	1	9.09%
	<b>Total</b>	29	0	0%	26	89.66%	3	10.34%
2	Boys	23	2	8.70%	8	34.78%	13	56.52%
	Girls	30	7	23.33%	8	26.67%	15	50.00%
	<b>Total</b>	53	9	16.98%	16	30.19%	28	52.83%
3	Boys	9	0	0%	1	11.11%	8	88.89%
	Girls	2	0	0%	1	50.00%	1	50.00%
	<b>Total</b>	11	0	0%	2	18.18%	9	81.81%
4	Boys	19	0	0%	18	94.74%	1	5.26%
	Girls	16	0	0%	14	87.50%	2	12.50%
	<b>Total</b>	35	0	0%	32	91.43%	3	8.57%
5	Boys	19	3	15.79%	9	47.37%	7	36.84%
	Girls	18	8	44.44%	8	44.44%	2	11.11%
	<b>Total</b>	37	11	29.73%	17	45.95%	9	24.32%
1-5	Boys	88	5	5.68%	52	59.09%	31	35.23%
	Girls	77	15	19.48%	41	53.25%	21	27.27%
	<b>Total</b>	165	20	12.12%	93	56.36%	52	31.52%
1, 3, 4 (Afrikaans)	<b>Total</b>	75	0	0%	60	80.00%	15	20.00%
2,5 (Sepedi)	<b>Total</b>	50	10	20.00%	17	34.00%	23	46.00%

\* The date of birth of one Afrikaans-speaking learner was unknown.

Table 5.5 shows that in School 1 and 4, the historically advantaged schools, there are no under-age learners, and only a few over-age learners (3 in each school, 10.34% and 8.57% respectively). The learner with HI in School 1 is one of the over-age learners. In School 2 and 5, the historically disadvantaged schools, less than half of the learners (30.19% and 45.95%, respectively) in the class are in the norm age range, with slightly more than half of the learners in School 2 being over-age (52.83%), and in School 5 the under-age (29.73%) and over-age (24.32%) learners being nearly the same proportion. The learner with HI in

School 2 is one of the over-age learners. In School 3 (the special school) most of the learners (81.81%) are over-age, suggesting that learners with HI fail in regular schools before being placed in the special school, and/or that learners with HI struggle to progress scholastically even in the special school. Only School 2 and 5 have under-age learners, and in both schools there are more under-age girls than boys (School 2: under-age girls – 23.33%, under-age boys – 8.70%; School 5: under-age girls – 44.44%, under-age boys – 15.79%). All the schools have over-age learners, and in all the schools, except School 4, there are more over-age boys than girls in the schools (School 1: over-age girls – 9.09%, over-age boys – 11.11%; School 2: over-age girls – 50.00%, over-age boys – 56.52%; School 3: over-age girls – 50.00%, over-age boys – 88.89%; School 4: over-age girls – 12.50%, over-age boys – 5.26%; School 5: over-age girls – 11.11%, over-age boys – 36.84%). The majority of under-age learners being girls and the majority of over-age learners being boys suggest that girls may be sent to school earlier than boys, and that boys may be sent to school later than girls, and/or fail more often, and/or participate more in activities that temporarily keep them from school. Of the Afrikaans-speaking learners in the sample, 60 (80%) are in the norm age range, as opposed to 17 (34%) of the Sepedi speaking learners in the sample. The 66% of the Sepedi speaking learners who are either under- or over-age, might have an influence on the ASC scores. Refer to 5.4.8 for the statistical significance in the difference among the age groups.

### 5.3 RESULTS AND FINDINGS: MEASURING QUALITY OF THE ASCQ

The sections on the results and findings of the research, that is 5.3 - 5.6, will firstly deal with the quantitative data (5.3). The quality of the ASCQ as an instrument to collect data will be established, followed by the moderator effects in respect of the ASC (5.4) and a discussion of the quality of the ASCQ and the moderator effects in 5.5. The qualitative data will be incorporated into the discussion of the school contexts where the ASC of learners with HI will be examined further (5.6).

The ASCQ was administered during the second last week of the third school quarter. A description of the administration of the questionnaires at the various schools can be found in Appendix O. The best way to handle non-responses to items in questionnaires is to try to prevent non-responses by encouraging the participants to co-operate (Beaton, 1997:763). In the Sepedi version of the ASCQ, only 20 non-responses occurred, spread over 16 items, and none in the Afrikaans version. As the items omitted were few and the distribution uneven, the non-responses were not regarded as serious (based on Beaton, 1997:763; Holt, 1997:593) and means were not interpolated. Some of the items in the ASCQ completed by

the Sepedi learners received two responses and such double responses were treated as non-responses. It is interesting to note that only some of the Sepedi-speaking learners gave non- and double responses, and none of the Afrikaans-speaking learners. The non- and double responses might be linked to the process of administering the questionnaire, as the questionnaire was administered to the Sepedi-speaking learners by the culturally congruent fieldworker, but what exactly prompted the learners to do so is unknown. The researcher was present during the implementation at School 2, and nothing was observed that appeared to influence the learners. A reason for the non- and double responses might also perhaps be sought in the background of the learners: uncertainty, possible fears of being wrong or of not being accepted could have prompted the learners to refrain from responding or to give two responses in respect of some of the items. Initially it was thought that it could be the non-Sepedi-speaking learners in the class who were unsure of the items and who made non- and/or double responses, but an analysis of the non- and double responses contradicted this possibility.

The ASCQ is expected to have four major dimensions: general academic self-concept (GASC), mathematics academic self-concept (MASC), first language academic self-concept (LASC) and, for the Sepedi classes only, English academic self-concept (EASC). (Data on the EASC will not be discussed because the research design calls for the comparison of only the GASC, LASC and MASC across school contexts. The EASC was only administered in the two historically disadvantaged schools where a multilingual approach to teaching was observed.) For each set of items a maximum-likelihood factor analysis was run, first requesting two factors and, second, one factor. It was expected that there would be no items loading on the second factor; hence, provided all items made sufficient contribution to the first factor, a one factor solution would be adopted. This turned out to be the case for two of the ASC dimensions: the LASC and the MASC. The GASC analyses suggested that there could be two distinct factors, satisfaction and efficacy, but the estimates of reliability were sufficiently low for efficacy, so that it was decided to accept a single factor for this study. It may be worthwhile, in future research, further to explore satisfaction and efficacy as two factors of GASC.

Table 5.6 addresses the measuring quality of the GASC section of the ASCQ by giving the means, standard deviations, factor loadings from one factor and the corrected item-total correlations. The items have been arranged according to the mean score, ranging from highest to lowest.

Table 5.6 Means, standard deviations, factor loadings from one factor, and item-total correlations for GASC

Item	Brief Description	Mean	sd	One Factor	Item-total r
7	<i>I am satisfied with my schoolwork.</i>	4.24	.81	.53	.40
8	<i>I think my ability is sufficient to cope with schoolwork.</i>	4.19	.85	.64	.55
18	<i>I would not be able to achieve better marks, even if I worked harder.</i>	4.13	1.03	.21	.25
13	<i>I have confidence in myself to do schoolwork.</i>	4.12	.93	.65	.58
5	<i>I feel good about my ability to do schoolwork.</i>	4.10	.85	.57	.45
1	<i>I am happy with the schoolwork that I do.</i>	4.04	.92	.66	.51
2	<i>I am proud of my ability in schoolwork.</i>	4.01	.89	.65	.59
10	<i>I feel good about my schoolwork.</i>	4.01	.86	.47	.45
3	<i>I am sure of myself in school tasks</i>	3.99	.94	.53	.38
9	<i>I feel worthless in class.</i>	3.91	1.10	.34	.44
19	<i>I think that the teachers treat me well.</i>	3.84	1.07	.61	.54
12	<i>It is bad for me when my teachers ask me questions.</i>	3.81	1.20	.24	.27
4	<i>I am proud of my school report.</i>	3.77	1.06	.55	.46
11	<i>I am capable to get the results I would like to get in schoolwork.</i>	3.69	.96	.36	.32
17	<i>I think I take longer than my classmates to understand schoolwork.</i>	3.67	1.09	.34	.39
14	<i>I understand most of my lessons well.</i>	3.65	.88	.33	.35
16	<i>I feel left out of things that happen in class.</i>	3.61	1.11	.14	.22
15	<i>I see myself as a good learner in class.</i>	3.47	1.03	.28	.28
6	<i>Most of my teachers do not understand me.</i>	3.40	1.28	.47	.44

The estimate of reliability (coefficient alpha) for the single factor score is .83, and as can be seen from the item-total correlations, all items are contributing to this overall score, as all item-total correlations exceed the minimum criterion of .2. The highest mean score on the GASC is 4.24 out of a possible 5 (Question 7: '*I am satisfied with my schoolwork.*') and the lowest (3.40) relates to Question 6 ('*Most of my teachers do not understand me*'). The generally high means are noteworthy. In the historically advantaged schools, 228 (17.17%) of the total of 1282 responses on the GASC were *always* (negative items had already been inverted and added), as opposed to the 691 (47.49%) of the total of 1455 responses on the GASC in the historically disadvantaged schools. The high percentage of learners assessing themselves to have a good GASC may suggest successful schooling practices and/or an unrealistically high GASC in the historically disadvantaged schools.

Table 5.7 addresses the measuring quality of the LASC section of the ASCQ by giving the means, standard deviations and the corrected item-total correlations. The items are again arranged in declining order according to the means.

Table 5.7 Means, standard deviations and item-total correlations for LASC

Item	Brief description	Mean	sd	Item-total r
18	<i>I would not be able to achieve better marks in *, even if I worked harder.</i>	4.06	1.03	.30
13	<i>I have confidence in myself to do * schoolwork.</i>	4.04	.88	.65
12	<i>It is bad for me when my * teacher asks me questions.</i>	4.03	1.10	.41
1	<i>I am happy with the * schoolwork that I do.</i>	4.00	.92	.50
7	<i>I am satisfied with my * schoolwork.</i>	3.95	.89	.56
17	<i>I think I take longer than my classmates to understand the * schoolwork.</i>	3.90	1.05	.38
9	<i>I feel worthless in the * class.</i>	3.89	1.11	.40
16	<i>I feel left out of things that happen in the * class.</i>	3.89	1.04	.12
3	<i>I am sure of myself in * school tasks.</i>	3.88	1.02	.70
6	<i>My * teacher does not understand me.</i>	3.87	1.22	.45
19	<i>I think that the * teacher treats me well</i>	3.85	1.07	.44
2	<i>I am proud of my ability in *.</i>	3.83	.98	.70

Item	Brief description	Mean	sd	Item-total r
14	<i>I understand most of my * lessons well.</i>	3.80	.89	.42
5	<i>I feel good about my ability to do *.</i>	3.79	.93	.53
8	<i>I think my ability is sufficient to cope with * schoolwork.</i>	3.74	1.07	.38
10	<i>I feel good about my * schoolwork.</i>	3.74	.94	.54
11	<i>I am capable to get the results I would like to get in *.</i>	3.59	.97	.62
15	<i>I see myself as a good learner in the * class.</i>	3.48	.93	.47
4	<i>I am proud of my mark in *.</i>	3.44	1.00	.60

\* represents the first language of the class, either Afrikaans or Sepedi

The estimate of reliability (coefficient alpha) for the single factor score is .87, and as can be seen from the item-total correlations, all items except Question 16 (*'I feel left out of things that happen in the \* class'*, with .12) are contributing to this overall score, since their item-total correlations far exceed the minimum criterion of .2. It is interesting to note that Question 16 in the LASC did fulfil the minimum criterion of  $\geq .2$  for both the Afrikaans and Sepedi versions in the pilot study. The highest mean score on the LASC is 4.06 out of a possible 5 (Question 18: *'I would not be able to achieve better marks in \*, even if I worked harder'*) and the lowest (3.44) relates to Question 4 (*'I am proud of my mark in \*'*). Once again, the high means are noteworthy. In the historically advantaged schools, 213 (16.35%) of the total of 1303 responses on the LASC were *always* (negative items had already been inverted and added), as opposed to the 605 (40.91%) of the total of 1479 responses on the LASC in the historically disadvantaged schools. The high percentage of learners assessing themselves to have a good LASC suggests successful schooling practices, and/or strong identification with the mother tongue (which is interesting considering the strong emphasis on English as language of teaching and learning), and/or an unrealistically high LASC in the historically disadvantaged schools.

Table 5.8 addresses the measuring quality of the MASC section of the ASCQ by giving the means, standard deviations and the corrected item-total correlations. The items are arranged in declining order according to the means.

Table 5.8 Means, standard deviations and item-total correlations for MASC

Item	Brief description	Mean	sd	Item-total r
12	<i>It is bad for me when my maths teacher asks me questions.</i>	4.38	.96	.51
19	<i>I think that the maths teacher treats me well</i>	4.24	.94	.27
9	<i>I feel worthless in the maths class.</i>	4.17	1.07	.52
13	<i>I have confidence in myself to do maths schoolwork.</i>	4.15	.90	.62
7	<i>I am satisfied with my maths schoolwork.</i>	4.12	.81	.59
1	<i>I am happy with the maths schoolwork that I do.</i>	4.08	.98	.53
8	<i>I think my ability is sufficient to cope with maths schoolwork.</i>	4.02	1.01	.46
10	<i>I feel good about my maths schoolwork.</i>	4.02	.96	.56
17	<i>I think I take longer than my classmates to understand the maths schoolwork.</i>	3.98	1.12	.48
2	<i>I am proud of my ability in maths.</i>	3.97	.98	.63
18	<i>I would not be able to achieve better marks in maths, even if I worked harder.</i>	3.94	1.19	.48
3	<i>I am sure of myself in maths school tasks.</i>	3.92	.93	.59
5	<i>I feel good about my ability to do maths.</i>	3.89	.95	.65
14	<i>I understand most of my maths lessons well.</i>	3.89	.86	.62
16	<i>I feel left out of things that happen in the maths class.</i>	3.89	1.17	.47
6	<i>My maths teacher does not understand me.</i>	3.85	1.29	.32
4	<i>I am proud of my mark in maths</i>	3.80	1.10	.60
11	<i>I am capable to get the results I would like to get in maths.</i>	3.74	1.06	.54
15	<i>I see myself as a good learner in the maths class.</i>	3.62	1.09	.44

The estimate of reliability (coefficient alpha) for the single factor score is .89, and as can be seen from the item-total correlations, all items are contributing to this overall score, as all item-total correlations exceed the minimum criterion of .2. The highest mean score on the MASC is 4.38 out of a possible 5 (Question 12: '*It is bad for me when my maths teacher asks me questions.*') and the lowest (3.62) relates to Question 15 ('*I see myself as a good learner in the maths class.*'). Once again, the high means, even higher than the means on the

LASC, are noteworthy. In the historically advantaged schools 469 (36.30%) of the total of 1292 responses on the MASC were *always* (negative items had already been inverted and added), and 573 (38.77%) of the total of 1478 responses on the MASC in the historically disadvantaged schools. In contrast to the GASC and the LASC, the learners from the historically advantaged and disadvantaged schools assessed themselves fairly similarly on the MASC, suggesting successful schooling practices and/or an unrealistically high MASC.

For each of the dimensions of the ASC, the mean across all items contributing to the dimension was calculated, as shown in Table 5.9.

Table 5.9 Item means across dimensions of ASC, all learners

<b>Dimension of ASC</b>	<b>N</b>	<b>Mean</b>	<b>sd</b>
GASC	146	3.89	0.49
LASC	147	3.83	0.55
MASC	146	3.98	0.59

It can be seen from Table 5.9 that the item means were quite similar. Table 5.9 includes learners of all languages found in the sample. Table 5.10 indicates the mean of only the Afrikaans and Sepedi learners across all items contributing to the dimension. It is safe to assume that the validity of the ASCQ would be higher when looking at only the Sepedi-speaking learners' responses to the Sepedi questionnaire, than when including the responses of the learners of other languages to the Sepedi questionnaire.

Table 5.10 Item means across dimensions of ASC, Afrikaans- and Sepedi-speaking learners

<b>Dimension of ASC</b>	<b>N</b>	<b>Mean</b>	<b>sd</b>
GASC	113	3.84	0.49
LASC	113	3.76	0.57
MASC	113	3.97	0.63

Comparing Table 5.9 and Table 5.10, it can be seen that the differences in means are small, but it seems as if the inclusion of learners of other languages in the sample actually increases the means on the dimensions GASC (3.89 vs 3.84) and LASC (3.83 vs 3.76), but less so on the MASC (3.98 vs 3.97). The difference might be smaller on the MASC as mathematics is taught in Afrikaans in School 1, 3 and 4 and in English in School 2 and 5. Home language, therefore, is a smaller factor in the MASC in School 2 and 5. (Refer also to



home language as moderator effect in 5.4.3 and the discussion of the ASCQ and moderator effects in 5.5).

## 5.4 RESULTS AND FINDINGS: OVERALL MODERATOR EFFECTS

### 5.4.1 Introduction

A number of multivariate analyses of variance (using the GASC, LASC and MASC) were conducted to examine mean differences on various moderators, namely historicity of schools (historically advantaged vs. historically disadvantaged schools), home language, gender, school, hearing ability, achievement and age of the learners.

### 5.4.2 Historicity of schools

Differences in means between responses from learners in historically advantaged and historically disadvantaged schools on the dimensions of the ASC are shown in Table 5.11.

Table 5.11 Significance of differences in means between historically advantaged and historically disadvantaged schools on the dimensions of the ASC

<b>Dimension of ASC</b>	<b>MS</b>	<b>df</b>	<b>F</b>	<b>p</b>
GASC	4.320	1, 145	20.601	<0.001
LASC	4.041	1, 145	13.967	<0.001
MASC	1.011	1, 145	2.950	0.088

There was a statistically significant difference between the three ASC dimensions of the two groups of schools (Wilks' Lambda = 0.75, Mult.F = 15.55, df = 3, 141, p <0.001). An inspection of the univariate ANOVAs, shown in Table 5.11, indicates that GASC and LASC differed at a highly significant level (p<0.001) in historically advantaged and historically disadvantaged schools, but MASC only at the 10% level of significance (p=0.088).

The means of the ASC dimensions in the different school groups are shown in Figure 5.1.

Figure 5.1 Means of the ASC dimensions in historically advantaged and historically disadvantaged schools

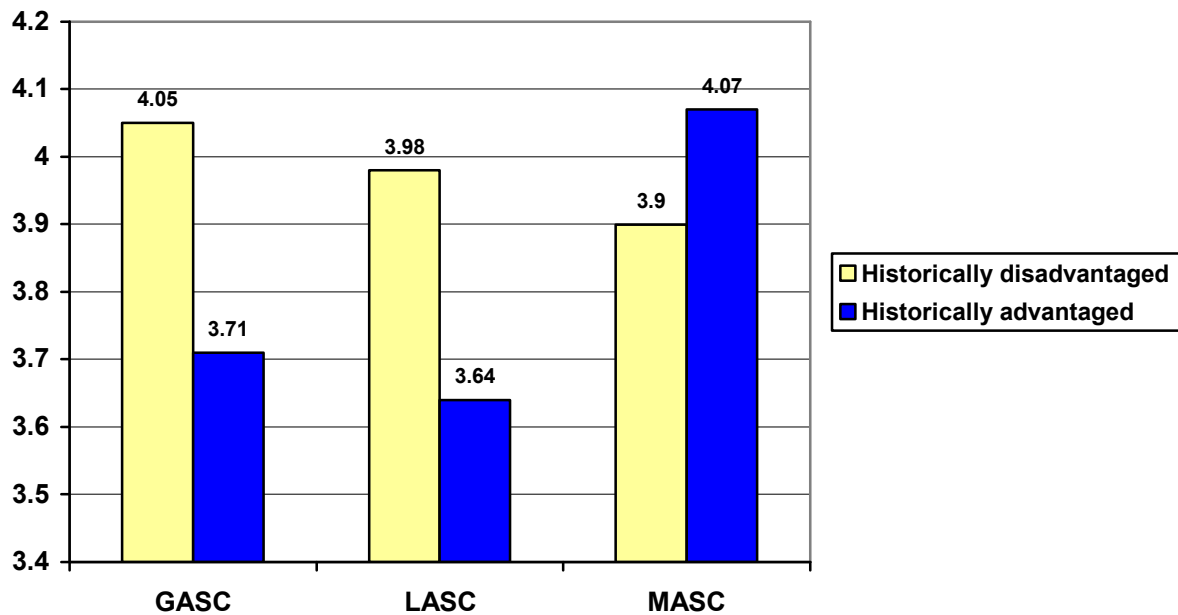


Figure 5.1 shows that the responses to the ASCQ from the learners in the historically disadvantaged schools were significantly higher ( $p < 0.001$ ) than the responses from the learners in the historically advantaged schools on both GASC (4.05 : 3.71) and LASC (3.98 : 3.64). On MASC, the results were reversed (3.9 : 4.07) and also of weaker significance ( $p = 0.088$ ).

#### 5.4.3 Home language

The significance of differences in means among responses from learners with different home languages on the dimensions of the ASC is shown in Table 5.12. Only Afrikaans (N=69), Sepedi (N=45), Tsonga (N=13), Zulu (N=11) and Tswana (N=5) were included in this analysis, as the other cells, South Sotho (N=2) and Venda (N=1), were too small.

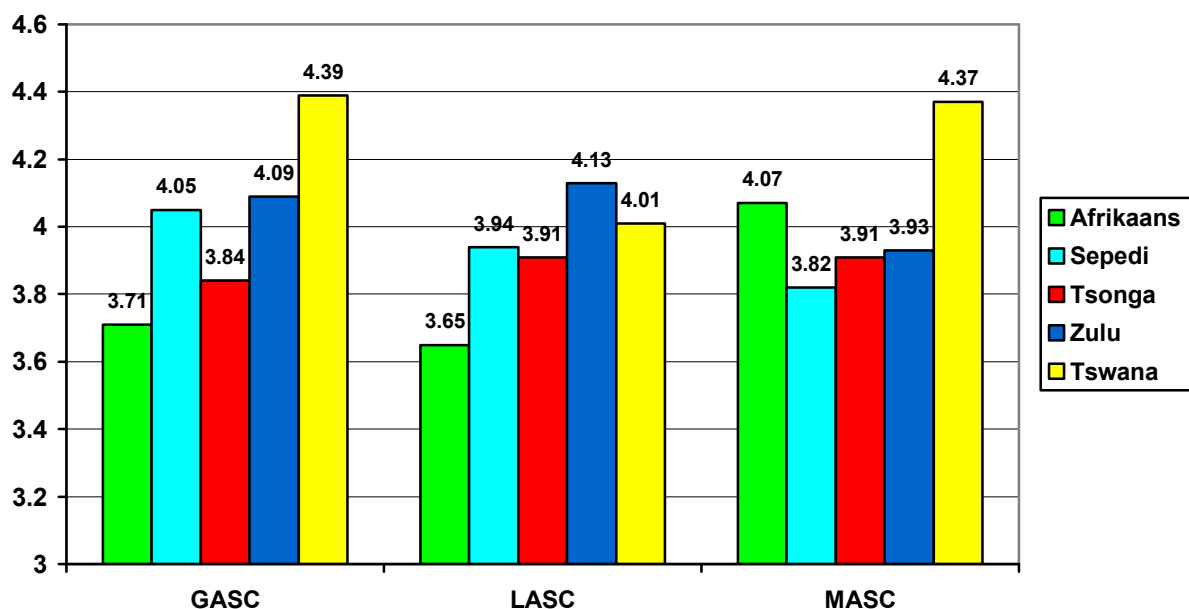
Table 5.12 Significance of differences in means among learners with different home languages on the dimensions of the ASC

Dimension of ASC	MS	df	F	$p$
GASC	1.265	4, 143	6.225	0.0001
LASC	1.000	4, 144	3.569	0.008
MASC	0.620	4, 143	1.802	0.132

Table 5.12 indicates that the overall means regarding the GASC differed among learners with different home languages at a highly significant level ( $p < 0.001$ ), the overall means regarding the LASC differed at the 1% level of significance ( $p = 0.008$ ), and the difference in the overall means regarding the MASC was not significant at all ( $p = 0.132$ ).

The means of the ASC dimensions for the home language groups represented in the sample are shown in Figure 5.2. The two South Sotho speaking and one Venda speaking learners in the sample were excluded in this analysis.

Figure 5.2 Means of the ASC dimensions for the home language groups represented in the sample



It can be seen in Figure 5.2 that the means of the Afrikaans-speaking learners reflect the trend set by the historically advantaged schools, namely GASC (3.71) and LASC (3.65) are lower than the GASC means (4.05; 3.84; 4.09; 4.39) and LASC means (3.94; 3.91; 4.13; 4.01) of the other language groups. Their MASC (4.07) is higher than their GASC (3.71) and LASC (3.65), also higher than the MASC of most of the other language groups (3.82; 3.91; 3.93).

#### 5.4.4 Gender

The significance of differences in means among responses from boys and girls on the dimensions of the ASC is shown in Table 5.13.

Table 5.13 Significance of differences in means on the dimensions of the ASC according to gender

Dimension of ASC	MS	df	F	<i>p</i>
GASC	0.544	1, 145	2.303	0.131
LASC	0.752	1, 145	2.407	0.123
MASC	0.178	1, 145	0.512	0.476

There were no statistically significant differences among the three ASC dimensions related to the gender of the learners (Wilks' Lambda = 0.96, Mult.F=1.81, df=3, 141,  $p=0.148$ ).

#### 5.4.5 School

Table 5.14 indicates the importance of the differences in the means of the ASC dimensions according to the school attended by the learners.

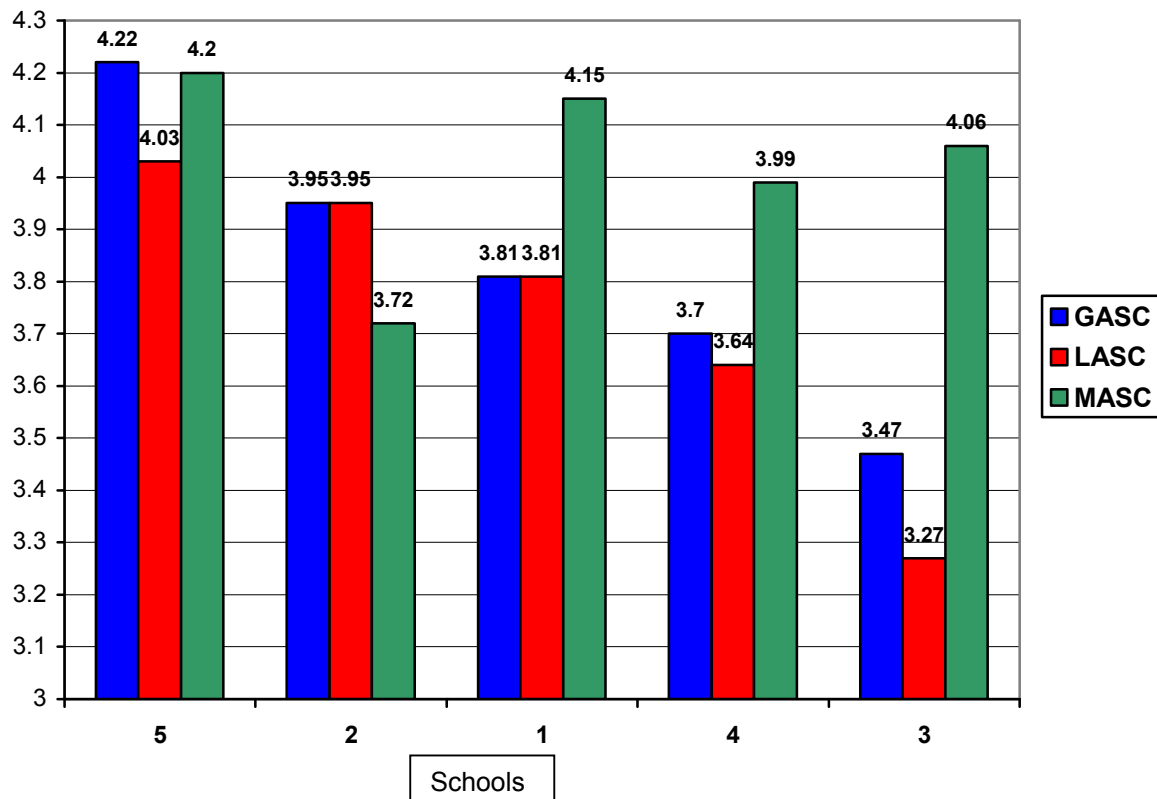
Table 5.14 Significance of differences in means on the dimensions of the ASC according to school

Dimension of ASC	MS	df	F	<i>P</i>
GASC	6.64	4, 145	8.23	<0.0001
LASC	4.74	4, 146	5.23	0.0006
MASC	4.25	4, 145	5.12	0.0007

The difference among the means of all the dimensions of the ASC according to the school attended by the learners was statistically highly significant (GASC:  $p<0.0001$ ; LASC:  $p=0.0006$ ; MASC:  $p=0.0007$ ). The means for the ASC dimensions in each school are displayed in Figure 5.3. The schools are shown in declining order in terms of the GASC (refer to 5.2.1 for the school context, predominant learner language and historical educational status of the schools).

It appears that there is a general tendency regarding GASC and LASC in the schools, with GASC being slightly higher than the LASC (School 5 - 4.22: 4.03; School 4 - 3.70: 3.64; School 3 - 3.47: 3.27) or equal to the LASC (School 2 - 3.95; School 1 - 3.81). The GASC and LASC means are the highest in the two historically disadvantaged schools (School 5: GASC – 4.22, LASC – 4.03; School 2: GASC – 3.95, LASC – 3.95), followed by the

Figure 5.3 Means of the ASC dimensions in each school



historically advantaged full-service and regular schools, (School 1: GASC – 3.81, LASC – 3.81; School 4: GASC – 3.70, LASC – 3.64). The GASC and LASC means are the lowest in School 3, the special school (3.47 and 3.27 respectively). MASC does not appear to be related to the GASC and/or LASC, but remains high (School 1: 4.15, School 3: 4.06, School 4: 3.99 and School 5: 4.20), except for the MASC in School 2 (3.72), which is also lower than its GASC and LASC.

#### 5.4.6 Hearing

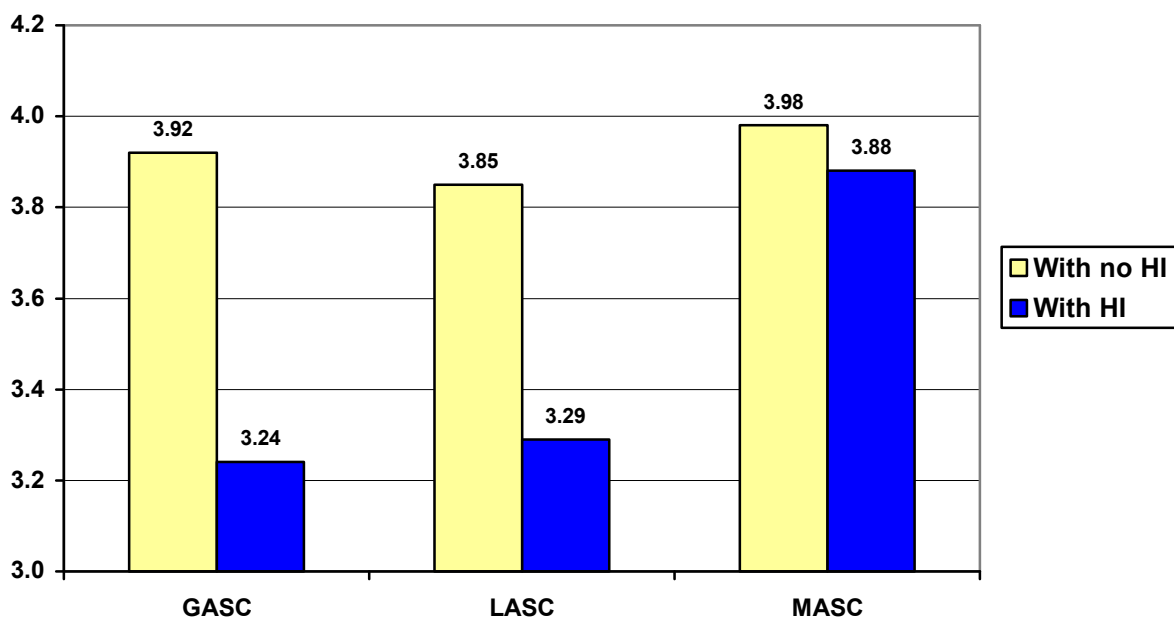
Table 5.15 indicates the differences in the means of the ASC dimensions of the learners with HI and the learners without HI.

There were statistically significant differences in the means of the ASC dimensions of the eight learners with HI compared with the means of those learners with no HI (Wilks' Lambda = 0.898, Mult.F=5.63, df=3, 141, p=0.002). The most significant difference was found in the GASC ( $p < 0.0001$ ), followed by the LASC on a 1% level of significance. The difference in means on the MASC was not significant. The means of the learners with HI and learners with no HI on the ASC dimensions are shown in Figure 5.4.

Table 5.15 Significance of differences in means on the dimensions of the ASC of learners with HI and learners without HI

Dimension of ASC	MS	df	F	p
GASC	3.099	1, 145	14.199	0.0001
LASC	2.092	1, 145	6.904	0.010
MASC	.072	1, 145	0.206	0.651

Figure 5.4 Means of the ASC dimensions of learners with and without HI



It can be seen in Figure 5.4 that the means of the learners with HI were much lower than the means of the learners with no HI on GASC (3.24:3.92) and LASC (3.29:3.85), but there was very little difference in MASC (3.88:3.98). Of course, it must be appreciated that there are only eight learners with HI in this analysis, so a more qualitative analysis is necessary, and this is made in 5.6. A discussion of the moderator effects follows in 5.5.

#### 5.4.7 Achievement

Table 5.16 contains the mean, median, minimum and maximum marks of the participating learners for the mean of their achievement marks across all learning areas and their first language and mathematics marks for the second and third school quarters, where applicable, as per school, gender and Afrikaans and Sepedi language groups.

Table 5.16 Mean, median, minimum and maximum school achievement marks in respect of the mean achievement mark across learning areas (MAM), first language (L1) and mathematics marks (Math) for the second and third school quarters

School	Gender	Learning Area	N	Mean	Std Deviation	Std Error	Median	Minimum	Maximum
1	Boys	2 <sup>nd</sup> MAM <sup>0</sup>	18	66.89	12.94	3.05	66.00	45.00	89.00
		2 <sup>nd</sup> L1 <sup>1</sup>	18	64.56	14.50	3.42	63.50	40.00	89.00
		2 <sup>nd</sup> Math <sup>2</sup>	18	75.11	12.58	2.96	77.00	47.00	95.00
		3 <sup>rd</sup> MAM <sup>3</sup>	18	65.67	12.19	2.87	64.50	44.00	90.00
		3 <sup>rd</sup> L1	18	66.50	13.57	3.20	68.00	37.00	87.00
		3 <sup>rd</sup> Math	18	73.44	16.80	3.96	75.00	25.00	93.00
	Girls	2 <sup>nd</sup> MAM	11	77.55	4.72	1.42	77.00	71.00	86.00
		2 <sup>nd</sup> L1	11	76.36	5.10	1.54	77.00	66.00	84.00
		2 <sup>nd</sup> Math	11	82.27	5.93	1.79	83.00	71.00	90.00
		3 <sup>rd</sup> MAM	11	76.72	4.78	1.44	76.00	68.00	84.00
		3 <sup>rd</sup> L1	11	75.91	6.88	2.07	78.00	63.00	84.00
		3 <sup>rd</sup> Math	11	82.18	4.09	1.23	80.00	76.00	90.00
	Total	2 <sup>nd</sup> MAM	29	70.93	11.72	2.18	74.00	45.00	89.00
		2 <sup>nd</sup> L1	29	69.03	13.07	2.43	72.00	40.00	89.00
		2 <sup>nd</sup> Math	29	77.83	11.01	2.04	80.00	47.00	95.00
		3 <sup>rd</sup> MAM	29	69.86	11.33	2.10	71.00	44.00	90.00
		3 <sup>rd</sup> L1	29	70.07	12.26	2.28	72.00	37.00	87.00
		3 <sup>rd</sup> Math	29	76.76	14.00	2.60	80.00	25.00	93.00
2	Boys	2 <sup>nd</sup> MAM	23	41.30	14.14	2.95	38.00	21.00	81.00
		2 <sup>nd</sup> L1	23	41.83	21.72	4.53	39.00	11.00	83.00
		2 <sup>nd</sup> Math	23	27.26	17.40	3.63	24.00	11.00	85.00
	Girls	2 <sup>nd</sup> MAM	30	49.23	17.33	3.16	46.5	13.00	83.00
		2 <sup>nd</sup> L1	29	53.28	19.26	3.58	52.00	24.00	87.00
		2 <sup>nd</sup> Math	30	32.60	19.51	3.56	28.00	4.00	78.00
	Total	2 <sup>nd</sup> MAM	53	45.79	16.37	2.25	43.00	13.00	83.00
		2 <sup>nd</sup> L1	52	48.21	30.98	2.91	48.5	11.00	87.00
		2 <sup>nd</sup> Math	53	30.28	18.64	2.56	25.00	4.00	85.00
3	Boys	2 <sup>nd</sup> MAM	9	49.33	8.03	2.68	49.00	38.00	65.00
		2 <sup>nd</sup> L1	9	51.56	10.43	3.48	52.00	36.00	67.00
		2 <sup>nd</sup> Math	9	49.33	15.62	5.21	43.00	35.00	83.00
	Girls	2 <sup>nd</sup> MAM	2	47.50	3.54	2.50	47.50	45.00	50.00
		2 <sup>nd</sup> L1	2	53.50	6.36	4.50	53.50	49.00	58.00
		2 <sup>nd</sup> Math	2	48.50	12.02	8.50	48.50	40.00	57.00
	Total	2 <sup>nd</sup> MAM	11	49.00	7.31	2.20	49.00	38.00	65.00
		2 <sup>nd</sup> L1	11	51.91	9.58	2.89	52.00	36.00	67.00
		2 <sup>nd</sup> Math	11	49.18	14.48	4.37	43.00	35.00	83.00

<sup>0</sup> Second school quarter: Mean of achievement marks across all learning areas (Continued on next page)

<sup>1</sup> Second school quarter: Achievement in the first language (either Afrikaans or Sepedi)

<sup>2</sup> Second school quarter: Achievement in mathematics

<sup>3</sup> 3<sup>rd</sup> relates to marks achieved during the third school quarter and applies only to School 1.

School	Gender	Learning Area	N	Mean	Std Deviation	Std Error	Median	Minimum	Maximum
4	Boys	2 <sup>nd</sup> MAM	20	61.55	14.76	3.30	66.00	34.00	80.00
		2 <sup>nd</sup> L1	20	59.95	12.49	2.79	60.00	36.00	79.00
		2 <sup>nd</sup> Math	20	67.60	17.77	3.97	71.50	30.00	94.00
	Girls	2 <sup>nd</sup> MAM	14	58.57	13.33	3.56	59.00	34.00	78.00
		2 <sup>nd</sup> L1	14	60.57	13.62	3.64	62.00	34.00	82.00
		2 <sup>nd</sup> Math	14	62.36	15.97	4.27	59.00	43.00	87.00
	Total	2 <sup>nd</sup> MAM	34	60.32	14.06	2.41	62.00	34.00	80.00
		2 <sup>nd</sup> L1	34	60.21	12.77	2.19	60.00	34.00	82.00
		2 <sup>nd</sup> Math	34	65.44	17.01	2.92	66.50	30.00	94.00
5	Boys	2 <sup>nd</sup> MAM	19	54.00	12.96	2.97	59.50	19.50	85.00
		2 <sup>nd</sup> L1	19	49.84	8.64	1.98	50.00	35.00	68.00
		2 <sup>nd</sup> Math	19	47.37	15.28	3.50	46.00	22.00	73.00
	Girls	2 <sup>nd</sup> MAM	18	57.39	19.73	4.65	59.50	19.50	85.00
		2 <sup>nd</sup> L1	18	45.17	10.50	2.47	46.00	23.00	68.00
		2 <sup>nd</sup> Math	18	52.00	17.15	4.04	50.50	22.00	86.00
	Total	2 <sup>nd</sup> MAM	37	55.65	16.46	2.71	59.50	19.50	85.00
		2 <sup>nd</sup> L1	37	47.57	9.74	1.60	48.00	23.00	68.00
		2 <sup>nd</sup> Math	37	49.62	16.16	2.66	49.00	22.00	86.00
1-5	Boys	2 <sup>nd</sup> MAM	89	54.55	16.14	1.71	56.00	19.50	89.00
		2 <sup>nd</sup> L1	89	53.19	17.05	1.81	53.00	11.00	89.00
		2 <sup>nd</sup> Math	89	52.53	23.96	2.54	51.00	11.00	95.00
	Girls	2 <sup>nd</sup> MAM	75	57.04	18.21	2.10	59.50	13.00	86.00
		2 <sup>nd</sup> L1	74	56.12	17.43	2.03	56.00	23.00	87.00
		2 <sup>nd</sup> Math	75	50.52	23.99	2.77	49.00	4.00	90.00
	Total	2 <sup>nd</sup> MAM	164	55.69	17.11	1.34	57.50	13.00	89.00
		2 <sup>nd</sup> L1	163	54.52	17.23	1.35	54.00	11.00	89.00
		2 <sup>nd</sup> Math	164	51.61	23.92	1.87	50.00	4.00	95.00

(Continued on next page)



School	Gender	Learning Area	N	Mean	Std Deviation	Std Error	Median	Minimum	Maximum
1,3,4 (Afri- kaans)	Boys	2 <sup>nd</sup> MAM	47	61.26	14.26	2.08	62.00	34.00	89.00
		2 <sup>nd</sup> L1	47	60.11	13.53	1.97	60.00	36.00	89.00
		2 <sup>nd</sup> Math	47	66.98	17.84	2.60	72.00	30.00	95.00
	Girls	2 <sup>nd</sup> MAM	27	65.48	14.49	2.79	71.00	34.00	86.00
		2 <sup>nd</sup> L1	27	66.48	13.32	2.56	69.00	34.00	84.00
		2 <sup>nd</sup> Math	27	69.44	16.64	3.20	75.00	40.00	90.00
	Total	2 <sup>nd</sup> MAM	74	62.80	14.39	1.67	64.00	34.00	89.00
		2 <sup>nd</sup> L1	74	62.43	13.72	1.60	61.00	34.00	89.00
		2 <sup>nd</sup> Math	74	67.88	17.34	2.02	72.00	30.00	95.00
2,5 (Sepe- di)	Boys	2 <sup>nd</sup> MAM	25	45.20	14.96	2.99	44.50	19.50	85.00
		2 <sup>nd</sup> L1	25	41.96	17.07	3.41	47.00	11.00	68.00
		2 <sup>nd</sup> Math	25	33.48	14.68	2.94	32.00	11.00	68.00
	Girls	2 <sup>nd</sup> MAM	25	52.10	21.40	4.28	50.00	13.00	85.00
		2 <sup>nd</sup> L1	24	50.54	17.62	3.60	49.50	24.00	80.00
		2 <sup>nd</sup> Math	25	39.44	22.98	4.60	37.00	4.00	78.00
	Total	2 <sup>nd</sup> MAM	50	48.65	18.60	2.63	44.50	13.00	85.00
		2 <sup>nd</sup> L1	49	46.16	17.70	2.53	48.00	11.00	80.00
		2 <sup>nd</sup> Math	50	36.46	19.32	2.73	34.50	4.00	78.00

The achievement marks are used in looking at the ASCs of the learners with HI in 5.6, and will not be discussed here, except for the following few remarks. It is acknowledged that the assessments in each school were very different and that combinations across schools only give a rough estimate of school marks according to all the schools and language, which is also indicative of the historically advantaged and disadvantaged schools. The boys' marks are generally lower than the girls' marks, except for the mean of the achievement marks across learning areas and mathematics marks of School 4, and the first language mark of School 5.<sup>1</sup> The mean of the achievement marks across learning areas and the first language and mathematics marks achieved by the Afrikaans-speaking learners in the historically advantaged schools are consistently much higher than those achieved by the Sepedi-speaking learners in the historically disadvantaged schools (62.80%, 62.43%, 67.88%: 48.65%, 46.16%, 36.46% respectively). Where the mathematics marks are the highest achievement for the Afrikaans-speaking learners (67.88%), they are the lowest achievement for the Sepedi-speaking learners (36.46%). This pattern of achievement is not at all reflected in the school- and language-based comparisons for GASC and LASC (5.4.2 and 5.4.3), but might explain the differences for MASC.

<sup>1</sup> Since School 3 had only one girl in Grade Seven, a gender-based comparison of achievement is of course irrelevant in respect of the special school.

When comparing full-service schools, it can be seen that for the second school quarter, School 1, the historically advantaged school, has higher marks for the mean of the achievement marks across learning areas, first language and mathematics than School 2, a historically disadvantaged school (70.93%, 69.03%, 77.83% : 45.79%, 48.21%, 30.28%). When comparing schools of similar socio-economic context, School 1 has higher marks for the mean of the achievement marks across learning areas, first language and mathematics than School 4 (70.93%, 69.03%, 77.83% : 60.32%, 60.21%, 65.44%). School 2 has lower marks for the mean of the achievement marks across learning areas and mathematics than School 5 (45.79%, 30.28% : 55.65%, 49.62%), but a higher mark for first language than School 5 (48.21% : 47.57%). When comparing the marks achieved by the Grade Sevens in the full-service schools with the marks of the Grade Sevens in the special school, School 1 has a higher mean of achievement marks across learning areas, first language and mathematics marks than School 3, the special school (70.93%, 69.03%, 77.83% : 49.00%, 51.91%, 49.18%), but School 2 has lower marks than the special school (45.79%, 48.21%, 30.28% : 49.00%, 51.91%, 49.18%).

Although a full examination of the correlations between the mean of the achievement marks across all learning areas and GASC, first language achievement and LASC, and mathematics achievement and MASC clearly promise to be relevant and interesting, it is not included in the study, as it does not contribute directly to the research question. For further development of the ASCQ, the correlations will be investigated in a separate study.

#### 5.4.8 Age of learner

As explained in 5.2.2 and shown in Table 5.4 and Table 5.5, by September of Grade Seven the age of the learners who have never repeated a grade should range from approximately 12 years 9 months to approximately 13 years 9 months. To examine the effect of age on the ASC results, the learners were, therefore, classified into three age groups: under-age (20 learners – 12.12%), norm-age (93 learners – 56.36%) and over-age (52 learners – 31.52%). Table 5.17 indicates the significance of the differences among the age groups.

Table 5.17 Significance of differences in means on the dimensions of the ASC among the age groups

Dimension of ASC	MS	df	F	p
GASC	1.192	2, 145	5.304	0.006
LASC	0.208	2, 145	0.655	0.521
MASC	2.230	2, 145	6.953	0.001

A MANOVA indicated that there was a statistically significant difference between these three age groups (Wilks' Lambda = 0.828, Mult.F=4.618, df=6, 280,  $p < 0.001$ ). Specifically, there was a statistically significant difference at the 1% level regarding the GASC of the learners in the different age groups, and a statistically significant difference at the 0.1% regarding the MASC of the learners in the different age groups. There was no statistically significant difference among the three groups in respect of LASC. Figure 5.5 is a graphic presentation of the means of the ASC dimensions by age group.

Figure 5.5 Means of the ASC dimensions by age group

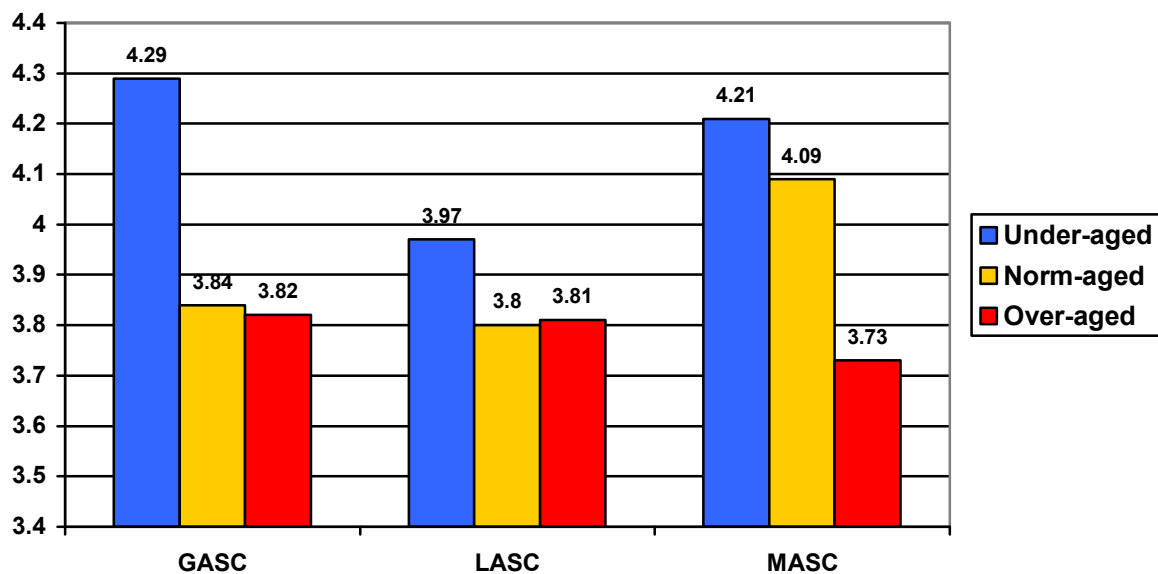


Figure 5.5 shows that the under-age learners reflect an overall higher self-assessment on the GASC (4.29), LASC (3.97) and MASC (4.21) than the norm-age learners (3.84, 3.8 and 4.09 respectively) and over-age learners (3.82, 3.81 and 3.73 respectively). The ASC means of the norm-age learners follow the same trend as the ASC means of the historically advantaged schools (Figure 5.1), the Afrikaans speaking learners (Figure 5.2) and most individual schools (Figure 5.3), namely a GASC and LASC clustered together, and a higher MASC. A discussion of the means of the different age groups is contained in 5.5.

## 5.5 DISCUSSION OF QUANTITATIVE DATA: ASCQ AND MODERATOR EFFECTS

The results and findings in respect of the ASCQ and moderator effects will be discussed by, firstly, addressing the reliability of the ASCQ; secondly, in accordance with the aim of the study, addressing the roles HI and school placement play in the ASC of learners with HI; and thirdly, discussing the influence the moderator effects have on each ASC dimension.

(i) The high Cronbach alphas for GASC (0.83), LASC (0.87) and MASC (0.89) and the very high item-total correlations for most items (Tables 5.6, 5.7 and 5.8) strongly suggest that the ASCQ was a reliable instrument to assess the ASC of Grade Seven learners, including Grade Seven learners with HI. Item-total correlations for all items of the GASC, LASC and MASC exceeded the minimum criterion of 0.2, except for Question 16 on the LASC with 0.12. For further development of the ASCQ, correlations between the mean of the achievement marks across all learning areas and GASC, first language achievement and LASC, and mathematics achievement and MASC will have to be examined in a more extensive study.

(ii) Table 5.18 contains a summary of data derived from Tables 5.11, 5.12, 5.13, 5.14, 5.15 and 5.17 for easy reference during the discussion in (ii) to (iv).

Table 5.18 Level of significance of moderator effects on ASC

Reference to ...	Moderator	GASC: $p$	Significance	LASC: $p$	Significance	MASC: $p$	Significance
Table 5.11	School historicity: adv/disadv	<0.001	0.1%	<0.001	0.1%	0.088	10%
Table 5.12	Home language	<0.001	0.1%	0.015	5%	0.132	Not
Table 5.13	Gender	0.131	Not	0.123	Not	0.476	Not
Table 5.14	School	<0.0001	0.1%	0.0006	0.1%	0.0007	0.1%
Table 5.15	Hearing	<0.0001	0.01%	0.01	1%	0.651	Not
Table 5.17	Age	0.006	1%	0.521	Not	0.001	0.1%

As there were no statistically significant differences among the three ASC dimensions related to the gender of learners (GASC:  $p=0.131$ ; LASC: 0.123; MASC: 0.476), the ASC of learners

with HI in full-service and special schools can be discussed and compared without consideration of gender.

From the statistically significant differences in the means of the GASC ( $p < 0.0001$ ) and LASC ( $p = 0.01$ ) of the eight learners with HI compared with the means of learners with no HI (refer to 5.4.6), one can safely conclude that HI impacts heavily on learners' perceptions of themselves in school generally and in the first language class, but not in respect of mathematics ( $p = 0.651$ ). Figure 5.4 showed that learners with HI have considerably less favourable perceptions than learners with no HI of themselves as learners (3.24 : 3.92) and of their language performance (3.29 : 3.85), than of themselves in respect of mathematics (3.88 : 3.98). The unique ASC profile of each learner with HI in the different contexts of the full-service and special school is discussed in 5.6, then considering the possible role of particular learning content, educators, personal characteristics and peers on each ASC dimension.

The data seem to confirm that learners with HI struggle to access language sufficiently, hence perhaps the difference between the means of the GASC and LASC of learners with HI and with no HI. GASC and LASC typically represent self-evaluations concerning learning areas which rely greatly on language during the instruction thereof. Instruction of the first language especially entails oral work; instruction of other learning areas relies much on oral exposition of content and often uses group work for further exploration and exercise; hence language and interaction play an important role. By contrast, it appears as if language might possibly be less of a critical factor when learners with HI engage with mathematics. Visual examples are given of types of sums, usually arranged from easy to more complex, and the application of principles, usually by the individual and not a group, remains constant; hence language is enhanced and made 'concrete' by visual explanation. One could also surmise that the mathematics educator in the special school, which contained six of the eight learners with HI in the study, perhaps surpasses her colleagues at that school in her standard of instruction of learners with HI or in her relationship with them. Another factor possibly contributing to the relatively similar MASC for learners with HI and with no HI might be that the level of difficulty of the mathematics assessment in the special school differs from that of the other learning areas. Finally, following the I/E model of Marsh (1986b: 132-133) (refer to the Internal/External model of Marsh in 3.8.1), a lower self-assessment of ability in language by the learners with HI may predispose their higher MASC.

School placement seems to contribute to the ASCs of learners in general, possibly also for learners with HI, as seen in the high levels of statistical significance of the differences among

the means of all the ASC dimensions according to school (refer to 5.4.5). The GASC and LASC means were the lowest by far in the special school (3.47 and 3.27 respectively), but their MASC (4.06), although at the median, was well within the top range (4.2 – 3.72).

(iii) When the significance of the moderator effects on each of the ASC dimensions is examined, GASC is seen to be influenced by the historicity of the schools ( $p < 0.001$ ), home language ( $p < 0.001$ ), school ( $p < 0.0001$ ), hearing ability ( $p < 0.0001$ ) and age ( $p = 0.006$ ). Specifically, GASC is significantly higher in historically disadvantaged schools (Figure 5.1), higher for the speakers of African languages than for the speakers of Afrikaans (Figure 5.2), higher in School 5 and 2 (Figure 5.3), higher for learners with no HI (Figure 5.4), and higher for under-age learners compared to norm-age learners and over-age learners (Figure 5.5).

It must be considered why GASC is higher in the historically disadvantaged schools and among the speakers of the African languages, especially when noting their low school achievement percentages (Table 5.16) and bearing in mind that, of all the participating schools, School 5 registered the highest scores on all the dimensions of the ASC (Figure 5.3). A high GASC could be evidence of successful schooling practices, the role of the educators, the content of the learning area (for example easy or difficult, culturally familiar or foreign) and/or unrealistic self-assessment. It could also be argued that learners in disadvantaged circumstances might tend to deny their difficulties, contributing to an inflated self-evaluation of own perceptions. Limited within-group diversity may further contribute to a high GASC. Many of the learners have parents who are unemployed, manual labourers and/or illiterate. The learners could then be fish in a largely 'uniform' pond and, therefore, comparison as a way of evaluating themselves could have limited value. This line of conjecture leads to considering the possible role of a collective consciousness in the African community, as claimed by several authors (Kotzé, 1993:1-20; Markus & Kitayama, 1991:224-230; Mwamwenda, 1995:424; Stevens & Lockhat, 1997:254; Triandis, 1989:509-510; Venter, 1999:26-28, 31), in the high GASC at the historically disadvantaged schools. It might be that, collectively, the learners feel they function well, and that they, therefore, rate themselves highly. In addition, the effect of language and school on GASC might have been reciprocal. In the historically advantaged schools in the study, the learners are taught in their home language, Afrikaans, but in the historically disadvantaged schools, all the learning areas, except for the first language, are taught in English, augmented by explanations in mainly Sepedi, Zulu and Tsonga. Learners with other home languages, such as South Sotho, Tswana and Venda, however, are also present in the class, even though they are very small minority groups, and are rarely, if ever, accommodated by explanations in their home language. Why GASC is higher for learners with no HI than for

those with HI, seems understandable in the light of the substantial barriers to learning which are cast up by difficulties in listening, understanding and communicating at school. The higher GASC of the under-age learners could possibly be attributed to insufficiently developed self-assessment abilities, as indeed suggested by findings in an earlier study (Du Plessis, 1999: 95; Wigfield & Karpathian, 1991: 248, 251) or inflated self-evaluation (as argued above), or it might be that under-age learners actually do feel and think themselves to be better than the other learners. Over-age learners, who have lower GASCs, entered school late or have failed one or more grades. Not being with their peers, having a history of failure and/or the tedium of having to repeat work might contribute to a lower academic self-evaluation as compared to under-age learners. It is worth noting, however, that the GASC of over-age learners (3.82) is virtually the same as that of norm-age learners (3.84), suggesting that over-age *per se*, when not compounded by other negative factors, does not strongly affect the learners' GASC.

LASC was significantly influenced by the historicity of the schools ( $p < 0.001$ ), home language ( $p = 0.015$ ), school ( $p = 0.0006$ ) and hearing ability ( $p = 0.01$ ), but not by gender ( $p = 0.123$ ) or age ( $p = 0.521$ ). Specifically, LASC is higher in historically disadvantaged schools (Figure 5.1), higher among the speakers of African languages (Figure 5.2), higher in School 5 and 2 (Figure 5.3) and higher for learners with no HI (Figure 5.4).

Similar reasons as for the higher GASC in the historically disadvantaged schools could be considered in explaining the higher LASC in the historically disadvantaged schools: successful schooling practices, the role of the educators, the content of the learning area, unrealistic academic self-assessment, denial of challenging circumstances and/or a collective consciousness. The high LASC in the historically disadvantaged schools could further be attributed to the learners' strong identification with the mother tongue and/or some confidence in respect of their performance in that learning area, which is interesting considering the strong emphasis in the schools on English as the language of teaching and learning. Only Sepedi, Zulu and Tsonga are formally taught as first languages in the historically disadvantaged schools. Speakers of the other languages must select one of the first language classes to attend. The responses of these learners on the LASC could have contributed to the fact that the difference between home language groups in respect of the LASC is less significant ( $p = 0.008$ ) than in respect of the GASC ( $p = 0.0001$ ). As HI drastically obstructs the way to language acquisition and communication, it is again apparently clear why the LASC of learners with no HI is significantly higher than the LASC of learners with HI. A question would be why some learners with HI, contrary to expectations, do not have low LASCs, as will be discussed in 5.6. The LASC of norm-age and over-age learners (3.8;



3.81) are virtually the same, suggesting that over-age learners do not experience more difficulties with the first language than the norm-age learners.

MASC seems to be influenced the least by moderator effects: historicity of schools ( $p=0.088$ ), school ( $p=0.0007$ ) and age ( $p=0.001$ ) influence MASC, but not home language (0.132), gender (0.476), or hearing ability (0.651). Specifically, MASC is higher in the historically advantaged schools (Figure 5.1), low for School 2 (Figure 5.3), and higher for under-age learners compared to norm-age learners and norm-age learners compared to over-age learners (Figure 5.5).

Under *Apartheid* policy, mathematics was not encouraged in historically disadvantaged schools (Parsons, 1982:291-293), with their educators generally lacking the appropriate training in mathematics, which has probably contributed in various ways to a lower MASC. In contrast to the profile of the learners at the norm-age where their MASC (4.09) is higher than their GASC (3.84) and LASC (3.8) (Figure 5.5), the MASC of the under-age learners (4.21) is slightly lower than their GASC (4.29). It might be that mathematics in Grade Seven requires cognitive skills that have not yet developed fully in the younger learners. The MASC of the over-age learners (3.73) is the lowest of all mean scores registered in respect of ASC dimensions and age. Mathematics is one of the learning areas that determine a pass or a fail. It may be assumed that failure to pass mathematics, leading to failing a grade, would be one of the reasons why some learners are over-age. A lower MASC could then be indicative of the resulting feelings and thoughts that the older learners have regarding mathematics, the learning area that led to them being held back in school. Home language and hearing ability do not seem to influence the MASC, suggesting – somewhat surprisingly – that mathematics can be learned without relying very heavily on listening skills and/or language skills in the home language. The lack of statistical significance in the overall means of the MASC among learners of different home languages could further be attributed to the limited role that the home languages play in a mathematics class conducted in English as the language of learning and teaching. The high MASC of the Tswana learners - 4.37 (Figure 5.2), the highest of all the language groups, merits contemplation, especially when taken into consideration that the Tswana speaking learners also had the highest GASC (4.39) and the second highest LASC (4.01) of all the language groups. The small sample size ( $N=5$ ) obviously calls for caution when trying to understand their high means. Since the Tswana speaking learners were in one class, however, the high means may be suggestive of a strong sense of identity within a minority group, giving rise to a language group dynamics within the class. Strong denial of challenges experienced at school, especially in respect of language, may also have affected the results. Tswana was the only language depicted in



Figure 5.2 that was not taught as a first language in the schools. The Tswana learners had to select one of the other languages as a first language class to attend, possibly Sepedi, as Sepedi and Tswana form part of the same group of South African languages, namely Sotho.

Section 5.6 presents case studies of learners with HI per school context of full-service and special school. Data from especially interviews with principals, educators and learners, and classroom observations are integrated with the ASC scores on the ASCQ of each learner, to broaden and deepen understanding of the ASC of learners with HI in special and full-service inclusion schools.

## 5.6 RESULTS AND FINDINGS: THE CONTEXTS OF THE SCHOOLS AND CASE STUDIES PER CONTEXT

Section 5.6 examines the ASC of the learners with HI<sup>2</sup> in two South African school contexts, namely full-service and special schools, by briefly considering the background of the schools and learners with HI, before trying to understand the GASC, LASC and MASC of each learner with HI, in the light of the ASC scores, interviews and classroom observations. Interview transcripts (including conversations regarding the projective pictures) and classroom conversation transcripts were read while simultaneously listening to the tapes to verify the correctness of the transcripts. Where necessary, appropriate changes were made, for example '*die sluitende onderwys*' was changed to '*inluitende onderwys*'. Additional information obtained from the field notes was added to the transcripts. The additional information mostly came from the classroom observations and included non-verbal behaviour, actions and conversations not recorded, for example how many times Hanno asked Pete to help him (refer to Appendix P for extracts from an interview transcript). The transcripts were scrutinised for similar themes, starting with the interviews with the principals (to understand the school context), before continuing to the interviews with the class educator, the first language educator and the mathematics educator, in that order. The first and second interview with an educator were treated as a unit and completed before continuing to the transcripts of the other educators. The questions in the interview schedules were used as guidelines to identify themes. The transcripts of the interviews and classroom observations were analysed for data supporting, expanding or contradicting the themes. Themes unrelated to the interview schedule were also noted, for example attempts to bring about equality in gender expectations. Provisional themes included themes relating to ASC, HI, teaching strategies, disciplinary problems the educators experienced, feelings about the

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<sup>2</sup> The names of the learners have been changed to protect their identity.

principal, career opportunities of learners with HI and incidences of a personal nature. The final themes related mainly to the ASC, HI and teaching strategies. During the second interviews with the educators, matters which were unclear from the first interviews and the observations were discussed with the educators, thereby validating some of the themes identified during the first interviews and observations.

In line with the data demands of qualitative research methods, Section 5.6 adopts a narrative style of data portrayal. It contains fine detail of the unique contexts of the learners with HI, which contributes to a deeper understanding of the dynamics underpinning the ASC of learners with HI and, thus, to more encompassing answers to the main research question. Of necessity, the style differs from the conciseness of reporting on the instrument development process and the quantitative results, reflecting the different requirements of a mixed method research design in respect of data reporting. The reader is therefore kindly requested to shift gears now, to follow the track of a narrative portrayal of the qualitative data.

#### 5.6.1 Full-service inclusion schools (School 1 & 2)

##### (1) School 1

###### *(a) Background of the school*

School 1 was a primary school with approximately 1300 learners and 50 educators. Class sizes varied from 26 - 32 learners per class, since the school governing body was willing and able to appoint additional educators to keep the class sizes within reasonable limits. The school was situated in an average to above-average income area. Resources were, in the view of the principal, limited, but available.

The school was described by the principal as a community school: An educational psychologist had a practice on the school premises. Professionals were contracted to assist the school and learners whenever the need arose. Businesses supported the school with donations in the form of money and/or items such as computers. Churches were involved. The school assisted a school in a disadvantaged area by sharing lessons and helping with assessment of learning area content. Parent involvement was held in high esteem.

Educators could rely on peer support, as well as support from outside the school when expertise to address an issue was not available in the school. The school had an aid class with an educator who had additional teaching qualifications. The aid class educator worked collaboratively with educators from aid classes of other schools in the surrounding area. The

aid class was available for learners of nine years and younger, with above-average intelligence and who struggled with reading, writing or arithmetic. Once the backlog had been eliminated, the learner was returned to the regular classes.

According to the principal, inclusive education could be successful when the classes were small enough, funds were available, and there were a motivated educator and assistant(s) in the class. He was sceptical whether inclusive education would be successful in the new South African education system. It appeared to the researcher, however, as if inclusive education was succeeding in his school, even without meeting his conditions. The principal was of the opinion that learners with impairments should not be grouped together, but should work with other learners in a regular school setting. According to him, homogeneous grouping pulled down the learners with impairments instead of supporting their progress.

The principal viewed all learners, including those with impairments, as learners who had to learn. All learners eventually had to be able to find a place in the adult world. Learners should not be judged on the basis of what they could not do, but rather on what they could do. No learner was regarded as superior to another learner.

The principal acknowledged that the ideal would be to include all learners with impairments, but he had found that the school could include only some learners with impairments successfully, whereas it struggled to include others. Some learners with impairments in the school were referred elsewhere when the placement did not prove advantageous to the learner or when the placement was disadvantageous to the other learners in the school. In order to achieve advantageous placement for all learners, the key was, according to the principal, to have a motivated educator, someone who was willing to walk the extra mile. The principal selected and motivated a specific educator before a learner with an impairment was placed in that educator's class. According to the principal, it was crucial to first prepare the educators for the challenges brought about by having learners with impairments in a class. He mentioned that his staff were prepared for six months beforehand in ways to deal with the learners with impairments. Staff also attended relevant courses. At the beginning of the year, educators who had learners with impairments in their classes were required to consult the educators who had taught those learners during the previous year, to become more knowledgeable regarding the particular learner. The principal also decreased the class size when the class contained a learner with an impairment.

The school had been criticised by special schools and by its own parents for its policy concerning learners with impairments. Some parents requested that their children should not

be placed in the same class as a learner with an impairment, for fear of their children being '*handicapped*' by the learner with an impairment.

The principal was of the opinion that, in many ways, the school had moved beyond the inclusive education policy of the Department of Education. In his view, many aspects of the inclusive education policy did not work. According to him, the school had its own policy in respect of inclusive education. The existence of the aid class was an example of school policy contradicting departmental policy.

*(b) Brief background of Hanno*

The Grade Seven class in School 1 that participated in the study had 29 learners: 18 boys and 11 girls. Hanno, one of the boys in the class, experienced severe HI. He was born prematurely at six months, weighing 1.2kg. His HI had existed since birth, but was only identified when he was about 2 ½ years old. When he was 3 years and 6 months old, he was sent to a crèche at a special school for learners with HI. He remained in the special school until March 1999, when he was in Grade Three and 11 years old. His parents then decided to enrol him in Grade Three in School 1 from April 1999. During 2000 he was referred to the educational psychologist at the school and attended a number of sessions, but the nature of the referral and support remain confidential. Notes in his school file mention that Hanno experienced aggression from other learners in the school.

According to the most recent audiological reports (September 1999), Hanno had severe sensorineural hearing loss of 70% in his right ear and a profound sensorineural hearing loss of 100% in his left ear. He relied on two hearing aids which amplified sound. Despite the severity of his hearing loss, Hanno had very good pronunciation and could converse easily and clearly.

He was 15 years and 5 months old at the time of the investigation; that is two years older than the mean age of the other boys and girls in his class, but only one year older than the mean age of learners in School 3, the special school for learners with HI. No indication could be found that he had had to repeat grades in School 1, therefore it could be assumed that Hanno had either repeated grades in the special school, or that he had started his school career later than his peers.

*(c) Hanno's ASC*

Figure 5.6 depicts the actual GASC, LASC and MASC of all the learners with HI, as well as the mean GASC, LASC and MASC of the learners with no HI. In 5.4.6 it was already

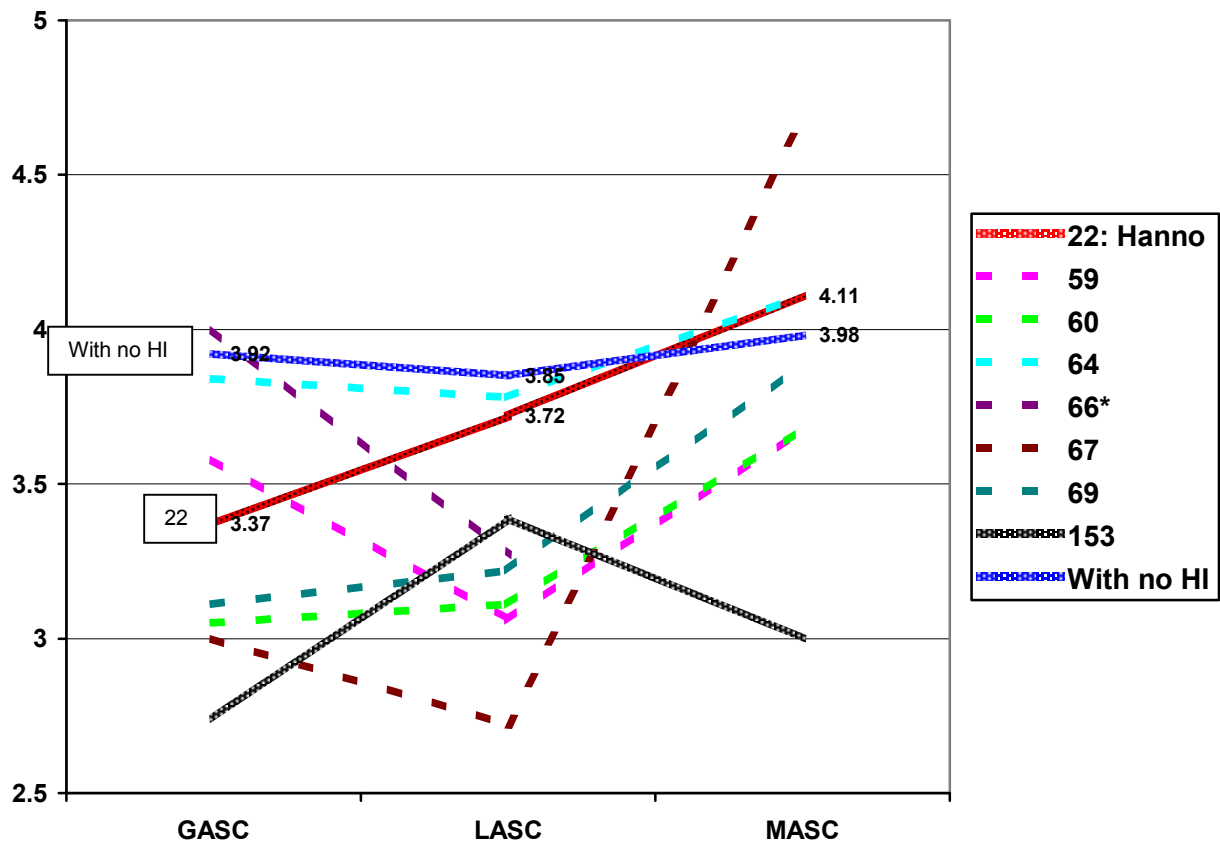
established that there were statistically significant differences in the ASC means of the eight learners with HI compared with the means for those learners with no HI (Wilks' Lambda = 0.898, Mult.F=5.63, df=3, 141, p=0.002). Hanno's ASC will be looked at in this section, but comparisons and explanations for the similarities and differences in ASC across the schools and learners will be considered in 5.7, that is, once all the contexts and schools have been described. Hanno's learner number was 22.

On a 5-point scale, Hanno registered means of 3.37 for GASC, 3.72 for LASC and 4.11 for MASC. Hanno's MASC (4.11) was 0.13 higher than the MASC of learners with no HI (3.98). His GASC (3.37) was 0.55 lower than the GASC of learners with no HI (3.92) and his LASC (3.72) was 0.13 lower than the LASC of learners with no HI (3.85).

Figure 5.6 shows that Hanno's GASC (3.37) was well below the mean GASC of the learners with no HI (3.92). The mean of his achievement marks across all learning areas decreased slightly from 54% in the second school quarter to 52% in the third school quarter. The mean of the achievement marks of the class was similar from the second to the third quarter, 70.93% and 69.86%, respectively. All the line graphs in Figure 5.6 are higher for MASC than GASC, although the difference is negligible (0.06) in the graph depicting the ASC of the learners with no HI.

During the administration of projective pictures, Hanno identified several typical classroom activities in the first picture, namely '*School in General*': a learner asking the educator something, a learner helping another learner, a learner building something, a girl fetching a book, a learner paging through his work to see if everything had been completed whilst another learner was looking on, a learner talking to another learner sitting next to him, and one learner who was doing his work. The learner who was asking the educator a question, did so because he did not understand his work or he was asking the educator what he had to do. Both of these themes had cropped up in interviews with Hanno's educators and confirmed what happened in class when Hanno asked the educators questions. On enquiring whether it helped the boy to ask the educator, Hanno replied with '*Maybe*'. It appeared as if Hanno doubted whether the educators in general were always helpful. The learner who was helping another learner did so because the latter perhaps did not know what to do. Asked why the latter perhaps did not know what to do, Hanno's answer was profound: "*Perhaps the educator was too quick for him – talked fast.*" He added that perhaps the educator was ahead with the work. Asked to explain what '*ahead with the work*' meant, he explained as follows: "*The guy sits and pages through his work and the educator talks. She talks fast, of course. Then she's on 10, now she's on 13 ... 12. Then the guy asks*

Figure 5.6 Actual GASC, LASC and MASC of learners with HI (Hanno) and mean GASC, LASC and MASC of learners with no HI



\* Learner 66 did not complete the MASC section of the ASCQ.

afterwards: ‘On which page are you now, Ma’am?’” In reply to a further question, Hanno said that it did not happen often that the educator talked fast or worked ahead.

When the cross-cultural interviewer spoke to Hanno, Hanno said that the learners talked too much in class, stood up too many times, and talked with friends next to them. Hanno’s hearing aids probably amplified all sounds, and the talking and standing up of classmates was presumably extremely bothersome if he was trying to concentrate on the board or on his work.

In an interview, Hanno’s class educator mentioned that she would like to see all the staff members teaching a particular learner with an impairment to come together and decide how that learner would be assessed and how his/her tests would be constructed. She would like the collaboration to be more than once a year, preferably in the form of weekly meetings. She did not think that the Department of Education gave educators the knowledge or skills to

include a learner with an impairment. She appeared to think that if educators worked collaboratively and agreed on a similar approach to accommodate a specific learner, the GASC of the specific learner might be raised. Presently, accommodations apparently depended on the experience and initiative of the individual educators. She declared that the Department of Education did not meet her needs for including learners with impairments. The Afrikaans educator was also of the opinion that, generally, educators were not being equipped to deal with learners with impairments.

Figure 5.6 shows that Hanno's LASC (3.72) was only 0.13 lower than the LASC of learners without HI (3.85). Considering the enormous barrier that HI brings to language instruction and learning, Hanno's LASC is remarkable. His marks for Afrikaans, his first language, increased from 40% in the second quarter to 52% in the third quarter, whereas the class mean for Afrikaans increased only slightly, from 69.03% to 70.07%, during the same period.

According to the Afrikaans educator, Hanno had an unrealistic idea of his language abilities, but she was of the opinion that the unrealistically high LASC was not necessarily detrimental. According to her, the high LASC '*carried his whole being*'. She also thought that Hanno felt that he coped well. She expected he would be able to stand up against anyone in the class, should the need arise.

When shown the projective picture that referred to an Afrikaans class, Hanno spoke about a learner who was walking around and did not want to do his work, but wanted to play in class. It was interesting that Hanno noted a learner who wanted to play in class. During observations it became clear that the Afrikaans educator made use of games as teaching methods. The learners appeared to enjoy the games, although it seemed as if Hanno could not always follow the games. From his projection, it might be concluded that even the games in the Afrikaans class were still hard work for him, as will be illustrated later. One of the classes ended with the educator asking Hanno what he was writing. Hanno answered: "*Too much.*"

The desks in the Afrikaans class were arranged to form six groups. Each group could accommodate up to six learners. Hanno sat in the group that was positioned in the centre of the class and in the front. His seat faced the window, but he had easy access to the chalkboard and the area from where the educator habitually taught. She often sat on the table directly in front of him.



The observations<sup>3</sup> in the Afrikaans class were riveting in respect of accommodations made for Hanno, and his participation, and sometimes lack thereof, in classroom activities. According to the Afrikaans educator, her decisions to make accommodations were guided by Hanno's facial expressions, which sometimes indicated total confusion with some instructions. She let herself be guided by his abilities and level of comprehension in making the accommodations. Even some written instructions he found difficult and he lagged behind the rest of the class. She usually repeated the instructions individually and reduced the volume of the exercise for him. Other day-to-day accommodations for Hanno included the following: She supported Hanno by sometimes indicating with her finger where the answers in the text lay, where they were reading or where he had to fill in the answers. When the learners had to fill in a worksheet by looking for the answers on a previous page in their books, Hanno was given a separate worksheet, so that he did not have to page through the book for the answers. She also tried to use low frequencies when speaking, as she found that Hanno was better able to hear lower frequencies. Her observation corresponded with Hanno's audiogram. She also relied on gestures to catch his attention or to convey instructions. She used gestures generally understood, such as '*come here*', '*keep quiet*' and '*no*'. A short cough or clearing of the throat also caught his attention. She normally asked Hanno the easier questions to involve him and to give him self-confidence; however, she did not ask him the easy questions first, but tactfully mixed the level of difficulty of the questions she asked in the class. She was of the opinion that the accommodations made for Hanno could also benefit other learners who were not academically strong. In an interview, Pete, a friend of Hanno, actually said that work explained and repeated for Hanno helped the whole class. According to Pete, the Afrikaans educator made Hanno's work easier.

Besides day-to-day accommodations, the Afrikaans educator always made accommodations in respect of oral and listening exercises. The educator made substantial accommodations in assessing Hanno during an unprepared oral speech. Hanno was visibly more tensed up than usual and requested permission to go to the bathroom prior to his speech. She later confirmed that Hanno had been nervous about making an unprepared speech in front of the class. Hanno was the fifth learner to be selected randomly for the unprepared speech. Hanno complained, saying he had been given his topic "*Dogs must have licenses*", and the educator explained that he had to say yes, he agreed with the statement, or no, he did not agree with the statement. When Hanno went outside to prepare, he came back immediately '*for a book to write on*' ('... *wil daarop skryf ...*'). The educator corrected his sentence and

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<sup>3</sup> The Afrikaans educator confirmed the credibility and trustworthiness of the classroom observations in her class: the behaviour of the learners was as it had always been, for the duration of the observations.



said “*you mean a book to press upon*” (“*Jy bedoel jy wil daarop druk ...*”). When Hanno came in to deliver his unprepared speech, he appeared shy. The educator asked him “*Why do you think dogs must have licenses?*” She introduced the topic to the rest of the class, as she had done once before for another learner. She reminded him to stand on the little orator’s box and told him to tell the class why he thought dogs must be licensed. Hanno was physically larger than most of the boys in the class, and, besides being nervous about addressing the class, he might have felt self-conscious about his size when standing on the box. For the third time the educator repeated: “*Yes, Hanno, do you think dogs must have licenses?*” Hanno answered: “*No.*” Hanno was not able to make a speech on current topics as all of the other learners did. Once the educator had established that he was unable to make a speech, she asked him guiding questions. The rest of the conversation ran as follows:

Educator: *Now tell me, why must a dog not have a license? ... [unclear] ... Is a dog a car? Is a dog a car? Is a dog like a car? Why is a dog like a car? Why do cars have licenses, Hanno? Why do you need a license for your car?*

Hanno: [Hanno responded to the last question only.] *Because then you can drive on the road.*

Educator: *OK. Why do dogs need licenses?* [The educator deviated from Hanno’s original point of view, namely that dogs did not need licenses. The change might have confused Hanno, depending on what he had prepared.]

Hanno: *Because they can ... [unclear] ... not on people.*

Educator: *So that they can walk everywhere they want? OK. Why?*

[Hanno wanted to get down from the orator’s box and go to his seat.]

Educator: *No, no, no.*

Hanno: *For three minutes?* [The said length of the unprepared speeches. No one’s speech was even remotely close to three minutes.]

[The class laughed.]

Educator: *Yes. Why do licenses cost money? Does a car license cost money?*

Hanno: *Yes.*

Educator: *What do you think will a dog’s license cost? The same as a car or cheaper?*

Hanno: *Cheaper.*

Educator: *Why do you think should dog licenses be cheaper than car licenses?*

Hanno: *Because he is not as ... [unclear] ... and pretty ... [unclear] ...*

Educator: *And important, and dangerous? Because dogs can be a dangerous thing, therefore they should ... Hey, Hanno and I are talking. ... Lastly, how do you think are we going to get the people so far to buy dog licenses?*

- Hanno: *You just go to the place where, where one ... the licenses ...*
- Educator: *Buy the licenses. Yes, and then?*
- Hanno: *Then one writes ... [unclear] ...*
- Educator: *Now the last question. What are you going to do if one does not, if you catch someone who does not have a license for such a dog?*
- Hanno: *Then fine them ... [unclear] ...*
- Educator: *A fine. Good. Your book, Hanno.*
- [Some of the learners clapped their hands. ]

When Hanno sat down, he rattled his chair loudly, rendering it difficult to hear the next speaker. It might have been because of relief that he had completed the speech, it might have been a way still to focus attention on himself, and/or it might have happened because he was unaware of the sound the chair was making.

The educator explained during an interview that she did not expect Hanno to be able to make a speech. She expected him to be able to respond to her questions. The most important accommodation the educator made was therefore in respect of the expected outcomes – answering questions, and not delivering a speech.

Hanno also exhibited clowning behaviour when he stood in front of the class. The educator interpreted it as a survival skill copied from other learners. She described it as the best alternative he had to just standing in front of the class saying nothing. She stated that Hanno would have been able to give a more independent unprepared speech had he been talking to her individually. Hanno received 50%, which falls in the category 'partially achieved', for his unprepared speech.

Other interesting accommodations took place when the class were required to complete a listening exercise. As Hanno could listen, but not necessarily hear in the same way as his peers, his listening exercise was adapted to resemble a comprehension test. The listening exercise took place during the fifth observation. The learners were instructed to fold the pages of the listening exercise in their workbooks so that the text, a poem, was covered. Hanno wanted to know what they were writing about. The educator told him to listen. The educator read the poem twice. While she was reading, the learners had the opportunity to make notes of detail in the poem. Hanno looked at the educator whilst she was reading, but not the whole time. When a learner entered the classroom, he turned around. The educator looked at Hanno. Hanno did not make any notes, which was consistent with learners with HI not being able to listen and write simultaneously, as they rely on speech reading to 'hear'

what is being said. When she had finished reading, she told Hanno to sit at her table, as he was allowed to look at the text. Hanno joked and said he was sitting on the king's throne. The educator asked the first question, and told Hanno that the answer was in the first verse. Upon Question 4, Hanno repeated part of the question to the educator. She had asked the question with her back towards Hanno. She repeated the question and told him to look in the fourth verse. She continued without waiting long by saying "Question 5", but Hanno said: "Wait ... Right!" The educator read Question 5. The learners had to deduce from the text whether the hunt had been successful. Hanno looked at the educator for a lead. He was told: "You must know that, Hanno. It does not specifically stand there in the text. Hanno, you must be able to know that. It is not in the text. The text implies it." She then simplified the question: "Did he manage to kill the mosquito, yes or no?" Hanno asked: "At Number 6, Ma'am?" The question, however, was at Number 5 and he was told so. She asked Question 6 and immediately asked Hanno whether he had heard and whether he was OK. He replied in the affirmative. Hanno repeated part of the seventh question again. It seemed as if he only wanted to make sure that he had heard correctly, as previously. The educator later helped Hanno with Question 8 by saying the answer lay in the second verse. She told him there were not any other leads, and continued to imply that there could have been more leads had he behaved himself better. Before the educator started with Question 9, Hanno called out that she must wait. She said "Nine!" and again Hanno said: "Wait, Ma'am!" After a few seconds, she continued with Question 9. Hanno wanted to know whether this was Question 9. The educator confirmed that it was and wanted to know whether Hanno had heard the question. He replied yes. The educator repeated Question 10, the second version being slightly easier than the first: "Where was the hunting field? Where was the mosquito hunted?" She looked at Hanno whilst she was saying it and told him to look in verse one.

After the listening exercise, Hanno went back to his original seat and gave his book to the boy who sat next to him, to mark his work. Hanno asked a question, but the question probably related to the answer he was required to mark, and not to his own work. His question, however, did reflect that he was not sure what the answer was. Then Hanno was quiet until Question 6, where he loudly said that he had made a spelling mistake. Afterwards, the learners had to add up their marks and read the marks to the educator. Hanno had 5 ½ out of a total of 10. Hanno's mark was the lowest; the next mark was six, which had been obtained by six learners. Hanno was praised by the educator, and was the only learner in the class, except for another learner who had obtained nine, who received praise. It must be considered how the other learners might have felt when Hanno was allowed to look at the text, or how they would have felt if he had achieved higher marks than they.

The Afrikaans educator usually allowed Hanno to ask ample questions. She also allowed other learners to ask questions, but Hanno asked many more questions during the course of a period than any other learner. For example, during one 45-minute period he asked six questions to the educator, and two questions to learners in the class. Many of Hanno's questions indicated that he did understand the question, but that he needed confirmation and reassurance as to whether he actually understood correctly. This question-asking behaviour, which could be time-consuming during a lesson period, could be indicative of a learned dependence or learned helplessness, or it could be indicative of the type of challenges a learner with HI has to contend with during the course of a normal day in a hearing environment, and therefore of the type of support required.

One such incident, which could be an example of learned helplessness or learned dependence, or indicative of everyday challenges, or perhaps a combination of both, occurred during the second observation. The lesson was on idioms, intensive forms and comparisons in the Afrikaans language. The educator gave instructions for them to learn the items by marking the ones on the list that they did not know, and by learning those. The class started to learn. Hanno came with his questions: "*This page?*" "*Are you going to ask us questions?*" The educator stood next to him and explained to him again. Hanno wanted to know whether they had to know the work by heart. Hanno asked a question about one of the intensive forms. The educator showed him how to learn by covering part of the expression. After five minutes of learning, they wrote a small test. Hanno's test behaviour was interesting: He asked the educator to repeat the first word. The educator let him page back to the work when he could not answer the second question. By merely interpreting a glance from Hanno, she knew she had to repeat the third word for Hanno. He still did not know the answer. She once gave him a lead to an answer. He expected a lead for the next question, but she did not give him a lead. Later on she reminded Hanno of a picture that he had seen that related to the answer of a question. The class then exchanged books and marked each other's work. They had to do their own corrections, but the educator asked a boy at Hanno's table to do Hanno's corrections for him. Hanno received his marks. He wanted to know from the educator whether something was right, however, it was not, and he was disappointed. She had to explain to Hanno what a '*mule*' was. Hanno asked the answer to the third question. Hanno inquired after the spelling of a word, whether it had one or two o's. The educator helped Hanno further. Hanno did not hear the first sound of a word. He heard '*oepe*', instead of '*hoepe*', the |h| being an unvoiced sound in Afrikaans.

Another incident that clearly illustrated Hanno's lack of independence in the Afrikaans class, occurred when the learners were given work to occupy them whilst the unprepared speeches were being made. The class had to divide animal names into syllables. Then they had to make up their own funny animal name by combining the syllables and they had to prepare a speech on that animal. Hanno asked a number of questions, until the educator, who was engaged in listening to the unprepared speeches, conceded to a final question. Hanno wanted to know whether he had to combine three or four animal names. The educator told him the instructions had been two or three animal names. He asked another question, but was told to put up his hand and wait his turn. Hanno wanted to know when the work had to be completed. The educator responded by saying that it was not homework, but class work. Hanno then wanted to know whether the work had to be completed that day, but was told that it was class work. After the third unprepared speech, Hanno asked the educator about his funny animal word, which he still had not decided on. She responded by briefly repeating the instructions, saying that he could not use her example and ended by saying "*You are again too lazy to think for yourself. Come on!*" It appeared as if Hanno could not work independently in the Afrikaans class, and frequently wanted to ask the educator questions. His behaviour stood in sharp contrast to his behaviour in the mathematics class, where, although he also asked questions, he seemed to be able to work independently. It should be considered whether Hanno's dependence was a matter of ability-level, learned helplessness or dependence, related to the content of the learning area, or in response to the educator's supportive style in class.

It was interesting to note that Hanno was able to participate in most of the lessons, but when games were played, he seemed not to participate. During the third observation, the educator played a word game with the learners. The game entailed her drawing pictures of syllables of a word on the board and the learners had to determine which word was represented by the drawings. Hanno was unusually quiet during the game. Although the pictures were of concrete objects, the combination of the syllables represented by the pictures required some abstract skills and knowledge of the language. It might be that Hanno was not able to synthesise well. It could also be that there was too much noise in the class for him to follow what was going on in the game. Or he might have been tired, as this occurred during one of the last periods of the day.

Another game that did not arouse Hanno's involvement, required the learners to divide animal names into syllables. The educator gave an easy example for Hanno to do, which he did correctly. The class then had to make up funny animal names by using the first syllable of the name of one animal (the 'head' of the word) and the last syllable of the name of

another animal (the 'tail' of the word). For example, a rhiraffe would be a rhinoceros and a giraffe; a centiphant a centipede and an elephant. The explanation was rather concrete, but Hanno did not react to or participate in the game. Some examples became more complicated, using the first, middle and final syllable of three animal names, for example a buncoder: a bunny, a crocodile and a spider. Hanno was unable to make up his own funny animal name by applying the process.

Hanno's concrete processing of language became evident during the first observation. The educator told a story as part of a comprehension exercise. Hanno listened attentively, though playing with his hands. Upon hearing the word '*amputate*', he made a cutting motion with one of his fingers from his right hand on one of his fingers from his left hand. Once, when the educator reminded him to look and listen, he touched his ears and his hearing aids.

In summary, the observations in the Afrikaans class included accommodations for day-to-day situations and oral and listening exercises, question-asking behaviour, learned helplessness or learned dependence, Hanno's lack of participation in games and his concrete understanding of language.

Hanno's MASC (4.11) is noteworthy because he had a higher MASC than the learners with no HI. His high MASC was also contradictory to the tendency of over-aged learners having a low MASC, as depicted in Figure 5.5. (At 15 years and 5 months, Hanno was an over-age learner.) Hanno's marks in mathematics increased from 60% to 69% in the third school quarter, even though the class mean for mathematics decreased slightly from 77.83% to 76.76%, during the same time. His high MASC could certainly be a reflection of his improvement in mathematics. It is interesting to note that Hanno was probably not satisfied with his marks. During the administration of projective pictures, he thought that the boy who was asking the educator something (as he often did), did not have good marks. The reasons given for the poor marks, were as follows: *he had to ask the educator many times, he did not understand the first time, he did not do his homework, he talked, and he did not concentrate*. Remember, however, that MASC, or any ASC for that matter, is not merely the product of achievement marks – good or poor - but also of feedback from and interaction with the mathematics educator and peers.

The desks in the mathematics class were arranged in a traditional way: one desk behind another, in neat orderly rows, each seating two learners. The educator's table stood in the front corner, and Hanno's desk was adjacent to the educator's table, that is, one of the desks at the front of the class. Pete, a friend of Hanno's, shared the desk.

The educator usually introduced new content at the beginning of the lesson, made sure the content was understood and gave the learners homework, with which they had to continue in class. The mathematics educator said that he talked more loudly in Hanno's class. He made sure that Hanno had heard his lesson correctly and that Hanno understood the work. He often asked Hanno whether he had heard him and invited Hanno to tell him if he could not hear. The educator repeated facts that he deemed necessary for Hanno to hear. The following two extracts, from the transcriptions during the first and second observations in the mathematics class, are examples of ways in which the educator determined whether Hanno had heard and understood him correctly:

Extract 1:

Educator: *Hanno, do you understand it?*

Hanno: ... (Unclear) ...

Educator: *Are you sure?*

Hanno: *Yes, Sir.*

Educator: *Everything? ... Do you understand it? Are you sure?*

Hanno: *Yes. If I don't understand, I will come and ask you.*

Educator: *Then you will come and ask me. Try the first three and then you bring your book so that I can see ...*

Extract 2:

The educator addressed the whole class, saying they must ask him if they do not understand, and ended his address with "*Did you hear, Hanno?*". After explaining the example, he addressed Hanno again: "*Do you understand it, Hanno?*". Hanno explained in a sentence what he had understood. The educator explained again, ending the explanation with "*Are you with me, Hanno? You must speak up, brother.*" Hanno affirmed. The educator proceeded to do an example on the board, whilst prompting Hanno for the subsequent steps and the answers. Hanno's answers were correct.

While they were working, the educator sat at his desk and marked books, all the time being available for the learners to ask him questions. He sometimes called learners one by one to his desk to mark their work, and explain their mistakes to them. He repeatedly invited the learners to come and ask him questions. He was accessible to all the learners and gave much individual assistance. He helped all learners, regardless of their demeanour, in an equally supportive way. Many learners made use of the opportunity, including Hanno. According to the mathematics educator, Hanno usually continued to ask questions until he



understood the work. During the administration of projective pictures, Hanno confirmed his habit of asking questions until he understood. With many of the questions, Hanno only sought confirmation that he was correct. During the administration of the projective pictures, Hanno mentioned that the boy benefited from asking the educator questions. He explained that the boy felt very bad when he did not understand the work, because then he could not do his work and finish it. Fortunately, this happened very seldom. Hanno gave the following two reasons for failure to understand or finish work: someone talked to the boy and, whilst the educator was busy teaching, the boy did other things and was not listening.

Hanno's close proximity to the educator also facilitated the asking of questions by Hanno, and hearing the answers clearly without repetition. Often Hanno did not get up to go to the educator's desk, but merely said "Sir?" to gain the attention of the educator, before posing his question.

Pete repeatedly and patiently helped Hanno with his mathematics, even without being asked by Hanno for assistance. Once, Hanno was not satisfied by an answer the educator had given. When Hanno sat down, he looked in Pete's book. A conversation between Pete and Hanno ensued, in which Pete explained to Hanno by referring to the example on the board. Hanno once again looked in Pete's book and Pete continued his explanation. Pete asked Hanno whether he knew how to do the work. Conversation followed before Hanno continued on his own. Hanno asked Pete's assistance at least four more times during that period. Later, Pete was heard to prompt Hanno to do something when he reached number 'd'.

In an interview with Pete, Pete said that he liked to help Hanno with mathematics. He wanted Hanno to understand the work and to achieve good marks, so that one day he could become something, do something with his life. He was aware that Hanno experiences HI. In mathematics class, Hanno usually of his own initiative asked Pete to help him, but on mornings before tests, Pete would ask Hanno to revise work with him. According to Pete, Hanno did not always hear the words correctly, especially if the educator used difficult words, and then he could not pronounce the words. Pete then explained the content of the lesson to Hanno in simpler words. Pete emphasised that Hanno was '*not stupid*', but that he sometimes could not hear the words properly. According to Pete, the whole class benefited when work was explained in an easier way to Hanno. He found that he sometimes understood the work better after it had been explained again to Hanno. Pete had also experienced that by helping Hanno to learn, he actually learnt more himself than when he was being taught. He found that his own marks had increased since he had started helping Hanno. He helped Hanno by explaining the work to him, doing an example with him and



leaving Hanno to do the rest of the work himself. If Hanno struggled, he would help again. Apparently Hanno was shy to ask other educators to repeat words, but not the mathematics educator.

The nature of the mathematics curriculum might have contributed to Hanno feeling good about his mathematical abilities. Examples of the work were done and explained on the board by the educator. In the examples chosen for the day's lesson, usually one new mathematical principle was applied. Hanno usually would have been able to follow the application, even if he had not heard the explanation fully. All the instructions were in a written format in their books, and Hanno could rely on his reading to understand the instructions. Further, the structured way in which the lessons were presented in organised, small steps and the many examples done in class could also have contributed to Hanno's high MASC.

According to the mathematics educator, Hanno would be able to pass Grade 12 mathematics one day if he worked hard. It appeared to him as if Hanno wanted to succeed at mathematics. He worked in class and did not daydream. His homework was always done. Despite his questions and even mischief, it appeared as if Hanno worked independently in class. He even continued to work, though learners would be standing around him, joking with one another. The mathematics educator promoted independence amongst the learners by not babying them. He was very strict, but treated all the learners similarly. During the interview with Pete, Pete mentioned that the mathematics educator was extremely just. The mathematics educator was once observed to praise Hanno on work done well and encourage him to continue doing so.

To summarise, there were several conditions in the mathematics class which might have contributed to Hanno's high MASC: the educator making sure that Hanno had heard and understood, the availability and accessibility of the educator for questions, Hanno's close proximity to the educator, Pete's supportive presence in the class, the nature of the content of mathematics, the structure of the lessons, Hanno's personal motivation and a good relationship between Hanno and the mathematics educator. Ironically, of the three educators interviewed at School 1, the mathematics educator was the least informed of inclusive education policy and practice.

(2) School 2

(a) *Background of the school*

School 2 was a primary school with approximately 1750 learners. Class sizes, according to the principal, averaged 60 learners per class. The school was situated in a below-average income area where the majority of the parents were unemployed. The principal described the community as “*the poorest of the poor*”. Resources were limited. According to the principal, the community was unstable (“*always on the move*”): people came from the rural areas to the city in search of work. They did not necessarily settle in that area, but later moved to neighbouring areas in search of accommodation. The result was that new learners were enrolled in the school throughout the year.

The principal found that many learners attended school infrequently because of hunger. There were also learners in the school who were exposed to abuse, including sexual abuse. Crime was apparently also rife in the area, especially during weekends. Many learners were exposed to drug abuse, criminality and drunkenness. Families were incomplete and broken and child neglect was a general occurrence. There were also child-headed households, where the parents were deceased or the parent worked in another city and left the children in the care of the eldest sibling.

Learners from three main language groups were accommodated in the school: Sepedi, Zulu and Tsonga. The majority of the learners were Sepedi speaking (approximately 60%), followed by the Zulu speaking learners (approximately 25%) and the Tsonga speaking learners (approximately 15%). Learners from Zimbabwe and Mozambique, who also sometimes attended the school, could, according to the principal, easily adapt to either Zulu or Tsonga. Their numbers in the school appeared to be negligibly small. The language of instruction in the intermediate phase (Grades Four – Six) and the senior phase (Grade Seven) was English, but the learners did not always understand. The content was then explained in Sepedi, Zulu and Tsonga. The class educator mentioned that it was time consuming to explain the content in four languages. He estimated that he spoke English for 40% – 45% of the time and that for the rest of the time he spoke in learners’ mother tongues. The multi-lingual approach to teaching was also observed in the mathematics class.

According to the principal, the mission of the school was to use the school to change the lives of people, adults and children alike, who lived in the areas surrounding the school. Because the lives of all the people in the vicinity of the school were acknowledged as important, no discrimination took place regarding admittance of learners who spoke languages other than Sepedi, Zulu or Tsonga, or learners with impairments. The school had

become involved in including learners with impairments because there were no special schools in the area, and because, even if there had been, the parents would not have been able to afford to send their children to the more expensive special schools.

The principal was very committed to inclusive education: *“We want to try and show the world that nothing is impossible ... we can change the system of education ... here we have a duty to try and change the attitudes ...”* Although the school did not discriminate against learners with impairments, the principal acknowledged that there were some learners with a severe degree of impairment, such as learners with severe mental or severe physical impairments, whom the school referred to a special school, as the school was of the opinion that they could not handle such impairments. The principal also mentioned that any learner should be able to fit into their system. (The system appeared to be flexible enough to allow for many accommodations.) When some parents were of the opinion that their children would not be able to cope in school, the school still encouraged such parents to bring their children to school. Evaluating the children’s needs and the school’s ability to provide in those needs, the school would then either accommodate the child or refer the child elsewhere. The special school, in turn, sent learners who they believed could cope in a regular school, to School 2.

The principal mentioned that initially the educators had been reluctant to educate learners with impairments, thinking that they did not have the ability to handle learners with impairments and that they were being confronted with an unnecessary burden. Slowly and over time, however, they adapted and realised that there was a need for inclusive education. The principal was also of the opinion that the educators had expected that the school would be swamped with learners with all kinds of impairments, which did not happen. He emphasised that it was important for the educators to realise that special schools would not fade away and that special schools would still be there for learners who could not be accommodated in regular schools.

The school-based support team (SBST) comprised eight volunteer educators and some parents, and supported the educators and the learners. The special needs coordinator of the school coordinated the SBST. When educators realised learners were not performing well, or that learners experienced problems, they referred the matter to the SBST, *via* the grade representative who was a member of the SBST. The SBST met on a weekly basis in the afternoons. They mainly dealt with challenges the learners encountered regarding learning. Many of the challenges were related to situations at home. Once a learner had been identified, the SBST invited the parents to school, upon failing to come to the school, the

SBST did home visits. The SBST reported to the school management team. The SBST also arranged workshops for the educators to determine which aspects of teaching were problematic for them and to support them. The members of the SBST attended workshops on a regular basis. One of the educators, not a member of the SBST, mentioned during an interview that the SBST attended the workshops but that they did not always disseminate the information. The SBST sometimes involved the school governing body (SGB) in assisting a family or learner in need. The SGB supported the educators, the learners and the parents by networking with stakeholders, such as prominent people in the community, businesses and doctors, outside the school.<sup>4</sup> Because local businesses were weak, the school searched further abroad for support. A cell phone operator had erected an antenna on the school grounds and paid rent to the school for the area of land used. Embassies were asked for donations and a photocopier and clothes had been received. A private school had donated sports equipment and clothing for which they had no further use. The town council also gave a grant to the school to enable the school to provide a feeding scheme for learners who were in need. Local councillors had been asked to petition for land for some parents in order for them to erect shacks for accommodation for themselves. The SOS Village for children in need had also been involved in supporting child-headed households.

The Department of Education had recently appointed an educator to deal with matters of inclusion. She was to be stationed at School 2, but would also be responsible for three other schools. Her duties would include supporting the schools to assist learners who required support. According to the principal, other schools sometimes asked School 2 to assist them in dealing with the implementation of inclusive education policy in their schools.

School 2 had been chosen, through contact between the principal and the school district manager, as a pilot school to implement inclusive education and participation; hence the school was ahead of the EWP 6 regarding many aspects of inclusive education. The Department of Education had helped with the implementation of inclusive education by arranging meetings between themselves and the school, by building ramps and by presenting workshops on how to deal with more than one learner with impairment in a class. The Department of Education needed to supply equipment necessary to support learners with HI, for example, as the parents were too poor to afford assistive devices themselves.

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<sup>4</sup> As member of the SGB, the principal put policy into practice and wanted to know what we, the researchers, could do for his school in respect of inclusive education. Immediate support was to arrange assessment of the hearing of one learner in Grade Seven, and facilitate decisions regarding her future school career. Long-term support included sharing with the school important information and guidelines for facilitating inclusive education that came forth from the study, and presenting a workshop on accommodating learners with HI.

The Grade Seven classroom attended by Sarah, the Grade Seven learner with HI in School 2, was situated on the perimeter of the school grounds, next to a road. During all the observations, no disturbing noises came from the road, although one educator complained that sometimes drunken people or criminals walked down the street and made a noise. The learners remained in the same classroom and the educators rotated. Only for the first language class did the learners separate according to their home languages: Sepedi, Zulu or Tsonga. The class was overcrowded, with usually three learners sharing a desk, sometimes even four. One visible effect of the overcrowding was that the educator could not interact easily with the learners who were experiencing difficulties. The furniture was old, and some of the desktops were loose. The learners let the desktops rest on their thighs. One of the window panes was broken. There were not many decorations in the class: four posters were displayed against the back wall of the classroom. The desks were grouped together to form clusters to facilitate group work. Because of the overcrowded classroom and the arrangement of the desks, some of the learners sat with their backs to the educator. If they wanted to see the educator, they had to turn around in their seats, which was difficult, especially for the middle learner in a group of three sharing a desk. It appeared as if the learners shared textbooks and rulers, but that all learners had their own exercise books. There was no electricity in the class. Teaching aids were limited to the resourcefulness of the educators, a chalkboard and loose sheets of paper. When group work was done, each group was given one sheet of paper. Considering that there were eight groups, compared to the 53 learners in the class, paper was used sparingly. Achievement would seem complicated by this arrangement, since only one learner could keep the paper and the other group members would have to rely on memory.

*(b) Brief background of Sarah*

The Grade Seven class in School 2 that participated in the study had 53 learners: 23 boys and 30 girls. Sarah, one of the girls in the class, experienced HI. Sarah had been a full-term baby, weighing 2.5 kg at birth. She was born in a rural area where resources and access to health care were limited. She was a healthy child, but had mumps at the age of five years. Her mother noticed discharge from her ears when she was five years old. Sarah was attending pre-school when an educator first mentioned the possibility of hearing loss. The mother was unaware of any hearing loss, but noticed when Sarah was in Grade One that she carefully looked at one's lips when one talked. The school encouraged her to go to a clinic, which then referred her to a hospital. At the hospital, Sarah received medicine which, according to the mother, only helped while Sarah was using it. In the long term, the medicine

did not cure the discharge. Every winter, Sarah would start to cough and the discharge would reappear.

In 1994 when Sarah was approximately seven years old, her parents moved to Pretoria in search of employment and better care for Sarah. Sarah remained behind, in the care of a grandmother, joined them in 2001 and enrolled in Grade Six in School 2. The area hospital referred Sarah to the academic state hospital. Assessment at the Ear, Nose and Throat (ENT) clinic led to bilateral ear operations in April 2002 (left ear) and June 2003 (right ear) for cholesteatoma. The conduction problem was because of an incomplete ossicular chain. According to the ENT specialist, Sarah had lost her ossicles because of extensive infection. A follow-up assessment by the ENT specialist, on recommendation of an audiologist, recommended another operation in January 2004 to fix the ossicles. After the operation, hearing aids might not be necessary. Scar tissue was seen in the external ear canal of the right ear during otoscopic examination which was attributed to the ear surgery Sarah had undergone. Sarah's middle ear functioning in both ears was regarded as abnormal, since the movability of the eardrum was very low.

According to the most recent audiological reports (August 2003), Sarah had a slight conductive hearing loss in the left ear, and an average conductive hearing loss in the right ear for the frequency range 125 – 8000Hz. The high and low frequency ranges were more affected than the mid-frequency range (500 – 2000Hz). A maximum correct word discrimination of 100% was obtained at 55dBHL in both ears, which indicated good discrimination abilities with increase in intensity. The audiologists recommended that Sarah return to the ENT specialist who had done the ear surgery to investigate the possibility of further surgery or suitable treatment to relieve the conductive component of her hearing loss. If there was no possibility of further surgery, hearing aids were recommended. It was also recommended that her seating placement in the class be changed. The recommendation was duly reported to the educators. Continuous assessment of middle ear functioning and follow-up hearing assessments was also recommended.

At the time of the investigation, Sarah was 16 years and 6 months old, that is 2 years and 5 months older than the mean age of the learners in her class (14 years 1 month) and 2 years and 1 month older than the mean age of the learners with HI in the special school (14 years 5 months). According to her mother, Sarah had repeated Grade Two, Four, Five and Six, which could explain her high age in Grade Seven. Sarah, however, was a very small girl, estimated not to be much older than 10 or 11 years.

Sarah was referred by the school to a Sepedi-speaking psychologist who assessed Sarah's intellectual abilities. According to the Individual Scale for Northern Sotho-Speaking Pupils, Sarah had moderate mental impairment. The validity of the results, however, is questionable: Sarah had never been supported with her HI, and therefore any assessment which involved language, as the intelligence test did, probably could not accurately reflect Sarah's intellectual abilities.

According to some of the educators, Sarah's speech was unclear and it was difficult to understand her. If one did not listen carefully, one would not be able to understand her. Apparently her sentences were by and large grammatically correct, but her pronunciation was very poor. The class educator estimated that he understood her 40% of the time. In addition to the HI, Sarah also faced educational challenges associated with multi-lingualism in the classroom: a language deficit resulting from the hearing loss plus the accommodation of different languages in one classroom. When Sarah was interviewed, it was clear that she had a very limited understanding of English, which was the language of instruction in the school in Grades Four to Seven.

The class educator described Sarah as an eager learner, respectful and willing to participate in all the activities, even though her HI was a challenge. She did not ask questions often in class. During observations, she was never seen to ask a question to any educator, although some interaction was noted between her and some of the group members.

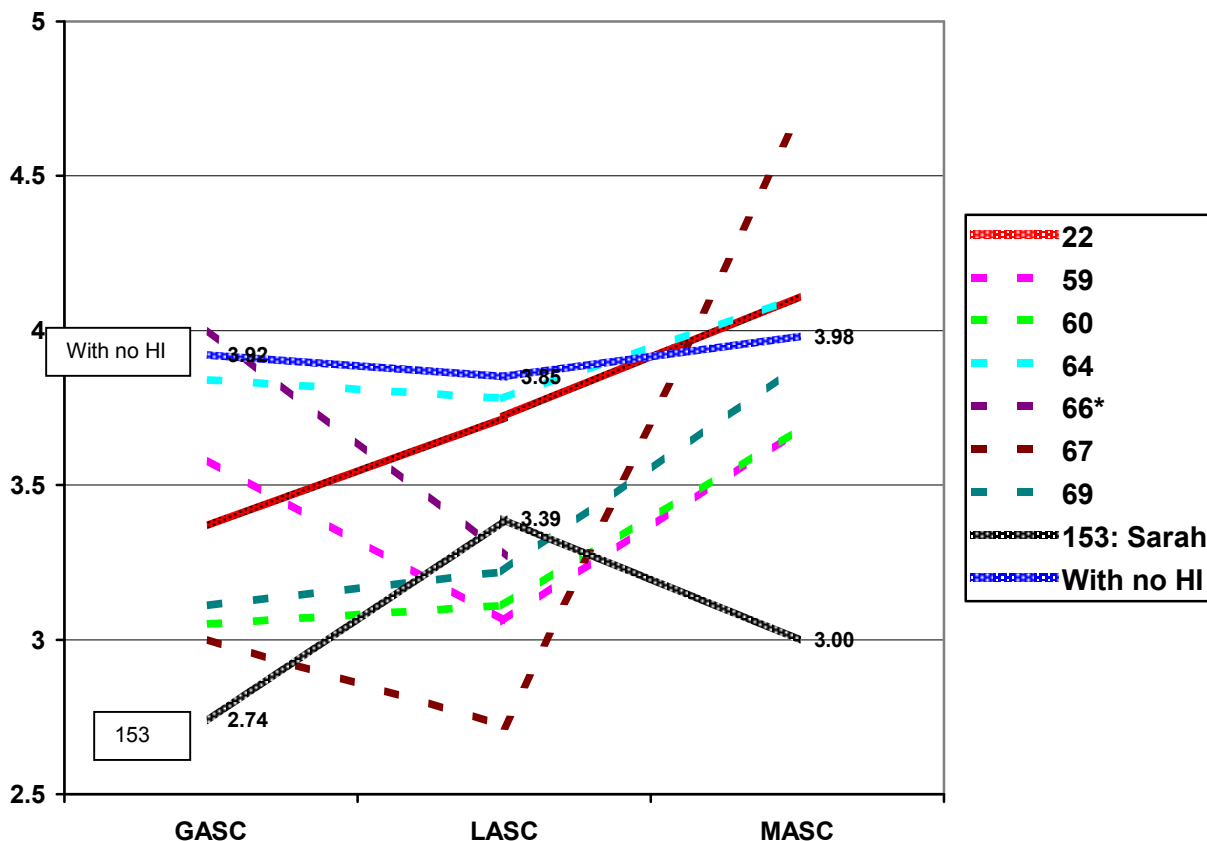
(c) *Sarah's ASC*

Figure 5.7 depicts the actual GASC, LASC and MASC of all the learners with HI, as well as the mean GASC, LASC and MASC of the learners with no HI. In 5.4.6 it was already established that there were statistically significant differences in the ASC means of the eight learners with HI compared with the means for those learners with no HI (Wilks' Lambda = 0.898, Mult.F=5.63, df=3,141, p=0.002). Sarah's ASC will be addressed in this section, but comparisons and explanations for the similarities and differences in ASC across the schools and learners will be considered in 5.7, that is, once all the contexts and schools have been described. Sarah's learner number was 153.

On a 5-point scale, Sarah's means were 2.74 for GASC, 3.39 for LASC and 3.0 for MASC. Sarah's GASC (2.74) was 1.18 lower than the GASC of learners with no HI (3.92), her LASC (3.39) was 0.46 lower than the LASC of learners with no HI (3.85) and her MASC (3.0) was 0.98 lower than the MASC of learners with no HI (3.98). Compared to the overall high means in the historically disadvantaged schools, Sarah's ASC means are thus much lower



Figure 5.7 Actual GASC, LASC and MASC of learners with HI (Sarah) and mean GASC, LASC and MASC of learners with no HI



\* Learner 66 did not complete the MASC section of the ASCQ.

than expected.

Sarah's low GASC (2.74) is noteworthy as it is the lowest GASC of all the learners participating in the study, even lower than the GASC of all the other learners with HI. Compared to Figure 5.5, which contains the GASC of over-aged learners, Sarah's GASC of 2.74 was considerably lower than the GASC of 3.82 of the other over-aged learners. Her mean percentage across all learning areas for the second school quarter was 21.89%, with 33% for arts and culture being her highest mark and 4% for mathematics her lowest mark. The mean percentage of her class across all learning areas for the second school quarter was 45.79%.

When shown the first projection picture, '*School in general*', Sarah described a situation where the educator asked the learner a question and the learner kept quiet. Then both the



learner and the educator kept quiet. When probed, she said that the educator did not hear the learner answering, but that the learner also did not hear the question. This might be a true reflection of Sarah's situation. In all but one of her classes, she sat with her back to the educator. She also sat between two other learners and turning around in her seat would be difficult. Following the lesson was probably difficult if she could not hear properly nor see the educator to track the visual cues of articulation. When asked what made the girl happy, Sarah answered that as long as the girl could write in class, she would be happy. When asked what made the girl sad, Sarah replied that failing a learning area made the girl sad. Considering that Sarah only passed arts and culture, and that the projection could be applied to Sarah herself, one can get an indication of the extent of her sadness in school, which contributes to understanding her low GASC. Exams also made the girl in the projective picture very sad, because she did not write '*nicely*'.

Sarah was mostly part of a group in a front corner of the class. The group had been formed during the previous academic year (it is not known whether by an educator or the learners themselves). When the new school year started, they had requested the educator not to break them up. This group performed very well. When group work was done, all the learners in the group received the same mark. Being in that group, according to the class educator, boosted Sarah's marks. If being in the group boosted her marks, the available marks might be an inflated version of Sarah's knowledge and skills in schoolwork.

According to the class educator, given the chance and time, Sarah would succeed in life. He did not mention what chances and how much time were required. The educator, however, thought she would not pass at the end of the school year, but would receive conditional transfer to the next grade because of her age. The educator also thought her progress in secondary school would be very poor, because her strong pillar – the group members in her group - would not all attend the same secondary school, the whole set-up would be new to Sarah, the new educators would still have to adapt their teaching methods to accommodate Sarah, and less individual attention was given to learners in the secondary school than in primary school.

The class educator mentioned that one tended to forget about her HI amidst the pressure of the workload. The big classes also made it more difficult to give individual attention to Sarah, which was confirmed by the classroom observations.

It was only Sarah's LASC (3.39) that was at a level comparable with the LASC of other learners with HI. It was also interesting to note that Sarah achieved her highest score on the

ASCQ for her LASC. Sarah, even so, scored only 25% for her first language, Sepedi, during the second school quarter, compared to the class mean of 48% in the first language. Unrealistic evaluation of the self and/or classroom factors might have contributed to her LASC. Also, Sepedi was one of the learning areas in which she performed relatively well, compared to some of the other learning areas.

But Sarah might indeed have felt more comfortable in the Sepedi class, as the class was taught only in Sepedi. In most of the Sepedi classes, Sarah faced the educator. The educator stated that she did not find it difficult to accommodate learners with impairments. She had clear-cut solutions: if a learner had a problem with hearing, she tried to speak loudly so that the learner could hear; if a learner had a speech problem, she listened to what he/she was trying to say. Sarah received additional support from the Sepedi educator. The educator gave Sarah, and some other learners who performed poorly, a worksheet with kg-words, a consonant blend in Sepedi, in a large font. The purpose was to explain to them how to write such words. She then followed up with dictations to see if Sarah had read the words and whether she could remember the words. Apparently she could remember the words. The extent and regularity of the additional support, however, is unknown.

According to the educator, the researcher's presence did not influence her during the observations. Observations in the Sepedi class were, however, hampered by the frequent absence of the educator and by disciplinary measures which were taken during class time. Sarah was not involved in any of the disciplinary incidents. Sarah's ambivalence in classroom participation, the effort made by the educator to involve Sarah and Sarah's reliance on peers for support, however, could be observed.

Sarah's classroom participation in the Sepedi class oscillated among isolation, half-hearted involvement and full participation. She was usually quiet in the class. When she sat with her back to the educator, between two other learners, she sometimes turned around to look at the educator, but mostly looked in front of her. Mostly, she did not participate in classroom conversation, nor did she put up her hand many times to answer. By and large, it was as if Sarah was in the class, but not part of the class.

She tried once or twice to put up her hand, but decided against it. Once, the class was having a discussion. She was then looking around and following the educator with her eyes. She still did not put up her hand. When the class said something in unison, Sarah repeated it together with the class. At times when nearly all the other learners had eagerly put up their

hands, she put up her hand halfway, uncertainly. It did not seem as if Sarah was participating.

Once, the class burst out in laughter, Sarah did so as well. For a moment it was thought that perhaps she laughed when she saw the class laughing, but actually it appeared as if her reaction was immediate. Once, when doing parts of speech, Sarah was more involved in the proceedings. Her hand eagerly went up all the way and not only halfway.

During each observation session in the Sepedi class, the educator either spoke to Sarah or posed a question, sometimes even more than one question. It appeared as if Sarah answered the questions correctly, but the level of difficulty of the questions is unknown. Once the educator asked whether Sarah had understood the homework. Considering that there were in excess of 55 learners in the Sepedi class, the educator's commitment to involve Sarah was commendable. According to the educator, Sarah could answer questions which was proof that she had been concentrating. The educator was unsure whether Sarah really had HI. She apparently performed better than some of the older boys in the class. Sometimes she told the educator that she could not hear. The educator also reminded her to tell her if she could not hear her. Sarah was never observed to ask the educator questions, but she sometimes asked her friends questions.

Sarah's interaction with a group member, initiated by herself, and her reliance on peers for support were observed during a class period when the Sepedi educator arrived late for the class. The learners were left to their own devices and a very high level of noise ensued. Sarah sat in the middle group in the front of the class, facing the central teaching area. She looked happy. She and a girl to her right had a conversation/communication going. Sarah wrote down words and gave it to the girl to mark. The girl then handed Sarah's book back to her. The two boys on either side of the girl also participated, but less actively. Again Sarah wrote down words which she gave to the girl who marked them. Sarah laughed and clapped her hands, probably because her work was correct. It then seemed as if Sarah dictated words to the girl to write down. Sarah received the paper. (It was the paper with kg-words.) She gave it back to the girl, who did something before she gave it back to Sarah again. The paper was exchanged several times between the two girls before the Sepedi educator appeared. It was the end of the lesson period, however, and not much teaching could be observed. Sarah's high LASC might thus also be a reflection of the benefit of the group support in the Sepedi class.

In summary, several factors might have contributed to Sarah's LASC: the language of learning and teaching was only Sepedi, the educator made an effort to speak loudly enough, the educator provided additional support in the form of worksheets, the educator tried to involve Sarah in classroom activities, and the group supported Sarah. As the educator did not (need to) discipline Sarah, a good relationship between the educator and Sarah might also have contributed to her LASC.

Sarah's MASC (3.0) was 0.98 lower than the MASC of learners with no HI (3.98), 0.73 lower than the MASC of the over-aged learners (3.73) and the lowest of all the participating learners with HI. Her mark of 4% for mathematics during the second school quarter was the lowest in the class, though followed by some other learners with 9%, 11%, 12% and 13%. The class mean for mathematics was a low 30.28%.

When shown the '*In the mathematics class*' picture and asked whether the learners liked mathematics, her answer suggested that she found mathematics too demanding. "*This one had closed the books. They want to take break.*" As the mathematics picture was the last picture in the projective series, her answer could also have suggested the end of the interview. But Sarah's low MASC could indeed have been influenced by a lack of mathematics ability, in which case her low MASC might be a realistic portrayal. It is interesting to note the discrepancy between Sarah's MASC and the judgment of the mathematics educator. According to him, she was able to apply what she had learnt in class in real life situations and, therefore, he said: "*But up to so far she is confident with mathematics.*"

The responsibility for the discrepancy in perception of Sarah's MASC should perhaps not be placed solely on the shoulders of the mathematics educator. During the interview he mentioned that he was uncertain as to how to support her. He said that he tried supporting her through teaching aids and involving her in group work. It was observed that he tried to involve her in classroom activities as well. It was also observed that his teaching style involved repetition and that he tried to facilitate extra opportunities for support. Throughout the interview, he repeatedly expressed his need to be workshopped on how to deal with learners with impairment. "*So, we are ordinary teachers, we are not remedial teachers, yes!*" What is important to note, is that the combined effect of the measures taken to support Sarah was not enough to raise Sarah's performance and, accordingly, her MASC, to a level comparable to that of other learners.

*"All in all I can say I use teaching aids, you see,"* the mathematics educator said. During the observation, the only teaching aids seen were the financial section of newspapers, a poster of types of triangles and a set of cards bearing the currencies and symbols for currencies of three countries, which were stuck onto the chalkboard. The teaching aids were applied during the lesson for the whole class and not specifically to support Sarah. An example could illustrate the educator's use of teaching aids. He once gave a pairing exercise on the board: learners had to come to the front and place a card with the symbol of the currency next to the card that contained the name of the currency in words. The currencies were rand (SA), dollar (US) and pound (UK) and the symbols were R, \$ and £ respectively. Sarah was asked to pair the first example, R and rand. He gave the instruction to her in Sepedi. She quietly did it correctly and the class clapped hands. No emotion could be observed on Sarah's face when the class applauded her.

The maths educator used the group members in Sarah's group to help her. She was shy and he thought she might be more responsive in the group. Some of the group members were apparently clever and achieved good marks. He requested them to discuss the work before trying to explain to Sarah what they had been discussing, to make sure that she understood. *"... she is not like them. Ja, she's slow in grasping."* He seemed to rely heavily on the group for supporting Sarah, as Sarah did not ask him for support, nor was given additional support from the educator, except during the fourth observation when additional explanation of work briefly took place. While the learners were doing group work, he explained work to some of the groups, but not the group Sarah was in. The support received from group members, however, did not seem to have the same effect on her MASC as the support received from group members in the Sepedi class had on her LASC, even though many of the group members were in both her Sepedi and mathematics groups, which suggests that group work is not the only contributory factor in the formation of the ASC.

In probing a reference to the projection picture *'In the mathematics class'*, two girls who were group members of the group Sarah was in, confirmed their role in supporting Sarah in the mathematics class, but probably in the other classes as well. According to one of them, the life orientation educator, who was also the coordinator of the special needs education at the school, had instructed the group to make Sarah their group leader. The first question then had to be addressed to Sarah. If she did not understand, they were allowed to tell her the answer. She could then go through the paces by giving them the answer and they had to write it down. Sometimes Sarah was required to go to the front of the class to report. If she did not understand, the girl accompanied her. The girl elaborated on her personal involvement with Sarah. She said that Sarah asked her when she did not understand what

the educator or she was saying: “*What are we doing here, I don’t understand.*” The girl then told Sarah to come and sit with her and explained the work to her so that she could understand. The next day she would ask Sarah whether she had understood. If not, she would start again to help Sarah. If the girl herself did not understand, she asked a good friend to explain to her, and then she would in turn explain to Sarah.

The mathematics educator mentioned in the interview that he tried to involve Sarah in classroom activities such as oral presentations or doing activities on the chalkboard. He realised that Sarah was shy and would not want to be the centre of attraction; therefore, he first asked other shy learners to report before giving her an opportunity for reporting. By involving others, he wanted to create a learning environment for her. As Sarah was in a group with clever learners, he was confident that her report to the class on the group discussion would be important for the rest of the class to hear. He also tried to involve her by asking questions. The questions were simple, such as giving an example of a vegetable that grows in winter. During the first four observations, Sarah was directly involved by the educator each time (first observation: pairing of currency and symbol; second observation: giving an example of a winter vegetable and an amount of money to be spent on groceries; third observation: drawing a figure containing many circles with a chalkboard compass on the chalkboard<sup>5</sup>; fourth observation: educator explaining something to Sarah). Sarah herself seldom put up her hand to volunteer an answer. It did not always seem as if she was paying attention. During the fourth and fifth observations, however, when characteristics of triangles were being dealt with, she appeared to be more involved in the classroom activities: she paid attention, compared the work in her book with the work on the chalkboard, and did corrections. A group member helped her.

The mathematics educator used much repetition of words and of content, of which the following is an example:

- Educator : *And the third one deals with what? Yes.*  
 Learner : *Frequency.*  
 Educator : *The frequency?*  
 Learner : *The frequency.*  
 Educator : *The frequency. And at the end of your frequency table you must ...*

The repetition would give Sarah ample opportunity to hear, provided she could see the educator and his facial expression and the volume was loud enough. Repetition, however,

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<sup>5</sup> Her attempt was unsuccessful and a boy was called forward to help her. Sarah only struggled to finish the top arch of the circle on the board. It might be that the board compass was awkward to handle, as Sarah herself was a very small girl.

does not ensure comprehension. The researcher's personal notes reflected: "*The amount of repetition in this class is amazing. It baffles me that so many learners still don't know the correct answers with all the repetition. Perhaps it goes to show that mere repetition is not the way to teach learners content.*"

Extra opportunities for support included being available to the learners during the class period: "*If you have any problems, please don't hesitate to call me.*" The educator also told the class to practice the drawing of circles at home by doing as many as they could. It is doubted whether all the learners would be able to heed to his call, as many of them did not own a compass and shared compasses in the class. The doing of corrections was emphasised in the lessons. The educator apparently presented a lesson, gave the learners homework, and then did the homework answers on the chalkboard the following day. The learners had time to do corrections. Corrections could be an effective way to facilitate learning; however, the effect on the learners if they continually had to do corrections might well have been demotivating. It is possible that the educator was extra critical of their work because of the presence of the researcher. Rote learning was done to learn the theorems regarding triangles. The whole class had to say the theorems out aloud.

Two points of concern in respect of the observations in the mathematics class unfortunately have to be voiced, possibly influencing the trustworthiness of the observations. The first concern relates to the influence the presence of the researcher appeared to have on the educator. Not only did the presence of the researcher apparently influence his way of dealing with learners with impairment, it also seemed to have made him prepare differently for lessons. According to him, it was 'nice' to have the observers in his classroom and a very good experience.

*"So the change that you brought here is to really, you know, to look at learners' problems, moreover that I'm dealing with ... (unclear) ... So before you came we were not aware on how to, you know, to pay attention on her. So you came up with, you know, some sort of regime on how to attend to her."*

This might have been a way of subtly indicating his own feelings of incompetence, thereby setting the stage for interpreting the observations in his class: he did what he did because he did not know of any better. The researcher, however, had never made any recommendations regarding teaching or dealing with learners with impairment. The only recommendations were made during the second interview, which occurred weeks after the last observations were completed, and then only because the report from the audiologist, containing her recommendations for classroom practice, was discussed.



*“Ja, when you came to class, in the classroom, you made it possible for us to, you know, to come up to teaching aids, paying attention to her, you know. Giving individual attention, even giving ourselves time to attend after school hours. So your presence here made a great change to other learners like Sarah.”*

He proceeded to explain that most of the educators, most of the time, took advantage of the fact that no one visited their classes.

*“But in the presence of the SBST or people like yourself, it becomes, you know, important to prepare. You want the preparations. I mean, you want us to impress you on how to deal, how do we deal with learners like Sarah. So now we prepare the teaching aids, you know. But in your absence we just teach. But, you know, I propose that in future they should, you know, visit the class time and again, you see?”*

From a different angle, the openness of the educator in acknowledging the influence of the researcher might actually have contributed to the trustworthiness of the observations. Although the observations were of his changed classroom practice, the classroom practice is still assumed to have had an effect on the learners. At least the presence of the researcher might have made a constructive contribution to his future classroom practice.

The second concern relates to the credibility of the observations themselves. During an incidental observation at the school, which took place during the first quarter of the following year and was not included in the data, it was observed that the smooth running of the lesson and the participation of the learners had been practiced beforehand. The learners were not supposed to have opened their exercise books, but one or two books were open, and the same word sum problem and answers that were being explained in the class was visible. The lesson being observed did not seem to be an expansion of the word sum in the books, but a repetition of it. It is clear that teaching involves much repetition.

With hindsight, two observations during the data collection were identified which might have been rehearsed before the time. The second observation session was on different ways of representing data: bar graphs, line graphs, frequency tables, pie charts *et cetera*. The learners knew the different forms of data representation although they did not have textbooks to refer to. When the educator asked the learners what other forms of data representation could be used, they had answers ready. In all fairness, it might be possible that the learners had acquired this knowledge during a previous year, or in another learning area such as economics and business science. The fifth observation session took place 13 days after the fourth observation, and the class was still busy with the different types of triangles, as they had been during the fourth observation. Triangles were once again classified according to



the angles and the lengths of the sides. Much repetition took place and the educator implemented his customary style of repeating facts. The learners were given homework to submit the day after the next, because the next day they were to write a test on triangles. The soundness of the educational practice of writing a test before the work was marked, was doubted. Once again, one should wonder whether the lesson had been repeated for the benefit of the researcher. Sarah's participation, in contrast to her usual reluctance, might also have been evidence that she knew the lesson content and was not afraid to participate. The big time lapse between the two observation sessions might have contributed to the educator forgetting that he had already presented this lesson. In fairness, another explanation should be considered. It might be possible that the lesson had indeed been for revision purposes. It was noticeable that some of the learners (still) did not know the correct answers, and could benefit from the repetition.

If the lesson(s) during the second and/or fifth observation sessions had indeed been repetitions of earlier lessons, the fragility of the teaching self-concepts of the educator(s) requires investigation. Their discomfort about the opinion of outsiders might reflect a need for acceptance and keeping up good appearances. As the observations during the study had been unannounced, the educators were probably on tenterhooks for the whole third quarter. It might explain why the Sepedi educator was so often absent from her class on observation days. When she saw the researcher was there, she either did not turn up, or arrived late possibly to minimise the remaining class time to be observed. The disciplinary measures might also have been a way to further decrease teaching time.

Although not bearing directly on the ASC of Sarah, a group member of Sarah's group probably confirmed the phenomenon of collective consciousness (refer to Kotzé, 1993:1-20; Markus & Kitayama, 1991:224-230; Mwamwenda, 1995:424; Stevens & Lockhat, 1997:254; Triandis, 1989:509-510; and Venter, 1999:26-28, 31 in 3.7) operant in their mathematics classroom, and possibly in the other classes as well. She started by saying that she and her friend worked together in class and discussed the work. Apparently not all the group members wanted to share in the discussion, but then the two friends would give them some mathematics, so that they would not be left behind: " ... *they must be with us in the same queue.*" The collective consciousness was visible in remarks made by this girl concerning the learners who were noisy when they should have been discussing work, as the following extract shows:

Interviewer : *What do you do then?*  
Girl : *Who, me and Mapula?*

- Interviewer : *Hmm.*
- Girl : *Start discussing.*
- Interviewer : *OK.*
- Girl : *To give them some maths. But that maths we are not going to say to the teacher it is for me and Mapula, I want to say it is for the whole group, to help them.*
- Interviewer : *OK. So actually then you and Mapula do the work and the other children share in your hard work?*
- Girl : *Yes.*

### 5.6.2 Special school (School 3)

#### (1) Background of the school

School 3 was a school primarily for learners with HI and included a preschool with 50 learners, a primary school with 170 learners and a secondary school with 130 learners, totalling 350 learners. The primary school constituted, therefore, about half of the school. There were 45 educators for the primary and secondary school, that is, for 300 learners. The educators taught across the boundaries of primary and secondary school, except for the Grade One to Three educators who taught exclusively in those grades. The school worked on an average of one educator for every nine to ten learners. In practice, the ratio varied with class sizes from three to sixteen learners. Often the classes of the younger learners were bigger than the classes of the older learners. The reasons for the varying class sizes were at least twofold. At the end of Grade Seven and Grade Nine, learners who had developed sufficient language and other skills necessary to deal with their HI, left to attend regular schools. Also, sometimes the school did not offer courses of the learners' choice, and the learners left to attend school elsewhere. According to the principal, a weight factor of five was involved in special schools when comparing the number of learners in the class with the number of learners in a regular school class. The level of complexity in teaching learners with impairment was estimated to be five times that of teaching learners with no impairment. Learners with learning impairment, including learners with severe attention impairment, at-risk learners and slow learners were also enrolled in the school. The mathematics educator was concerned that regular schools increasingly sent learners with behavioural problems to the special school, which could not refuse admitting these learners, complicating the task of the educators and putting the education of the learners with HI at risk.

The school was situated in an average to below-average income area. Learners from all over Pretoria, however, attended the school. Nearly 60 of the 350 learners could not afford any school fees. Many of these received milk and bread daily to take home, as there was no food at home. According to the principal, the school was, however, regarded as an affluent school, because it was not situated in an informal settlement; and therefore the poverty index could not be applied to it. Resources for the school were limited, but available and the educators and parents mostly raised additional funds, with the help of outside organisations.

The school was a double medium parallel school, in the sense that Afrikaans and English were catered for in the school. The school was in the process of adding some of the black languages to its range of languages. The school did not use sign language, on mutual agreement that another special school in Pretoria would cater for users of sign language.

The school offered several services to the learners. Academically, the following were available: a preschool which admitted learners from the age of three years, a primary school from Grade Naught to Grade Seven, a secondary school from Grade Eight to Grade Twelve which ended with the same Grade Twelve examination as in regular schools, and N-courses, namely business studies and building technology, equivalent to Grade Ten to Twelve, which were affiliated at the technical colleges. Learners could elect to acquire skill qualifications, instead of academic qualifications. The school provided training in welding and metalwork, panel beating, woodwork, building, cooking, needlework, interior decorating, art and pottery. The skills training started from a level equivalent to Grade One. If there were indications that a learner could not progress academically, the learner started as soon as possible learning a skill. So learners did not fail *per se*, but were placed where their ability could be utilised to their advantage. The school had staff who could give learning support ('remedial' education), which is generally not found in regular schools. The school also provided a hostel service, where learners could stay during the school quarter. There were health services, with a nurse and visiting medical doctors, specifically a paediatrician and an ENT specialist who delivered a service free of charge once a week. There was a hearing aid technician who repaired hearing aids. The school also had speech therapists, audiologists and psychologists. If some of the learners required therapy not available at the school, the school would arrange for a therapist, such as a physiotherapist, to use the facilities at the school and provide therapy to the learner. Even if learners left school to attend regular schools, they were allowed to attend speech therapy. The school provided an afterschool centre. There was also a social worker. The social services raised funds to buy necessities for some learners. The school also had a bus service that transported learners from all over

Pretoria to and from the school. All together, there were about 50 individuals, in addition to the educators, involved in all aspects of service delivery at the school.

Because of all the support activities, the principal said that the extramural activities, such as sport, suffered. The learners had access to full participation in sport, but the sport was not intense or focused on competition. The school provided for athletics, rugby, netball and softball, and cultural activities, such as participation in eisteddfods. The special schools participated in the same softball league as other schools, because softball did not require hearing or adaptations. Rugby, for example, could not be played in the same league, because the learners with HI wore expensive hearing aids.

The school also had a parent support group with compulsory membership. Parents had to come to the school on a regular basis for interviews and even for training from the educators on how to help their children to read. The school also arranged functions for the parents to attend on a quarterly basis concerning issues at school, such as discipline or dealing with hearing aids.

Internal support for the educators was provided by structures which the school created. Heads of department, senior educators and vice-principals provided support. The school arranged courses for its educators. The Ear Institute often presented courses which members of the staff could attend. The outcomes-based education (OBE) training for regular school educators was shortly to be presented for the school's educators. Some members of its staff were going to participate as presenters. The special schools also relied on one another for support. The educators of the different clusters came together to share and learn from one another.

Monday and Thursday afternoons were set aside for learner support. Monday afternoons were usually reserved for multi-disciplinary meetings, often including the parents. Thursday afternoons were set aside for therapy for the older learners. The learners up to Grade Three received such support continually during the school day. The therapist either pulled the learner from the class or helped the learner in the class. The educators gave learning support, under the auspices of a learning support committee.

According to the principal, the aim of the school was to offer 'normal' education to 'normal' learners who had to contend with a barrier. All learners in the school were considered to be 'normal'. The learners were not considered to be different from learners in other schools. "*This is not a dumb school, and that you must write in capital letters.*" He emphasised that

his school operated like any other school. The school merely had additional services to address the barriers of the learners. There were many other learners with many other 'problems' who were in regular schools. The principal was of the strong opinion that a learner with HI could be in any school in Pretoria, and the parents could arrange speech therapy in the afternoons, and it would be exactly the same as in his school.

The principal held the view that inclusive education was currently only applied in one direction. Many people understood inclusion as including learners who experienced barriers in regular schools, but, according to the principal, inclusion should work in all directions: "... *include all children in all schools*". Inclusion was then about much more than merely about learners with impairment. He emphasised that people argued about where to help learners who were already being helped; in the meantime, there were 300 000 learners outside the education system who were not receiving any form of education.

The school, according to the principal, already practised inclusive education. He regarded his school as a full-service school because of all the services available at the school. Simultaneously, the school could also reach out to other schools. The school could fulfil the requirements of the EWP 6. He added his personal opinion that he could not understand the meaning and reasons why existing schools had to be transformed to full-service schools when his school, and other special schools, could already be regarded as full-service schools. He regarded a resource centre to be part of a full-service school. The principal questioned what being a resource school for schools in the area would entail. He was concerned that a learner would be enrolled in a neighbouring school and the special school would be called upon to service the learner. He feared he could be left with an empty school. He would be willing to service or help full-service schools if it meant all schools for all learners. The learners with more severe degrees of impairment who required more specialised support could be serviced in a school such as his.

Except for the speciality impairments, he believed that all schools could deal with all kinds of impairment. With *speciality impairments* he referred, for example, to visual impairment, calling for learning material in Braille, which required very expensive equipment that could not be duplicated at every school. Regular schools sometimes asked his school for assistance if there was a learner with HI enrolled in their schools. The psychologists of the special school then went to such schools to address the staff, do in-service training and present ways to deal with HI.

According to the principal, the implementation of the EWP 6 had progressed well in his school. In his view, the biggest challenge was the great uncertainty associated with the overall implementation. He felt no policy was clear. There were adaptations and postponement of time lines, which frustrated him as principal and created uncertainty among his staff. He received circulars, shared them with his staff, only to receive a subsequent circular nullifying the previous one.

He was of the opinion that inclusion was not feasible in a developing country, as the infrastructure and money required were unavailable. He stated that special schools were expensive and he was concerned about people wanting to duplicate special schools at each and every other school. According to him, inclusion could work if schools collaborated. He gave an example: His school was situated on a bus route. Instead of having one learner with HI in a class in a school in the area, that learner could be transported to his school where he/she could be effectively supported. Instead of building or adapting costly facilities to accommodate individual learners, an already existing facility was available. He made a call for optimal use of available facilities and resources.

The two Grade Seven learning areas in the school which were observed occupied similar classrooms. The classrooms were small, containing two rows of desks, each with no more than seven desks, facing a chalkboard, a desk for the educator at the side, and cupboards at the back. The floors were carpeted and the cupboards and roofs were covered with sound absorbing material to improve the acoustics of the classrooms.

## (2) Brief background of the learners with HI

The Grade Seven class in School 3 that participated in the study had 11 learners: nine boys and two girls. There were six learners with HI in the class: five boys and one girl.

### *(a) Isaac – Learner 59*

Isaac, one of the boys in the class, experienced a slight hearing loss in the left ear and a moderate hearing loss in the right ear, but did not rely on speech reading. His speech was articulate and easily understandable. He struggled with attention, poor concentration, impulsiveness and talkativeness, and was referred to a medical doctor for the possibility of medication to improve his attention and impulse control. The school considered placement in the front of the class to be beneficial for him.

He started at the special school when he was in Grade Five and he was a hostel learner. Although his reading performance was reported as reasonable, his spelling was reported as poor and he had been referred for remedial education [*sic*] in respect of his spelling. His

social adaptation and self-confidence were described as being good, but his motivation apparently needed to improve. He participated in sports.

Isaac was 14 years and 11 months old at the time of the study, which was five months older than the mean age of the boys in his class (14 years 6 months), and 1 year and 3 months older than the mean age of all the learners participating in the study (13 years 8 months).

*(b) James - Learner 60*

James, a boy in the class, had experienced a profound hearing loss in both ears since birth. He relied on two hearing aids and speech reading. The special school considered placement in the front of the class to be beneficial for him. His attention was described as inadequate, but it had improved with the use of Ritalin.

He started school in 1994 at a regular school in another province. He had to repeat Grade One and Grade Four. He continued at the regular school until Grade Six, when he moved to the special school, repeating Grade Six. He was admitted to the special school on the grounds of his severe hearing loss, serious underachievement and socio-emotional problems at home. He did not always talk in full sentences and one often struggled to make sense of what he said. His pronunciation was also poor, which added to the difficulty in understanding him. He had received private speech therapy while in regular school.

A school report noted that his progress was slow because of the seriousness of his hearing loss. He had poor vocabulary, sentence construction, reading comprehension and pronunciation, but read rather fluently. Twice weekly sessions on the Morag Clarke programme<sup>6</sup> to improve his command of Afrikaans was recommended and carried out by his Afrikaans educator. He had a serious backlog in English as he had apparently been exposed to English only in the special school; therefore, his mother had requested extra English classes. His mathematics was rated as reasonable, although he could not work independently. His attitude towards school and learning was considered to be good. Socially he had adapted well, and had made a few friends. Emotionally he had learnt to act more independently and to make his own decisions. His behaviour, however, was regarded as immature for his age.

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<sup>6</sup> Morag Clarke was a programme followed by the school where the learner with HI learnt language in a natural way. Instead of teaching the learner to look at the lips of the educators, the educators continued teaching in a normal way, repeating where necessary. The educators would just not look away if a learner with HI looked at them. The learners taught themselves to speechread.



James was 15 years and 5 months old at the time of the study, which was 11 months older than the mean age of the boys in his class (14 years 6 months), and 1 year and 9 months older than the mean age of all the learners participating in the study (13 years 8 months). James's age is attributed to his repetition of Grades One, Four and Six.

*(c) Odette – Learner 64*

Odette, the only girl with HI in the class, had a moderate hearing loss in the left ear. She had a degenerative hearing loss which had probably followed a virus infection when she was five years old. The hearing loss had apparently been sudden, but had only been established when she was seven years old. Learners who experience sudden hearing loss apparently adjust with more difficulty to their impairment. Odette wore inner ear hearing aids, and relied on speech reading. Her speech was clear and easy to understand.

She had attended the special school since 1999 when she was in Grade Three, and had been staying in the hostel since 2000. School reports cited good verbal and written language, including spelling. She read well and had reasonable comprehension. An under-age vocabulary sometimes contributed to poor comprehension. She struggled with problem solving and number concept in mathematics. She participated in sports and eisteddfods. Her self-confidence was rated as good.

Odette was 13 years 0 months old at the time of the study, which was 1 year and 1 month younger than the mean age of the girls in her class (14 years 1 month). Since she was the only girl with HI in the class, it would be more appropriate to compare her age with that of all the girls in the study, which was 13 years and 6 months. Odette's age was in the expected age range for Grade Seven learners participating in the study (12 years 9 months to 13 years and 9 months).

*(d) Adrian – Learner 66*

Not much was known about Adrian, a boy. One ear canal was closed, which caused hearing loss in the one ear. According to the Afrikaans educator, Adrian neglected his work and did not learn for tests. Apparently Adrian's mother wanted to take him to a regular school, perhaps for financial reasons. He was 14 years and 1 month old at the time of the study, which was 5 months younger than the mean age of the boys in his class (14 years 6 months) and five months older than the mean age of all learners participating in the study (13 years 8 months).



*(e) Claus – Learner 67*

Claus, a boy, experienced a moderate hearing loss (cause unknown) in both ears, and used speech reading. Although he had to wear hearing aids, he seldom did, as he disliked them. His speech was articulate and easily understandable. No preferential class placement was considered important for him, provided that he attended the special school.

He had been enrolled as a day learner in Grade Naught in the special school in 1996 and continued with Grade One in 1997. Initially his mother had not wanted him to attend the special school. According to school reports, he was more interested in his sports participation, in which he excelled, than in academic work and apparently did only the minimum amount of work necessary. According to the reports, his reading showed room for improvement and he lacked vocabulary. Socially he was adapted very well and his self-confidence was good, but he sometimes showed annoyance with educators.

He was 14 years and 1 month old at the time of the study, which was five months younger than the mean age of the boys in his class (14 years 6 months) and five months older than the mean age of all learners participating in the study (13 years 8 months).

*(f) Paul – Learner 69*

Paul experienced severe hearing loss in his left ear and a profound hearing loss in the right ear. He was dependent on speech reading and hearing aids. Paul's speech was difficult to understand. His attention was at times inadequate. Placement in the front of the class was considered to be beneficial to him.

He stayed in the hostel. He had a history of poor school achievement in the special school. According to the school reports, his reading ability was reasonable, but showed room for improvement. His vocabulary and sentence construction, however, were described as poor. His mathematics was good, but he needed encouragement. The school felt that he regarded his participation in sport as more important than academics, and academically he did no more than was necessary. His social adaptation was described as good and his self-confidence as reasonable.

Paul was 14 years and 4 months old at the time of the study, which was two months younger than the mean age of the boys in his class (14 years 6 months) and eight months older than the mean age of all learners participating in the study (13 years 8 months).

(3) ASC of the learners in School 3

Figure 5.8 depicts the actual GASC, LASC and MASC of all the learners with HI, as well as the mean GASC, LASC and MASC of the learners with no HI. In 5.4.6 it was already established that there were statistically significant differences in the ASC means of the eight learners with HI compared with the means for those learners with no HI (Wilks' Lambda = 0.898, Mult.F=5.63, df=3, 141, p=0.002). The ASC of the learners with HI will be addressed in this section, but comparisons and explanations for the similarities and differences in ASC across the schools and learners will be considered in 5.7, that is, once all the contexts and schools have been described. The learner numbers involved in the special school are 59, 60, 64, 66, 67 and 69. All the graphs belonging to learners in the special school consist of dotted lines.

The ASC of learners with HI will be discussed focusing on the widely distributed range of the GASC, the general decrease of LASC and the general increase in MASC.

*(a) The wide distribution of the GASC*

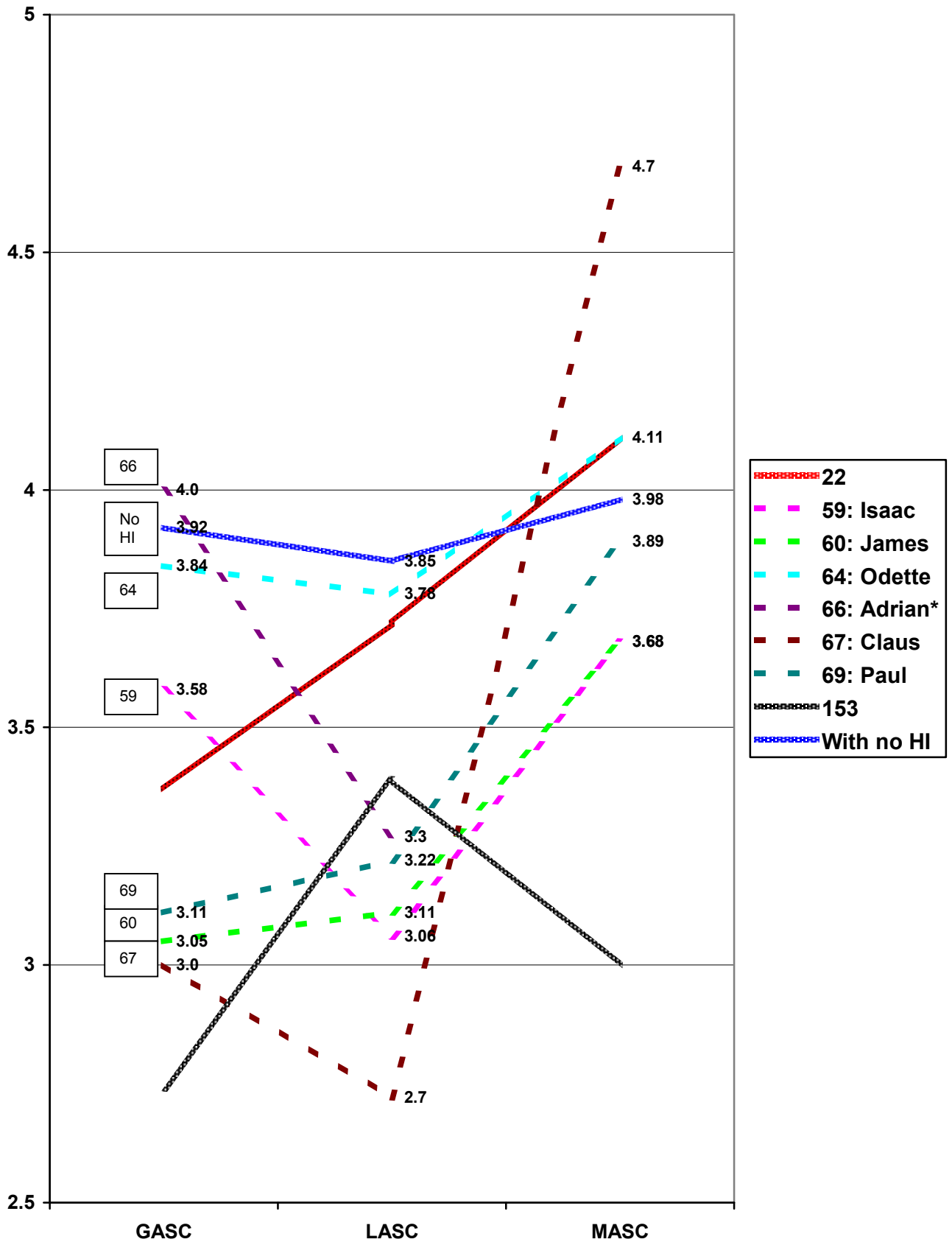
All the GASCs of the learners with HI (3.84, 3.58, 3.11, 3.05 and 3.0), except one (4.0), are lower than the GASC of the learners with no HI (3.92). Two of the GASCs compare fairly well (4.0 and 3.84) with the GASC of learners with no HI (3.92) and three GASCs (3.11, 3.05 and 3.0) cluster far below the GASC of learners with no HI (3.92).

When his high mean for all the learning areas during the second quarter (64.5%) is compared to the class mean of 49.00%, the high GASC (4.0) of Adrian is understandable. According to the Afrikaans and mathematics educators, however, he neglected his work and did not learn for tests. He appeared to be unmotivated, but it seemed as if his mother had seen his potential and, therefore, wanted to place him in a regular school. The high GASC of Odette (3.84) is less understandable: her mean for all the learning areas during the second quarter (45.44%) was actually slightly lower than the class mean of 49.00%. The fact that she was the only girl in the class with HI, and that she did not associate with the only other girl in the class, might have contributed to her inflated GASC: she did not evaluate herself against the rest of the class, and was, borrowing a metaphor from Marsh, a very big fish in a very small pond<sup>7</sup>. The Afrikaans educator was of the opinion that the learners in the special school were often not realistic about their own abilities, especially those who were not

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<sup>7</sup> Her identification of gender during the administration of the projective pictures could support this notion. She was handed the projective pictures with a girl in the centre; however, she consistently referred to the girl as 'the boy'. One reason might be that she was one of only two girls in the class, and was used to being surrounded by boys. Another reason might be, in line with a high level of self-confidence, that she was attributing the suggestion of problems in the projective pictures to the boys.

Figure 5.8 Actual GASC, LASC and MASC of learners with HI (in School 3) and mean GASC, LASC and MASC of learners with no HI



\* Adrian (Learner 66) did not complete the MASC section of the ASCQ.

academically strong. These learners tended to overestimate their abilities, because they did not have insight in themselves. As a consequence, they had more self-confidence than other learners and a good self-concept, albeit unrealistic. The academically strong learners had more insight in themselves, and often a poorer self-concept, which was equally unrealistic. The mathematics educator supported the statement and said many of the learners had an inflated sense of themselves, especially if they did not have exposure to the 'world outside'. Considering Odette's low mean and marks, it might be that she had overestimated her abilities, not only in respect of the GASC, but also in respect of the LASC and MASC. Her profile of ASC actually closely resembles that of learners with no HI. According to the records, both Adrian and Odette had a hearing loss in only one ear. Their speech was good and communication did not appear to be a problem. Neither learner struggled with attention. It appears that these two learners could function well in the class, which might have further contributed to their high GASCs. Odette was in the norm-age range and Adrian was only four months older than expected in Grade Seven.

It appears as if degree of hearing loss, age and motivation, and not school marks, can contribute to understanding the low GASCs of Paul (3.11), James (3.05) and Claus (3.0). Paul's mean performance for all the learning areas during the second quarter was 51.22%, slightly higher than the class mean of 49%. Similarly, Claus's mean performance for all the learning areas during the second quarter was 55.11%, notably higher than the class mean of 49%. James's mean performance, however, for all the learning areas during the second quarter was 38%, much lower than the class mean of 49%. It must be remembered that James had had profound hearing loss in both ears since birth and had only received specialised support since the previous year when he enrolled in the special school. His marks, although improving, were then understandably low. On the projective pictures he said that the boy felt good about school in general. Paul had severe and profound hearing loss, but managed marks above the class mean (51.22%). Similarly, Claus had moderate hearing loss in both ears, but did not wear his hearing aids. Although he probably missed much of the lesson content, his marks (55.11%) were still above the class mean. On the projective picture relating to school in general, he described a boy who had been called to do work on the board but was worried because he did not know what to do then. It is interesting to note that the learners with serious hearing losses had lower GASCs than the other learners, although hearing loss did not appear to be strongly related to their achievement relative to their classmates. The low GASCs might then be influenced by the age of the learners. Table 5.17 indicated a statistically significant difference at the 1% level among the under-, norm- and over-age groups regarding GASC. As James (15 years and 5 months) was 1 year 8 months older than the oldest of the norm-aged learners (13 years 9 months),

Claus (14 years and 1 month) 4 months older and Paul (14 years and 4 months) 7 months older, age might contribute to the explanation of the low GASCs. Adrian, however, was also 4 months older than the norm-age, but registered the highest mean score on the GASC. It must be considered that it is not age in years and months *per se* which contribute to the GASC, but what had happened in the past (repetition of grades, failure to understand work *et cetera*). According to the school reports, the educators were of the opinion that both Claus and Paul were not interested in academic work, but only in sports. Both were said to be able to achieve better marks if they would work harder. Although their marks were above-average, they might have evaluated themselves according to their perceived abilities and therefore evaluated themselves to have low GASCs. This explanation concurs with the view of the Afrikaans educator mentioned previously that academically stronger learners often have more insight in themselves, resulting in poorer ASCs.

The GASC of Isaac (3.58) lay between the high and low GASCs. His mean performance in all the learning areas was 39.89%. In his projective pictures, Isaac repeatedly described a learner who was afraid to do work on the chalkboard. In his first description, he described a boy who had been called to do work on the chalkboard, but was shy and afraid. The educator relented and told him he could sit down, as she would ask someone else. On the other projective pictures, the boy was not so fortunate and had to deal with doing work on the chalkboard.

*(b) The general decrease of LASC*

The general decrease from the GASC to the LASC can be noted for four of the six learners with HI, namely Adrian (4.0 to 3.30), Odette (3.84 to 3.78), Isaac (3.58 to 3.06) and Claus (3.0 to 2.7). Two learners showed a very slight increase from their GASC to their LASC, namely Paul (3.11 to 3.22) and James (3.05 to 3.11). Overall, the LASC of the learners with HI was low.

Adrian was not available when projection pictures were administered; therefore his thoughts and feelings on Afrikaans could not be used to explain his low LASC. He achieved 67% for Afrikaans during the second school quarter and the educator commented that his Afrikaans had improved. The class mean for Afrikaans was only 51.91%. It might be that classroom factors relating to the educator, the content and/or himself, and/or home factors contributed to his lower LASC (by 0.7). The decrease for Odette was actually slight (0.06). She appeared to like the Afrikaans educator and the learning area. In the projective pictures she felt that the educator trusted the learner, thought the learner was not naughty and that the learner listened in the class. The learner felt happy about his marks, only if he had learnt.

He learnt sometimes, but not always. Odette achieved 49% for Afrikaans. During the administration of the projective pictures, Isaac (LASC lower by 0.52) said that the Afrikaans educator was a good educator who helped one well. When one was naughty, one was punished with work to write out. He also described a situation where a learner had to do questions on the board, but was scared and nervous to do the questions in front of the class, in case the educator scolded him and said: “*Oh no, why are you doing it wrong?*” The learner decided to tell the educator about his fear. The feedback from the educator was that he should stop being afraid, believe in himself, concentrate and then he would get the questions right. The outcome was (perhaps overly) positive: he succeeded and got all the questions correct. The learner decided that in future he would do the questions without fear. If he made a mistake, he would correct it, and if he did not see the mistake, the educator would tell him. Whichever way, the educator would be happy and proud of him. He also described a situation where the learner did not know answers to questions about a storybook the learner had read. The educator was ‘unhappy’ and, much to the learner’s joy, offered to help him individually and privately. The other learners might feel it was unfair of the educator to help and like only one learner. Perhaps the situation construed a wish of Isaac’s for individual and private attention away from the class and/or to be liked (a similar theme cropped up in the projective pictures relating to mathematics). He achieved 46% for Afrikaans. During observations, he remarked that the work was too difficult. It might be that fear of mistakes, lack of individual support, a perception that he was not liked by the educator and/or a perception that the work was too difficult contributed to his lower LASC. Claus was decidedly less positive, but very clear, about the educator and Afrikaans as learning area, which might explain his low LASC (2.7, and lower than his GASC by 0.3). During the administration of the projective pictures, a learner in the Afrikaans class misbehaved and was called by the educator, and “... *now she probably moans with him*”. The learner was reprimanded once or twice a day. When asked what the learner thought or felt about Afrikaans, Claus fell into a circular argument trying to explain why the learner did not like Afrikaans. The learner did not like Afrikaans, because he did not do his homework anymore, he did not listen anymore, and he became naughty in class. The learner did these things because he did not like Afrikaans, and perhaps because the teacher had been nasty with him. In a second round of explanations of the same situation, Claus said the learner did not like Afrikaans because the educator fought with him every time, because he did not do homework and always forgot his book at home. She reprimanded him, but he did not listen anymore, and back chatted her. The result was that the rest of the class did not like the learner, because he was nasty with the educator. The learner sometimes felt he was innocent. It did not appear as if Claus’s marks directly contributed to a low LASC: he achieved 58% for Afrikaans, with the remark on his report that he could do better if he

worked harder. It might be, however, that he perceived himself to be much better in Afrikaans, and was disappointed by the 'low' mark; hence the low LASC.

Paul and James showed slight increases from their GASC to their LASC (3.11 to 3.22 and 3.05 to 3.11 respectively). Still, the LASCs were rather low. In the projective pictures, Paul described a boy who felt unhappy about Afrikaans because his work was poor. Paul did, however, achieve 65% for Afrikaans during the second school quarter. Paul described the conflict before a test: he knew he had to learn to improve his work, but sometimes he did not learn and still did very well on a test. Paul described a kind educator in the projective picture who helped the learners to correct all their mistakes and was available for questions. The way he explained the projective picture portrayed a will to do well, but that his spelling seriously hampered his efforts. He explained that a learner was doing answers on the chalkboard. If an answer was wrong, marks got deducted. For every spelling mistake, the learner lost half a mark. The educator and the other learners helped the learner to correct all his spelling mistakes. The learner got 20 out of 60. If the learner had not made the spelling mistakes, he would have had 52 out of 60. The learner did not always like spelling. If the learners in the picture did not do well on a test, the teacher was going to punish them. The next time the learners did not do well, she was going to phone their parents. When she phoned their parents, their parents would beat them severely. James, who struggled with sentence construction, said the following:

Interviewer : *Does this boy like Afrikaans?*

James : *But not much. Our class does not like Afrikaans at all.*

Interviewer : *Is that so? Tell me why not?*

James : *Because teacher scolds too much. I struggle confuse to write. I like Afrikaans but I do not like language, but I like comprehend<sup>8</sup>.*

James, however, said later: "*Afrikaans is easy for the children. They like Afrikaans.*" He achieved 45% for Afrikaans, with the note on his report that he had worked well.

The learners appeared divided in their opinion of the Afrikaans educator and Afrikaans as learning area. It is important to remember that their thoughts and feelings regarding the Afrikaans educator and Afrikaans as learning area were compounded by their difficulty in acquiring language – receptive and expressive levels - and maintaining communication. The lower LASC should not and could not be attributed only to the role the Afrikaans educator played.

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<sup>8</sup> The translation attempts to reflect the grammatical distortions in James's responses.



According to the Afrikaans educator, she did more than the prescribed OBE curriculum, because she looked at the problems of the learners and specifically addressed those. She tried to assist or accommodate the learners in several ways: she gave individual support in the classroom to many learners; she often repeated work; learners with HI sat in the front of the class; she tried to keep her mouth at their eye level, because if it was higher or lower, it was bothersome to them to speechread; she made sure the lighting was good; she never talked with her back to the learners; in the afternoons she followed the Morag Clarke programme with some learners; she made sure she had the attention of the learners before she spoke; she tried to arrange optimal class placement for every learner; and she did not over- or under-enunciate sounds. The classroom observations confirmed that the educator consistently assisted and accommodated the learners in many ways. According to the Afrikaans educator, the behaviour of the learners improved slightly on the occasions when the researcher observed the class.

The Afrikaans educator demanded tidiness, precision, originality and hard work from the learners: certain pieces of work were done in rough before being written neatly for assessment; she told a learner that torn pages looked bad; to another she said his work was disordered; she told the learners to pack up neatly and to clean underneath their desks before they could leave; she reminded them of things such as writing the date at the top of the page; when Isaac read a story, she interrupted him because he had not read the title of the story; when reading the story, the learners were instructed to use their voices to imitate the people 'speaking'; the learners had to make their own ending to the story, but when Isaac read his, he was told that although the educator liked the ending, he could have made it more interesting; when a learner completed an impromptu 'speech', the educator said although it had been nice, his speech had not been worth much more than 30%–40% and that she wanted to know lots more from them.

The conflicting situations of work being good, but not good enough as portrayed in the final two examples above, might have discouraged some of the learners. It appeared as if work could never be just right. Claus had done an outstanding project on stamps, admittedly with the help of his mother, but the educator wanted to reduce his work, considering parts of it unnecessary, so that it would fit more easily into the plastic bags of his portfolio. She remarked that his mother had helped him fantastically, and asked how many marks did he think she should give his mother. He replied '100'. The history behind the incident was unknown: had the learner perhaps been reprimanded before for relying too much on the help



of his mother, or did he repeatedly do much more than he was required to do. Whichever way, incidences like these might have contributed to Claus's low LASC.

The Afrikaans educator gave the learners practical tips to improve their work. She told them to write as briefly as possible, as they made unnecessary mistakes when they wrote long sentences. When working on a project, she made general suggestions on what to do: paste in the envelope, read it at home. Once a learner wanted to do a memory map on the back of the notes. She told them that they had to turn the page each time they wanted to write something down. She said that they would not be able to remember what to write and that they would be making spelling mistakes.

The educator helped the learners to expand their vocabulary. She asked Odette whether she had heard the difference between '*geskryf*' and '*beskryf*'. She asked, and explained to the class, words such as '*compare*', '*kermisbed* (Afrikaans)' and '*sardines in a tin*'. A learner struggled to pronounce '*personification*'. She helped by showing him how to break up the word into syllables.

The learners were spontaneous in her class. They were called to the front to enact the story they had read. The learners participated enthusiastically. She wanted the learner who had completed a memory map first, to tell them about the work. A learner who had not finished, volunteered. The educator had to tell the class, specifically one girl, not to interrupt him, even if he was wrong. Apparently the learners were spontaneous in their remarks, as well.

She addressed individual learners to make sure they had understood. While the learners were working, she explained the instructions individually where necessary. She also helped learners individually. When helping a learner to compile a portfolio, she said that some of his work was too untidy to be included and should rather be left out. She showed him other work which looked good, and which they could include. They searched a lot to find all the pieces to put into the portfolio. She made suggestions as to where he could improve his work, such as pasting in stamps.

The patience with which the educator repeated instructions in class was commendable. Between the first and the second run of instructions she had to be patient while each learner said or asked something, and others had not heard. It took a few minutes before the class was settled and she could continue. Once she had given her explanation of the work, she was barraged with questions and comments, to verify her explanations, complain about a lack of pencils, confirm where to do the work, and deny guilt for squabbles.

The educator was (sometimes) flexible in her expectations of learners. Once she wanted one of the learners who had completed a memory map, to tell them about the work. The learner did not want to, even though he had had time to go through his work. She merely extended her invitation for explanation to someone else. She also had to be flexible in executing her lesson, mainly because of the large variations in speed of work. When the first learner had completed his memory map, Odette was still looking for the notes to start the work. The educator suggested that she borrow someone's notes in order to keep up with the rest of the class. While Odette and others were finishing the work, the educator kept the first learner to finish occupied by asking him to revise his speech to tell the rest of the class about the memory map.

Although generally demanding in her style, the educator complimented and praised learners where appropriate. She praised their efforts: "*Beautiful. There it is.*" She told a learner how much he had improved towards the end of the year. (But he just had to learn to be neat.) She indicated to him work of which she was proud. To another learner she said she was proud of him because he was so quick with his work.

Finally, two unrelated incidents shed some light on having to live with HI. Firstly, several interesting remarks were heard when the educator once wanted the learners to listen carefully. She told them their ears should go like 'this', making waving movements with her hands. Three of the remarks were: "*My ears can't*"; "*My ears are not ...*"; "*I am not a baboon*". Secondly, during a lesson, Isaac once called James while simultaneously waving his hand. It was notable that he combined a visual and oral mode of communication.

To summarise the situation in the Afrikaans classes that one could have expected to contribute to a favourable LASC, it could be said that the Afrikaans educator demanded tidiness, precision, originality and hard work from the learners, gave practical tips to the learners to improve their work, helped the learners to expand their vocabulary, allowed learners to be spontaneous, addressed individual learners to make sure they had understood, repeated instructions, was flexible, and complimented and praised them where necessary.

(c) *The marked increase in MASC*

The MASCs of all the learners with HI were much higher than both their GASCs and LASCs. Two MASCs were higher than the MASC of the learners with no HI (3.98): Claus (4.7) and

Odette (4.11). Paul had a MASC of 3.89, and Isaac and James both had a MASC of 3.68. Adrian was absent when the MASC section was administered.

Most of the learners gave favourable responses on the projective pictures in respect of mathematics as a learning area. Surprisingly, the most negative comments came from Claus who had the highest MASC (4.7). His high MASC seemed to correlate with his mark in mathematics, namely 83%, which was much higher than the mean performance of the class of 49.18% for mathematics. Claus was reluctant to respond to the projective picture in respect of mathematics. He described a learner who paged through the book to get to the right page or had forgotten his book at home. In both cases the educator complained about him. The learner did not know what he thought about mathematics. Claus further described a boy who did not understand the work and the educator who wanted to explain the work to him. Claus did not know whether the boy would be able to do the work after her explanation. Claus also described a boy who did not want to work and stubbornly refused to do a sum on the board despite the encouragement from the rest of the class and the instruction of the educator. The situation would make the learner feel bad, as the other learners would not like him anymore, because he did not listen to them. The learner did not want to listen to the educator. Claus said the boy thought nothing of the mathematics educator; however, bearing the language difficulties of learners with HI in mind, this answer could either imply that the learner's opinion of her was low, or that he literally had no thoughts about her. Odette with a MASC of 4.11 achieved 40% for mathematics, considerably below the class mean of 49.18%. Odette said the boy on the projective pictures felt good about his marks and that it was nice being in the mathematics class. Odette's MASC might be inflated, because of her small frame of reference - the same reason why her GASC might be inflated. One could also consider that her ability to self-evaluate might be limited. Her projections on the projective pictures were ambivalent about mathematics. Mathematics could be good or bad. One learner liked mathematics; another did not. One learner thought the educator was nasty with him; another thought the educator was nice. The educator shouted, or helped. If one knew the tables, one liked mathematics. If one did not know the tables, one would fail and not like mathematics anymore. Odette described a disobedient boy who did not worry about the educator. The boy did not listen to her, cursed her and became naughty. Finally, the educator took the boy to the principal. It is possible that Odette was describing one of her classmates.

Paul had a MASC of 3.89 and achieved 50% for mathematics. He had a stoical approach to mathematics on the projective pictures, which tended to be (perhaps overly) positive at times. Paul described a boy who liked mathematics because he knew he would be using

mathematics one day when he was working. If his answers were wrong, he merely corrected them. The educator was good, because all the learners listened to her and everyone worked together. Paul thought the learners were going to have all the answers correct. When the boy, or other learners, asked the educator to explain work, she did so because she said that was her job. After her explanation, the learners knew what to do. If they did not do well, they started again, even though they felt bad. Some of the mathematics was sometimes easy; some was difficult. Paul described the context of the learner as one who was in the special school for his first year. This stood in contrast with himself who had been at the school for many years. Paul explained that other learners did better than the particular boy, because it was his first year at the school. The learner remembered what he had done in the old school, but the work they did in the new (special) school was different. The new schoolbooks were different from the old books and contained more difficult work. Paul was sure that after a year, or a month, the learner would know what to do. Paul might have been referring to the transition from Grade Six to Grade Seven, or to James.

Isaac and James both had a MASC of 3.68, and mathematics marks of 37% and 40% respectively. On the mathematics projective picture Isaac described a similar situation as on the Afrikaans projective picture, namely of a boy who had been called to do sums on the board. The boy said he could not do the sums, because he was scared everyone would ridicule and hit him when he did them incorrectly, and then they would not want to be friends with him anymore. Isaac mentioned that if the boy had sat at his desk, he would have been able to do some of the sums, but on the board he was nervous and then was not able to do it. It seemed as if the educator was aware of the fears of the learners to do sums on the board. She told them not to be afraid, as she would make sure that the learners did not laugh at whoever was doing the sums. Sometimes she managed to prevent them from laughing at the boy. She was strict and told them they had to do the sums. All in all, Isaac said the boy was a little bit scared to do mathematics, in case he did it incorrectly. He knew, however, that the educator would not scold him if he did sums incorrectly, but would correct him. Again, the despair of having everything wrong and the desire to stay behind to be helped individually and privately by the educator surfaced. The consequences were the same as in the Afrikaans class: some of the other learners would be angry, because they also struggled, but the educator did not help them, but only the one boy. The change projected in the effect of the individual attention was remarkable: the boy would be glad for the help, for then his sums would be correct again; he was going to understand and begin to do his homework. It seemed as if the change brought about by the individual attention even had effect on the rest of Isaac's projections. In a further questioning on the picture, Isaac described a boy coming forward to do sums on the board. The children told the boy that he

need not be scared, as the educator would not do anything. The boy was advised to believe in himself and think *“I will have everything right”*. The boy was happy and not scared. The boy acknowledged that he was sometimes naughty in class: he did not do his work, he did not listen to the educator and he played. James spontaneously said that the learners loved mathematics and that they were able to do sums. He contrasted them with a boy in the centre who was unhappy because he was unable to do mathematics. The boy would be happy if the educator taught him. So the boy explained to the educator how he felt and asked the educator to help him. The educator told the boy not to worry, as she would teach him to *“become clever, to get a good mark”*. What was interesting in the projections, was the explanation of why the boy could not do mathematics. James explained that the boy had ‘head or brain problems’; therefore he could not think well and therefore was unable to know how to do the sums. *“And what does one call a problem inside? ... Cancer.”* It seemed as if James wanted to say that the boy could not think well because he had brain cancer, or a serious ailment. The following statement explains much of how James, who spoke extremely poorly, thought about his situation: *“I saw that many children who cannot talk, cannot think, cannot write.”* It appeared as if his lack of proper speech was the beginning point of his reasoning as to why he struggled at school<sup>9</sup>. James also told about a boy who got into trouble, for forgetting his book at home. Additionally, the educator was going to phone his mother who would scold him as well. James apparently had an almost childlike, or irrational, fear of being scolded and taken to the principal, as this theme often emerged in his projections.

As all the learners with HI had average to high MASCs, the role of the mathematics educator as one contributing factor to the MASC, was investigated. The mathematics educator explained how she accommodated the learners with HI in her classes: her approach was very visual – whatever was said, was written on the chalkboard as well; she used basic

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<sup>9</sup> At the end of the session on projective pictures, I asked James whether he wanted to ask me anything. He asked whether I could teach him to spell. He also struggled to speak in sentences, but he wanted to speak right. The teachers could teach him well, but ... *“I am worried about myself, how I talk.”* He was worried because he wanted to get his sentences right, but was unable to do it. I proceeded to explain that unfortunately I would not be able to do it, but that we could consult his mother and the school. He explained that he had gone to ‘another lady’ (that is, a speech therapist) in XXX, not the educator, to help him to improve his speech. But now he was in Pretoria. He was ‘OK’ with being in Pretoria; he just struggled still. (At the special school the Afrikaans educator followed the Morag Clarke programme twice weekly with him, together with a girl.) Phone numbers were exchanged so that I could contact James’s mother. After negotiations with the school and the university, it was possible to arrange support sessions for James with an educational psychology student at the University of Pretoria, who has HI herself, and wanted to help learners with HI. She is currently working under the supervision of a qualified educational psychologist to support this learner, as part of her training.

language in explaining work and giving instructions; she limited her explanations to the basics, so as not to confuse the learner with HI; she only told the learners what to do and not what not to do; her speed of work was slower than when she had taught at a regular school; she did not spice up her lessons with history or interesting facts, as that merely confused the learners, because they could not relate that to the mathematics they were doing or got stuck with the facts and forgot the sums (she had found that even intelligent learners could not deal with extra facts); she repeated instructions, examples and content often in class to make sure everyone had understood; she created her own worksheets from textbooks by copying, cutting and pasting, as many of the books had only a few sums per exercise, but the learners with HI needed to do 10 or 20 sums; and she limited the writing on the worksheets - the less writing, the better. The classroom observations confirmed that the mathematics educator accommodated the learners as she had described.

She emphasised the importance of basic and clear language in written and oral instructions. She had found that the learners with HI disliked reading. An instruction such as “*Measure every angle of the triangle*” was often only read up to the word ‘measure’, and the learners would then proceed to measure the lengths of the sides of the triangle instead of the angles. Once she gave them a puzzle, which only discouraged them instead of being met as a challenge. Their difficulty with puzzles did not relate to ability, but to the language factor which was difficult for them. They did not like language to be put to mathematics. By teaching them to recognise symbols, such as %, reading was reduced. Since much mathematics could be done by recognising symbols, the nature of the learning area might, therefore, also have contributed to the high MASC.

Although repetition had a definite function in the class for learners with HI, the mathematics educator was of the opinion that repetition also made the learners lazy: they did not always attend well as they knew statements and instructions would be repeated. They also knew that she would have time to attend to them individually. Had they not listened in the first place, the educator would explain to them individually later on. A related barrier to optimal learning was that the mathematics educator felt that some parents did too much for their children with HI, thereby contributing to learned helplessness. By the time they were in Grade Seven, they had not yet learnt to work by themselves and they did not want to learn to work independently anymore.

She tried to make everyone progress at the same, reasonable pace. She estimated in advance that a portion of work would take a certain length of time. If too many learners still failed to understand by the end of the time, she would extend it. Inevitably, some learners



were left behind, but as the others became bored, she had to move on. When planning her lessons, she looked at the learners' abilities, considered what she wanted them to do and asked herself what she needed to do to accommodate the learners. She did not stick rigorously to a uniform presentation. Even in one class, she differentiated her *modus operandi*. Some learners were, for example, required to complete all 20 sums, others only 10. According to her, the learners accepted that. The younger the learners, the more they sought equal attention. As they grew older, they were able to work more independently. Her style of teaching the Grade Sevens usually entailed doing an example on the board and then letting the learners do another example. The learners then continued on their own with exercises. While they were busy, she went to them individually to render support or monitor work. The way she taught, learners were allowed to make mistakes. She was not very quick tempered or perfectionist about the books. She tried to do things that they would like, such as playing games; however, playing games *et cetera* often put stress on the learners who did not have the ability and struggled. Some learners quickly caught on, shouted out the answers and were excited. The learners who struggled just sat, because they were too scared to ask again, as the others might say: "*Oh, did you not understand, again?*". She sometimes felt discouraged when she had taught the learners something, and the next day they came in class and said: "*What's that?*".

The learners were sometimes mean with one another. According to the mathematics educator, they knew exactly who was 'clever' and who not. Some were rude and would say things like, "*Oh, don't ask again! In any case, you know nothing.*" She was strict when learners made nasty remarks. (She was less strict when they were harmlessly misbehaving or playing.) When a learner was nasty, she would sometimes retort and mention all his/her own weaker points. Then she would ask: "*OK, how do feel now? This is how that guy feels. So don't make me do it again.*" She was of the opinion that if they did not feel the consequences of their remarks, they would continue being hurtful. The others would also know if they were going to do something similar, the educator was going to punish them. It was interesting to note that the fear of having to face ridicule often cropped up in the responses to the projective pictures in respect of both the Afrikaans and mathematics classes, and as such, was an issue to be dealt with in the classes.

In explaining content, the educator used concrete metaphors from real life to explain concepts and used concrete line drawings to further enhance clarity. It should be noted that the metaphors were not necessarily mathematically correct, but served as a memory aid to guide the learners to the next step. Deciding on a common denominator in adding fractions could be a problem for some learners. Her solution, relating to real life, was the following: "*If*

*the little one can become the big one, then we give the little one steroids, then we make him bigger. So, what do we give the little one?*” A learner answered correctly. The next step also came from the world of the learners: *“Remember, I multiply both with the same number. It is like children. Can I give her a bigger piece of chocolate than you?”* and *“Fractions are like your children: if I divide the top by three, I must divide the bottom by three as well.”* She explained the meaning of a fraction by using an example of a pizza. *“The bottom one [denominator] tells you in how many pieces the pizza has been cut, how many parts there are; if the pieces are big or small. The top one tells you how many you can eat.”* She drew diagrams of circles representing pizzas cut in quarters on the board as she was explaining. She explained again that if the denominators were not the same, the *“one was given steroids so that the children did not argue”*. Once she spoke about the denominator staying the same and the numerator changing. She likened it to the learners’ school uniform, where the trousers stayed the same from primary school to secondary school, but they wore different shirts.

When a learner wanted to know what equivalent fractions were, she asked the class to help with the word *equivalent*. She received an answer: *“You multiply it.”* Only then did she proceed to explain, once again using a visual cue, the moon. *“If you multiply the top ...”* and she drew an arch between the two numerators of the two fractions *“... you also multiply the bottom ...”*. She drew another arch between the two denominators of the fractions, and the two arches resembled a crescent moon. Once, when a learner posed a question, she said: *“No, top and top are friends, and bottom and bottom are friends.”* She proceeded to explain the ‘moon principle’ by using the sum at hand.

She used a party as a memory aid when explaining the multiplication of fractions. With multiplication, it did not matter whether the fractions were of the same type: everyone could party together. The boys wanted to dance with the girls. She said that when they danced, they put their hands together and their feet worked together. She continued by multiplying the top numbers (their hands) and the bottom numbers (their feet) of the fractions. A concern with the use of multiple metaphors is that the metaphors could confuse some of the learners: when should they use the children, the moon, the steroids or the party?

The learners were also allowed to use concrete methods of calculation: they used their fingers to determine multiples of numbers, when they did not know the tables by heart. Eventually, most of them arrived at the correct answer. The absence of pocket calculators was noticeable. By using their fingers, the learners showed clear understanding of the concept of multiplication tables, which might have been lost with the use of pocket



calculators. The educator once scolded a girl for not knowing the multiplication tables and said that was the reason why she struggled so much.

The mathematics educator tried to involve all the learners alternately in her lesson. She often addressed questions to learners by name, rarely posing general questions. By asking questions randomly, she ensured participation and improved attention, as anyone could be asked the next question. From the answers, she could also determine whether the learners had understood her. By letting most, if not all, learners participate, the work became a communal project: everyone was helping everyone else. The following is a paraphrased version of how she involved the learners:

She finished a sum and proceeded to the next. Bruce was asked to do the sum. She followed a question and answer format, guiding him towards the next steps and answers. She asked Harry whether he understood the explanation. (Previously, she had found that he had not understood.) She asked for a volunteer to do number seven on the board and selected Adrian ... She showed them another way to do the sums by converting the mixed fraction to an improper fraction. She asked Murray to do the conversion while she wrote it on the board ... Thomas wanted to know what equivalent fractions were, and she asked the class to help with the word *equivalent*. She received an answer: “*You multiply it*”, and used that answer as the basis of her explanation (cf. the previous pages).

The educator asked guiding questions to prompt the learners from one step to the next in doing the sums. It appeared, however, as if she often functioned as the vanguard of the thinking and left the answering to the learners. Even if the learners did not have to think about the sequence of the operations, her questions had good value in modelling good mathematical problem solving strategies. It was, however, uncertain whether the learners had caught on and applied the same strategies when they worked independently. An example of how she asked guiding questions is illustrated in the following extract:

Educator : *You say one up to six. How do I do that? How can a one become a six? Think, must it become bigger or smaller?*

Learner : *Bigger.*

Educator : *Bigger. What is making bigger? Multiply or divide?*

Learner : *Multiply.*

Educator : *Multiply. One times what is six?*

Learner : *Six.*

Educator : *Now? One times six. And what is ...*

She then proceeded to show them another way to do the sum. Once again she guided them with questions. The learners answered: sometimes wrongly, sometimes correctly. She explained why the wrong answers were wrong and occasionally praised the correct answers. A section of the sum took at least five interactions between educator and learner. Once they had to divide 120 by 15. She guided them by starting to count in multiples of 15. Gradually the learners took over, until they reached 120.

She also applied her question guiding strategy in a slightly different way in dealing with instructions. She started by asking whether they understood a particular word from the instructions. They did not. She proceeded by asking them to explain the rest of the sentence. In doing that, one learner inferred the meaning of the word in question and said it. It was right.

The educator encouraged learners to ask her questions. They were not shy to ask her questions during the lesson time or when they were working individually. Once, Isaac had asked a friend at the hostel for explanations, written down answers, and got them wrong. The educator saw that he had struggled and reminded him that if he did not understand, he should come and ask her. Another time, Harry did not know something and asked her. She said that it was right that he had asked.

The educator rendered individual support to the learners while she was teaching, but also while the learners were doing exercises on the new work. While she was teaching, her questioning often discovered learners who did not understand and whom she could help immediately. Once she saw Harry frowning. She told him she could see in his eyes that he had not done the previous day's homework. He admitted that he had not understood the work and she explained to him, using the chalkboard and asking him guiding questions.

While the learners were doing exercises, she was available for individual assistance, which she provided at each learner's desk. She stopped at every learner and helped where necessary. Often she gave them two sums to do, which she first wanted to check before they could continue with the rest of the exercise. She helped them by asking guiding questions in the same way that she did sums on the board, explaining content again and/or by repeating concepts. She often had to repeat explanations on the same sums, but each explanation was tailored to suit each learner individually. When the learners encountered too many problems, or she saw a serious mathematical error, she did the sum on the board. Sometimes the learners asked her to explain sums they had not even tried or they said the work was difficult. She told them to try first, if they wanted to, in pencil, even if it was wrong.

She would be on her way to help. When marking work, she said that, if they had it wrong, they just had to mark it wrong, she would come and look.

Support not only comprised class work, but was also tailored to address general barriers to participation in the work. Support, therefore, often entailed also admonishing a learner who was noisy, or attracting the attention of another before continuing her explanation. When she addressed James, she did not give the required information before he indicated that he was listening. This learner, having profound HI, was also tutored on how to use his voice when he spoke. He did as she told him, and she praised him. In the course of her support to individual learners, she scolded, threatened, encouraged and praised.

It was clear that the learners relied strongly on the educator for support. Some waited for the educator before they continued. At times it appeared as if the learners were too lazy to think, and learned helplessness merits consideration. It is, however, difficult to judge if the impairment is kept in mind.

Repetition of work was initiated by the educator, but was also required from the learners' side of apparent necessity. For example, she explained the concept of the denominator having to be the same by using the example of the pizza. Four similar questions concerning the nature of the denominator followed, and four times she gave a similar answer. Other times, she repeated statements, but used other words. The repetition was usually bound to examples, and not merely repeating the same phrase. Even before starting a task, she sometimes quickly did the first item or two with the learners. It familiarised them with the task, and they had to repeat what they had heard when they started working by themselves.

Direct instruction took place mostly. The learners were not required to explore or investigate the nature of mathematics. Content was explained using basic language and simple concepts. For example, a common fraction was remembered as "*Small one top, big one bottom.*" Sometimes she gave them tips: if there were two zeros (top and bottom), they could be cancelled; if there were a number ending in a zero at the top and a five below, then they could divide by five; the next thing they should look at was whether the numbers could both be divided by two. Work was carefully structured to increase in complexity.

In summary, it could be said that, from the observations, it appeared that a concrete approach to learning, involvement of the learners in the lesson, guidance to the correct answers, ample opportunities for asking questions, individual attention, repetition and direct instruction contributed to the high MASC of the learners with HI.

A paraphrase from the first observation session illustrates how the mathematics educator integrated various aspects of her teaching, as highlighted in the summary above:

They were doing a sum. She told the class that they had to help Marc. She warned them that it did not mean that the rest did not all have to work together. If he got stuck with a problem, they had to help him. She started by supporting Marc, prompting him with the question: *“What do we do first? We count the ...”*. He answered, and she asked the next question: *“OK, how much is ...?”*. He answered, and she prompted with the next question. She interrupted Marc’s answer to address Isaac. She posed the question to Isaac. Isaac gave an answer, which she said was wrong. She referred Isaac to where she had written something in big letters on the chalkboard and asked for a learner to help him. James gave an answer but she said there was an easier way. James then gave the ‘easier’ way: *“The big one on the little one, and if the little one can’t get big, then we give him steroids.”* She repeated, correcting him: *“If the little one can become the big one, then we give the little one steroids, then we make him bigger. So, what do we give the four?”* A learner answered correctly. She returned to Marc and told him why it was not necessary to do what Isaac had proposed to do. Her explanation contained a short summary of what to do: *“Your first test is: can the little one become the bigger one? If your answer is ‘yes’, then you simply make the little one bigger. If my answer is ‘no’, I change both.”* She involved another learner in asking whether he understood and continued to do the next step of the sum. She prompted the learner at the next step. She interrupted her explanation to address a boy who seemed worried and was scratching and digging around. It turned out that the boy was still not on the right page and was looking for where they were busy now in the papers. She gave him the page number and continued. She gave another short summary of what to do: *“If it is small and big, it is a common fraction, then we leave it like that.”* A learner checked his work with her and she told him it was wrong. *“Remember, I multiply both with the same number. It is like children. Can I give her a bigger piece of chocolate than you?”* The learner’s subsequent answers showed that he now understood. She proceeded with the next sum, starting with a question to a learner not involved earlier.

Summary of the observations contributing to the MASC would not be complete without mentioning the class atmosphere. The class atmosphere was relaxed. Learners volunteered to answer questions, even sometimes shouting out (even wrong) answers. The class was not silent when working: the learners talked to one another. Sometimes there was friendly bantering between the educator and one or more of the learners. During the last observation, which occurred after a school show the previous evening, the learners were more distractible than usual and casual conversation ensued (about an educator who had to

go to the doctor for a head injury and an educator's bad luck with theft). It was interesting to note that the educator did not want conversation about a non-mathematics topic, but probably realised that the sooner she addressed it, the sooner the learners would be able to focus on the mathematics again.

## 5.7 DISCUSSION OF THE RESULTS: THE ASC OF LEARNERS WITH HI

The discussion will, firstly, compare the similarities and differences in ASC of learners with HI across the schools, and with learners with no HI, and will, secondly, look at explanations and factors which might have influenced the ASC of learners with HI. Since Chapter 1, the ASC has been regarded as the product of different factors in various systems and, as such, it has been regarded as an indicator of the 'health' or wellness of a system, especially the individual, class, school and education systems. Before comparison and explanation of differences in ASC can be linked conclusively to school context, the key issue of the thesis, as stated in Chapter 1, must be considered: *How does ASC reflect the practices of inclusive education and participation in different school contexts?* Subsequently, the issue at stake will not be whether inclusive education should be implemented, or not, but rather, as the EWP 6 is already in place (although not by far fully implemented), what could be done to ensure that all schools become effective learning environments for learners with HI.

To facilitate the discussion of the ASC of learners with HI, Table 5.19 shows the means for the GASC, LASC and MASC of the learners with HI in School 1, 2 and 3, as well the means for the GASC, LASC and MASC for learners with no HI in School 1, 2, 3, 4 and 5, and Figure 5.9 shows the actual GASC, LASC and MASC of learners with HI and the mean GASC, LASC and MASC of learners with no HI.

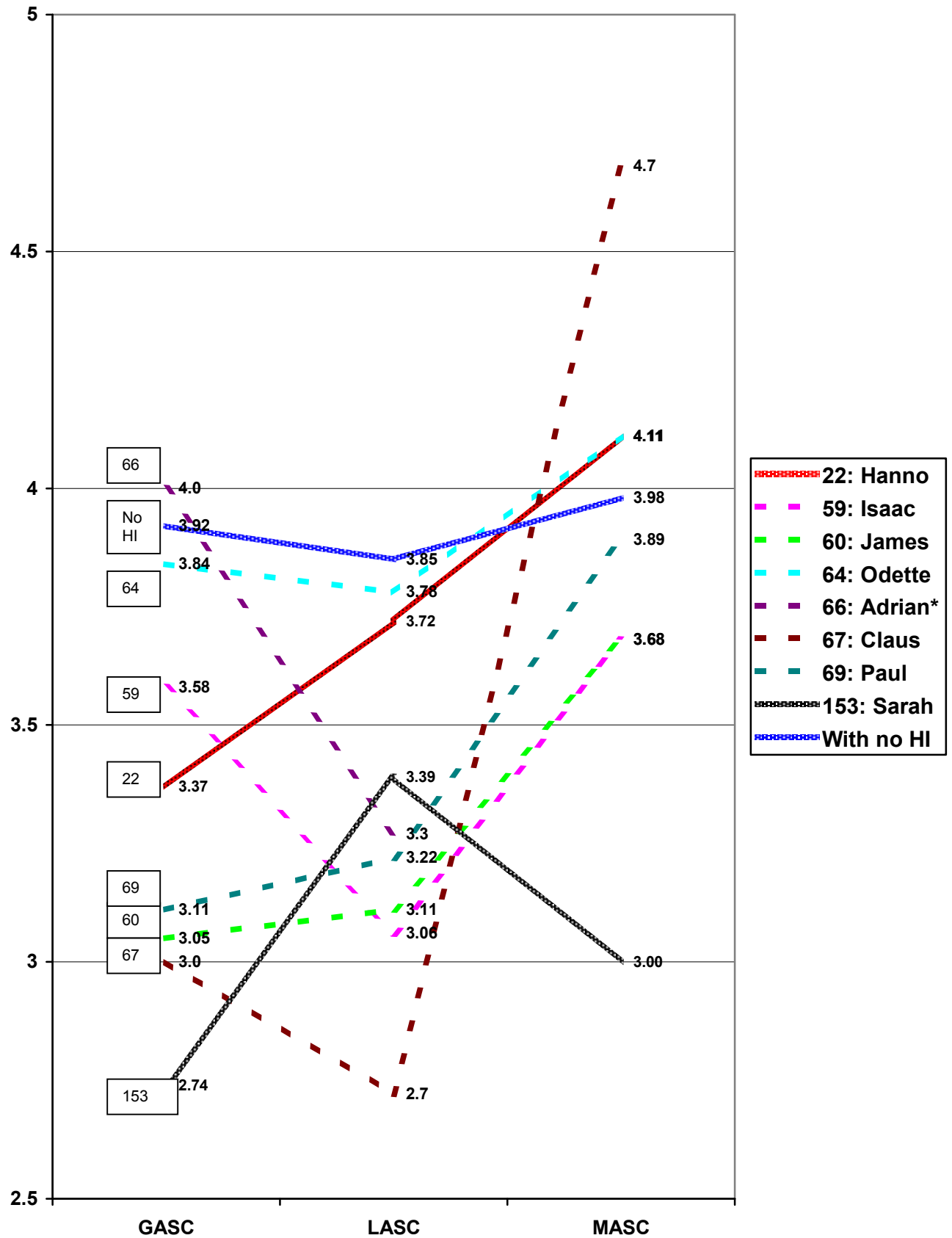
Table 5.19 Means for the GASC, LASC and MASC for learners with HI and no HI and for schools

School		1	2	3					4	5	
School type		Inclusive	Inclusive	Special					Regular	Regular	
Learner number & name		22 Hanno	153 Sarah	59 Isaac	60 James	64 Odette	66 Adrian	67 Claus	69 Paul	-	-
GASC	No HI	3.92	3.92	-	-	-	-	-	-	3.92	3.92
	Learner	3.37	2.74	<u>3.58</u> <sup>1</sup>	<b>3.05</b> <sup>2</sup>	<u>3.84</u>	<u>4.0</u>	<b>3.0</b>	<u>3.11</u>	-	-
	School	3.81	3.95	3.47					3.70	4.22	
LASC	No HI	3.85	3.85	-	-	-	-	-	-	3.85	3.85
	Learner	3.72	3.39	<b>3.06</b>	<b>3.11</b>	<u>3.78</u>	<b>3.30</b>	<b>2.7</b>	<b>3.22</b>	-	-
	School	3.81	3.95	3.27					3.64	4.03	
MASC	No HI	3.98	3.98	-	-	-	-	-	-	3.98	3.98
	Learner	4.11	3.00	<u>3.68</u>	<u>3.68</u>	<u>4.11</u>	absent	<u>4.7</u>	<u>3.89</u>	-	-
	School	4.15	3.72	4.06					3.99	4.20	

<sup>1</sup> Underlined means indicate means in the special school higher than Sarah's (Learner 153) means in School 2.

<sup>2</sup> Means in **bold** indicate means in the special school lower than Hanno's (Learner 22) means in School 1.

Figure 5.9 Actual GASC, LASC and MASCC of learners with HI and mean GASC, LASC and MASCC of learners with no HI



\* Adrian (Learner 66) did not complete the MASCC section of the ASCQ.

Firstly, when the different dimensions of ASC are examined in Figure 5.9, three somewhat arbitrary levels of GASC, LASC and MASC (relatively high, moderate and low) can be distinguished. This distribution is shown in Figure 5.10.

Figure 5.10 Distribution of ASCs in terms of relative level

ASC dimension	Level	School 1	School 2	School 3	Learners with no HI
GASC	Relatively High			Adrian (4.0) Odette (3.84)	3.92
	Relatively Moderate	Hanno (3.37)		Isaac (3.58)	
	Relatively Low		Sarah (2.74)	Paul (3.11) James (3.05) Claus (3.0)	
LASC	Relatively High	Hanno (3.72)		Odette (3.78)	3.85
	Relatively Moderate		Sarah (3.39)	Adrian (3.3) Paul (3.22) James (3.11) Isaac (3.06)	
	Relatively Low			Claus (2.7)	
MASC	Relatively High	Hanno (4.11)		Claus (4.7) Odette (4.11) Paul (3.89)	3.98
	Relatively Moderate			Isaac (3.68) James (3.68)	
	Relatively Low		Sarah (3.0)		

As the wide distribution of the GASC scores of the learners in School 3 has already been discussed in 5.6.2 3(a), only the GASC of Hanno (3.37) in School 1 and Sarah (2.74) in School 2 will be discussed here. Considering that both Hanno and Sarah were in full-service inclusion schools, the differences in GASC scores suggest that not all full-service schools are equally beneficial to the GASC of learners with HI. Before implying that School 2 had failed as a full-service school, the differences in socio-economic contexts between the schools and the historicity of the learners must be kept in mind, and this will be discussed later in this section. But it does seem as if the GASC at least reflects educational practices generally, if



not practices of inclusive education and participation specifically, in different schools and classrooms.

Except for the high LASC of Odette (3.78) in School 3, which might be an unrealistically high LASC as suggested in 5.6.2 3(a), the learners from School 3 scored themselves as having moderate and low LASCs, whereas Hanno from School 1 and even Sarah from School 2 scored themselves as having high and moderate LASCs respectively, although Sarah's moderate LASC might also have been an unrealistic self-assessment as suggested in 5.6.1 2(c). What becomes noticeable, is that Hanno's LASC in the full-service school surpasses the LASCs of the learners in the special school. Despite the specialised support in the form of a first language educator trained to work with learners with HI and the various other support facilities available, the learners in the special school only had moderate or low regard for their Afrikaans language abilities and performances. Hanno's moderate and profound hearing losses and his socio-economic context make him comparable to the learners in the special school, suggesting that the full-service school placement had been advantageous for him in respect of his LASC. It is argued that the Afrikaans educator played a role in Hanno's high LASC, as will be seen when the role of the educators in ASC is discussed, and that exposure to a language rich environment could have contributed to Hanno's high LASC. Again, it seems as if the LASC at least reflects educational practices generally, if not practices of inclusive education and participation specifically, in different schools and classrooms.

All the learners with HI scored themselves as having high or moderate MASCs, except for Sarah (3.0) in School 2. Similar to the GASC, the differences in MASC scores suggest that not all full-service schools are equally beneficial to the MASC of learners with HI. Again, differences in socio-economic contexts between the schools and the historicity of the learners probably contributed to the differences, and this will be discussed later in this section. What becomes noticeable, is that apparently the learners with HI, whether in a full-service school such as Hanno, or in the special school, evaluated their MASCs to be higher or similar to the learners with no HI. The data, therefore, suggest that placement *per se* in the special school or a full-service school, such as School 1, did not seem to influence the MASC of learners with HI significantly, but that the mathematics educators and/or the nature of mathematics as learning area played a role in the way the learners with HI evaluated themselves in the mathematics classes.

Another possible reason for the high MASC of the learners with HI might be located in the I/E model of Marsh (1986b: 132-133), as explained in 3.8.1. The I/E model predicts a negative

direct effect of mathematics achievement on verbal self-concept, and of verbal achievement on mathematics self-concept. For example, a high MASC is more probable when the learner's mathematics achievements are good and when mathematics achievements are better than the verbal achievements. It is then the difference between mathematics and verbal achievements which is predictive of MASC. High verbal achievements can essentially depress a high MASC (Marsh, 1986b: 134), since the difference between the achievements would then be smaller. This line of reasoning would have been applicable to Table 5.19 and Figure 5.9 had the learners with HI achieved poorer marks in the first language than mathematics, but according to Table 5.16, the learners in School 3 had slightly better marks for the first language than mathematics, which should then have had a negative effect on the MASC. One could argue that the difference in marks was too small, or that the already high MASC might have been even higher, or that other factors also contributed to the high MASC, such as the role of the mathematics educators and the nature of the learning content. Similarly, the low LASC of learners with HI should be considered as reflecting more than the comparison of learners' perceived language and mathematics achievements. Again, the role of the educators, the effect of the HI on acquiring and learning the first language, and the nature of the learning area should be taken into account.

Compared to the ASCs of learners in the special school and learners with no HI, Hanno's ASCs appear to epitomise the success of inclusive education and Sarah's ASCs the failure of inclusive education. Hanno's ASCs moreover appear to disprove the BFLPE of Marsh and Parker (1984) and Marsh (1987) (refer to 3.8.1), whereas Sarah's ASCs appear to support the BFLPE. Briefly, the BFLPE predicts that, for two learners with the same abilities, the learner in the academically better school will have a lower ASC than the other learner (Strein, 1993:280), since the learners of the academically better school, with whom the learner compares his or her academic abilities, do work of the same or higher standard than he or she does. The inclusion of a learner in a school where ability and/or performance is generally higher than in another school, could lead to a lower ASC (Marsh, 1991:470). An assumption based on the BFLPE is that transfer of a learner with HI from a special school to a regular (or full-service) school, would lead to a lower ASC.

The underlined means in Table 5.19 show that Sarah's GASC and MASC are lower than the mean GASC and MASC in the special school, and, therefore, appear to provide evidence of the BFLPE: being placed in a full-service school contributes to a lower ASC. The controversy surrounding Sarah's moderate LASC has already been discussed. It must be kept in mind that Sarah was stated to experience moderate intellectual impairment. Additionally, she had had no previous support in the school, received little support at the time

of the study and had no hearing aids. These factors might have contributed further to her low GASC and MASC.

The means in bold print in Table 5.19 show that Hanno's GASC is higher than the GASC of three of the six learners in the special school, that his LASC is higher than the LASC of five of the six learners in the special school, and that his MASC is higher than the MASC of three of the five learners in the special school<sup>10</sup>, and as such do not support the BFLPE: being placed in a full-service school does not necessarily contribute to a lower ASC. As his GASC, LASC and MASC moreover compare well with the mean GASC, LASC and MASC of his class, it can be concluded that he had been able to participate in a classroom of learners with full hearing, as can be supported by classroom observations and interviews. His enrolment in a special school for learners with HI (providing him with the necessary support for the development of sufficient language and coping skills) until early in Grade Three, before then transferring him to the full-service school, and the supportive and accommodative nature of his education in the full-service school probably contributed to his high ASCs.

Odette consistently scored herself as having higher ASCs than Hanno, but her high means might reflect an unrealistic self-evaluation, as discussed previously. As suggested in 3.8.1, the basic assumption of the BFLPE, that learners form their academic self-concepts only by comparing their academic achievements with those of other learners in their class or school, is too simplistic and other influences, such as feedback from educators, parents and peers, previous experiences, and expectations of the learners, parents and educators, should also be taken into account.

Secondly, explanations and factors which might have influenced the ASC of learners will therefore now be discussed, focusing on factors operant in the social, economic, education, school, class and individual systems. As some of the factors operate across more than one system, the systems *per se* will not be discussed, but only used as a guideline in the discussion.

Starting with a broad perspective on the ASC of learners with HI and looking at the role of the Department of Education, staff members from the full-service schools and the special school differed in their opinions regarding the support rendered by the Department of Education to the schools and educators in implementing inclusive education policy. The principal of

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<sup>10</sup> Adrian did not complete the MASC; therefore, only five learners in the special school can be involved in the comparison.

School 1 was of the opinion that School 1 had moved beyond the stipulations of the EWP 6 in implementing inclusive education and that the school had managed to create its own workable solutions in respect of inclusive education. At least two of the educators on his staff remarked that educators were not being equipped to deal with learners with impairment generally, nor learners with HI specifically. Looking at Hanno's ASCs, it appears as if School 1 had done well in interpreting and implementing inclusive education policy, regardless of the perceived lack of departmental support. As School 2 was actually a pilot school for the implementation of inclusive education and participation policy, the school should expectedly have been ahead of the EWP 6 in respect of many aspects of inclusive education. According to the principal, the Department of Education had arranged meetings and workshops for the school staff regarding inclusive education and dealing with more than one learner with impairment in the class, and had built ramps; however, the existence and attendance of workshops such as these were not mentioned by any of the three educators at School 2 during interviews. The Department still only had to provide assistive devices. Despite the meetings, workshops and ramps, Sarah's ASCs (except for her relatively moderate LASC, which might have been inflated) were the lowest of all the learners with HI participating in the study. Her low ASCs could imply that the meetings and workshops had not provided sufficient guidance to the educators to support her, or that the well-intended support rendered by the Department was off-target in that she still lacked the one crucial tool to function in a hearing school, namely hearing aids. Her own apparent lack of ability, however difficult to establish reliably, might of course also have contributed to her low achievement and, consequently, her low ASC. The data available on this school strongly suggest that learners with HI need specific support if they are to be successful at schools other than special schools for learners with HI. General support appears to be too non-specific to have positive effects. School 3 relied on internal support and support from other special schools. The support they received from the Department was limited to those additional services they could render because of the nature of the school. The principal of School 3 expressed the opinion that courses offered by the Department for educators in regular schools were often not appropriate for the teaching conditions of his educators, and had to be adapted.

From the data, it did not seem as if the type of school, full-service or special, as designated by the Department of Education, had an influence on the ASC of learners with HI, as the one full-service school apparently included a learner with HI more successfully than the other full-service school, and the ASCs of the learners with HI in the special school are spread somewhat randomly among the ASCs of the learners with HI in the full-service schools. The mere designation of regular schools as full-service schools does not bring about the desired changes in educational practice: from the data, it appears that Sarah was an unhappy

learner in a full-service school context. Being designated as a full-service school, then must link with the specific role that the Department of Education should play in supporting the school to implement inclusive education policy.

Shifting the perspective of the discussion to schools, the roles that the *principal* and the *social and economic contexts* play become apparent. As both principals of the full-service inclusion schools declared themselves committed to inclusive education and acceptance of all learners, yet had different ASC results in respect of the learners with HI involved in the study, the principals' commitment to inclusive education *per se* did not appear to facilitate effective learning environments. The *resources* the principals had access to, and were able to mobilise, and the *resourcefulness* of the principals themselves, probably contributed more to facilitating effective/ineffective learning environments and sound/poor ASCs of learners with HI. Access to resources are linked to the social and economic systems operant in the schools.

With access to additional resources, the principal in School 1 was able to reduce class size to 28-32 learners, compared to the 60 learners per class in School 2, which had access to limited resources and had to apply these where the need was greatest. Additionally, the principal in School 1 was able to reduce class size even further for classes containing a learner with an impairment. From the data, it would seem that smaller class sizes might contribute to higher ASCs of learners with HI, but the data do not imply that the highest ASC can always be found in the smallest classes. The class in School 3 were the smallest (N=11), but the ASCs were by and large not the highest. The ASCs of Sarah, however, were generally the lowest of all the learners participating in the study, and her class size was the biggest (N=53).

The principal in School 1 tried to select educators most suitable for dealing with impairment, and prepare and motivate them before installing a learner with an impairment in their classes. According to the educators, he facilitated the sharing of knowledge by requiring educators who had learners with impairment in their classes to consult with educators who had had those learners during the previous year. School 2 had an elaborate support system for educators and learners in the form of the SBST, but at least one of the educators was disappointed by the lack of feedback received from the SBST, especially in respect of feedback on courses attended by the SBST. The principal of School 1 mentioned that professionals and businesses were approached to address challenges which occurred in the school. Challenges could relate to general educational challenges such as a lack of computers and finances, to educators who required support in dealing with specific

impairments, or to learners who might require support services of a psychological or other nature. School 2, however, had to contend with issues of a more basic nature: learners needed to be provided with meals, clothes and/or basic childcare. In School 3, according to the principal, the school had to make provision for basic amenities for some learners, but various forms of specialised support were available on the school premises because of the nature of the special school.

Again shifting the perspective of the discussion - this time to classrooms - the role of the *educators*, the *learning areas* and the *peers* in the ASCs of the learners with HI comes under scrutiny. It is argued that the educators play a pivotal role in the ASC of the learners with HI, and their role will be discussed last. The lower GASC and LASC of learners with HI compared to those of learners with no HI would seem to confirm that learners with HI are linguistically challenged. From the virtually similar MASC of learners with HI and learners with no HI it may be inferred, on the other hand, that learners with HI are fairly well able to access mathematics. Specific learning areas, therefore, would appear to be more, or less, accessible to learners with HI.

In School 1, especially in the mathematics class, Hanno relied heavily on the support of his friend, Pete. The support he received was arguably one of the contributing factors to his high MASC. In contrast, Sarah, in School 2, relied on more than one friend to help her, but apparently with less effect in respect of her MASC than her LASC, suggesting that peer support can be helpful, but is not necessarily vital for improving or maintaining a high ASC. The learners in School 3, in contrast, relied solely on the educators for support during the classes. Their ASCs ranged from high to moderate to low across the different learning areas, adding 'proof' to the notion that peer support can be used in a supportive way, but is not vital to improve ASC.

When shifting the perspective on the ASC of learners with HI to the individual system, access to resources by the learners with HI individually, personal historicity of each learner, involvement of parents and disposition come under discussion. The parents of Hanno in School 1 were able to *access financial and/or medical resources* and were, therefore, able to afford audiological assessment and suitable hearing aids for Hanno at an early age. The parents of Sarah in School 2, however, struggled to make a living. Free or cheap treatment provided by the rural clinic and local hospital failed to prevent HI and/or support Sarah in respect of her HI. Once in Pretoria, she relied on free public healthcare, which, although effective, took time in taking place. The learners with HI in School 3 had the advantage that once they had entered the school, basic amenities and technical support could be provided



to them. Further, from the data it appears that the learners with HI in School 1 and 3 could readily access educational resources by asking the educators questions and were then supported effectively. Sarah in School 2 seemed unable to access the educational resources available, although she did use peer support. She might not have accessed the knowledge of the educators because she was too shy or lacked communication skills, or she might have tried to ask for support in the past but had been disappointed with the results.

*Early identification of HI and appropriate steps taken to support the learners with HI* seem to be crucial to their ASC. Hanno's HI was identified at an early age (2½ years) and he was enrolled at the special school at an early age (3½ years), where he received appropriate stimulation and technical support in the form of hearing aids. Only in his Grade Three year was he enrolled in the regular school, which later became a full-service inclusion school. Similarly, all but one of the learners of School 3 were identified as having HI at an early age and were then supported appropriately. The only learner in School 3 who stood out as being different (based on speech, behaviour and academic progress), was James, who had profound hearing loss, but had been enrolled in a regular school with private speech therapy, until placed in the special school for his second year in Grade Six. Similar to James is Sarah, in School 2, whose HI was only identified at a late age in her life and who was enrolled in a regular school, later becoming a full-service inclusion school. Although Sarah's HI was less severe than both Hanno's and James's, her ASCs were lower than theirs, except for a slightly higher LASC than James's. It appears that early identification of HI, appropriate technical support in the form of hearing aids and/or operations, and specialised learning support during the early years are crucial for academic progress and consequently for a healthy ASC. As Hanno's ASCs were in general comparable to those of learners with no HI, the important role that a special school can play in giving learners with HI a springboard for the rest of their school career, cannot be denied. Hanno's adaptability and his good pronunciation probably contributed much to his successful inclusion.

The role *parents* might have played in the ASC of their children with HI is uncertain. Hanno's parents were reportedly divorced, and not very involved in his schoolwork and activities; however, his paternal grandmother took an interest in his schoolwork. Sarah's parents, especially her mother, left no stone unturned in her efforts to find help for Sarah. Because of limited resources, including limited access to knowledge about Sarah's HI, her efforts were not very effective. Furthermore, she continually found herself a virtual victim of inclusive education policy, as attempts to arrange for placement at other schools were not always supported by the school and/or the Department, even though Sarah was not making progress scholastically. The educators in School 3 mentioned that few of the parents of the

learners were really supportive of their children and that the learners were more often than not spoiled. From the data it would seem that a supportive adult in the life of the learner with HI, combined with access to knowledgeable ways of support, might contribute to better ASCs.

In the special school, many learners feared being ridiculed when they had to do work on the chalkboard. It appears as if complete *acceptance* of the learners with HI by the other learners had taken place in the full-service schools, as no such incidences could be found. Hanno, apparently, had been the target of aggression when he first enrolled in the full-service school, but no similar incidents of aggression were still occurring. It might be that the learners in the full-service schools were exposed to a diversity of impairments and that respect and acceptance of people as they are was being taught and modelled consciously, whereas the ethos in the special school appeared to be expressly problem-focused. Also, the learners in the special school might have had feelings of inferiority because they had struggled to cope in regular schools or had been regarded as 'stupid' by some people; ridicule, in their perception, might then have become a socially acceptable form of assertive behaviour.

Hanno was described by his mathematics educator as someone who was *motivated* to do the best he could, whereas some of the learners in the special school were described as lacking motivation for academic work. Sarah apparently appeared to be motivated as well, although her motivation did not seem to be enough in contributing to a high ASC. Disposition, therefore, seems to relate inconsistently to a healthy ASC.

It appears that the Department of Education, the type of school, the principal's commitment to inclusive education, the learning area, peer and adult support, and personal disposition contribute indecisively to the ASC of learners with HI, whereas the resources available to a school and the resourcefulness of principals probably contribute to the ASC of learners with HI somewhat consistently, and early identification of HI, appropriate technical support and early specialised learning support appear to contribute to the ASC of learners with HI decisively. Educators were mentioned as a resource or asset that the learners with HI could tap into, and this will now be looked at in more detail.

In the school context, the *educators* have daily and direct contact with the learners with HI. Considering that feedback is one of the ways in which ASC is formed, educators potentially play a major role in influencing the ASC of all the learners, including those with HI. Additionally, educators facilitate learning by presenting content and making appropriate



accommodations. Educators also contribute to class atmosphere, monitor progress, facilitate peer support and are in a position to render timely support to learners with HI. Therefore, it is argued that in addition to the factors mentioned in the previous paragraph, educators contribute much, if not the most, to the ASCs of learners with HI.

Since the learning areas other than the first language and mathematics were not focused on in the study, not much can be said about the way these educators may have contributed to the GASC. Hanno's responses as well as Pete's responses with regard to the projection pictures can perhaps give the best idea of what it was like for Hanno in the full-service school: he sometimes did not understand work and/or the instructions; when he asked questions, the answers were not always satisfactory; some educators sometimes talked too fast and he could not keep up with them, especially if he had to follow in a book or on a page; some learners talked too much in class, stood up too often and talked with friends; he was sometimes busy with other things while the educators were teaching; and he sometimes failed to hear the words, especially difficult words. Sarah, on the other hand, had to contend with a multilingual teaching situation; non-preferential seating; lack of interaction with and individual attention from the educators because of *inter alia* overcrowding; difficulty in communication because of HI and unclear speech; and incidences of failing to hear the educator and the educator not hearing (understanding) her.

Accommodations in the Afrikaans class in School 1 entailed practical arrangements (preferential seating, using gestures to catch his attention or convey instructions), accommodations in teaching and assessment (individual repetition of instructions, reduction in the volume of the exercises, indication of where answers in the text lay or where on the page they were reading or working, substantial accommodations with oral and listening exercises, deviation from the expected outcomes for the learners with no HI, allowing question-asking behaviour), and involvement in class activities (ensuring successful participation by asking Hanno easier questions). Accommodations in the Sepedi class in School 2 entailed practical arrangements (the educator spoke loudly), accommodations in teaching (additional support in the form of worksheets to be completed), involvement in class activities (effort made by the educator to involve Sarah) and reliance on peer support (Sarah was supported by some of her group members). In School 3, accommodations in the Afrikaans class entailed practical arrangements (preferential seating, ensuring speech reading by favourable positioning, obtaining the attention of the learners before speaking), accommodations in teaching and assessment (individual support and explanation of instructions, repetition of work and instructions, practical tips, expansion of vocabulary, flexibility) and involvement in class activities (allowing spontaneity in class).

When the categories of accommodations in the first language classes and the quality and quantity of accommodations are considered, it can be seen that the least accommodations were being made in School 2. In School 1 and 3, accommodations in teaching and assessment, particularly, were numerous and appeared to effectively support the learners with HI to participate in learning the first language.

Accommodations in the mathematics class in School 1 entailed practical arrangements (preferential seating, an educator who spoke more loudly), accommodations in teaching and assessment (an educator who consistently checked whether Hanno had heard and understood, an educator who usually asked Hanno to do an example to ensure that he had understood new content, repetition of facts, availability and accessibility of the educator to be asked questions on the work, individual assistance, one new mathematical principle per day, written instructions, structured presentation of lessons) and peer support (Pete supported Hanno). Accommodations in the mathematics class in School 2 entailed accommodations in teaching and assessment (repetition, facilitation of extra opportunities for support which were ineffective, availability of the educator for support which was not used by Sarah and therefore ineffective in supporting her), involvement in class activities (the educator asked Sarah easy questions) and peer support. Accommodations in the mathematics class in School 3 entailed practical arrangements (preferential seating), accommodations in teaching and assessment (following a visual approach, using basic and clear language in explaining and giving instructions, limiting explanations to the basics, reducing speed of work, keeping lessons to the content only, often repeating instructions and examples and content, making appropriate worksheets, rendering individual support - also at each learner's desk, using a concrete approach to learning, allowing the learners to be concrete, ensuring active involvement of all the learners in the class, giving guidance to the correct answer, providing ample opportunities to ask questions, addressing general barriers to participation in the work, employing direct instruction methods) and ensuring a relaxed classroom atmosphere.

Again, when the categories of accommodations in the mathematics classes and the quality and quantity of accommodations are considered, it can be seen that the least accommodations were being made in School 2. In School 1 and 3, accommodations in teaching and assessment, particularly, were numerous and appeared to effectively support the learners with HI to participate in learning mathematics. It is important to remember that, although the accommodations in respect of teaching and assessment were few and appeared to be ineffective in School 2, there was a wholehearted acceptance of Sarah as learner in the class, with all the educators actively trying to involve her in classroom activities

by asking easier questions and/or by using the group she was a member of. Much was done for social acceptance of Sarah, but considerably less for academic progress.

The effect of some of the accommodations differed across the schools. Although repetition was an accommodation frequently made in teaching and assessment, the type and function of repetition in the schools differed. Repetition of instructions, explanations and content, as in School 3, seemed to have more value than repeating singular statements or answers, as often happened in School 2. The mathematics educator of School 3, however, emphasised that learners with HI needed much repetition, as they were sometimes unable to follow the first instruction, explanation or exposition of content and, as such, the repetition in School 2 probably was not completely without effect. Yet the mathematics educator in School 3 was also of the opinion that much repetition made the learners lazy to listen and pay attention, as they knew that if they had not heard the first time, the task would be repeated.

In School 1, Hanno often asked questions, which usually centred on confirmation that he had heard correctly, or a repeated explanation because he had not understood. Sarah did not direct questions to the educators, and only sometimes to her peers. The learners with HI in School 3 continually asked questions, but the questions demonstrated a need for individual attention, or dependence, rather than a need for support with the work.

Related to the question-asking behaviour in the various schools, it is interesting to note that Hanno appeared to be working independently in the mathematics class, but was more dependent on the educator for guidance in the Afrikaans class. In the special school, all the learners with HI appeared to depend on the educators in the Afrikaans and mathematics classes. The nature of the learning area and/or the educators might have contributed to the dependence or learned helplessness. Afrikaans being a language and, as already explained, more difficult to access for learners with HI, might explain why the learners with HI were notably more dependent on the Afrikaans educator in both the full-service and the special school. In contrast, Hanno was able to work independently in the mathematics class, suggesting that the learners with HI in the special school were perhaps becoming too reliant on the mathematics educator. Sarah appeared to work independently from the educator, using her peers for support where necessary, but without having much academic success. The role of the educators in contributing to (learned) dependence and independence of learners with HI should not be underestimated.

It was more notable in the mathematics classes in School 1 and 3 than in the first language classes in School 1 and 3, that visual explanation of content was considered an important

way of introducing new content. In School 2, there was a bigger emphasis on oral exposition of content because of the educator’s teaching style and/or the lack of learning support materials; however, when Sarah’s HI is taken into consideration, it becomes clearer why she progressed slowly in a class where she was not enabled visually to access the content.

Once, in the special school, the learners had to dramatise a short story they had read and discussed. It was interesting to note how easily these learners complied with the task. They were spontaneous in their dramatisation, and included acting with their lines. When Hanno had to do an unprepared speech, he was uncomfortable, and completely lacked spontaneity. Acknowledging that the learners in School 3 knew the text when dramatising the story, whereas Hanno’s speech was unprepared, the question yet arises whether Hanno would have felt more comfortable when making a speech in front of other learners with HI.

A question which merits consideration is why the educators in School 2 were apparently unable to support Sarah to participate in learning. Ironically, the educators in School 2 had apparently been exposed to the principles of implementing inclusive education. Figure 5.11 indicates the educators participating in the research, in respect of their gender, learning area and language of instruction, and Figure 5.12 summarises additional information regarding the educators.

Figure 5.11 Educators participating in the research

School	Educator	Gender	Learning area	Language of instruction
1	1	Female	Class educator	Afrikaans
	2	Female	Afrikaans First Language	Afrikaans
	3	Male	Mathematics	Afrikaans
2	1	Male	Class educator	English, Sepedi,
	2	Female	Sepedi First Language	Sepedi
	3	Male	Mathematics	English, Sepedi
3	1*	Female	Class educator	Afrikaans
	2*	Female	Afrikaans First Language	Afrikaans
	3	Female	Mathematics	Afrikaans

\* The bracket indicates that Educator 1 and 2 was the same person, that is, the class educator was the Afrikaans first language educator as well.

Figure 5.12 Educator information

	School 1 Educators			School 2 Educators			School 3 Educators	
	1	2	3	1	2	3	1 & 2	3
<b>Initial Training</b>	Pretoria College of Education: Junior Primary	BPrimEd BA with History & Afrikaans	HED: Biblical studies, Remedial Education. Mathematics (UNISA)	N3 Motor mechanics; Senior Primary Teacher's Diploma	Mokopane College of Education: Diploma in Education	Groblersdal College of Education: Primary Teachers Diploma	BA HED DSE (UNISA) BS BEd	College of Education: Remedial Education
<b>Years of experience</b>	6	15	27	6	7	7	22	16 or 17
<b>Further courses</b>	Department of Education courses: ADD Emotional problems Speech therapy Dyslexia	FDE Gifted children Singing Choir Computer	OBE courses		OBE courses Handball Volleyball Cricket	Several OBE courses with certificates	Courses presented internally by the school: hearing & OBE	Diploma in Computer Science Courses presented internally by the school

According to Figure 5.12 the training of the educators varied from three years' teaching courses at colleges of education to post-graduate courses at universities. Educators in the historically advantaged schools had university and/or college training, whereas the educators in the historically disadvantaged school had training only at colleges, probably also historically disadvantaged tertiary institutions. It might be that the training of the educators in School 2 did not adequately prepare them to deal with new challenging teaching situations which may arise, contributing to the ineffectiveness of the accommodations for Sarah.

The number of years' teaching experience of the educators in the historically advantaged schools was considerably greater than that of the educators in the historically disadvantaged school. Except for Educator 1 in School 1, the educators in School 1 and 3 all had 15 years or more of experience. The educators in School 2 had six, seven and seven years of teaching experience respectively. When considering the accommodations made for the learners with HI in School 1 and 3, the data suggest that increased teaching experience might contribute to enabling educators increasingly to deal with learners with HI in their classes. Why there is such a discrepancy in years of teaching experience merits consideration. One possible reason obviously concerns the small sample size, which might have increased the idiosyncratic characteristics of the participants selected. Another possible reason relates to the policy of affirmative action implemented since 1994 in South Africa where historically disadvantaged employees have been enjoying preference when applying for jobs. It might be that some educators in the historically disadvantaged schools with many years' experience have been appointed in administrative and executive positions, thereby creating a vacuum of valuable experience in the historically disadvantaged schools. The obverse might be that the cohort of educators with long years of experience in historically disadvantaged schools chiefly consisted of seriously under-qualified personnel who, in the new educational dispensation, have had to make way for better qualified educators through a number of right-sizing exercises.

What is especially notable from Figure 5.12 is that not one of the educators had attended courses on inclusive education, raising serious questions indeed. Not having received appropriate training means that their knowledge about inclusive education policy and practice was gleaned from departmental and/or school meetings, conversation with lay people and/or peers, the media and/or personal reading on the matter. It is not probable that their initial training had made provision for inclusive education, as it had been completed before the inclusive education and participation policy was finalised. Their teaching skills were possibly honed by initial training, peer input and lessons learnt from experience. The educators of School 3 had extensive additional training and experience in dealing with learners with HI,

but the educators of School 1 had had no such exposure. Nevertheless, they were able to make appropriate accommodations for Hanno, suggesting that their training (both had university training) and/or their years of experience contributed to the effective learning support they succeeded in giving.

In conclusion, when trying to illuminate the key issue of the thesis, the data suggest that ASC can reflect the practices of inclusive education and participation as expressed in specific classrooms by specific educators, and not necessarily in schools or school contexts generally. *ASC can then indeed be regarded as a way to determine the 'health' or wellness of the individual in the classroom and of classroom practices.* The classroom practices in especially School 1 and 3 add valuable suggestions as to how effective learning environments can be created for learners with HI, whether in full-service or special schools. The crucial role educators play, as facilitators of classroom practices, in the ASC of learners with HI cannot be denied.

Chapter 6 contains a summary of the thesis, including the literature review and research results and findings, and attempts to answer the research questions as posed in Chapter 1, before discussing limitations of the research and making recommendations for future research.

## CHAPTER 6

### HOW WELL HAVE WE HEARD?

#### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

*“When does treating people differently emphasize their differences and stigmatize or hinder them on that basis? And when does treating people the same become insensitive to their difference and stigmatize or hinder them on that basis?”*

*(Minow, 1990 in Zollers & Yu, 1998:744)*

#### 6.1 ORIENTATION

In line with an interpretivist approach, Chapter 6 does not propose to give singular answers to research questions, nor does it propose to give final answers to research questions. Some answers were derived from the analysis, synthesis and integration of the available quantitative and qualitative data, and were reflected, where possible, against some of the known theories and suggestions in the literature to either assess the credibility of the data, or to extend, confirm or contradict the theories. Where literature was scarce, or not available, the data have been taken to speak for themselves. The data do not claim to be all-representative, or applicable to all situations for aeons to come. But, by the rigorous application of multiple research methods, the data can claim to represent at least five schools in respect of their learners' academic self-concept (ASC), including the ASC of their learners with hearing impairment (HI), at this point in time in South Africa, even though the elusive 'singular reality' of the ASC of learners with HI can never be reached, but only approximated by the different methods.

#### 6.2 SUMMARY

Chapter 1 looked at a number of important issues in respect of inclusive education and participation, special needs and ASC, and orientated the reader towards understanding the relevance, aim and importance of the research. The aim was to investigate the ASC of learners with HI (as an example of a barrier to learning and participation), in special and full-service inclusion school contexts. It was argued that understanding the ASC of Grade Seven learners with HI in different school contexts, would contribute to an understanding of whether and how the ASC of Grade Seven learners was indicative of the success of the conversion of primary schools to full-service inclusion schools for Grade Seven learners, and eventually



possibly for other school grades. It was envisaged that the findings of the research might provide educationists, educational leaders, managers, and educators generally, with information as to what was required to improve the conversion of schools to full-service inclusion schools, and to minimise an inappropriate implementation of the South African inclusive education and participation policy from casting up additional academic, social and emotional barriers before thousands of learners with impairments already experiencing barriers to their learning and participation. The main research question, therefore, was, *What is the academic self-concept of Grade Seven learners with hearing impairment in the contexts of special and full-service inclusion schools?* Three sub-questions were posed. Firstly, in special and full-service inclusion schools, which role does HI play in the ASC of Grade Seven learners? Secondly, what outcome(s) related to the ASC of the Grade Seven learner with HI could be regarded as indicative of successful conversion of primary schools to full-service inclusion schools? And thirdly, what guidelines could emerge to improve the conversion of primary schools to full-service inclusion schools in order to maintain and/or enhance the ASC of learners experiencing HI specifically, and barriers to learning and participation (BLP) generally?

In Chapter 2, dealing mainly with issues of context, the backdrop for understanding the ASC of learners with HI in special and full-service school contexts was cast wide in order to reckon with the influences of macro-, meso- and microsystems on the ASC of learners with HI. The bio-ecological perspective of Bronfenbrenner (1979, 1986) set the tone for a multi-systemic, multifaceted and multifactorial approach to BLP, culminating in a focused contemplation of HI. In addition, the asset-based approach drew the attention to the viewpoint that capacities, skills and assets within the systems could, and should, be accessed when dealing with BLP generally, and HI particularly. Five different viewpoints on effective learning environments for learners with impairments were presented, namely *exclusion, segregation, integration, mainstreaming* and *inclusion*. This was followed by consideration of the South African legislation and policy documents which lay the foundation for the South African solution to effective learning environments, namely inclusive education, as contained in the Education White Paper 6 (EWP 6).

A conceptual exploration was conducted in Chapter 3, from which the content and structure of the Academic Self-concept Questionnaire (ASCQ) was construed. The ASCQ originated from a contemplation of the theoretical underpinnings of self-concept, as found in a synthesis of the structure and dynamics of the self-concept. For the structure, at least five possible self-concept models were considered before selecting the hierarchical self-concept model for the purposes of the study. The ASC, also in terms of a collective consciousness, was

subsequently considered. The dynamics of the self-concept then led to a review of the development and change of the (academic) self-concept, reiterating the involvement of more than the individual system. Finally, the (academic) self-concept of learners with HI was briefly contemplated.

Research methodological issues were looked at in Chapter 4. The explanation of the interpretivist paradigm contained basic tenets that guide action and feelings about the ASC of learners with HI and how the ASC of learners with HI should be understood and studied accordingly. This led to a review of the ways in which the ASC could be probed and the suitability thereof for Grade Seven learners, also those with HI, which was followed by developing a multi-method and mixed method research design which made provision for a pilot study, to ensure the robustness of the methods. The results of the pilot study suggested that not all Grade Seven learners had the vocabulary, even in their mother tongue, to distinguish among meanings of words representing frequency categories, such as *never*, *seldom*, *sometimes*, *often* and *always*. The pilot study also indicated that a standard response sequence compared well to a response sequence where the neutral response option was placed separately. Finally, the means, item-total correlations and alphas for each item on each dimension of the pilot instrument were scrutinised to determine which items should be included in the final ASCQ. All relevant results from the pilot study were incorporated into the final version of the ASCQ. Cognisance was taken of the requirements that validity and credibility, and reliability and trustworthiness, posed to the research. The ways in which differences in language and culture could impose on validity and reliability, and possible ways to deal with such differences, were discussed. The methodological principles and processes underpinning each of the methods in the research design were considered, before describing the ethical principles adhered to during the research. Appendices provide elucidating information for most of the issues discussed in Chapter 4.

The results and findings of the investigation into the ASC of learners with HI in special and full-service schools are written up in Chapter 5. The relevant results and findings in respect of the sample, the ASCQ, moderator effects, and case studies are as follows:

Concerning the sample, five schools were involved. School 1 and 2 were full-service inclusion schools, with the former being historically advantaged and the latter historically disadvantaged. School 3 was a historically advantaged special school for learners with HI. School 4 and 5 were regular schools, with the former being historically advantaged and the latter historically disadvantaged. Approximately the same number of boys (54%) and girls (46%) participated in the study. Afrikaans and non-Afrikaans speaking learners were almost

equally represented: 46% spoke Afrikaans, 30% spoke Sepedi and 24% learners spoke other indigenous languages of South Africa. Learners were almost equally distributed in historically advantaged (46%) and historically disadvantaged (54%) schools. Eight learners with HI participated in the study, of whom six were enrolled in the special school, and two, one each, in two full-service inclusion schools. Only two of the learners with HI were girls: one in one full-service school and one in the special school.

There was an extensive age range of learners in the study, with an interesting distribution across the schools: in the historically advantaged full-service and regular school there were no under-age learners, and only 10% and 9% over-age learners respectively; therefore 90% and 91% of the learners respectively were within the norm-age range. In the historically disadvantaged full-service and regular school there were 17% and 30% under-age learners and 53% and 24% over-age learners respectively; therefore only 30% and 46% of the learners respectively were within the norm-age range. In the special school there were no under-age learners, 18% norm-age and 82% over-age learners. Of the Afrikaans speaking learners, who were all in historically advantaged schools, 80% of the learners were in the norm-age range, as opposed to only 34% of the Sepedi learners, who were all in historically disadvantaged schools.

Concerning the ASCQ, after running a maximum-likelihood factor analysis, a one-factor solution was accepted for the general academic self-concept (GASC), first language academic self-concept (LASC) and mathematics academic self-concept (MASC). The coefficient alphas for the GASC, LASC and MASC were all in excess of 0.80, the lowest being 0.83, and all the item-total correlations of all the items on all the dimensions, except Question 16 of the LASC, exceeded the minimum criterion of 0.2. Therefore, the ASCQ was regarded as a reliable instrument to assess the ASC of Grade Seven learners, including those with HI.

Some of the moderator effects showed similar results as some other moderator effects. Learners in historically disadvantaged schools registered significantly higher means on the GASC and LASC than learners in historically advantaged schools. Learners in historically advantaged schools, however, registered slightly higher means on the MASC, even though the significance was much lower. Home language, which relates to the historicity of the schools, produced similar results. The means of the learners with different home languages differed significantly on the GASC and LASC, but not on the MASC, with means on the GASC and LASC higher in historically disadvantaged schools, where Sepedi, Zulu, Tsonga and Tswana were spoken, than in the historically advantaged schools, where only Afrikaans

was spoken. In respect of hearing, learners with no HI registered significantly higher means on the GASC and LASC than learners with HI, but not in respect of the MASC, where there was no significant difference between the means of learners with no HI and learners with HI.

Boys and girls did not have significantly different means on the GASC, LASC or MASC. The difference among the means on the GASC, LASC and MASC according to the school attended by the learners was statistically significant. The GASC and LASC were the highest in the historically disadvantaged schools, followed by the full-service and regular historically advantaged schools. The special school had the lowest GASC and LASC. The MASC fluctuated less and appeared to be independent of school.

Under-age learners had statistically significantly higher scores on the GASC and MASC than norm-age and over-age learners, and over-age learners registered significantly lower scores on the GASC and MASC than under-age and norm-age learners. There was no statistically significant difference among the three age groups in respect of LASC.

The GASC was influenced by the historicity of the schools, home language, school, hearing ability and age, but not by gender. Specifically, the GASC was statistically significantly higher in historically disadvantaged schools, higher for the speakers of African languages than for the speakers of Afrikaans, higher in School 5 and 2, higher for learners with no HI, and higher for under-age learners compared to norm-age learners and over-age learners. The LASC was statistically significantly influenced by the historicity of the schools, home language, school and hearing ability, but not by gender or age. Specifically, the LASC was higher in historically disadvantaged schools, higher among the speakers of African languages, higher in School 5 and 2, and higher for learners with no HI. The MASC seemed to be the least influenced by moderator effects: historicity of schools, school and age influenced the MASC, but not home language, gender, or hearing ability. Specifically, the MASC was higher in historically advantaged schools, low for School 2, and higher for under-age learners compared to norm-age learners, and norm-age learners compared to over-age learners.

When combining achievement data of all the participating schools, the boys achieved slightly higher marks than the girls in mathematics only. The mean achievement, first language and mathematics marks achieved by the Afrikaans-speaking learners in the historically advantaged schools were consistently much higher than the mean achievement, first language and mathematics marks achieved by the Sepedi-speaking learners in the historically disadvantaged schools. Whereas the achievement in mathematics was the

highest achievement for the Afrikaans-speaking learners, the achievement in mathematics was the lowest achievement for the Sepedi-speaking learners.

When comparing full-service schools, School 1 consistently had much higher mean achievement, first language and mathematics means than School 2. When comparing the marks achieved by the Grade Sevens in the full-service schools with the marks of the Grade Sevens in the special school, School 1 had higher mean achievement, first language and mathematics means than School 3, the special school, but School 2 had lower means than the special school.

The relevant results and findings in respect of the case studies are as follows. Hanno, a learner with severe and profound HI in School 1, the historically advantaged full-service inclusion school, wore hearing aids, and had attended a special school for learners with HI until March of his Grade Three year. He registered a GASC mean well below the mean GASC of the learners with no HI, a LASC mean only slightly lower than the LASC mean of the learners with no HI, and a MASC mean higher than that of the learners with no HI. From the projective pictures it appeared that some of Hanno's educators sometimes spoke too fast for him to follow, and that despite his high LASC, Afrikaans was hard for him. The observations in the Afrikaans class included accommodations for day-to-day situations and oral and listening exercises, question-asking behaviour by Hanno, learned helplessness or learned dependence, Hanno's lack of participation in games and his concrete understanding of language. There were several conditions in the mathematics class which might have contributed to Hanno's high MASC: the educator making sure that Hanno had heard and understood, the availability and accessibility of the educator for questions, Hanno's close proximity to the educator, a peer's supportive role in the class, the nature of the content of mathematics, the structure of the lessons, Hanno's personal motivation and a good relationship between Hanno and the mathematics educator.

Sarah was a learner with a slight and average hearing loss in School 2, a historically disadvantaged full-service inclusion school. She did not have hearing aids and, according to the educators, her speech was difficult to understand. She registered the lowest GASC and MASC of all the learners with HI in the study, but the third highest LASC of the learners with HI participating in the study. Responses obtained from the projective pictures suggested that sometimes she and the educators did not hear each other, and that she did not like to fail. As Sarah had scored only 25% for her first language, the moderately high LASC was ascribed to unrealistic self-evaluation and/or classroom factors, such as that the language of learning and teaching was only Sepedi, the educator made an effort to speak loudly enough,

the educator provided additional support in the form of worksheets, the educator tried to involve Sarah in classroom activities, and Sarah's group supported her. Classroom observations of the mathematics class showed that the mathematics educator tried to support Sarah through teaching aids and involving her in group work and classroom activities. It was also observed that his teaching style involved repetitious statements and that he tried to facilitate extra opportunities for support. He repeatedly expressed his need to be workshopped on how to deal with learners with impairment.

Isaac, James, Odette, Adrian, Claus and Paul were learners with HI in School 3, a historically advantaged special school for learners with HI. Their hearing losses ranged from slight to profound hearing losses in one, or both, ears. All had hearing aids, except Adrian. The GASCs of the learners were distributed widely, but were mostly lower than the GASC of learners with no HI. It appeared as if degree of hearing loss, age and motivation, and not school marks, contributed to the lower distribution of GASCs. Overall, the LASC of the learners with HI was low, despite the Afrikaans educator providing practical tips to the learners to improve their work, helping the learners to expand their vocabulary, allowing learners to be spontaneous, addressing individual learners to make sure they had understood, repeating instructions, being flexible, and complimenting and praising them where necessary. The learners appeared divided in their opinion of the Afrikaans educator and Afrikaans as learning area. It is important to remember that their thoughts and feelings regarding the Afrikaans educator and Afrikaans as learning area were compounded by their difficulty in acquiring language and maintaining communication. The lower LASC should not and could not be attributed only to the role the Afrikaans educator played. The MASCs of the learners with HI were much higher than both their GASCs and LASCs, and compared favourably to the MASC of learners with no HI. From the observations, it appeared that a concrete approach to learning, involvement of the learners in the lesson, guidance to the correct answers, ample opportunities for asking questions, individual attention, repetition and direct instruction contributed to the high MASC of the learners with HI in the special school.

### 6.3 CONCLUSIONS IN RESPECT OF THEORY AND PRACTICE

The conclusions will firstly deal with the issue of measurement of the ASC, before addressing any of the research questions relating to the ASC. In line with the main research question and sub-questions, as posed in the summary of Chapter 1, the ASC of learners with HI in different school contexts will be addressed. Thereafter, the role HI plays in the ASC of learners with HI will be discussed, before concluding whether and how the ASC of Grade Seven learners with HI is indicative of the success of the conversion of primary schools to



full-service inclusion schools for Grade Seven learners. The conclusions will also look at guidelines emerging from the research which could improve the conversion of primary schools to full-service inclusion schools. Lastly, the conclusion will deal with some other issues which emerged from the research and which proved to be of importance.

Byrne (1996:241-243) warned that inadequate methods, the absence of instruments for specific population groups and insensitivity for cross-cultural influences were weaknesses in self-concept measurement. As accurate and trustworthy measurement of the ASC of learners with HI was considered paramount in the study, several cautionary measures were taken. Based on the recommendations of several studies (Byrne, 1996:243; Byrne *et al.*, 1992:196; Wigfield & Karpathian, 1991:245) to augment self-reported self-concepts as obtained from the completion of questionnaires with other methods, projection material, and where possible, opinions of educators voiced during interviews, were used as additional ways to collect and verify data in respect of the ASC of learners. To address the absence of instruments for specific population groups, the ASCQ was developed for and piloted on the specific population groups. As far as cross-cultural influences were concerned, the development of the ASCQ in the first languages of the learners and the collaboration of a cross-cultural fieldworker were efforts to take into account the unique contexts the learners found themselves in.

The almost accidental questioning of the learners' understanding of frequency categories of time during the pilot study proved to be invaluable for future assessments in South Africa and even further afield. Instruments which rely on frequency categories of time, might benefit from rethinking what the target population knows about such categories. The assumption that Grade Seven learners in an urban environment in South Africa knew the differences among the words would undoubtedly have led to invalid results, which, in turn, would have led to invalid conclusions and a doubtful contribution to the field of knowledge and possibly fruitless or even harmful recommendations for practice. The lack of certainty among Grade Seven learners, and possibly learners of other grades as well, in respect of the meanings of the words commonly used to denote frequency categories of time has serious implications for curricular assessment, assessment in general, the validity of assessment, the future of learners when recommendations are made on the grounds of invalid results, and the development and translation of multilingual instruments. The educational psychologist should be aware of the possibilities for misunderstanding if the educational psychologist and/or the client are not proficient in the same language.

Contemplating the main research question of the study, the research has not suggested a single and straightforward answer in response to the question, *What is the ASC of Grade Seven learners with HI in the contexts of special and full-service inclusion schools?* From the data it appeared as if school context in respect of full-service inclusion and special schools *per se* did not play a primary role in influencing the ASC of learners with HI, as the ASCs of the two learners with HI in different full-service schools were unrelated. In the historically advantaged full-service inclusion school, Hanno had a LASC and MASC comparable to those of the learners with no HI in his school, and higher, in each case, than all but one of the learners of the special school. His GASC, however, was only in the relatively moderate range. In the historically disadvantaged full-service inclusion school, Sarah's GASC and MASC were the lowest of all the learners with HI, although her LASC lay in the relatively moderate range. It therefore appears that placement in a full-service school was not equally beneficial to both learners with HI. In the special school, there was a wide distribution of GASCs from high to low, a general concentration of relatively low(er) LASCs, and a general concentration of relatively high MASCs, perhaps signifying some school and/or mathematics educator effect.

Given the limited number of learners with HI and schools participating in the study, conclusions cannot be generalised. It does, however, appear that Hanno's experience of success in the full-service inclusion school, based on his GASC, LASC and MASC, was co-influenced by early identification of his HI, technical support in the form of hearing aids, early exposure to specialised education in the special school and the support and accommodations made by the educators. In stark contrast to Hanno, Sarah's sense of failure to bloom in the full-service inclusion school, based on her GASC, LASC and MASC, appeared to be co-influenced by the late identification of her HI, lack of technical support, lack of exposure to early specialised education, and lack of academic support and effective accommodations by the educators. The possibility of intellectual impairment complicating her progress in the school cannot be ignored, but also cannot be offered as a reason for her lack of progress, as the validity of the results of the intelligence test is under suspicion.

The research was also directed by three sub-questions. The first sub-question related to the role HI plays in the ASC of Grade Seven learners in special and full-service inclusion schools. In the special school, the GASCs of the learners with HI were widely distributed, and did not always appear to be related to the learners' mean achievement marks across all the learning areas. The GASC did, however, seem to relate to the degree of hearing loss experienced by the learners: if the hearing loss was small to moderate, or located in only one ear, it appeared that those learners were able to attain a higher GASC; if the hearing loss



was serious and in both ears, the learners appeared to have a lower GASC. Serious hearing loss could also be related to the age of the learners, with learners with a serious hearing loss being older than the other learners; therefore, age and degree of hearing loss probably played a role in the GASC of learners with HI in the special school. However, despite serious hearing loss and being older than the other learners in his class, Hanno was still able to attain a moderate GASC, suggesting that learners with HI in full-service inclusion schools might evaluate themselves more favourably than learners in the special school; however, in the other full-service inclusion school, Sarah, whose hearing loss was less severe than Hanno's, but who was also older than her peers, and who had a low GASC, draws attention to the fact that not all learners with HI fare well in full-service inclusion schools. Several prerequisites appear to be operant in determining the success of the inclusion of learners with HI. These prerequisites will be dealt with shortly as guidelines for the conversion of schools to full-service schools, in answer to the third sub-question.

Despite the specialised support in the special school, all but Odette had a moderate to low LASC. Therefore, it appears that HI greatly influenced the LASC of the learners in the special school. As Hanno's LASC was much higher than the LASC generally of the learners in the special school, more than only HI seems to have contributed to the moderate to low LASC of the learners in the special school. The influence of the Afrikaans educator at the special school, the history of teaching language at the special school and limitations to the data because of the small sample size should also be considered when trying to understand the low LASC at the special school. As Hanno had severe and profound hearing losses in both ears, and a high LASC, the degree of hearing loss does not appear equally to influence the LASC of all learners with HI. Hanno's first language educator thought that Hanno's LASC was unrealistic, but that his LASC enabled him to cope well in the class. Sarah's LASC was also thought to be unrealistically high, but without the benefit that she was coping well in the first language class.

The MASC of the learners with HI in the special school was high. Disregarding the specialised nature of their mathematics instruction, one is tempted to conclude that it appears as if HI does not play a role in the MASC of the learners with HI in the special school, but Hanno, in School 1, was also greatly supported by the mathematics educator, and had a high MASC. It would therefore perhaps be more accurate to conclude that, provided that there is adequate and effective support for the learners with HI, HI does not seem to play a strong role in the MASC of learners with HI. Some evidence for such a line of thought can be found in the MASC of Sarah, who did not receive effective support or

accommodations in mathematics, and had a low MASC. (School 2 had the lowest MASC of all the schools in the study.)

The second sub-question addressed the outcome(s) related to the ASC of the Grade Seven learner with HI, which could be regarded as indicative of the successful conversion of primary schools to full-service inclusion schools. Given the premise that the ASC of learners with no HI can be regarded as the norm in full-service inclusion schools, one could tentatively suggest, based on Hanno' ASC profile, that when the ASC of a learner with HI compares favourably with the mean ASC of learners with no HI in a class, successful conversion has taken place. Specifically, a GASC and LASC which are moderately lower than the GASC and LASC of the learners with no HI are acceptable, and a MASC that is similar to the MASC of the learners with no HI is acceptable.

The quote at the beginning of the chapter reflects some of the confusion and conflict that educationists and educators contend with on a theoretical and practical level in schools, when dealing with the many faces of diversity, as prevalent in full-service inclusion schools. The third sub-question addressed guidelines that emerge from the research, to improve the conversion of primary schools to full-service inclusion schools in order to maintain and/or enhance the ASC of learners experiencing HI specifically, and BLP generally. When suggesting guidelines, the temptation is to give a bulleted list of do's and don'ts. But context reigns supreme: what works in one school or context would not necessarily work in another. For example, one could not expect the principal of School 2 to use scarce resources to decrease the class size of the one class containing a learner with HI, when many of the other classes contain learners with other impairments, and many learners are most basically in need of food, clothes and other basic amenities. It might be wise to note that some schools have the capacity for implementing inclusive education policy, but not the readiness. Other schools are ready, but lack capacity. Ideally, guidelines would work best in schools which have both the capacity and the readiness.

In 5.7 several factors, mostly from the qualitative data, which might have influenced the ASC of learners with HI, were loosely ordered into categories of effectiveness, or possible influence; hence guidelines to improve the conversion of regular schools to full-service inclusion schools could be construed from these. Based on the ASCs of the learners with HI in the study (refer to 5.6), the 'categories of effectiveness' relating to the Department of Education, type of schools, principals' commitment to inclusive education, learning areas, peer and adult support, and personal disposition apparently contributed indecisively to the ASC of learners with HI. Other 'categories of effectiveness' relate to the resources available

to a school and the resourcefulness of principals, which probably influenced the ASC of learners with HI. Lastly, 'categories of effectiveness' relating to early identification of HI, appropriate technical support, early specialised learning support, and the accessibility and knowledge of educators appeared to contribute decisively to the ASC of learners with HI. Even though its contribution to the ASC of learners with HI was vague, the Department of Education cannot be excluded as a main role player in the conversion of schools, especially as the Department initiated the conversion; therefore, the Department of Education, the principals and the educators must be regarded as main role players. Of these three, the educators appear to bear the brunt of the conversion as they ultimately have to deal with the learners with impairment in their classes. Of course it is acknowledged that educators cannot work in isolation and that they need support from their principals, the Department of Education and parents; and that the lack of, or availability of, resources can easily render the task of accommodating learners with HI complicated to a greater or lesser degree.

The Department of Education has the ongoing responsibility to explain its inclusive education and participation policy to the educators. In School 2, for example, the educators appeared to try hard to include Sarah, but little true participation by Sarah in the learning content was observed. The other learners with HI in the study were able to participate actively in the classrooms. It even merits consideration whether the Department has perhaps not fully thought through the essence of inclusion, namely participation itself, and in its implementation strategies perhaps got stuck in the post-apartheid euphoria of simply in principle achieving a state of no separation between people with differences. The Department's apparent reluctance to consider other schooling opportunities for Sarah supports this line of speculation: the agenda seems to be to include learners, no matter the cost to the individual, for the sake of inclusion, and not for optimal participation.

It is thought provoking to note that it was not training in the principles of inclusive education which had made some educators deal more successfully with learners with HI than others. It was educators who consciously and consistently applied the principles of teaching a specific learning area and assessment, and who understood the specific academic needs of the learners with HI. They were specialists in their respective fields of teaching. They apparently had acquired their expertise through their training, attendance of courses on HI (the educators in the special school), reflection on experience, and teaching. Therefore, most guidelines to improve the conversion of primary schools to full-service inclusion schools would certainly centre on equipping and empowering educators.

In line with the need '*to be workshopped*' voiced by some of the educators, the Department may need to put much effort into training the educators in full-service schools. An understanding that most educators in South Africa grew up in an education system where learners with impairments were separated from others in special schools or classes, emphasises the importance of careful explanation of alternative systems and ways of educating learners (based on Carrington & Elkins, 2002: 2). The content and presentation of the training workshops evidently need to be thought through more carefully. One of the educators was of the opinion that, although the Department of Education had presented courses on how to deal with learners who posed various challenges, the courses lacked specific content and did not contribute to the knowledge or skill base of the educators. She felt that she herself knew more than the presenters had done and could have presented the course(s) herself. The Department should then realise that it does not have to, and cannot, take responsibility for imparting knowledge in respect of learners with HI. The educators and staff of the special schools, and at some full-service schools, appear to be by far more experienced than most officials from the education support services.

Ironically, a workshop led by the Gauteng Department of Education (2000b) stated that educators '*were not fully enabled*'. If they had been, they would have been able to cope with all the demands put to them. Educators therefore have specific in-service training needs. From observation, it seems that educators need to be made aware of practical day-to-day arrangements to be made for learners with impairment, accommodations to their teaching and assessment, how to involve learners in the classroom activities, and how to facilitate peer support. The workshops should not cover general issues, but should deal with a specific impairment or need for support. General accommodations, such as using teacher aids, appear to have less than general effect. Knowledge and skills of impairment and support should obviously be acquired at tertiary level by new educators, to lessen the burden on in-service training.

It does not appear as if the implementation of inclusive education policy is without mishap. Incongruencies in policy and practice not only contribute to incorrect assumptions of inclusive education, but also harm the future of learners. Educational psychologists, in collaboration with the Department, can play a valuable role in the implementation of inclusive education by 'translating' the policy requirements to feasible practice, so that educators, learners and even parents can benefit from the policy. The preventative role that educational psychologists can play and the importance of macro level involvement in policy implementation in schools are once again emphasised by the findings of the study.

The Department also needs to prevent unsynchronised functioning among the systems involved from casting up additional barriers to learners with HI. Designating certain schools as full-service schools and encouraging parents to enrol learners with HI in full-service schools should not be done unless the necessary support can be given by various other departments, such as the Departments of Health and Social Development. The support entails a range of interventions which include determining the learners' needs, such as assessing the degree of hearing loss, evaluating and supplying hearing aids, arranging for ear operations, preferential seating in the classroom, visual exposition of content, arranging for government grants, or even placement in a special school. Although Sarah had been on the 2003 list for learners in need of assistive devices, and perhaps even on lists of previous years, she had not received hearing aids. The visits to the Ear, Nose and Throat (ENT) Clinic had been undertaken on the initiative of the mother. It is obvious that resources are a problem, as many other learners also await assistive devices, for example crutches, spectacles, wheelchairs and prostheses. The possible harm<sup>1</sup> done to learners' lives when promises appear empty, however, is simply too great for the Department of Education to continue with inclusion for the mere sake of following policy. It is ironic that the EWP 6 allows for the existence of special schools, and acknowledges that some forms of impairment require support in special schools, or resource centres, but that the officials apparently are less willing to use the resources of special schools. When deciding on whether placement in a full-service school would be the most effective learning environment for learners with HI, the data tentatively suggest that learners whose HI was identified early, who had received appropriate technical support and who had had exposure to early specialised learning support may benefit more from eventual placement in full-service schools. Once again, it seems that learners whose parents have access to resources, be it sufficient finances or good medical aid funds, also have access to more opportunities in life.

An issue of real concern emerged from the sampling process. Appendix A describes the almost futile search for Grade Seven learners with HI to participate in the study. The difficulty in locating the learners with HI might on the one hand be confirmation of the success of the inclusive education and participation policy: learners are not labelled according to their impairment, but treated as other learners with no impairment. On the other hand, learners with HI have specific academic support needs, and failure to meet the needs can have detrimental effects on their school careers and academic progress, as Sarah is experiencing. There is a tendency to identify learners with impairment only according to their needs for support (Department of Education, 2002:19), but challenges within the education

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<sup>1</sup> Please refer to the Epilogue.

system would seem to nullify the benefits of such an identification system. Appendix A2 mentions that an official list of learners in need of assistive devices (for example hearing aids) was scrutinised for possible participation in the study. Seven learners were found who met the sampling criteria, but further investigation revealed that they did not require the devices anymore. The fact that none of the seven learners who had applied for assistive devices in 2002 seemed to require any devices during 2003, gives rise to several concerns. Firstly, it appears as if the educators, who had compiled the list, had experienced difficulty in correctly identifying HI. An obvious related concern is whether other barriers of impairment can be correctly identified. It can also be questioned whether it is the task of the educator to identify impairment, and if so, why they are apparently so poorly equipped to deal with the task. The Education Support Services should perhaps rethink its role regarding learners who become noticeable because of their behaviour. The fact that educators incorrectly identified some learners with HI may indicate that some educators tend to look for reasons for the poor performance of learners within the learners themselves, and that they are perhaps not aware of the existence, influence and contribution of other BLP that are extrinsic to the learners. The Department of Education has still to do much advocacy in respect of understanding learner needs in context.

The mere identification of impairment is never the main purpose *per se*. Establishing the appropriate support required by the learner with an impairment should always be the purpose of identification, which leads to the second concern. The learners who were identified on the list for assistive devices noticeably required some educational support, but the type of support required, was misjudged. Several questions come to mind: What did those learners really require to fully participate in the education? When and how would their real needs for support be established? How many other learners in schools experience barriers to their learning and participation but are inappropriately supported, or even remain unsupported? In other words, an incorrect identification of the support required by the learners on the list may also be applicable to learners not on the list.

A third concern is the time, money and human resources that would probably be spent to assess the hearing ability of the learners on the list, without reaching those learners who could really benefit from hearing aids. The poignant question begging an answer is, where the learners are who require learning support because of their HI. Statistics regarding the prevalence of HI vary. In the study, close to 1000 Grade Seven learners<sup>2</sup> were targeted

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<sup>2</sup> The final five participating schools had approximately the following number of Grade Seven learners: School 1: 130, School 2: 240, School 3: 11, School 4:140, and School 5: 160. Other schools that were also consulted had the following number of learners: School A: 140, School B: 120, School C: 80;



through consultations with schools. Only two learners with HI were found (0.2% of 1000). Given that South Africa is a developing country where a large portion of its population is much more prone to debilitating diseases and lack of proper medical care than the population from developed countries, it is highly likely that the prevalence of HI is higher than 0.2%<sup>3</sup>. It should be considered whether the learners with HI are enrolled in schools, but remain unnoticed, or whether they drop out of school at an early age, or whether they do not go to school at all. It seems that many learners could benefit greatly if educators were better acquainted with the procedures of identification of HI, and/or health services could regularly assess the hearing ability of primary school learners. The implementation of early childhood intervention programmes would obviously support learners with HI from a very early age, thereby preventing learning breakdown and promoting optimal development of potential.

The important role that special schools can play in providing learners with HI with effective language and coping skills cannot be ignored. Hanno seemed to have benefited greatly from the early specialised education at the special school. The data suggest that early exposure to such specialised support might enable learners with HI to cope more successfully in full-service inclusion schools than would have been the case without the support, as Sarah's case shows. The late chairperson of the Deaf Federation of South Africa (DEAFSA), Dr Elsabé Smuts, held the conviction that learners with HI benefited when placed in a special school during their early school years, before attending a regular or full-service school. When learners with HI started out in regular or full-service schools, they usually experienced failure because of their inability to keep up with the language demands of the school; therefore, the Department of Education should perhaps consider expanding the capacity of special schools for learners with HI during the formative years. The educators at the special schools possess an immeasurable amount of expertise in respect of supporting learners with HI academically, socially and emotionally. Educators from other schools could greatly benefit if these specialist educators could share experiences and suggest practical day-to-day arrangements, accommodations for teaching and assessment, ideas for class participation and effective ways to use peers for support.

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School D: 120; School E: 120. The total number of learners involved in the process of identifying schools was in excess of 1000.

<sup>3</sup> It has been estimated that 10% of the South African population contend with impairments, and that 3.5% of this 10% of the population (0.35%) have some degree of hearing loss (The Centre for Deaf Studies, n.d.: on-line doc.), which implies that three to four people in 1000 people contend with HI. Applied to the schools consulted, at least three to four learners with HI should have been found. The possible number of learners with HI drastically rises in the light of Donald *et al.*'s (1997:69) estimate that much more than 10% of South Africa's learners are in need of special support. This line of speculation is supported by findings in 2.6.1 that the census recorded that 0.94% of the South African population had HI (SignGenius, n.d.: on-line doc.), thereby moving the upper-limit of learners with HI to be found to at least ten.



The lack of overall support from the data for the Big-fish-little-pond Effect (BFLPE) (refer to 3.8.1) casts further doubt on the applicability of the BFLPE to learners experiencing HI and BLP. Briefly, the BFLPE predicts that, for two learners with the same abilities, the learner in the academically better school will have a lower ASC than the other learner (Strein, 1993:280), since the learners of the academically better school, with whom the learner compares his or her academic abilities, do work of the same or higher standard than he or she does. An assumption based on the BFLPE is that transfer of a learner with HI from a special school to a regular (or full-service) school, would lead to a lower ASC. The ASCs of Hanno, however, contradict the BFLPE as he registered ASC means higher than most of the learners in the special school. Sarah's ASCs, however, support the BFLPE as her GASC and MASC were lower than the mean GASC and MASC in the special school, even though School 2 did not necessarily have a higher standard than School 3. The basic assumption of the BFLPE, that learners form their academic self-concepts chiefly by comparing their academic achievements with those of other learners in their class or school, is regarded as too simplistic to explain differences in ASC. Other influences, such as feedback from educators, parents and peers, previous experiences, and expectations of the learners, parents and educators, should also be considered.

#### 6.4 LIMITATIONS OF THE RESEARCH

By knowing the limitations of the research, the value of the conclusions and the extent of applicability of the findings and conclusions to other samples and populations can be assessed. The study distinguishes between functional and accidental limitations. Functional limitations are inherently part of the research design, if recognised can be made to contribute to the validity and reliability of the study, and, as such, paradoxically can be regarded as strong points in the research. Accidental limitations are oversights in the research process which endanger the validity and reliability of the study. On a more positive note, discussion of the limitations will be followed by recommendations for future research. Some of the recommendations logically flow from the discussion of the limitations and others have originated from the conclusions.

Limitations in the study centre mainly on limitations that the research design brings. An attempt was made to limit variables in the research; therefore, only one district and only Grade Seven learners were involved, and only HI as a BLP was selected. By limiting the variables, the data in respect of the ASC of Grade Seven learners with HI were cleansed as far as possible from the confounding influences of other variables; however, variables which

could also have influenced the ASC of learners with HI were thus not reckoned with. Some of the variables that have come into play by limiting the research to a single district relate to other interpretations and implementations of the inclusive education and participation policy by other districts, other educator in-service training programmes, other socio-economic contexts, other resources available to the schools and districts, and other (and more) schools representing the special and full-service school contexts in South Africa. Although the sampling of full-service schools in contrasting socio-economic contexts was a deliberate attempt to incorporate more than one socio-economic context, the study, for example, only involved urban schools and not rural schools, where historically disadvantaged schools apparently have even less resources than their counterparts in cities. The co-ordinator of the Education Support Services of the selected district identified the possible full-service schools and the possible regular school counterparts for participation in the research. It might have been that familiarity with certain schools because of challenges at the schools or personal preference could have biased the identification of schools. Bias could also have crept in by an inclination to identify the best examples of full-service schools, as opposed to schools where the inclusive education policy was not implemented well at the time of the research.

Although the sample is of an acceptable size, the number of learners with HI in the sample amounted to only eight, and the different groupings of learners in the sample, such as learners in advantaged or disadvantaged contexts or learners speaking a particular language, are sometimes too small to allow for the generalisation of findings with confidence, although the findings can be extended to similar conditions. The small sample size of learners with HI, however, made possible the in-depth qualitative investigation of the dynamics of the ASC. The strong emphasis the study has placed on context per implication limits the generalisation of the findings to other populations with different contexts, but also makes the available results and findings more credible and trustworthy in respect of the particular contexts in which the work was done.

Another functional limitation of the research design addresses the role of the researcher as observer in the classroom. Section 5.6 mentioned that it might have been possible that the credibility and trustworthiness of some of the observations were tainted by the presence of the researcher in the classroom. As the credibility and trustworthiness of the observations were verified by most of the educators, it is argued that the value of observation of the dynamics of the ASC of learners with HI surpassed the possible detrimental effects of the influence of the researcher in the classroom.

Another limitation, an accidental limitation, centres on the oversight during the pilot study when the incorrect Sepedi option of *never* was chosen for the ASCQ, as explained in 4.9. Fortunately, both the chosen option and the correct option were understood by at least two thirds of the learners, indicating that both words were relatively well known. Moreover, the correct option was considered to be more of a slang expression than the chosen option. Additionally, in contrast to the pilot study which tried to determine the most appropriate frequency categories of time and therefore contained no explanations, the administration of the ASCQ specifically included an explanation of the words used as frequency categories, which might have countered some of the confusion in respect of the meanings of the words.

## 6.5 RECOMMENDATIONS FOR FUTURE RESEARCH

An obvious recommendation is to redo the pilot study to determine which Sepedi word represents the *never* response the best. In redoing the pilot study, the investigation could also be extended: As some of the results implied that the learners' choice of word might possibly have been a function of the other words in the set, the final version of words representing the frequency categories of time selected by the learners should be incorporated in another round of sorting by the learners. By doing this, one can verify that the selected words are indeed understood best by the learners and indeed represent the categories they are supposed to represent; therefore, the selected words would cause the least confusion and would be the most appropriate to validly reflect the learners' stance in respect of the construct of the assessment instrument. Until such an investigation has been done, serious note must be taken of the risk of doubtful validity and reliability of measuring instruments where frequency categories are used in indigenous languages in general, and in the ASCQ specifically. The age groups for which the frequency categories of time create confusion should furthermore be established, for example whether or not learners in the secondary school or tertiary institutions, or adults in the place of work understand the frequency categories. The advantage in reliability of a standard response sequence, or one where the neutral option is placed separately, has not been established conclusively, especially not for learners with HI (refer to 4.9.3). By replicating the pilot study, or in another study, using the standard and the changed response sequence, clarity in this regard may be found.

Another obvious recommendation for further research is to replicate the main study with a bigger sample size, especially with more learners with HI, and to replicate of the study with other impairments. To fully understand the impact of inclusive education and participation on the learner, other dimensions of the self-concept, such as the social, emotional and physical

self-concepts of learners with impairments, should also be investigated. The difference in the LASC and MASC of learners with HI gives rise to questions concerning the ASC in other learning areas, especially since the GASC appeared to be lower than the LASC and MASC for some learners with HI. Learners in other grades should also be involved. The study suggested that some learners with HI could benefit from placement in a special school during the early school years. The study focused on learners in the last year of primary school, as the EWP 6 is first targeting primary schools in the conversion process, but it remains unknown how learners with impairment would fare in full-service inclusion secondary schools in South Africa, especially in the Further Education and Training (FET) band. Many of the current learners with HI, and other impairments, in full-service primary schools may opt for placement in full-service secondary schools. Timely research regarding placement at a full-service secondary school during the pilot study of the South African conversion of some schools may be of benefit to future secondary school learners with impairment. Related to the issue of inclusion of learners with HI would be the effect of inclusion on learners with no HI, or no impairment, although some data already exist in this regard, as the nature of inclusion relates to all learners and not only those with impairment.

The issue of early identification of HI and other impairments needs constant attention in research in South Africa. It is stated once more that the earliest identification of impairment is required to render effective support, and not to label learners. As it was found that access to resources seem to contribute to higher ASCs, the issue of the availability, accessibility and mobilisation of resources in historically disadvantaged contexts especially should be researched. Questions to consider are what types of support require resources as a prerequisite and what can be done without resources. Linked to the topic of resourceful utilisation of resources, or assets, is the question of the (reflective) practice of the educators: why some educators are more successful than others in accommodating learners with HI, and probably other impairments. It might emerge that certain impairments can be accommodated more easily than others and that, depending on the impairment, the resources available and the capacity of the educators, specific impairments should rather not be included in full-service schools.

As Hanno benefited from Pete's support, but Sarah did not seem to benefit as much from the group she was placed in, the effective use of peer support in accommodating learners with HI, and other impairments, could be researched. Ideally, peer support should not replace the educator, should be effective in supporting the learners with impairment, and should have benefits for the peers who support the learners with impairment.

The high mean ASC of the learners in the historically disadvantaged schools compared to those of the learners in the historically advantaged schools also merits further investigation, especially as there does not seem to be a correlation between the mean achievement marks achieved by the learners and their ASCs. The possible reasons contemplated in the study should be further explored.

## 6.6 CONCLUDING COMMENT

I would, in line with an interpretivist approach, like to personalise the last section of my work, thereby giving up the distance I have tried to maintain between the data and myself. By distancing myself from the data (and I am aware of some of the debates about objective and subjective involvement of the researcher with data), I have tried to be a valid and reliable research reporting instrument, or tool. In personalising this last section, I do not intend to be less valid or reliable as a tool (nor to imply that participant researchers are not credible or trustworthy), but to indicate that I have been part of this study, or that this study has been part of me, for a long time, and that the study (and participants) are worthy of personal respect as an entity that was conceived, born and nurtured to become what it wanted to become.

I concur with the conclusions that the ASC of learners with HI may be an indicator of the congruency between the inclusive education and participation policy of South Africa and its implementation in the particular context, and that its successful implementation relies heavily on the educators. They truly make the difference. The magic trick would be for the Department of Education to invest in the creation of good educators. However, I agree less with the dire circumstances Sarah finds herself in at present, in contrast to the good prospects Hanno presently has in store. Although I have resigned myself to the idea that prosperity cannot be for everyone, I often wonder how Sarah's life would have been had she been accepted in a special school. Realising that there is not a special school in the area where she grew up, unless she had gone to a hostel, foregoing a close relationship with her mother, made me realise that had the policy of inclusive education and participation been implemented earlier, and had educators been (much) better informed, and had the health services functioned better, Sarah might actually have had a better future in store. However, if Sarah, with the small figure and shy smile, who wanted to write nicely, perhaps had to be one of the victims in smoothing out the rutted track of policy implementation, then maybe many more Sarahs could benefit from her experiences in the future, even though, probably being jobless and impoverished, she would be unaware of her contribution to a macro level decision concerning inclusive education and participation policy and implementation. Still,

when the implementation of policy loses synchrony with its supposed beneficiaries, the fear of many might be realised, namely that the inclusive education and participation policy will prove to be yet another policy of the Department of Education to suffer from training, implementing and resourcing difficulties, like Curriculum 2005.

The key issue of this thesis is, *How does academic self-concept reflect the practices of inclusive education and participation in different school contexts?* The usefulness of knowledge of the state of the ASC has been established for inclusive education and participation practices. This learner-centred indicator should now be put to use to confirm, modify and/or contribute to future inclusive educational practices in South Africa.

## EPILOGUE

### WHAT HAS BECOME OF THE PARTICIPANTS?

I have been able to follow the progress of only three of the participants. Apparently Hanno's parents enrolled him in a private school for his secondary education. The classes are said to be smaller, and, therefore, he will/is likely to receive more individual attention than in a public secondary school. He also participates in provincial cricket for the deaf and hard of hearing, and has made the team.

Sarah is in the unfortunate position that she is too old for the education system to be compelled to accept her as a learner. She was conditionally transferred to Grade Eight at a regular secondary school. In Sarah's case a 'conditional transfer' implies that she did not meet the criteria to pass Grade Seven, but that she was allowed to progress to the next grade because of her age. Sarah's progress in the secondary school was exceedingly slow, and her mother was very worried. Sarah managed to achieve an average of only 18%. On request of the mother, a speech therapist was contacted to assist Sarah in her vocabulary and pronunciation, and to facilitate the making of accommodations by the school. She was assessed by a psychologist at a special school for learners with HI. The assessment took place in English and, much to her mother's dismay, Sarah was said to function at the level of a Grade One learner. Her apparent level of functioning, combined with her age (she was older than 16 years), allowed the special school to send Sarah to a special school for learners with intellectual impairment, but the mother had already been to the school, and reckoned that Sarah was able to do more than the learners at the school. Other special schools were contacted, but no school was willing to take Sarah because of her age. The schools were also filled to capacity and could not make an exception for Sarah. Sarah then attended evaluation for placement at a well-known school, under the auspices of a church, for learners who are deaf and with HI, but was told that she did not know sign language and was therefore refused admittance. Another school for learners with HI also refused Sarah, because she did not stay in the area. Finally, Sarah's mother heard about a clinic which offers skills courses every Thursday. Sarah currently attends these classes. Had Sarah been referred to a special school earlier, she probably would have been accepted, and taught communication and life skills so that she would have had a better chance to support herself in the future.

James is still at the special school for learners with HI, and is receiving support from the educational psychology student as reported. Apparently, he is making good progress.



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## APPENDIX A

### CHANGES IN THE RESEARCH DESIGN

#### **A1 Change in respect of full-service inclusion schools**

According to the EWP 6 (Department of Education, 2001: 42-43), the immediate to short-term steps of policy implementation stipulated the designation, planning and implementation of the conversion of 30 primary schools to full-service inclusion schools during a three-year period (2001 – 2003). Initially, all the primary schools (approximately three schools) designated by the Gauteng Department of Education (GDE) to participate in the first phase conversion to full-service inclusion schools, would have been approached to participate in the research. Contrary to the short-term planning of the EWP 6, the GDE only finalised their selection of primary schools during the beginning of 2003, with the aim of implementing the short-term steps of the EWP 6 in 2004<sup>1</sup>. Because of, amongst other reasons, the time constraint, another field within which to investigate the ASC of learners who experience BLP in South African school contexts had to be found.

Under the visionary leadership of a former district manager, one of the Tshwane districts of the GDE had already started to implement an inclusive education and participation policy in their schools, even before the promulgation of the EWP 6. The district contains regular schools, as well as special schools. Several 'regular' schools operate according to the principles of inclusive education and participation, and can be regarded as examples of schools striving towards becoming complete full-service inclusion schools. Consultation with the co-ordinator of the education support system for that district regarding research in the district proved to be favourable, pending formal permission granted by the GDE, which was subsequently obtained.

#### **A2 Change in respect of regular schools**

Initially, the research design called for regular schools which had enrolled Grade Seven learners with the selected impairment. The purpose was to compare the ASC of learners with the selected impairment in special schools, the ASC of learners with the impairment in regular schools where no or few accommodations are made, and the ASC of learners with the impairment in full-service inclusion schools where all the required accommodations are made. After identifying the full-service inclusion schools, the district also identified three

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<sup>1</sup> Recent news from the Department of Education is that the implementation of the short-term steps will not commence even in January 2005, as provinces "*have still not met the deadline of achieving certain milestones set for 2003.*" (Makgalemele, 2004). Apparently money which was promised for the implementation was not received (Makgalemele, 2004).

corresponding regular schools. By that time, based on the potential special schools involved, and the learners with impairment in the full-service schools, HI had been selected as an impairment to investigate in the study. A survey at the identified regular schools, indicated no Grade Seven learners with HI. As the original research design called for learners with HI in full-service, special *and* regular schools, a search for learners with HI in regular schools began.

During the end of 2002, the district compiled a list of assistive devices needed per school and per grade to support certain learners to participate fully in their education. As the research was to be conducted in 2003 with learners who were in Grade Seven during 2003, the 2002 list was scrutinised for Grade Six learners who had requested hearing aids. Four schools were found, one of which had already been selected as a full-service inclusion school, and another which had recently been involved in an extensive research project conducted by the Department of Educational Psychology of the University of Pretoria, South Africa. For fear of over utilisation and possible feelings of exploitation, the latter school was not considered an appropriate school for the research. The remaining two schools had respectively four and three learners each who purportedly required hearing aids. When the schools were visited, the educators reported that classroom seating had solved the alleged hearing difficulties and/or that there were no learners with hearing problems in 2003. At one school, however, a Grade Seven learner was reported to always wear earplugs; hence hearing difficulties were suspected. A full audiological assessment at the Department of Communication Pathology of the University of Pretoria, South Africa, indicated normal hearing. At the other school, one learner who continued to do poorly despite preferential classroom seating piqued interest. Once again a full audiological assessment indicated normal hearing, although serious self-handicapping in the form of pretending to be hard of hearing was observed.

Phone calls to schools in the district which appeared similar to the full-service inclusion schools already selected, were made to enquire regarding Grade Seven learners who might experience HI. No such schools were found.

According to education departmental policy, each learner must have a profile at school, compiled and kept up to date by each class educator during each year, in which important information, progress reports and examples of class work are filed. Such a profile would be a good reflection of the learner's school career, and could contribute valuable information to the study. According to a visiting nurse at a school, the Department of Health annually screens Grade 1 learners for visual and hearing ability, and Grade Seven learners for visual

ability only. Therefore, the profiles might also contain important information regarding the hearing ability of each learner, as screened by the Department of Health, when the learner started school. Unfortunately, the policy was only implemented during 2002, and previous information was not recorded. Two principals from schools in historically disadvantaged areas were adamant when they were asked that there was no way to access any information regarding the learners prior to 2002. Schools in historically advantaged areas, however, did have profiles of learners since the start of their school careers. In adherence to the initial research design, however, it would have been futile to search for learners with HI in historically advantaged regular schools, when there was no way to search for learners with HI in historically disadvantaged regular schools.

An educator from a school in a historically disadvantaged area where the ASC questionnaire was to be piloted<sup>2</sup>, approached the researcher about three Grade Seven learners who talked little in class, required repeated individual instructions, struggled to make progress and who appeared to be socially isolated. An impromptu screening for auditory discrimination and discernment in volume indicated one learner who might be experiencing HI. A full audiological assessment yet again indicated normal hearing.

As no regular school in the district could be found that had a Grade Seven learner with HI, it was decided to slightly alter the research design. Instead of comparing the academic self-concepts (ASCs) of Grade Seven learners with HI in regular schools with those of Grade Seven learners with HI in special and full-service inclusion schools, the ASC of learners in the regular schools would be used generally as an indication of the ASC of Grade Seven learners. No classroom observations would be done in the regular schools, as no learner with HI could be observed. Educators would also not be interviewed, as no accommodations for HI were being made. The two schools finally selected as the regular schools in the study, were both identified by the district as schools corresponding to each of the selected full-service inclusion schools.

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<sup>2</sup> On account of the cooperation and interest shown by a specific Grade Seven educator, and identification of the school by the Department of Education as a regular school similar to one of the full-service inclusion schools already indicated for the research, it was decided to involve the school in the main study, provided there was a learner with HI in Grade Seven, and not in the pilot study. Besides assisting in the research process in a generous way, it was felt that the educator could benefit professionally from her participation. Her participation would, amongst other things, sensitise her for the different learning support requirements of the learners and the range of possible BLP operant in her school and classroom. She would also receive first-hand feedback regarding the results of the study. The pilot version of the protocol for the first educator interview had already, however, been conducted with this educator.

Ironically, during the last two weeks of fieldwork a regular primary school in the district that had a Grade Seven learner with HI was found – a classic example of opportunistic sampling (Creswell, 2002: 196). Sadly, despite permission from the GDE and the parents of the learner to conduct research during the following school quarter, the school was unresponsive to several requests to participate in the research. It was thought that involving the school would contribute valuable data regarding the ASC of learners with HI in regular schools, as the particular learner apparently performed very well academically, emotionally and socially, as opposed to the two other learners with HI in the full-service inclusion schools who had under-average and average academic achievements.

### **A3 Change in respect of special schools and barrier of impairment**

Initially, it was expected that many different barriers of impairment would be accommodated in full-service inclusion schools. To select one particular barrier of impairment, a survey was to be conducted at all the selected full-service inclusion and regular primary schools for the categories of barriers of impairment found at each. Analysis of the survey results would indicate the prevalence of the barriers of impairment, which would inform the decision in respect of the particular barrier to be focused on in the research, and, therefore, which special school/s to involve in the research.

In the selected district, there were special schools for learners with learning impairment, physical impairment, intellectual impairment, hearing impairment and epilepsy. Although special schools in other education districts could have offered other possibilities of barriers of impairment to investigate, it was decided not to approach other districts, in order to prevent differences in district policy from influencing the data. Diagnostically, learning impairment is a controversial topic worthy of a study on its own; therefore special schools for learners with learning impairment were not a preferred choice. As epilepsy is often associated with learning impairment and learning problems, it would have been methodologically nearly impossible to obtain a clear and pure image of learners who solely experience epilepsy; therefore, special schools for learners with epilepsy were also not a preferred choice. Intellectual impairment would have posed unknown challenges to the theoretical model regarding the ability to evaluate self-perceptions and practical challenges regarding the development, accommodation and implementation of an ASC questionnaire. Special schools for learners with intellectual impairment were consequently eliminated. Therefore, only schools for learners with physical impairment and hearing impairment were preferred choices to consider for participation in the research. As only learners with HI could be found in Grade Seven in the full-service inclusion schools, the selection of the impairment and the special school was obvious, and fortunate.



## **APPENDIX B**

### **SURVEY OF BARRIERS TO LEARNING AND PARTICIPATION**

The survey was administered by the researcher in a one-on-one situation with the principal, the head of educational guidance at the school or the head educator of the Grade Seven learners. The researcher asked questions to clarify responses, and the participants could ask questions when necessary. With some participants, extensive support had to be provided in respect of the scale which went from 0 to 10. The survey starts on the next page.

**SURVEY OF BARRIERS TO LEARNING AND PARTICIPATION  
(SBLP)**

		<b>FOR OFFICE USE</b>		
Learners' grade	V1	0	7	1-2
Learners' school	V2			3-4
Card number	V3	0	1	5-6
Repetition number	V4	0	1	7-8

**DEAR PRINCIPAL / HEAD OF THE GRADE**

1. A broad range of **learning needs** exists among learners everywhere, also in your school. Often the learning needs become barriers to the effective learning and participation of the learners.
2. Which of the following barriers are found **in the Grade 7 classes** in your school? In the first column, make a cross opposite the barriers that learners in the Grade 7 classes in your school have to deal with. In the second column, please write down as accurately as possible how many learners there are who have to deal with the specific barriers.
3. If a learner experiences **multiple impairments**, please indicate that in the space provided for multiple impairments.
4. Please answer all the questions.

**NOTE:**                    **No one in the school will see your answers.**  
                                   **Please ask if something is unclear.**

**EXAMPLE:**

**In Grade 7 ...**

1. Learners in wheelchairs
2. Visual impairment

<b>X</b>	<b>Number</b>	<b>For office use</b>	
		V000	00-00
<b>X</b>	1	V999	99-99

**PLEASE TURN THE PAGE**

Which of the following barriers are found **in the Grade 7 classes** in your school?

<b>Within the learners themselves:</b>
--

In Grade 7	X	Number	For office use	
1. Physical impairment relating to arms and hands	<input type="checkbox"/>	<input type="checkbox"/>	V5	<input type="checkbox"/> <input type="checkbox"/> 9-10
2. Physical impairment relating to legs and feet	<input type="checkbox"/>	<input type="checkbox"/>	V6	<input type="checkbox"/> <input type="checkbox"/> 11-12
3. Physical impairment relating to cerebral palsy	<input type="checkbox"/>	<input type="checkbox"/>	V7	<input type="checkbox"/> <input type="checkbox"/> 13-14
4. Mild intellectual impairment, excluding Down's Syndrome	<input type="checkbox"/>	<input type="checkbox"/>	V8	<input type="checkbox"/> <input type="checkbox"/> 15-16
5. Severe intellectual impairment, excluding Down's Syndrome	<input type="checkbox"/>	<input type="checkbox"/>	V9	<input type="checkbox"/> <input type="checkbox"/> 17-18
6. Partially sighted	<input type="checkbox"/>	<input type="checkbox"/>	V10	<input type="checkbox"/> <input type="checkbox"/> 19-20
7. Severe visual impairment (Blindness)	<input type="checkbox"/>	<input type="checkbox"/>	V11	<input type="checkbox"/> <input type="checkbox"/> 21-22
8. Hard of hearing	<input type="checkbox"/>	<input type="checkbox"/>	V12	<input type="checkbox"/> <input type="checkbox"/> 23-24
9. Severe hearing impairment (Deafness)	<input type="checkbox"/>	<input type="checkbox"/>	V13	<input type="checkbox"/> <input type="checkbox"/> 25-26
10. Deaf-blindness	<input type="checkbox"/>	<input type="checkbox"/>	V14	<input type="checkbox"/> <input type="checkbox"/> 27-28
11. Little or no functional speech	<input type="checkbox"/>	<input type="checkbox"/>	V15	<input type="checkbox"/> <input type="checkbox"/> 29-30
12. Epilepsy	<input type="checkbox"/>	<input type="checkbox"/>	V16	<input type="checkbox"/> <input type="checkbox"/> 31-32
13. Attention deficit only	<input type="checkbox"/>	<input type="checkbox"/>	V17	<input type="checkbox"/> <input type="checkbox"/> 33-34

**PLEASE TURN THE PAGE**

In Grade 7	X	Number	For office use
14. Hyperactivity only	<input type="checkbox"/>	<input type="checkbox"/>	V18 <input type="checkbox"/> <input type="checkbox"/> 35-36
15. Attention deficit and hyperactivity	<input type="checkbox"/>	<input type="checkbox"/>	V19 <input type="checkbox"/> <input type="checkbox"/> 37-38
16. Learning impairment	<input type="checkbox"/>	<input type="checkbox"/>	V20 <input type="checkbox"/> <input type="checkbox"/> 39-40
17. Severe reading difficulties only	<input type="checkbox"/>	<input type="checkbox"/>	V21 <input type="checkbox"/> <input type="checkbox"/> 41-42
18. Severe writing difficulties only	<input type="checkbox"/>	<input type="checkbox"/>	V22 <input type="checkbox"/> <input type="checkbox"/> 43-44
19. Severe spelling difficulties only	<input type="checkbox"/>	<input type="checkbox"/>	V23 <input type="checkbox"/> <input type="checkbox"/> 45-46
20. Severe numeracy difficulties only	<input type="checkbox"/>	<input type="checkbox"/>	V24 <input type="checkbox"/> <input type="checkbox"/> 47-48
21. Developmental impairment	<input type="checkbox"/>	<input type="checkbox"/>	V25 <input type="checkbox"/> <input type="checkbox"/> 49-50
22. Extremely slow learners	<input type="checkbox"/>	<input type="checkbox"/>	V26 <input type="checkbox"/> <input type="checkbox"/> 51-52
23. Chronic diseases, e.g. HIV/AIDS	<input type="checkbox"/>	<input type="checkbox"/>	V27 <input type="checkbox"/> <input type="checkbox"/> 53-54
24. Down's Syndrome	<input type="checkbox"/>	<input type="checkbox"/>	V28 <input type="checkbox"/> <input type="checkbox"/> 55-56
25. Multiple disabilities	<input type="checkbox"/>	<input type="checkbox"/>	V29 <input type="checkbox"/> <input type="checkbox"/> 57-58

Please specify the multiple disabilities: .....

.....

.....

.....

.....

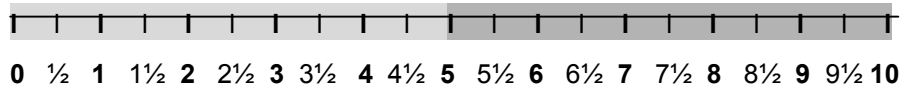
.....

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Some barriers to learning and participation are less visible and therefore need to be assessed on a different scale. On a numerical scale of 0 to 10, where 0 is 0% and 10 is 100%, what is the prevalence of the following barriers to learning and participation amongst the Grade 7 learners in your school? Draw a circle around the number that most accurately describes the situation of your Grade 7's.

EXAMPLE:

55. Abusive parents

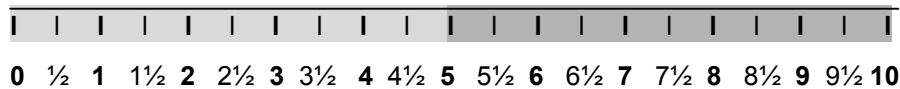


For office use

V9999  0000

**In the family:**

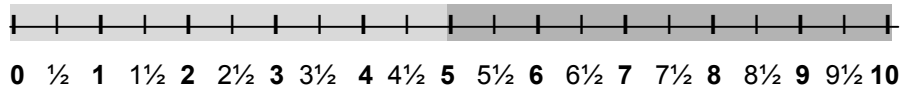
26. Non-recognition and non-involvement of parents



For office use

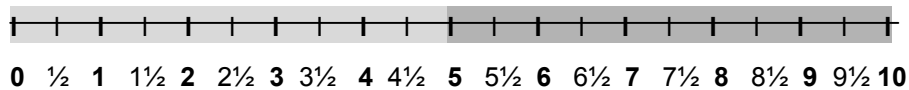
V30  59

27. Without parents and supervision



V31  60

28. Severe behavioural problems

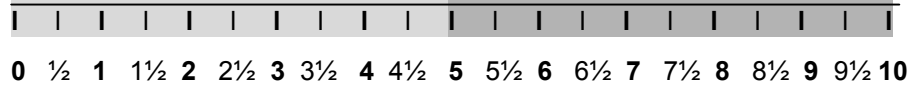


V32  61

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**In the school and education system:**

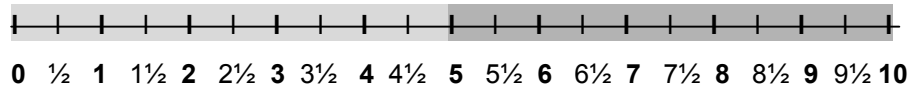
29. Negative attitudes to difference and stereotyping of difference



**For office use**

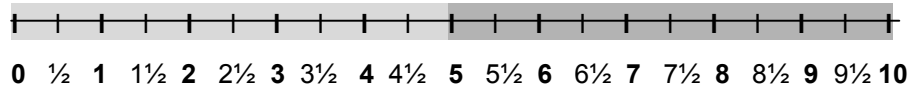
V33  62

30. Inflexible curriculum



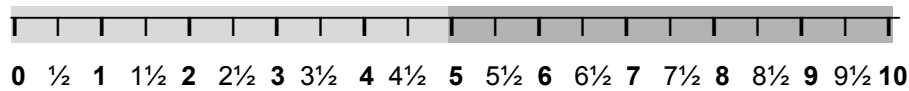
V34  63

31. Inappropriate language of learning and teaching



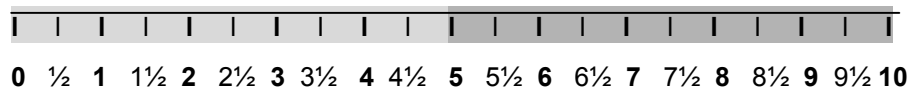
V35  64

32. Inappropriate communication



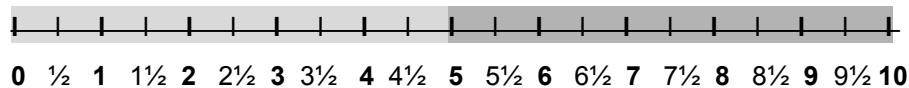
V36  65

33. Inaccessible and unsafe built environments



V37  66

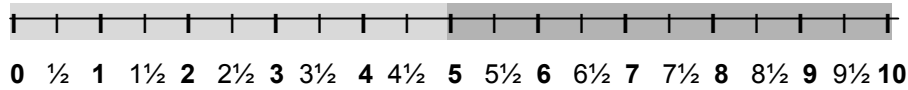
34. Inappropriate and inadequate support services



V38  67

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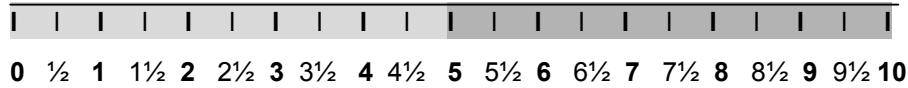
35. Inadequate policies and legislation



For office use

V39  68

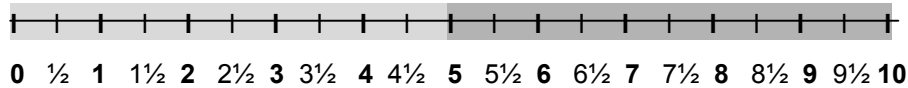
36. Inadequately and inappropriately trained  
education managers and educators



V40  69

**In the economic, social and political systems:**

37. Socio-economic barriers



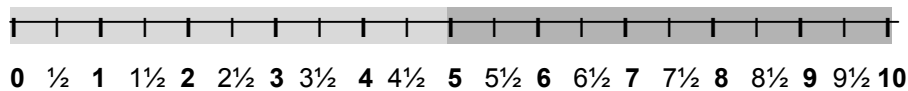
V41  70

38. Particular life-experiences e.g. rape, violence, crime, abuse

Specify: .....

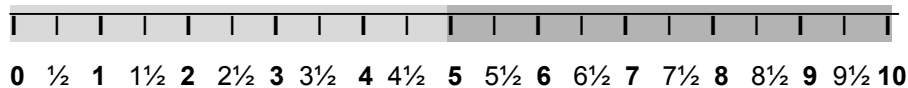
.....

.....



V42  71

39. Substance abuse



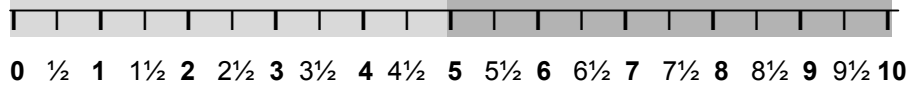
V43  72

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Other:

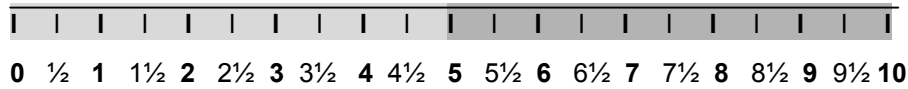
40. Other: .....



For office use

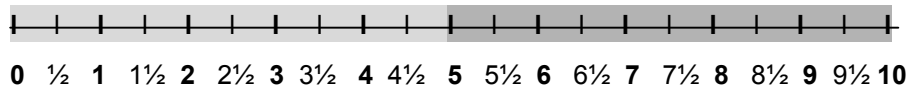
V44  73

41. Other: .....



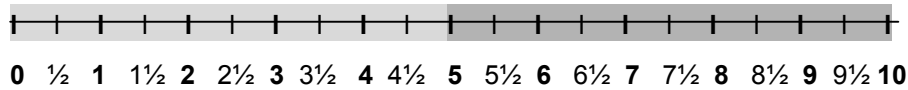
V45  74

42. Other: .....



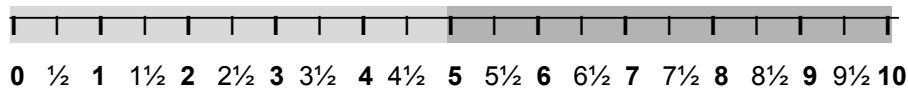
V46  75

43. Other: .....



V47  76

44. Other: .....



V48  77

PLEASE TURN THE PAGE

Comments:

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**THANK YOU VERY MUCH FOR  
YOUR INSIGHT, TIME AND SUPPORT!!**

## **APPENDIX C**

### **SELECTION AND COMPOSITION OF ITEMS FOR THE ACADEMIC SELF- CONCEPT QUESTIONNAIRE (ASCQ)**

The following questionnaires were consulted to make a selection of items for the ASCQ to be used in the study:

- Academic Self-Description Questionnaire 1 (ASDQ 1) (8-12 years) (Marsh, 1990 in Marsh & Yeung, 1997b: 698). ASDQs were also developed for learners of other ages.
- Academic Self-Description Questionnaire (Mboya, 1993, 1994a, 1994b), a translated version of the ASDQ of Marsh for secondary school learners
- Song and Hattie Questionnaire (SHQ) (Hattie, 1992: 162-163). The questionnaire contains a section for academic self-concept, ability self-concept and class self-concept. Other possibilities were also considered.
- Self-concept Scale for Primary School Pupils (SSPS) of Le Roux (Le Roux, 1983a, 1983b). Although the ASC questions are not divided into sections, the questions were sorted into the categories of the Song and Hattie Questionnaire, to facilitate comparison and selection.

QUESTIONNAIRE AND ITEMS	* Correlates statistically significant on 5% level with average school achievement of each learner	* Collectively four questions from the SSPS statistically significant with average school achievement of each learner	* Items indicated by regression analyses as the smallest number of predictors that can explain the most variance in the average school achievement of each learner	DISCUSSION	RESULT
<b>ACADEMIC SELF-DESCRIPTION</b>					
<b>QUESTIONNAIRE 1 (ASDQ 1)</b>					
1. Compared to others in my class, I am good at most school subjects.				Focuses only on a normative judgement of ability and not a criterial judgement of ability.	Reject
2. I get good marks in most school subjects.				Focuses only on a normative judgement of ability and not a criterial judgement of ability.	Reject
3. In most classes, the work is easy for me.				} Since 4 of the 6 questions of the ASDQ are rejected, Questions 3 & 4 are rejected as well.	Reject
4. I am helpless in most school subjects.					Reject
5. I learn things quickly in most school subjects.				} Focuses only on a normative judgement of ability and not a criterial judgement of ability.	Reject
6. I have always done well in most school subjects.				Focuses only on a normative judgement of ability and not a criterial judgement of ability.	Reject
<b>SONG &amp; HATTIE QUESTIONNAIRE (SHQ)</b>					
<b>Academic self-concept</b>					
1. I am happy with the schoolwork I do.			✓ , ✓		Accept
2. I am proud of my report card.			✓	The words 'report card' are foreign to South African Grade 7 learners, and is replaced by 'school report'.	Accept
3. I am satisfied with my schoolwork.					Accept
4. In the kind of things we do in school, I feel that I am as good as the other people in my class.				Similar to Ability self-concept Question 2 of SSPS	Reject
5. I feel good about my schoolwork.					Accept

QUESTIONNAIRE AND ITEMS	* Correlates statistically significant on 5% level with average school achievement of each learner	* Collectively four questions from the SSPS statistically significant with average school achievement of each learner	* Items indicated by regression analyses as the smallest number of predictors that can explain the most variance in the average school achievement of each learner	DISCUSSION	RESULT
<b>Ability self-concept</b>					
1. I am proud of my ability in academic work.					Accept
2. I feel good about my academic ability.			✓ ✓	'Academic ability' might be difficult for some learners to understand; therefore 'academic ability' will be replaced with 'ability to do school work'.	Accept
3. I think I have the ability to get good grades in school.				Focuses too much on a normative judgement of ability and not a criterial judgement of ability.	Reject
4. I think my ability is sufficient to cope with schoolwork.					Accept
5. I think that I am capable of getting the results I would like to obtain in schoolwork.					Accept
<b>Class self-concept</b>					
1. I am sure of myself in school situations.			✓	'School situations' might be unclear and will be replaced with 'school tasks'.	Accept
2. I am proud of my schoolwork.				Similar to SHQ, ASC Question 2	Reject
3. In the kind of things we do in school, I feel that I am as good as the other people in my class.				Similar to Ability self-concept Question 2 of SSPS	Reject
4. Most of my teachers do not understand me.					Accept
5. I feel worthless in class.					Accept

QUESTIONNAIRE AND ITEMS	* Correlates statistically significant on 5% level with average school achievement of each learner	* Collectively four questions from the SSPS statistically significant with average school achievement of each learner	* Items indicated by regression analyses as the smallest number of predictors that can explain the most variance in the average school achievement of each learner	DISCUSSION	RESULT
<b>Other possibilities</b>					
1. I have confidence in myself to do school work.					Accept
2. I feel left out of things in class.					Accept
3. I have respect for my schoolbooks.				The statement is open to different cultural interpretations and may, therefore, be contaminated by cultural meanings.	Reject
<b>SELF-CONCEPT QUESTIONNAIRE FOR PRIMARY SCHOOL PUPILS (SSPS)</b>					
<b>Academic self-concept</b>					
1. I usually feel unhappy at school.				Similar to SHQ, ASC Question 1, which was shown to be statistically acceptable. Go to SHQ for ASC questions, SSPS has too few.	Reject
<b>Ability self-concept</b>					
1. Many of my lessons I do not understand well.		✓			Accept
2. I think that I take a longer time than my friends at school to understand the lessons.	✓	✓	✓ ✓		Accept
3. Even if I worked harder, I would not be able to achieve better marks.	✓	✓	✓		Accept
4. I cannot read as fast as my friends.				} These questions relate to different subject-specific self-concepts. As different sections of the ASCQ will be developed for different subject-specific self-concepts, these questions will be redundant.	Reject
5. I do not like Mathematics.					Reject
6. I cannot write a good essay.					Reject

QUESTIONNAIRE AND ITEMS	* Correlates statistically significant on 5% level with average school achievement of each learner	* Collectively four questions from the SSPS statistically significant with average school achievement of each learner	* Items indicated by regression analyses as the smallest number of predictors that can explain the most variance in the average school achievement of each learner	DISCUSSION	RESULT
<b>Class self-concept</b>					
1. I dislike it when my teachers ask me questions.	✓	✓			Accept
2. I do not see myself as the best learner in class.					Accept
3. I prefer it that other children do not see my work in class.					Accept
4. I think that the teachers do not treat me well.					Accept
				Total number of academic self-concept items selected	4
				Total number of ability self-concept items selected	7
				Total number of classroom self-concept items selected	7
				Total number of other possibilities selected	2
				Total number of items selected	20

\* Results from a previous study to develop a diagnostic instrument to determine the ASC of Tsonga speaking Grade Seven learners in a historically disadvantaged school in South Africa (Du Plessis, 1999: 84, 85).

**Final selection of general academic self-concept items and their origin:**

ACADEMIC SELF-CONCEPT

- |    |                                      |     |
|----|--------------------------------------|-----|
| 1. | I am happy with the schoolwork I do. | SHQ |
| 2. | I am proud of my school report.      | SHQ |
| 3. | I am satisfied with my schoolwork.   | SHQ |
| 4. | I feel good about my schoolwork.     | SHQ |

ABILITY SELF-CONCEPT

- |     |   |      |
|-----|---|------|
| 5.  | I am proud of my ability in academic work.  | SHQ  |
| 6.  | I feel good about my ability to do school work.   | SHQ  |
| 7.  | I think my ability is sufficient to cope with schoolwork.                                 | SHQ  |
| 8.  | I think that I am capable of getting the results<br>I would like to obtain in schoolwork. | SHQ  |
| 9.  | Many of my lessons I do not understand well.  | SSPS |
| 10. | I think that I take a longer time than my friends at school<br>to understand the lessons. | SSPS |
| 11. | Even if I worked harder, I would not be able to achieve better marks.                     | SSPS |

CLASS SELF-CONCEPT

- |     |  |      |
|-----|--|------|
| 12. | I am sure of myself in school tasks.                         | SHQ  |
| 13. | Most of my teachers do not understand me.                    | SHQ  |
| 14. | I feel worthless in class.                                   | SHQ  |
| 15. | I dislike it when my teachers ask me questions.              | SSPS |
| 16. | I do not see myself as the best learner in class.            | SSPS |
| 17. | I prefer it that other children do not see my work in class. | SSPS |
| 18. | I think that the teachers do not treat me well.              | SSPS |

OTHER POSSIBILITIES

- |     |  |     |
|-----|--|-----|
| 19. | I have confidence in myself to do school work. | SHQ |
| 20. | I feel left out of things in class.            | SHQ |



## **APPENDIX D**

### **ACADEMIC SELF-CONCEPT QUESTIONNAIRE (ASCQ)**

Appendix D contains an English translation of the ASCQ. The English translation is followed by the Afrikaans ASCQ and the Sepedi ASCQ as used in the study.

**ACADEMIC SELF-CONCEPT QUESTIONNAIRE (ASCQ)**

<b>FOR OFFICE USE</b>					
Learner's number	V1	<input type="text"/>	<input type="text"/>	<input type="text"/>	1-3
Learner's grade	V2		0	7	4-5
Learner's school	V3		0	<input type="text"/>	6-7
Language	V4			<input type="text"/>	8
Gender	V5			<input type="text"/>	9

1. **Everyone thinks differently about school.** Here are some statements about school and some subjects at school. Each statement has possible answers. Please decide which answer describes you best. **There are no right or wrong answers.** Draw a circle around the answer that describes you best.

NOTE: Ask me if you do not understand.

2. Choose the answer that **really** describes you **best**.
3. Please answer all the questions.
4. Try not to use the answer "sometimes" too many times.

NOTE: **No one in the school will see your answers.**

EXAMPLE:

A. **Are you a boy or a girl?**

boy	girl
-----	------

B. **Do you play soccer?**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

Now do the rest of the questionnaire.

When you answer the following questions, think of yourself in general:

For office use

1. I am happy with the schoolwork that I do.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V6  10

2. I am proud of my ability in schoolwork.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V7  11

3. I am sure of myself in school tasks.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V8  12

4. I am proud of my school report.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V9  13

5. I feel good about my ability to do schoolwork.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V10  14

6. Most of my teachers do not understand me.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V11  15

PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.

7. **I am satisfied with my schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V12  16

8. **I think my ability is sufficient to cope with schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V13  17

9. **I feel worthless in class.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V14  18

10. **I feel good about my schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V15  19

11. **I am capable to get the results I would like to get in schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V16  20

12. **It is bad for me when my teachers ask me questions.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V17  21

13. **I have confidence in myself to do schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V18  22

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

14. **I understand most of my lessons well.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V19  23

15. **I see myself as a good learner in class.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V20  24

16. **I feel left out of things that happen in class.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V21  25

17. **I think I take longer than my classmates to understand schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V22  26

18. **I would not be able to achieve better marks, even if I worked harder.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V23  27

19. **I think that the teachers treat me well.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V24  28

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

**When you answer the following questions, think of yourself as in the English class:**

**1. I am happy with the English schoolwork that I do.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V25  29

**2. I am proud of my ability in English.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V26  30

**3. I am sure of myself in English tasks.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V27  31

**4. I am proud of my mark in English.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V28  32

**5. I feel good about my ability to do English.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V29  33

**6. My English teacher does not understand me.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V30  34

**7. I am satisfied with my English schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V31  35

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

8. I think my ability is sufficient

to cope with English schoolwork.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V32  36

9. I feel worthless in the English class.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V33  37

10. I feel good about my English schoolwork.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V34  38

11. I am capable to get the results I would like to get in English.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V35  39

12. It is bad for me when my English teacher asks me questions.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V36  40

13. I have confidence in myself to do English schoolwork.

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V37  41

PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.

14. **I understand most of my English lessons well.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V38  42

15. **I see myself as a good learner in the English class.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V39  43

16. **I feel left out of things that happen in the English class.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V40  44

17. **I think I take longer than my classmates to understand the English schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V41  45

18. **I would not be able to achieve better marks in English, even if I worked harder.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V42  46

19. **I think that the English teacher treats me well.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V43  47

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**



**When you answer the following questions, think of yourself as in the Mathematics class:**

**1. I am happy with the Mathematics schoolwork that I do.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V44  48

**2. I am proud of my ability in Mathematics.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V45  49

**3. I am sure of myself in Mathematics tasks.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V46  50

**4. I am proud of my mark in Mathematics.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V47  51

**5. I feel good about my ability to do Mathematics.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V48  52

**6. My Mathematics teacher does not understand me.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V49  53

**7. I am satisfied with my Mathematics schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V50  54

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

8. **I think my ability is sufficient to cope with Mathematics schoolwork.**

Never	A few times	Sometimes	Many times	Always
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V51  55

9. **I feel worthless in the Mathematics class.**

Never	A few times	Sometimes	Many times	Always
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V52  56

10. **I feel good about my Mathematics schoolwork.**

Never	A few times	Sometimes	Many times	Always
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V53  57

11. **I am capable to get the results I would like to get in Mathematics.**

Never	A few times	Sometimes	Many times	Always
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V54  58

12. **It is bad for me when my Mathematics teacher asks me questions.**

Never	A few times	Sometimes	Many times	Always
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V55  59

13. **I have confidence in myself to do Mathematics schoolwork.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V56  60

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

14. **I understand most of my Mathematics lessons well.**

Never	A few times	Sometimes	Many times	Always
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V57  61

15. **I see myself as a good learner in the Mathematics class.**

Never	A few times	Sometimes	Many times	Always
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V58  62

16. **I feel left out of things that happen in the Mathematics class.**

Never	A few times	Sometimes	Many times	Always
-------	-------------	-----------	------------	--------

V59  63

17. **I think I take longer than my classmates to understand the Mathematics schoolwork.**

Never	A few times	Sometimes	Many times	Always
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V60  64

18. **I would not be able to achieve better marks in Mathematics, even if I worked harder.**

Never	A few times	Sometimes	Many times	Always
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V61  65

19. **I think that the Mathematics teacher treats me well.**

Never	A few times	Sometimes	Many times	Always
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V62  66

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

**Please write down your name and surname:**

---

**Thank you very much for your time and effort!**

**Remember that I keep all your answers secret and confidential.**

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## AKADEMIESE SELF-KONSEPVRAELYS (ASKV)

VIR KANTOORGEBRUIK			
Nommer van Leerder	V1	<input type="text"/>	1-3
Graad van Leerder	V2	<input type="text" value="0"/> <input type="text" value="7"/>	4-5
Skool van Leerder	V3	<input type="text" value="0"/> <input type="text"/>	6-7
Taal	V4	<input type="text"/>	8
Geslag	V5	<input type="text"/>	9

1. **Almal dink verskillend oor skool.** Hier volg 'n paar stellings oor skool en oor 'n paar leerareas by die skool. Elke stelling het 'n paar moontlike antwoorde. Besluit watter antwoord beskryf jou die beste. **Daar is geen regte of verkeerde antwoorde nie.** Trek 'n sirkel om die antwoord wat jou die beste beskryf.

LET OP: Vra my as jy nie verstaan nie.

- Kies die antwoord wat jou **regtig** die **beste** beskryf.
- Beantwoord asseblief al die vrae.
- Probeer om nie die antwoord "partykeer" té baie te gebruik nie.

LET OP: **Niemand in die skool sal jou antwoorde sien nie.**

VOORBEELD:

A. Is jy 'n seun of 'n 

seun	meisie
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 meisie?

B. Speel jy sokker? 

Nooit	Min kere	Partykeer	Baie kere	Altyd
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**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

Doen nou die res van die vraelys.

Wanneer jy die volgende vrae beantwoord,  
dink aan jouself in die algemeen:

1. Ek is gelukkig met die skoolwerk wat ek doen.

Nooit	Min kere	Partykeer	Baie kere	Altyd
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Vir  
kantoorgebruik

V6  10

2. Ek is trots op my vermoë in skoolwerk.

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V7  11

3. Ek is seker van myself in skooltake.

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V8  12

4. Ek is trots op my verslag.

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V9  13

5. Ek voel goed oor my vermoë om skoolwerk te doen.

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V10  14

6. Die meeste van my onderwysers verstaan my nie.

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V11  15

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

7. **Ek is tevrede met my skoolwerk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V12  16

8. **Ek dink ek het genoeg vermoëns om skoolwerk te hanteer.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V13  17

9. **Ek voel niks werd in die klas.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V14  18

10. **Ek voel goed oor my skoolwerk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V15  19

11. **Ek is in staat om die resultate te kry  
wat ek graag wil kry in skoolwerk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V16  20

12. **Dis vir my sleg wanneer my onderwysers vir my vrae vra.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V17  21

13. **Ek het vertroue in myself om skoolwerk te doen.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V18  22

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

14. **Ek verstaan die meeste van my lesse goed.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V19  23

15. **Ek beskou myself as 'n goeie leerder in die klas.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V20  24

16. **Ek voel uitgesluit uit dinge wat in die klas gebeur.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V21  25

17. **Ek dink ek neem langer as my klasmaats  
om skoolwerk te verstaan.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V22  26

18. **Ek is nie in staat om beter punte te behaal nie,  
selfs as ek harder werk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V23  27

19. **Ek dink dat die onderwysers my goed behandel.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V24  28

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**



**Wanneer jy die volgende vrae beantwoord,  
dink aan jouself in die Afrikaanse klas:**

**1. Ek is gelukkig met die Afrikaanse skoolwerk wat ek doen.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V25  29

**2. Ek is trots op my vermoë in Afrikaans.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V26  30

**3. Ek is seker van myself met Afrikaanse werk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V27  31

**4. Ek is trots op my punt in Afrikaans.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V28  32

**5. Ek voel goed oor my vermoë om Afrikaans te doen.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V29  33

**6. My Afrikaanse onderwyseres verstaan my nie.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V30  34

**7. Ek is tevrede met my Afrikaanse skoolwerk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V31  35

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

8. **Ek dink ek het genoeg vermoëns om Afrikaanse skoolwerk te hanteer.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V32  36

9. **Ek voel nikswerd in die Afrikaanse klas.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V33  37

10. **Ek voel goed oor my Afrikaanse skoolwerk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V34  38

11. **Ek is in staat om die resultate te kry wat ek graag wil kry in Afrikaans.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V35  39

12. **Dis vir my sleg wanneer my Afrikaanse onderwyseres vir my vrae vra.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V36  40

13. **Ek het vertroue in myself om Afrikaanse skoolwerk te doen.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V37  41

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

14. **Ek verstaan die meeste van my Afrikaanse lesse goed.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V38  42

15. **Ek beskou myself as 'n goeie leerder in die Afrikaanse klas.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V39  43

16. **Ek voel uitgesluit uit dinge wat in die Afrikaanse klas gebeur.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V40  44

17. **Ek dink ek neem langer as my klasmaats om die Afrikaanse skoolwerk te verstaan.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V41  45

18. **Ek is nie in staat om beter Afrikaanse punte te behaal nie, selfs as ek harder werk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V42  46

19. **Ek dink dat die Afrikaanse onderwyseres my goed behandel.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V43  47

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

**Wanneer jy die volgende vrae beantwoord,  
dink aan jousef in die Wiskunde klas:**

**1. Ek is gelukkig met die Wiskunde skoolwerk wat ek doen.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V44  48

**2. Ek is trots op my vermoë in Wiskunde.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V45  49

**3. Ek is seker van myself met Wiskunde werk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V46  50

**4. Ek is trots op my punt in Wiskunde.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V47  51

**5. Ek voel goed oor my vermoë om Wiskunde te doen.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V48  52

**6. My Wiskunde onderwyser verstaan my nie.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V49  53

**7. Ek is tevrede met my Wiskunde skoolwerk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V50  54

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

8. **Ek dink ek het genoeg vermoëns om Wiskunde skoolwerk te hanteer.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V51  55

9. **Ek voel niks werd in die Wiskunde klas.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V52  56

10. **Ek voel goed oor my Wiskunde skoolwerk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V53  57

11. **Ek is in staat om die resultate te kry wat ek graag wil kry in Wiskunde.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V54  58

12. **Dis vir my sleg wanneer my Wiskunde onderwyser vir my vrae vra.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V55  59

13. **Ek het vertroue in myself om Wiskunde skoolwerk te doen.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V56  60

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

14. **Ek verstaan die meeste van my Wiskunde lesse goed.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V57  61

15. **Ek beskou myself as 'n goeie leerder in die Wiskunde klas.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V58  62

16. **Ek voel uitgesluit uit dinge wat in die Wiskunde klas gebeur.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V59  63

17. **Ek dink ek neem langer as my klasmaats  
om die Wiskunde skoolwerk te verstaan.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V60  64

18. **Ek is nie in staat om beter Wiskunde punte te behaal nie,  
selfs as ek harder werk.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V61  65

19. **Ek dink dat die Wiskunde onderwyser my goed behandel.**

Nooit	Min kere	Partykeer	Baie kere	Altyd
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V62  66

**WAG ASSEBLIEF VIR INSTRUKSIES VOORDAT JY OMBLAAI.**

**Skryf asseblief jou naam en van neer.**

---

**Baie dankie vir jou tyd en moeite!!!!**

**Onthou dat ek al jou antwoorde geheim en vertroulik hou.**

## ACADEMIC SELF-CONCEPT QUESTIONNAIRE (ASCQ)

FOR OFFICE USE					
Learner's number	V1				1-3
Learner's grade	V2		0	7	4-5
Learner's school	V3		0		6-7
Language	V4				8
Gender	V5				9

1. **Dihlallogano tša batho ka sekolo ga diswane.** Tse ke tse dingwe tsa dipego le dithuto ka sekolo. Pego engwe le engwe e na le dikarabo tše dika e swanelago. Ka kgopelo kgetha karabo ye e go hlalošago botsebotse. **Ga go na karabo ye e nepagetšeng goba ye e fosagetšego.** Thala sekele mo karabong ye e gohlalosago gabotse.

HLOKOMELA: O mputšiše ge o sa kwišiši.

2. Kgetha karabo ye e go hlalošago **gabotse.**
3. Ka kgopelo, araba diputšiso ka moka.
4. Leka go se šumiše “nako engwe” ga ntshi.

HLOKOMELA: **Ga go motho wo a tlo bonago dikarabo tša gago mo sekolong.**

MOHLALA:

- A. O mošimane goba mosetšana?

mošimane	mosetšana
----------	-----------

- B. O raloka kgwele ya maoto?

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**



**Bjale, araba diputšišo tše dilatelang.****For office use****Ge o araba diputšišo tse dilatelang, inagane ka kakaretšo:****1. Ke thakgalela mošomo wa sekolo wo ke o dirago.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V6  10**2. Ke motlotlo ka bokgoni bjaka mošomong wa sekolo.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V7  11**3. Ke ya itshepa mo mošomong wa sekolo.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V8  12**4. Ke motlotlo ka school report ya ka.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V9  13**5. Ke thakgalela bokgoni bjaka go direng mošomo wa sekolo.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V10  14**6. Bontshi bja barutiši ba ka ga ba nkwišiši.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V11  15**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

7. Ke kgotšofalela mošomo wa ka wa sekolo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V12  16

8. Ke nagana gore bokgoni bja ka bo lekanetše go ka dira mošomo wa sekolo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V13  17

9. Ke ikwa ke se na molemo ka phapušing ya borutelo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V14  18

10. Ke thakgalela mošomo wa ka wa sekolo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V15  19

11. Ke kgona go hwetša dimaraka tse nka ratago go di hweša ka mošomo wa sekolo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V16  20

12. Ga go bose mo go nna ge barutiši ba ka ba mputšiša diputšišo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V17  21

13. Ke ya itshepa mo go direng mošomo wa sekolo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V18  22

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

14. Ke kwišiša gabotse bontshi bja dithutišo (dilesene) tša ka.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V19  23

15. Ke ipona ke le morutwana o a gaišago ka phapušing ya borutelo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V20  24

16. Ke ikwa ke sa a karetswa dilong ka phapusing ya borutelo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V21  25

17. Ke nagana gore ke tsea nako e ntshi go kwišiša mošomo wa sekolo gona le bagwera ba ka ka phapušing ya borutelo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V22  26

18. Ga ke kgone go hwetša dimaraka tše kaone, le ge nka šoma kudu.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V23  27

19. Ke nagana gore barutiši ba ntshwara botse.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V24  28

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

**Ge o araba diputšišo tse dilatelago, inagane  
ka phapusing ya borutelo ya Sepedi:**

1. **Ke thakgalela mošomo wa Sepedi wo ke o dirago sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V25  29

2. **Ke motlotlo ka bokgoni bjaka bja Sepedi.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V26  30

3. **Ke ya itshepa mo Sepeding.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V27  31

4. **Ke motlotlo ka dimaraka tša ka tša Sepedi.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V28  32

5. **Ke thakgalela bokgoni bjaka bja go direng Sepedi.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V29  33

6. **Morutiši wa ka wa Sepedi ga a nkwišiši.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V30  34

7. **Ke kgotšofalela mošomo wa ka wa Sepedi sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V31  35

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

8. Ke nagana gore bokgoni bja ka bo lekanetše go ka dira mošomo wa Sepedi sekolong.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V32  36

9. Ke ikwa ke se na molemo ka phapušing ya borutelo ya Sepedi.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V33  37

10. Ke thakgalela mošomo wa ka wa Sepedi sekolong.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V34  38

11. Ke kgona go hwetša dimaraka tse nka ratago go di hweša mo Sepeding.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V35  39

12. Ga go bose mo go nna ge morutiši wa ka wa Sepedi a mputšiša diputšišo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V36  40

13. Ke ya itshepa mo go direng mošomo wa Sepedi sekolong.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V37  41

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

14. Ke kwišiša gabotse bontshi bja dithutišo (dilesene) tša ka tša Sepedi.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V38  42

15. Ke ipona ke le morutwana o a gaišago ka phapušing ya borutelo ya Sepedi.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V39  43

16. Ke ikwa ke sa a karetswa dilong ka phapusing ya borutelo ya Sepedi.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V40  44

17. Ke nagana gore ke tsea nako e ntshi go kwišiša mošomo wa Sepedi sekolong gona le bagwera ba ka ka phapušing ya borutelo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V41  45

18. Ga ke kgone go hwetša dimaraka tše kaone tša Sepedi, le ge nka šoma kudu.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V42  46

19. Ke nagana gore morutiši wa Sepedi o ntshwara botse.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V43  47

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

**Ge o araba diputšišo tse dilatelago, inagane  
ka phapusing ya borutelo ya dipalo:**

1. **Ke thakgalela mošomo wa dipalo wo ke o dirago sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V44  48

2. **Ke motlotlo ka bokgoni bjaka bja dipalo.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V45  49

3. **Ke ya itshepa mo dipalong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V46  50

4. **Ke motlotlo ka dimaraka tša ka tša dipalo.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V47  51

5. **Ke thakgalela bokgoni bjaka go direng dipalo.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V48  52

6. **Morutiši wa ka wa dipalo ga a nkwišiši.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V49  53

7. **Ke kgotšofalela mošomo wa ka wa dipalo sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V50  54

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

8. **Ke nagana gore bokgoni bja ka bo lekanetše go ka dira mošomo wa dipalo sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V51  55

9. **Ke ikwa ke se na molemo ka phapušing ya borutelo ya dipalo.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V52  56

10. **Ke thakgalela mošomo wa ka wa dipalo sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V53  57

11. **Ke kgona go hwetša dimaraka tse nka ratago go di hweša mo dipalong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V54  58

12. **Ga go bose mo go nna ge morutiši wa ka wadipalo a mputšiša diputšišo.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V55  59

13. **Ke ya itshepa mo go direng mošomo wa dipalo sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V56  60

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**



14. Ke kwišiša gabotse bontshi bja dithutišo (dilesene) tša ka tša dipalo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V57  61

15. Ke ipona ke le morutwana o a gaišago ka phapušing ya borutelo ya dipalo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V58  62

16. Ke ikwa ke sa a karetswa dilong ka phapusing ya borutelo ya dipalo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V59  63

17. Ke nagana gore ke tsea nako e ntshi go kwišiša mošomo wa dipalo sekolong gona le bagwera ba ka ka phapušing ya borutelo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V60  64

18. Ga ke kgone go hwetša dimaraka tše kaone tša dipalo, le ge nka šoma kudu.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V61  65

19. Ke nagana gore morutiši wa dipalo o ntshwara botse.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V62  66

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

**Ge o araba diputšišo tse dilatelago, inagane  
ka phapusing ya borutelo ya English:**

1. **Ke thakgalela mošomo wa English wo ke o dirago sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V63  67

2. **Ke motlotlo ka bokgoni bjaka bja English.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V64  68

3. **Ke ya itshepa mo English.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V65  69

4. **Ke motlotlo ka dimaraka tša ka tša English.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V66  70

5. **Ke thakgalela bokgoni bjaka bja go direng English.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V67  71

6. **Morutiši wa ka wa English ga a nkwišiši.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V68  72

7. **Ke kgotšofalela mošomo wa ka wa English sekolong.**

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V69  73

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

8. Ke nagana gore bokgoni bja ka bo lekanetše go ka dira mošomo wa English sekolong.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V70  74

9. Ke ikwa ke se na molemo ka phapušing ya borutelo ya English.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V71  75

10. Ke thakgalela mošomo wa ka wa English sekolong.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V72  76

11. Ke kgona go hwetša dimaraka tse nka ratago go di hwetša mo English.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V73  77

12. Ga go bose mo go nna ge morutiši wa ka wa English a mputšiša diputšišo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V74  78

13. Ke ya itshepa mo go direng mošomo wa English sekolong.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V75  79

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

14. Ke kwišiša gabotse bontshi bja dithutišo (dilesene) tša ka tša English.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V76  80

15. Ke ipona ke le morutwana o a gaišago ka phapušing ya borutelo ya English.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V77  81

16. Ke ikwa ke sa a karetswa dilong ka phapusing ya borutelo ya English.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V78  82

17. Ke nagana gore ke tsea nako e ntshi go kwišiša mošomo wa English sekolong gona le bagwera ba ka ka phapušing ya borutelo.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V79  83

18. Ga ke kgone go hwetša dimaraka tše kaone tša English, le ge nka šoma kudu.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V80  84

19. Ke nagana gore morutiši wa English o ntshwara botse.

Aowa	Ga mmalwa	Nako engwe	Gantshi	Nako tšohle
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V81  85

**KA KGOPELO, E MELA TAELO PELE O PHETLA LETLAKALA.**

**Ka kgopelo, ngwala leina la gago le sefane sa gago.**

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**Re lebogile nako le mošomo wa gago!!!!**

**Gopola dikarabo tša gago ke sephiri.**

## APPENDIX E

### MANUAL FOR THE ACADEMIC SELF-CONCEPT QUESTIONNAIRE (ASCQ)

#### 1. BACKGROUND, DESCRIPTION AND AIM OF THE ASCQ

##### 1.1 Background

Enough evidence exists to prove that the self-concept of a child influences the way in which the child performs in his schoolwork and grows up. A low self-concept is recognised as one of the contributing factors to suicide, crime, substance abuse, teenage pregnancy, anorexia nervosa, aggressive behaviour and poor academic achievement.

A circular reciprocal relation exists between academic achievement and academic self-concept. An even closer relation exists between academic achievement in a specific subject and a subject-specific self-concept. The current emphasis on achievement validates research on the academic self-concept, especially for those learners in historically disadvantaged schools who have not had the benefits of schooling that learners from historically advantaged schools have, in order to achieve and feel good about their achievements.

##### 1.2 An understanding of self-concept and academic self-concept

*“Self-concept, broadly defined, is a person’s perception of him- or herself. These perceptions are formed through one’s experience with and interpretations of one’s environment and are influenced especially by reinforcements, evaluations by significant others, and one’s attributions for one’s own behavior.”* (Shavelson & Bolus, 1982: 3; Shavelson *et al.*, 1976: 411). *“These self-perceptions influence the way one acts which in turn influences one’s self-perceptions.”* (Marsh & Yeung, 1997b: 692).

Academic self-concept is a person’s perception of him- or herself as a learner in an academic or school environment. A subject-specific self-concept is therefore a person’s perception of him- or herself as a learner in a specific subject.

### 1.3 Description of the ASCQ

The questionnaire has been developed for Afrikaans and Sepedi speaking Grade Seven learners. It is divided into three parts. The first section contains questions referring to the general academic self-concept of the learner, the second section to the first language (Afrikaans or Sepedi) self-concept and the third to the mathematics self-concept. Each section contains 19 questions, rendering a total of 57 questions.

The learners must indicate their choice on a scale of *never, a few times, sometimes, many times* and *always*.

### 1.4 Aim of the questionnaire

The general aim of the questionnaire is to assess the self-concepts, as specified by the questionnaire, of learners in Grade Seven. Hopefully, it will be useful

- to aid individual assessment in clinical and counselling settings,
- to identify learners with low self-concept in order to direct intervention,
- as a research instrument, and
- to teachers in order to understand and support their learners.

The questionnaire should never be the sole method used for assessing self-concept where this is being used to influence important decisions about a learner.

## 2. DIRECTIONS FOR ADMINISTRATION

### 2.1 Questionnaire administrators

Teachers, psychometrists and psychologists may implement the questionnaire. The prospective questionnaire administrators must familiarise themselves with the questionnaire instructions before the time.

### 2.2 Learners

The ASCQ is to be used during research as a group test. The learners must be assured that their answers will be kept confidential. The group must preferably not be bigger than 20

learners. The questionnaire could be used individually as well, although the learner may possibly be afraid to respond to the questions truthfully. Learners must not be tired when they complete the questionnaire.

### 2.3 Venue for completing the questionnaire

The room where the learners will complete the questionnaire must be selected for disturbances to be limited to the minimum. It must be quiet, comfortable and neutral so that the learners will feel at ease. The room must not be crowded and learners must not be able to see one another's responses. The educators must also not be present, to facilitate honest responses.

### 2.4 Material needed for completing the questionnaire

The learners must each have a pencil and a rubber, the questionnaire and a clear, white A4 sheet of paper. The administrator must have the manual, the questionnaire and a few extra pencils and rubbers.

### 2.5 Duration of the questionnaire

The ASCQ is not an intelligence or achievement test, therefore no time limit is set. However, the questionnaire should not take longer than 45 minutes to administer.

### 2.6 Instructions

(Text which the administrator reads aloud is printed in italics.)

The administrator must establish a good relationship with the learners. Questionnaires are handed out with the front page facing the desk to prevent impulsive learners from rushing through the questionnaire without heeding the instructions. A single white A4 paper is also distributed to every learner. For those who want to pace themselves or find the rest of the questionnaire distracting, the administrator demonstrates that

*“The paper can be used either to cover the answers, or to cover the questions following the one you are busy with”,*

Before the questionnaires are turned over, the administrator must ask the learners:



*“Please do not start filling in the questionnaire, but wait for instructions. The questionnaire is not a test and therefore there are no right or wrong answers. It is your opinions that matter. Each of you must answer each question according to the way you feel. You may now turn over the questionnaire.”*

The administrator must take care not to influence responses by making suggestions.

The administrator explains that

*“The block in the top-right hand corner is for office use only and should be left unanswered.”*

The administrator then proceeds to read the instructions on the questionnaire.

1. **Everyone thinks differently about school.** Here are some statements about school and some subjects at school. Each statement has possible answers. Please decide which answer describes you best. **There are no right or wrong answers.** Draw a circle around the answer that describes you best.

*NOTE: Ask me if you do not understand.*

2. Choose the answer that **really** describes you **best**. (Do not write down your friend's answers.)
3. Please answer all the questions.
4. Try not to use the answer “sometimes” too many times.

*NOTE: **No one in the school will see your answers.** (Therefore, cover your work if you want to make sure no one sees your answers.)*

The administrator then proceeds to read the first practice example to the learners.

**EXAMPLE:**

**A. Are you a boy or a girl?**

boy	girl
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The learners complete the example. Because the responses of the learners are confidential, the administrator may not read their responses. With the first practice example, however, the

administrator must check to see whether the learners have used a circle to indicate their choice, and whether they have indicated the correct option according to their gender. Then the second question and possible answers are dealt with.

**B. Do you play soccer?**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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The administrator says and does the following:

*“Never means not once”* (accompanied by the administrator shaking his/her head several times); *“a few times means seldom ... one, two, three, maybe more ... a few times; sometimes means not never, and not always, somewhere in between; many times means often, many, many times, but not always; always means always, every single time”* (accompanied by the administrator nodding his/her head several times).

Learners are requested:

*“Please do not turn to the next page before you are instructed to do so.”*

The administrator then tells the learners:

*“Listen. I am going to read the questions aloud with you so that we can finish at the same time. For some of you, it will be very slow, for some it will be fast. Please do not work ahead.”*

When the administrator has ensured that the learners know how to respond to the questions, they can proceed to page 2.

The following items concern the academic self-concept of the learners. If the learners ask questions about the meaning of any word or expression, the administrator may paraphrase it without changing the meaning so that the learners can understand the question.

The administrator explains:

*“The section for office use should not be completed.”*

The administrator then reads the headings, each question, the possible responses and the instructions at the bottom of each page. This will ensure that all the learners finish at the same time and that learners who cannot read well, can keep up with the rest of the class.

**Now do the rest of the questionnaire.**

**When you answer the following questions, think of yourself in general:**

**1. I am happy with the schoolwork that I do.**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**2. I am proud of my ability in schoolwork.**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**3. I am sure of myself in school tasks.**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**4. I am proud of my school report.**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**5. I feel good about my ability to do schoolwork.**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**6. Most of my teachers do not understand me.**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

**7. I am satisfied with my schoolwork.**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**8. I think my ability is sufficient to cope with schoolwork.**

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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9. ***I feel worthless in class.***

Never	A few times	Sometimes	Many times	Always
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10. ***I feel good about my schoolwork.***

Never	A few times	Sometimes	Many times	Always
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11. ***I am capable to get the results I would like to get in schoolwork.***

Never	A few times	Sometimes	Many times	Always
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12. ***It is bad for me when my teachers ask me questions.***

Never	A few times	Sometimes	Many times	Always
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13. ***I have confidence in myself to do schoolwork.***

Never	A few times	Sometimes	Many times	Always
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**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

14. ***I understand most of my lessons well.***

Never	A few times	Sometimes	Many times	Always
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15. ***I see myself as a good learner in class.***

Never	A few times	Sometimes	Many times	Always
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16. ***I feel left out of things that happen in class.***

Never	A few times	Sometimes	Many times	Always
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17. ***I think I take longer than my classmates to understand schoolwork.***

Never	A few times	Sometimes	Many times	Always
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18. ***I would not be able to achieve better marks, even if I worked harder.***

Never	A few times	Sometimes	Many times	Always
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19. ***I think that the teachers treat me well.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

If necessary, give the learners opportunity to stand up and stretch quietly for a few minutes before the next section continues.

***When you answer the following questions, think of yourself as in the English class:***

1. ***I am happy with the English schoolwork that I do.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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2. ***I am proud of my ability in English.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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3. ***I am sure of myself in English tasks.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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4. ***I am proud of my mark in English.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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5. ***I feel good about my ability to do English.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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6. ***My English teacher does not understand me.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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7. ***I am satisfied with my English schoolwork.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

8. ***I think my ability is sufficient to cope with English schoolwork.***

Never	A few times	Sometimes	Many times	Always
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9. ***I feel worthless in the English class.***

Never	A few times	Sometimes	Many times	Always
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10. ***I feel good about my English schoolwork.***

Never	A few times	Sometimes	Many times	Always
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11. ***I am capable to get the results I would like to get in English.***

Never	A few times	Sometimes	Many times	Always
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12. ***It is bad for me when my English teacher asks me questions.***

Never	A few times	Sometimes	Many times	Always
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13. ***I have confidence in myself to do English schoolwork.***

Never	A few times	Sometimes	Many times	Always
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**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

14. ***I understand most of my English lessons well.***

Never	A few times	Sometimes	Many times	Always
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15. ***I see myself as a good learner in the English class.***

Never	A few times	Sometimes	Many times	Always
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16. ***I feel left out of things that happen in the English class.***

Never	A few times	Sometimes	Many times	Always
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17. ***I think I take longer than my classmates to understand the English schoolwork.***

Never	A few times	Sometimes	Many times	Always
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18. ***I would not be able to achieve better marks in English, even if I worked harder.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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19. ***I think that the English teacher treats me well.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

If necessary, give the learners opportunity to stand up and stretch for a few minutes before the next section continues.

***When you answer the following questions, think of yourself as in the Mathematics class:***

1. ***I am happy with the Mathematics schoolwork that I do.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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2. ***I am proud of my ability in Mathematics.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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3. ***I am sure of myself in Mathematics tasks.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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4. ***I am proud of my mark in Mathematics.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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5. ***I feel good about my ability to do Mathematics.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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6. ***My Mathematics teacher does not understand me.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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7. ***I am satisfied with my Mathematics schoolwork.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

8. ***I think my ability is sufficient to cope with Mathematics schoolwork.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

9. ***I feel worthless in the Mathematics class.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

10. ***I feel good about my Mathematics schoolwork.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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11. ***I am capable to get the results I would like to get in Mathematics.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

12. ***It is bad for me when my Mathematics teacher asks me questions.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
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13. ***I have confidence in myself to do Mathematics schoolwork.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

**PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.**

14. ***I understand most of my Mathematics lessons well.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

15. ***I see myself as a good learner in the Mathematics class.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------



16. ***I feel left out of things that happen in the Mathematics class.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

17. ***I think I take longer than my classmates to understand the Mathematics schoolwork.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

18. ***I would not be able to achieve better marks in Mathematics, even if I worked harder.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

19. ***I think that the Mathematics teacher treats me well.***

<i>Never</i>	<i>A few times</i>	<i>Sometimes</i>	<i>Many times</i>	<i>Always</i>
--------------	--------------------	------------------	-------------------	---------------

***PLEASE WAIT FOR INSTRUCTIONS BEFORE YOU TURN THE PAGE.***

At the end of the questionnaire, the learners are asked to write down their name and surname for research purposes. They are thanked for their time and effort and reminded that their responses will be kept confidential. The researcher collects the questionnaires to ensure that no one else will see their responses.

***“Please write down your name and surname.”***

***“Thank you very much for your time and effort!”***

***“Remember that I keep all your responses secret and confidential.”***

### 3. CODING OF THE ASCQ

Check the questionnaire to see whether the learner has marked all the questions. If some questions were left unanswered, either ask the learner to fill them in, or give those numbers a 0 code. Codes are allotted as follows and written in the square on the right hand side of the page.

**For questions 1-5, 7-8, 10-11, 13-15, 19 in each section:**

Never <b>1</b>	A few times <b>2</b>	Sometimes <b>3</b>	Many times <b>4</b>	Always <b>5</b>
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**For questions 6, 9, 12, 16-18 in each section:**

Never <b>5</b>	A few times <b>4</b>	Sometimes <b>3</b>	Many times <b>2</b>	Always <b>1</b>
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Each section (questions 1 - 19) is added up separately to give a General ASC (GASC), first language ASC (LASC) and mathematics ASC (MASC) score.

#### 4. INTERPRETATION

A high score, ranging from 76 to 95, could indicate a high GASC, LASC or MASC.

A low score, ranging from 19 to 38, could indicate a low GASC, LASC or MASC.

The maximum score that a learner with a high ASC can achieve on Question 1, 2, 3, 4, 5, 7, 8, 10, 11, 13, 14, 15, and 19 in each section is 65 (13 x 5). The maximum score of the negative questions, Question 6, 9, 12, 16, 17 and 18 in each section, that a learner with a high ASC can achieve is 30 (6 x 5). Therefore, the maximum of the ASCQ for each section is 95 (65 + 30; or 19 x 5). If a learner with a high ASC selects response options with values of 4 or 5 at each item, the score will range between 76 and 95.

The minimum score that a learner with a low ASC can achieve on Question 1, 2, 3, 4, 5, 7, 8, 10, 11, 13, 14, 15, and 19 in each section is 13 (13 x 1). The scores of Question 6, 9, 12, 16, 17 and 18 in each section were reversed and the minimum score that a learner with a low ASC can achieve on these questions is 6 (6 x 1). Therefore, the minimum score of the ASCQ for each section is 19 (13 + 6; or 19 x 1). If a learner with a low ASC selects response options with values of 1 or 2 at each item, the score will range between 19 and 38.

## APPENDIX F

### INTERVIEW WITH PRINCIPALS

**General information** (to understand the context of the learners and the school):

For example:

How many learners are there in the school?

How many educators are there in the school?

What is the average class size?

What is the pass rate for the Grade 7's?

What first languages are spoken in the school?

**About the aim / goal of the school** (to understand the vision and mission):

For example:

How would you describe the aim / goal of the school?

**About support** (to understand the steps of support):

For example:

What structures are in place in school to support educators?

What structures are in place to support learners?

How are parents involved in supporting their children and the educators?

**About barriers to learning and participation** (to understand the role of BLP):

For example:

What is the policy of the school regarding admittance of learners with impairments/disabilities?

How does the school policy relate to your own viewpoint?

How do you see the role of your school regarding learners with impairments/disabilities?

How do you understand the inclusive education policy?

How does the school collaborate with other schools?

**About policy implementation** (to understand the progress of policy implementation):

For example:

How has the policy implementation process progressed in your school?

How has the Department of Education contributed in your school towards implementing inclusive education and participation policy?

**Termination of interview:**

For example:

Are there any questions you would like to ask me?

Thank principal for the time, insight and helpfulness.

## APPENDIX G

### EDUCATORS - FIRST INTERVIEW

**Introduction** (to support the educators to be at ease):

Explain what I do.

Ensure confidentiality.

**About their work:**

For example:

How was your day?

Tell me about your work with the Grade 7's.

**About challenges:**

For example:

Which challenges / problems regarding which learners affect you most when you educate / teach? Why?

What / where, according to you, is the origin of the challenges / problems?

How do you deal with the various challenges / problems?

How has the Education Support Services / Department of Education assisted you to deal with the various challenges / problems?

What arrangements are there in your school, or whom can you turn to, when you really struggle with your work or a learner?

What are your needs at school?

What are your needs regarding the challenges / problems?

**About support:**

For example:

What can I do for you? / What would you like me to do? / How can I help you?

If there were one thing you could change about your work, what would it be?

**About inclusive education:**

For example:

Tell me what you know about inclusive education.

How do you feel about inclusive education?

What do you know about the Education White Paper 6 (EWP 6)?

What has the GDE (Gauteng Department of Education) done so far to inform you of the EWP 6? What future plans are there?

How can the EWP 6 influence your day-to-day task?

**About academic self-concept:**

For example:

What do you know about the self-concept of Grade 7 learners?

What would you say is academic self-concept (ASC)?

What role, do you think, does ASC play in the lives of Grade 7 learners?

**About their background:**

For example:

How long have you been an educator?

How long have you been at this particular school?

What training did you do to qualify for teaching?

What other courses have you attended / presented?

**Termination of interview:**

For example

Do you have any questions for me?

Emphasise confidentiality.

Observations: What can I do to minimise the influence of my presence in your classroom on you?

Thank educators for their time, insight and helpfulness.

## APPENDIX H

### EDUCATORS – SECOND INTERVIEW

#### **Introduction:**

For example:

Ensure confidentiality.

What would you like to tell me about the time when I observed learners in your class?

How have my observations influenced your teaching?

(Now follow questions about the observations. I would like the educator to participate in explaining, understanding and interpreting what I had observed, in order to enhance the trustworthiness of the observations. As the questions of each interview depend on the observations, I cannot present any specific questions. I, however, present general questions that I anticipate asking.)

#### **About their work:**

For example:

How do you prepare for the different needs of the learners in your class?

How would you assess your own teaching?

What are your assets in teaching?

What aspect(s) regarding your teaching would you like to improve?

#### **About an incident/s:**

For example:

How often do incidents like this occur?

What prompted you to handle the situation in the way you did?

What did you expect the learner's reaction to be?

How do incidents like this influence the rest of the class?

#### **About inclusive education:**

For example:

How would you rate the inclusiveness of your classroom?

**About a learner:**

For example:

Why, according to you, does the learner do ....? (some specific behaviour/action)

How would you interpret the other learners' reaction towards this learner?

What would the class be like without this learner?

What does the learner contribute to the class?

How, would you say, is the academic self-concept (ASC) of the learner in your class?

**Termination of interview:**

For example

Do you have any questions for me?

Emphasise confidentiality.

Thank educators for their time, insight and helpfulness.



## APPENDIX I

### PROJECTIVE PICTURES

Figure 1

Picture X (Jacobs, 1981:244)



Figure 2

The original Picture 2 of the Bar Ilan Picture Test  
(Itskowitz & Strauss, 1977)

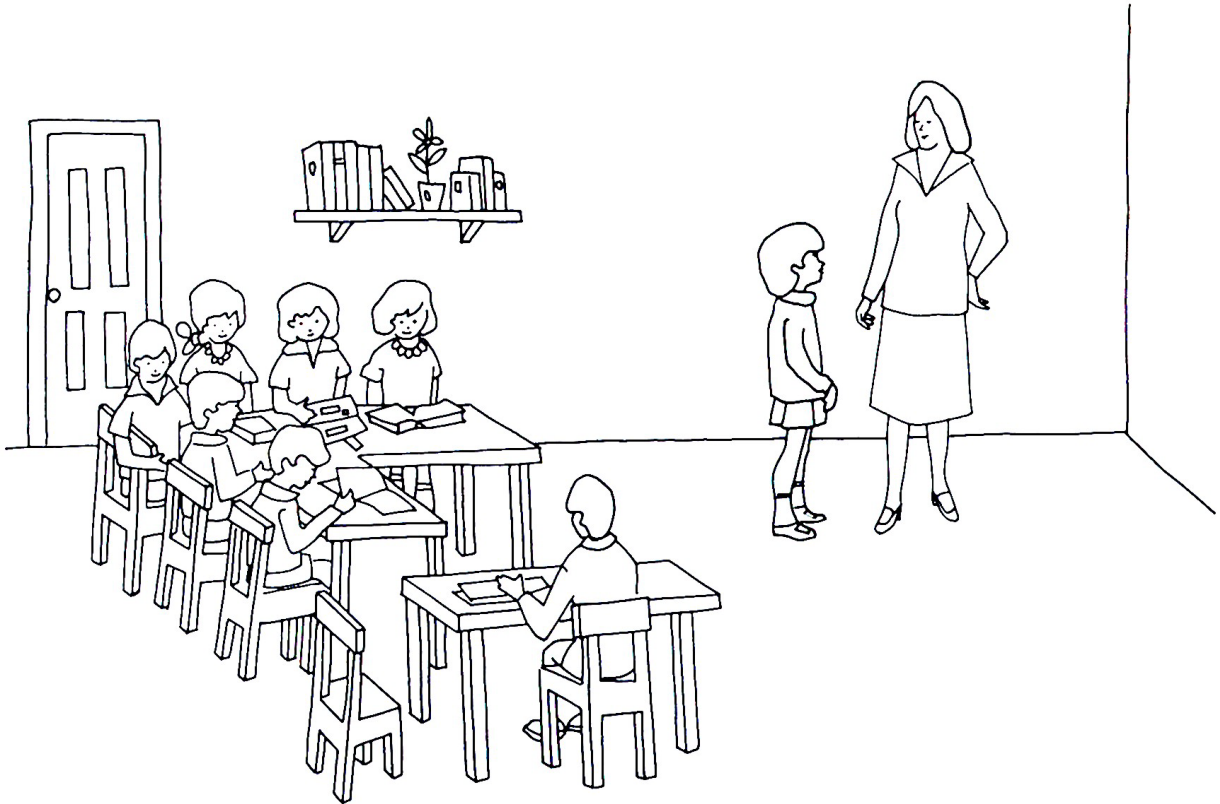


Figure 3

The first adaptation

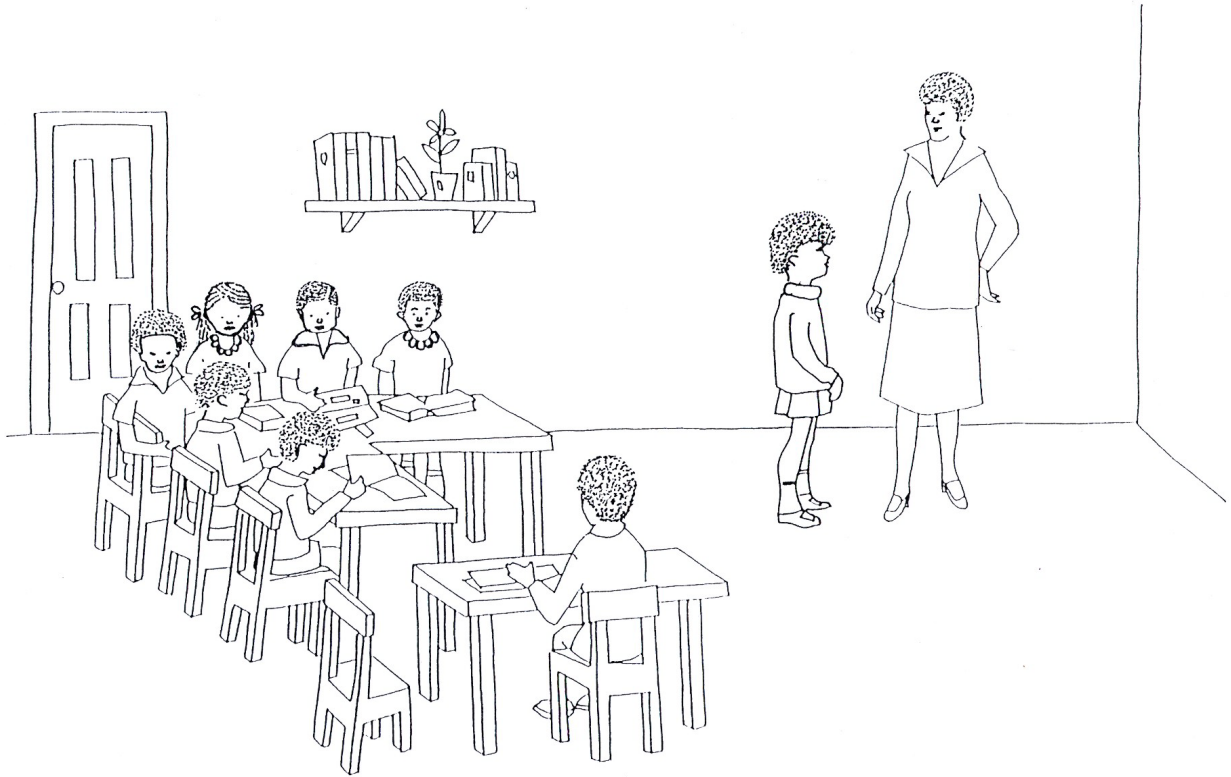
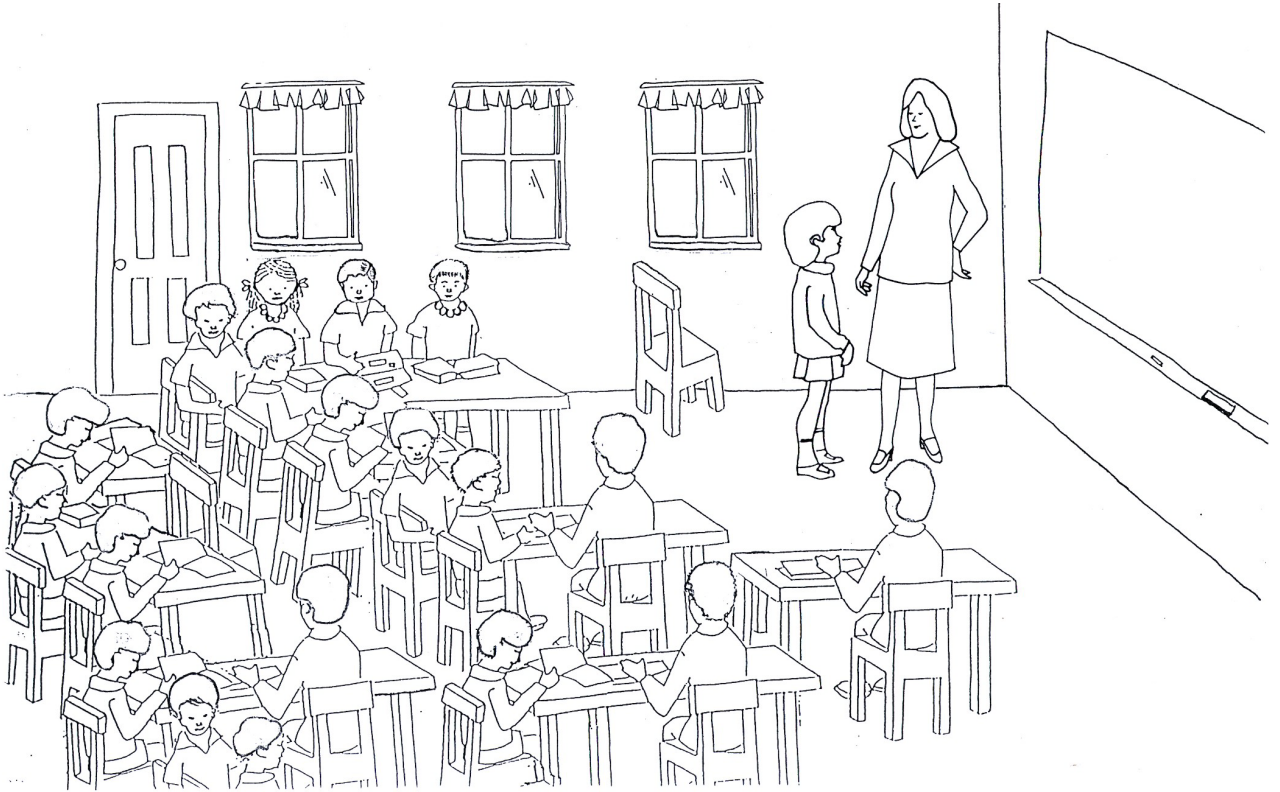


Figure 4

An example of a final projection picture





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## APPENDIX J

### PERMISSION FOR RESEARCH FROM THE GAUTENG DEPARTMENT OF EDUCATION



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Department of Education

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Departement van  
Onderwys

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**Date:** 08 May 2003

**Name of Researcher:** Du Plessis Anna-Barbara

**Address of Researcher:** P.O. Box 67541  
Highveld  
Centurion, 0169

**Telephone Number:** (012) 6655991/0836552009

**Fax Number:**

**E-Mail Address:** dupr@kidd.co.za

**Research Topic:** The Relation between Academic Self-Concept and Barriers to Learning and Participation in three South African School Contexts: Special, Ordinary and Full-Service Inclusive Schools

**Number and type of schools:** 4 Primary and 1 LSEN Schools

**District/HO:** Tshwane South

**Re: Approval in Respect of Request to Conduct Research**

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District Senior Manager confirming that permission has been granted for the research to be conducted.

***Permission has been granted to proceed with the above study subject to the conditions listed below being met and may be withdrawn should these conditions be flouted:***

1. The District Senior Manager/s concerned must be presented with a copy of this letter that would indicate that you have been granted permission from the Gauteng Department of Education to conduct the research study.
2. The District Senior Manager/s must be approached separately, and in writing, for permission to involve District Officials in the project.
3. A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate



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that you have been granted permission from the Gauteng Department of Education to conduct the research study.



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4. A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principal/s, SGB/s and District Senior Manager/s of the school/s and district/s concerned, respectively.
5. Kindly obtain the goodwill and co-operation of all the GDE official/s, principal/s, chairperson/s of the SGB/s, teacher/s and learner/s involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that prefer not to participate will not be penalised in any way.
6. You may only conduct your research after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Senior Manager (if at a office) must be consulted about an appropriate time when you may carry out your research at the sites that they manage.
7. You may commence your research from the second week of **February** and must conclude your programme before the beginning of the **last quarter** of the academic year.
8. It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.
9. The researcher is responsible for supplying and utilising their own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.
10. The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.
11. On completion of the study the researcher must supply the Senior Manager: Strategic Policy Development, Management & Research Coordination with a bound copy of the final, approved research report.
12. The researcher may be expected to provide a short presentation on the findings of his/her research to both GDE officials and the schools concerned.
13. Should the researcher have been involved with research at a school and/or district level, the District Senior Manager must also be supplied with a brief summary of the research findings.

The Department wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards,

A handwritten signature in blue ink, appearing to read 'Sally Rowney', on a light-colored background.

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**Sally Rowney: Senior Manager**





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<b>The contents of this letter has been read and understood by the researcher.</b>	
<b><i>Signature of Researcher:</i></b>	
<b><i>Date:</i></b>	

## APPENDIX K

### LETTER TO THE DISTRICT SENIOR MANAGER

24 July 2003

Dear Sir / Ma'am

**RE: Approval in respect of request to conduct research**

I am currently a PhD student in the Department of Educational Psychology in the Faculty of Education of the University of Pretoria. I am doing research on the academic self-concept of learners in special, ordinary and the envisioned full-service inclusive primary schools.

I successfully applied to the GDE for approval to conduct research in schools in your district. According to stipulations 1 and 4, I must supply certain information to you. Therefore, please find enclosed a copy of the letter of approval, as well as a document stating the purpose and anticipated outcomes of the research.

Please do not hesitate to contact me with any enquiries. All my contact details are on the letter of approval.

Yours sincerely

Anna-Barbara du Plessis

(The letter of approval can be found in Appendix J. The document stating the purpose and anticipated outcomes of the research follows.)

## **DOCUMENT ACCORDING TO STIPULATIONS 4 AND 10 OF THE GDE LETTER OF PERMISSION TO CONDUCT RESEARCH**

### **Purpose of the research**

The purpose of the study is to investigate the relation between the academic self-concept (ASC) of Grade 7 learners and barriers to learning and participation (BLP) in special, ordinary and full-service inclusive school contexts.<sup>1</sup>

### **Anticipated outcomes**

The results of the research might provide educationists, educational planners and managers, and educators generally, with pointers as to what provision, processes and/or outcomes to strive for in the conversion of primary schools to full-service inclusive schools, to prevent additional academic, social and emotional barriers from being cast up before the thousands of learners already contending with barriers to learning and participation, and to facilitate a smooth conversion.

The research might also sensitise the educators to the important role that academic self-concept plays in the lives of learners.

### **Promise of confidentiality and anonymity**

The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study will not appear in the research report without the written consent of each of these individuals and/or organisations.

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<sup>1</sup> The purpose was later changed to read: The purpose of the study is to investigate the academic self-concept (ASC) of learners with hearing impairment (HI) in special, regular and full-service inclusion school contexts.

## **APPENDIX L**

### **AN ENGLISH EXAMPLE OF DOCUMENTATION ADDRESSED TO THE SCHOOLS**

8 April 2003

Dear Sir / Ma'am

RE: Survey at the Grade 7 classes at your school

I am currently a PhD student in the Department of Educational Psychology of the Faculty of Education of the University of Pretoria. I am doing research on the academic self-concept of learners in special, ordinary and the envisioned full-service inclusive primary schools.

I plan to do research in certain primary schools in District Tshwane South (D4). Officials from D4 helped me to identify and select a preliminary number of schools appropriate to this research. It is vital to first contact these schools regarding the barriers to learning and participation prevalent in the Grade 7 classes. After contextual details have been verified and a final selection has been made, I shall go ahead with a formal request to the Gauteng Department of Education to do research in these selected schools. Once permission has been granted, I shall contact the selected schools again to arrange for further collaboration.

For the first step, I now kindly request the principal or the head of the Grade 7 classes, to complete a survey regarding the various barriers to learning and participation prevalent in the Grade 7 classes. To facilitate the completion of the survey, I plan to make an appointment with the relevant person at a convenient time.

I am doing the survey regarding the barriers to learning and participation with the support and knowledge of the Education Support Services of Tshwane South, my promotor and Head of Department at the University of Pretoria. For any inquiries, please consult the list of references.

Ms Gugu Kgare

Education Support Services D4

012 – 341 6362

082 808 4895

Prof AC Bouwer

Promotor

012 – 420 2339

082 375 6716

Dr Irma Eloff

HOD Educational Psychology

012 – 420 5503

012 – 420 3751

You are also invited to ask any questions regarding your possible involvement in the research. Please feel free to contact me with your concerns at the number given below.

I would be willing to assist the educators, where possible, with support regarding particular learners who experience barriers to their learning and full participation in the schools. Support might entail extensive discussions, a collaborative search for meaningful action and/or identification and use of assets of the learners and/or the schools. The research might also sensitise the educators to the important role that academic self-concept plays in the lives of learners. Further, the results of the research might provide educationists, educational planners and managers, and educators generally, with pointers as to what provision, processes and/or outcomes to strive for in the conversion of primary schools to full-service inclusive schools, to prevent additional academic, social and emotional barriers from being cast up before the thousands of learners already contending with barriers to learning and participation, and to facilitate a smooth conversion.

I intend to do the fieldwork with full understanding of the fact that the school and Education Department have to deal with an entirely new implementation of White Paper policy regarding inclusive education and that new strategies will be implemented for the first time. I want to emphasise that I do not want to evaluate the education system nor the implementation of policy nor the work that the educators do. I want to understand the academic self-concept of learners in different school contexts.

Kind regards

Yours sincerely

Anna-Barbara du Plessis

012 – 665 5991

083 655 2009

## APPENDIX M

### LETTERS OF PERMISSION FROM THE PARENTS

#### M1 Example of letter of permission for participation in the pilot study

28 August 2003

Dear Parent / Guardian

I am an educational psychologist busy with further studies at the University of Pretoria. XXX Primary School was identified by myself, in collaboration with the Gauteng Department of Education, District D4, as a partner in research.

Part of the research involves the development of a questionnaire that determines the academic self-concept of the learners. It is necessary that some learners complete this questionnaire to determine the qualities of the questionnaire.

I, therefore, kindly ask your permission for your child to complete the questionnaire, in order to assist with the development of the questionnaire. The learners will complete the questionnaire at a time the principal has approved. Your child's school marks will also be used to make further correlations.

The results of the questionnaire and correlations will be handled confidentially and your child will remain completely anonymous. The results will only be used to further develop the questionnaire.

Please fill in the tear off slip and send it back to school **tomorrow**. If your child does not bring a tear off slip, we will assume that he / she may participate.

Thank you for your cooperation.

Kind regards

Anna-Barbara du Plessis

\_\_\_\_\_  
Project leader  
Tel: 083 655 2009

✂ -----

Tick the block that applies to you:

I give permission for my child, \_\_\_\_\_, to participate in the project.

I refuse that my child, \_\_\_\_\_, participates in the project.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

**M2 Example of letter of permission for audiological assessment<sup>1</sup>**

1 August 2003

I hereby give permission to Anna-Barbara du Plessis, a student of the University of Pretoria, to transport my child, ....., to the Department of Communication Pathology at the University of Pretoria on the 21<sup>th</sup> August 2003, for a free assessment of her / his hearing.

I understand that Anna-Barbara du Plessis will be cautious when transporting my child, and I shall not hold her responsible for any form of accident that might happen.

She may pick up my child from ..... Primary School at 12:30 pm, and return my child to the primary school when the assessment has been completed, which would be before 5 pm.

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Contact details: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

<sup>1</sup> Most of the parents accompanied their children.

**M3 Example of letter of permission for participation in the questionnaires and observations**

21 July 2003

Dear Parent / Guardian

I am an educational psychologist busy with further studies at the University of Pretoria. XXX Primary School has been identified by myself, in collaboration with District D4, as a partner in educational research.

I am interested in the opinions that learners have about their schoolwork. The information gained through the research project will help educators to further improve education for all learners, as well as understand and support the learners.

We ask your kind permission for your child to take part in the project for the benefit of South African education.

The learners, and their interactions, will be observed in their classes in certain learning areas for approximately six days. They will also complete a questionnaire which will not be seen by any staff member of the school. For statistical purposes, the achievement marks of the learners will also be obtained. All information will be regarded as confidential. The learners will take part in the project on times deemed appropriate by the principal.

If your child may take part in the project, kindly fill in the tear off slip and send it back to school tomorrow.

Thank you most sincerely for your co-operation.

Kind regards

Anna-Barbara du Plessis

\_\_\_\_\_  
Project leader  
Tel: 083 655 2009

\_\_\_\_\_  
Principal

✂ - - - - -

I, \_\_\_\_\_, parent/guardian of \_\_\_\_\_, hereby grant permission for my child to participate in the project as described above.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_



**M4 Example of a letter of permission for participation in the questionnaires only**

4 September 2003

Dear Parent / Guardian

I am an educational psychologist busy with further studies at the University of Pretoria. XXX Primary School has been identified by myself, with permission from the Gauteng Department of Education, District D4, as a partner in research.

I am interested in the opinions that learners have about their schoolwork. The information gained through the research project will help educators to further improve education for all learners, as well as understand and support the learners.

I, therefore, kindly ask your permission for your child to complete a questionnaire. The learners will complete the questionnaire at a time the principal has approved. Your child's school marks will also be used to make further correlations.

The results of the questionnaire and correlations will be handled confidentially and your child will remain completely anonymous inside and outside the school.

Please fill in the tear off slip and send it back to school tomorrow.

Thank you for your cooperation.

Kind regards

Anna-Barbara du Plessis

\_\_\_\_\_  
Project leader  
Tel: 083 655 2009

✂ -----

Tick the block that applies to you:

I give permission for my child, \_\_\_\_\_, to participate in the project.

I refuse that my child, \_\_\_\_\_, participates in the project.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

**M5 Example of a letter of permission for participation in the learner interviews**

22 August 2003

Dear Parent / Guardian

In a previous letter I have described the research that I do in the school where your child is a learner. After careful classroom observation, I have come to the conclusion that your child might make a valuable contribution to the research.

I therefore ask your kind permission for my colleague and myself to conduct an interview with your child on school matters. The interview will take place at a time convenient for your child and will be child-friendly. The interview will be strictly confidential and your child will remain completely anonymous in and out of the school.

If you have any questions or concerns, please contact me at the given number, or contact the class teacher or principal.

Yours sincerely

Anna-Barbara du Plessis

Tel: 083 655 2009

✂ - - - - -

I, \_\_\_\_\_, parent/guardian of \_\_\_\_\_, hereby grant permission for my child to be interviewed.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX N

### NOTE OF CONFIDENTIALITY AND ANONYMITY

I, \_\_\_\_\_, hereby declare that I shall treat all the information on the cassette tapes received from Anna-Barbara du Plessis with the utmost confidentiality. All the participants will remain anonymous. I undertake not to breach the confidentiality and/or violate the anonymity of any of the participants.

All rights reserved. None of the information contained in the tapes may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise.

Signed: \_\_\_\_\_

on \_\_\_\_\_ day of \_\_\_\_\_, 2003.

## APPENDIX O

### A DESCRIPTION OF THE ADMINISTRATION OF THE ASCQ AT THE VARIO US SCHOOLS

The administration of the ASCQ at each school is described under the following headings: Questionnaire administrator, Details of administration, Time of administration, Duration of administration, Comments on the questionnaire, and General comments.

#### School 1

##### Questionnaire administrator

- The researcher administered the questionnaire.

##### Details of administration

- The learners went to a supervising educator's classroom, as their class educator had a meeting with the principal.
- The questionnaires were administered in Afrikaans.
- A set of preset instructions was followed. One learner wanted to know whether the practice question relating to playing soccer referred to soccer as sport or soccer as leisure activity. He was told to consider the total amount of soccer he played.
- The researcher was able to position herself so that the learner with a HI was slightly to the left, but otherwise right in front of her. She stood close to enhance hearing and to follow progress on the questionnaire, but not too close to make speech reading difficult or her observations suspicious. Instructions were given clearly, and loudly enough.

##### Time of administration

- It had been arranged that the ASCQ would be administered while the rest of the school attended a weekly assembly, from approximately 07:50 until 08:40. The researcher continuously strived to minimise the effect of her presence and research on the academic programme of the school, therefore the questionnaires were not administered during academic time. On the day, however, no assembly was held as photos were being taken of participants in the school activities (refer to the General comments).

##### Duration of administration

- Commencement was delayed until about 08:15.
- Administration was completed at 09:15.

### Comments on the questionnaire

- In the first section on general ASC, a learner queried the word '*nikswerd*' in Question 9. It was explained in Afrikaans as '*without worth*', and a possible synonym in their vernacular was given, namely '*gemors*' in Afrikaans and '*rubbish*' in English.
- In the first section on general ASC, Question 18, containing a complicating subordinate clause, was met with gasps, thereby indicating that they did not understand the question. The researcher repeated the question at least twice, with emphasis on the first part of the question, and soothed feelings by saying that she was aware of the difficulty of the question, and the learners simply had to try their best.
- The same explanations were given at Questions 9 and 18 in the second and third sections of the questionnaire, even before questions were asked, to prevent possible further feelings of confusion, and to enhance clarity and consistency.

### General comments

The day and time of administration had been arranged with the class educator more than a week prior to the occasion. When the researcher arrived at the school, however, it was announced that it was photo day at school, and that all the classes, sports teams, cultural groups and participants of other activities would be called to the hall for photo shoots. Additionally, the class educator attended a meeting with the principal and the class was sent to another educator for supervision in her absence. The learners were disrupted by the change of venue and the photo shoots. They took their time walking to the supervising educator's class. Several learners were not in the classroom, but on the school grounds, and three others (two boys and a girl) were in the hall for the first photos. The supervising educator, although helpful in looking for the missing learners, was not concerned about class discipline, and by the time most of the learners were present, they were disruptive, unruly and not in the mood for pen and paper work. The progress of the questionnaire was slowed down by incessant remarks made by a few boys, despite repeated requests to remain silent. Remarks were uttered very quietly, but drew loud attention and seemed to centre on answers or comments regarding educators. Twice during the administration announcements were made *via* intercom for other photo shoots. Fortunately no further learners in the class were involved. The supervising educator was not continuously present during the administration of the questionnaire. It is doubted whether his presence would have influenced the learners in their answers: the learning area he taught was not contained in the questionnaire, and the learners generally did not heed to what he said.

When the three learners who had been involved in the first photo shoots came back to the class, administration was briefly interrupted. They were handed questionnaires and given the same instructions as the other learners. There was not time, and the other learners were too restless, for them to catch up with the rest of the class. They were requested to start where the rest of the class would be continuing, that is from Question 11 of the first section on general ASC. By allowing them to complete the missing questions in their own time, the consistency in the questionnaire instructions would have been breached, with possible consequences for the validity and reliability of the ASCQ; therefore, a few missing answers to questions were preferred to the risk of jeopardising the validity and reliability of the ASCQ by following a different administration procedure for these learners. These learners returned soon enough to still benefit from exposure to the repetitive structure of the ASCQ. Some of the learners made their own written comments at the end of the questionnaire.

One might consider that postponing the administration of the questionnaire would have been an option. The Grade Sevens, however, were to start their September examinations in two days' time. Permission from the Department of Education to do research extended only to the end of the third school quarter; therefore, postponement was not an option.

## **School 2**

### Questionnaire administrator

- The culturally congruent fieldworker administered the questionnaire, in the presence of the researcher.

### Details of administration

- The learners were in their usual classroom.
- No educators were present during the administration.
- The questionnaires were administered in Sepedi.
- A set of preset instructions was followed.
- The researcher assisted the culturally congruent fieldworker where possible, for example by drawing attention to misunderstandings and to learners experiencing problems.
- A short break was made between Sections 2 and 3 of the ASCQ. The learners were encouraged to stand up and move their arms and legs, before the questionnaire was continued.
- The learner with an HI was seated in the centre of the class. Instructions were given clearly and loudly enough.

Time of administration

- The school timetable only made provision for academic periods. Many learners rely on transport after school to reach their homes; therefore, administration after school would not have been appropriate. The administration was scheduled, after consultation with the principal and vice-principal, for 10:00 on a Monday morning. Break time starts at 10:45.

Duration of administration

- Because of an interview with an educator early in the morning which took more time than planned, the ASCQ was only administered at about 10:30.
- Since many of the learners rely on the feeding scheme during break for a daily meal, the principal kindly arranged for food to be kept for the learners while they completed the questionnaire.
- The questionnaires were completed after approximately 50 minutes.

Comments on the questionnaire

- No questions had been asked during the pilot study. When administering the ASCQ in the main study, it seemed as if a few words were unfamiliar to many of the learners:

Item	Word	English	Measure taken
5, 10	<i>thakgalela</i>	<i>glad/happy</i>	substituted orally by ' <i>thabela</i> '
9	<i>molemo</i>	<i>worthless</i>	substituted orally by ' <i>ihušo</i> '
15	<i>gaišago</i>	<i>good</i> (such as in being a good learner)	explained orally in Sepedi
16	<i>karetswa</i>	<i>excluded</i>	explained orally in Sepedi

- In the remaining sections of the ASCQ the unfamiliar words in Questions 5, 9, 10, 15 and 16 were treated as described above to prevent any possible further feelings of confusion, and to enhance clarity and consistency.

General comments

The class was a heterogeneous combination of learners in respect of mother tongue, namely Sepedi, Tsonga and Zulu. The educators were of the opinion that everyone could understand everyone, since so many languages co-existed in the neighbourhood and in the school. The class received their tuition in English, although augmented where necessary with Sepedi, Tsonga and Zulu. The class only separated into Sepedi, Tsonga and Zulu

groups when the mother tongue was taught. Each language group was then combined with same-language speakers in another Grade Seven class.

When the ASCQ was administered to the selected Grade Seven class, there were learners from the different mother tongues in the class who were not well versed in Sepedi. Exclusion from the proceedings might have caused them to feel rejected. Their responses, however, might prove not to be a valid reflection of ASC and unreliable, because of their lack of understanding of the statements. The section on the Sepedi ASC would especially be irrelevant to their situation. Requesting the Tsonga and Zulu-speaking learners not to respond to the Sepedi section, might have led to boredom, mischief and an unlearning of the correct response procedure. They were therefore requested to respond to the statements as if they were in their vernacular class. They were also requested to write down the first language in which they received tuition. The records of these learners could easily be excluded from the statistical calculations to prevent irrelevant variables from influencing the validity and reliability of the data.

### **School 3**

#### Questionnaire administrator

- The researcher

#### Details of administration

- For the first section and part of the second section of the questionnaire, the learners were in their Afrikaans class, also the class of their class educator, and for the remainder of the questionnaire they were in their natural sciences and technology classroom. The Afrikaans educator was not present during the administration of the questionnaire, but the natural sciences and technology educator stayed in her classroom. It is doubted whether her presence had a great influence on the responses of the learners, since they had already completed the first part of the questionnaire concerning general ASC, which might have been related to the learning areas she taught, in the Afrikaans classroom, and the rest of the questionnaire related to the Afrikaans and Mathematics classes.
- Arrangements were made to implement the questionnaire during the last period of the day when the learners had a free period, to minimise the impact on the academic programme of the school. When the researcher, however, arrived at the school earlier the day for observations, she was informed that another educator urgently needed that period to complete work which was due to be handed in at the GDE, and that the period was not available any more.



- The Afrikaans educator graciously offered her period for the administration of the questionnaire. By the time the decision was made, at least 10 minutes had gone by, leaving less than 30 minutes for the administration of the questionnaire. Being left no other choice (it was during the last week of the term, and most of the learners in the class stayed in the school hostel and would be going home early that week), administration began. The Afrikaans educator undertook to arrange for more time to complete the questionnaire. By the end of the period, the learners were half way through the second section. They were requested to write their names on the questionnaires, which were handed back to the researcher. The extra time arranged was for the following morning after the first break.
- The following day the learners were handed their questionnaires. One of the learners was absent and one of the learners who had been absent the previous day, was present. To maintain familiarity with the questionnaire, the statements and the responding procedure, the questionnaire was repeated from the beginning. Learners were told to follow on their questionnaires. If they wanted to make changes to their responses, they were allowed to do so; however, no one made any changes. Repeating the procedure gave the learner who had been absent the opportunity to catch up with the other learners. When the last statement completed the previous day was reached, the learners merely continued to respond to the questionnaire according to the instructions. The administration continued without any further incident.
- The questionnaires were administered in Afrikaans.
- A set of preset instructions was followed. One learner wanted to make ✓ marks. As it would not detract from the questionnaire, she was allowed to do so.
- Since the classroom was designed to accommodate learners with HI, the classroom was small and carpeted. The learners sat in two rows of five and six facing the chalkboard. Many of the learners with HI sat in the front row. The researcher made sure that all learners could at all times see her face, for those who used speech reading to enhance their understanding, and that she spoke clearly, without over articulating.

#### Time of administration

- Both sessions took place after the first break, at about 10:00.

#### Duration of administration

- Both sessions were approximately 20 minutes. In total about 40 minutes were necessary for the administration.

### Comments on the questionnaire

- In Section 1, Question 8 drew questions. The learners were unsure of the meaning of the question. *'Ek dink ek het genoeg vermoëns om skoolwerk te hanteer'* ('I think my ability is sufficient to cope with schoolwork') was translated spontaneously by one of the learners (with learning impairment) and confirmed by the researcher as *'Ek dink ek is slim genoeg om skoolwerk te kan doen'* ('I think I am clever enough to do school work'). In Section 2, Question 8, a learner volunteered with *'Ek dink ek het genoeg verstand ...'* ('I think I have enough brains ...').
- The learners were unsure of the meaning of the statement in Section 1, Question 9. Many of the learners with HI heard *'niks werk'* ('not work') instead of *'niks werd'* ('not worth'), the end sounds representing the common occurrence of |t| and |k| discrimination difficulty. They were obviously unsure of the nonsensical meaning of the alternative statement. The statement was explained in Afrikaans as *'without worth'*, and a possible synonym in their vernacular was given, namely *'gemors'* in Afrikaans and *'rubbish'* in English. One of the learners (with learning impairment) then added *'As Juffrou jou weggooi'* ('If Ma'am throws you away').
- Question 11 in Section 1 was queried. *'Ek is in staat om die resultate te kry wat ek graag wil kry in skoolwerk'* ('I am capable to get the results I would like to get in schoolwork) was explained as *'Ek kan die punte kry wat ek graag wil kry in skoolwerk'* ('I am able to get the marks I want to get in schoolwork').
- Question 16 of Section 1 was queried. *'Ek voel uitgesluit uit dinge wat in die klas gebeur'* ('I feel left out of things that happen in class') was explained as *'Ek voel eenkant in die klas. Dinge gebeur, maar ek is nie deel daarvan nie.'* ('I feel separate in class. Things happen, but I am not part of those.').
- Question 17 of Section 1 was queried. *'Ek dink ek neem langer as my klasmaats om skoolwerk te verstaan'* ('I think I take longer than my classmates to understand schoolwork') was repeated, and then explained by an example: *'If the teacher gives the class work to do, the other learners finish the work before you do.'*
- Question 18 of Section 1 was queried: *'Ek is nie in staat om beter punte te behaal nie, selfs as ek harder werk'* ('I would not be able to achieve better marks, even if I worked harder'). The researcher repeated the question several times and put much emphasis on the first part of the question, with the second part said softly, as if only an afterthought. The learners were assured that the researcher was aware that the question was difficult and that they only had to try their best.
- Question 5 of Section 2 elicited a question. *'voel goed'* ('feel good') was explained with *'voel lekker'* ('feel nice').

- Questions that were queried in the first section, were treated in the same way in the other sections, even before questions were asked, to prevent possible further feelings of confusion, and to enhance clarity and consistency.

#### General comments

The interruption in the completion of the questionnaire had not been planned, and was certainly not desired, as many variables might influence the answers. In the way in which the interruption was handled, however, an effort was made to prevent any uncalled for effects, and to keep the process in line with what had happened at the other schools.

Before administering the questionnaire, the process of administration was discussed with the class educator. She was of the opinion that the learners would need more time than learners from other schools to complete the questionnaire. On the other hand, the mathematics educator did not have such concerns. It is interesting to note that, although more items required explanation, the learners of the special school completed the questionnaire in more or less the same time as School 4, and that the learners from School 1 took much longer. Comparisons are not made with Schools 2 and 5, as these learners had to complete four sections and not three.

It is interesting to note the greater number of questions asked by the learners in School 3 as opposed to the number of questions asked by the learners in the other schools. The questions might be an indication of the difference in language ability, a learned dependency, different ASCs and/or differences in school or class culture concerning question-asking behaviour.

#### **School 4**

##### Questionnaire administrator

- The researcher

##### Details of administration

- The learners were in the classroom of their English educator. The educator was not present during the administration.
- The questionnaires were administered in Afrikaans.
- A set of preset instructions was followed.

#### Time of administration

- The arrangement by the principal had been for the last period on a Thursday before the school day ended. There were failed communications between him and the educator, resulting in a re-scheduling of the appointment.
- The ASCQ was administered mid-morning on the following day.

#### Duration of administration

- The administration took approximately 35 minutes.

#### Comments on the questionnaire

- In the first section on general ASC, a learner queried the word '*nikswerd*' in Question 9. It was explained in Afrikaans as '*without worth*', and a possible synonym in their vernacular was given, namely '*gemors*' in Afrikaans and '*rubbish*' in English.
- In Section 1, Question 18, containing a complicating subordinate clause, caused queries. The researcher repeated the question at least twice, with emphasis on the first part of the question, and soothed feelings by saying that she was aware of the difficulty of the question and that the learners were simply to try their best.
- The same explanations were given at Questions 9 and 18 in the second and third sections of the questionnaire, even before questions were asked, to prevent possible further feelings of confusion, and to enhance clarity and consistency.

#### General comments

Before commencement, a boy wanted to know whether one of their learning areas, Afrikaans, would be eliminated if they all gave negative responses regarding Afrikaans. It appeared as if many of the learners did not like Afrikaans as learning area.

Some of the learners spontaneously requested to write explanatory notes. Permission was given.

The educator had told them that the questionnaires would be completed anonymously. The researcher, however, required their names to correlate the data on the questionnaires with the marks on the mark sheet. The learners were assured that only the researcher would see their names for correlation purposes, and that all names would be kept confidential. Eventually, all learners would remain anonymous.

Compared to the other administrations, the administration at School 4 went without a glitch.

## School 5

### Questionnaire administrator

- The culturally congruent fieldworker. The administration took place much later than planned (refer to time of administration). The researcher had to depart for another school for questionnaire administration. The culturally congruent fieldworker, however, had observed the researcher administering the ASCQ during the pilot study. Full written instructions were also given; hence it was considered appropriate for the fieldworker to administer the questionnaire.

### Details of administration

- The school kindly combined two classes in one classroom so that many more learners could write the ASCQ. Unfortunately, the school could not provide the researcher with precise mark schedules for one of the classes, and the questionnaires of that class had to be discarded, since no correlations could be made.
- The ASCQ was administered in Sepedi.
- A set of preset instructions was followed.
- A small break was made between sections 2 and 3. The learners were encouraged to stand up and move their arms and legs, before the questionnaire was continued again.

### Time of administration

- The administration had been scheduled, after consultation with the principal, for 10:00 on a Thursday morning. Break time starts at 10:45. The questionnaire administration at School 1, however, lasted much longer than anticipated. The questionnaires at School 5 could only be administered after break time, that is at 11:45.

### Duration of administration

- Administration lasted less than an hour.

### Comments on the questionnaire

- No questions had been asked during the pilot study. When administering the ASCQ in the main study, it seemed as if a few words were unfamiliar to many of the learners:

<b>Item</b>	<b>Word</b>	<b>English</b>	<b>Measure taken</b>
9	<i>molemo</i>	<i>worthless</i>	substituted orally by 'ihušo'
15	<i>gaišago</i>	<i>good</i> (such as in being a good learner)	explained orally in Sepedi
16	<i>karetswa</i>	<i>excluded</i>	explained orally in Sepedi

#### General comments

Two learners, one from each class, were refused permission to participate in the questionnaires by their parents. Their names were struck from the class list and no data were collected from them.

## APPENDIX P

### EXTRACTS FROM AN INTERVIEW TRANSCRIPT

Extracts are from the transcript of the second interview with the first language educator at School 1. 'I1' and 'I2' refer to 'Interviewer 1' and 'Interviewer 2'. 'P' refers to 'Participant'. Changes to the transcript are indicated with strikethroughs and superscripts, and additions are written in italics.

#### Tape 36

#### School 1

#### Afrikaans educator

27-10-2003

#### Extract 1

I1: Hierdie onderhoud, kan ek dalk net weer bevestig, soos die vorige een, is konfidensieel. Wat gesê word bly hierso. Ja, miskien moet ek begin om te vra, is daar enigiets wat jy agtergekom het of wil sê van die tyd wat ek in jou klas gesit het?

P: Nee, net die saak van dat hulle was nie anders as wat hulle normaalweg is nie. Daar was miskien 'n bietjie meer, ek wil myself gehoor hê want hier is nou 'n "audience."

I1: Ja, ja.

P: Maar in wese glad nie anders nie, nee. Nee wat, soos wat jy hulle daar gekry het, is hoe hulle is.

I1: Is soos wat hulle is. En dit is glad nie ...

P: Mag dit skokkend wees of mag dit nie skokkend wees nie, maar dit is so.

[Someone brings coffee. P: I sent for some coffee. I didn't even ask you. I1: Nee. Dis nie 'n probleem nie.]

I1: Ja. Okay, ek het gesien in die klas dat daar is met sekere goeters is dit dat Hanno effens anders behandel word, byvoorbeeld met ~~assosiering~~ <sup>assessering</sup> en dinge. Hoe berei jy voor daarvoor? Wat laat jou besluit om sekere goed vir hom aan te pas, daar te stel?

P: Ek laat my baie lei deur sy gesigsuitdrukking as ek 'n opdrag gee. Ek kan onmiddellik sien as hy heeltyd totaal verward is oor die opdrag.

I1: Ja.

P: Dis by mondeling en luisteroefeninge, is dit algemeen dat ek vir hom sal toegewings maak.

I1: Ja, ja.

P: Dit is logies. Ek dink dit is onmenslik om van hom te verwag wat 'n mens van die ander kinders verwag.

I1: Ja.

P: Maar soos jy gesien het, ek sal ook altyd die ander kinders in aanmerking neem en vir hulle vra: "Gee julle om as ek hom so en so behandel?". Ek het nog nooit 'n reaksie, teenreaksie van hulle gekry nie. Hulle is altyd baie simpatiek teenoor hom.

I1: Hm, hm.

P: Wat skriftelike opdragte betref, sal ek baie keer sien hy vind dit moeilik om die opdrag te verstaan, dan is die ander al amper halfpad met die opdrag.

I1: Ja.

P: Nadat ek vir hom spesiaal verduidelik het, en dan sal ek ook vir hom sê ek verwag nou net jy doen net vir my vyf as die ander moet 10 doen, want ~~jy kry~~ <sup>ek gee vir jou</sup> dieselfde punte. Ek laat my baie lei wat skriftelike werk deur sy vermoëns en sy mate van begrip, maar mondeling en luister sal ek altyd toegewings maak.

I1: Ja, ja. Dit was vir my interessant ook gewees met die mondeling om Hanno se reaksie dop te hou. *Ramodungoane*, I haven't told you yet, but they had unprepared speeches,



which they received a topic, went outside, had three minutes to prepare and then came back to deliver the speech to the rest of the class. En dit was vir my interessant, ek het van die bietjie wat ek hom nou al dopgehou het, het dit vir my gelyk asof hy baie meer gespanne is. [P: *Mmmm.*] Ek het toevallig nou opgelet dit is 'n periode direk na pouse, en hy het dadelik gevra toe dit naby sy beurt kom of hy kan kamer verlaat. [P: *Mmmm.*] Toe het ek gewonder of dit nou saam met die spanning is en of dit dalk 'n manier is om net dit dalk net bietjie uit te stel.

P: Ek dink dit is net om die spanning 'n klein bietjie te verlig, om net die situasie 'n bietjie te verplaas. Om net asem te skep eintlik.

I1: Ja, ja.

P: Nee, dit is definitief dit. Maar soos jy ook gehoor het, ek het hom baie gelei deur vrae.

I1: Dit is reg, ja.

P: Ek verwag nie van hom om vir my regtig 'n toespraak te lewer nie.

I1: Ja.

P: Ek verwag dat hy sal antwoord op my vraag.

I1: Ja. Want die meeste "effort" het, hoe kan ek sê, die leiding het van jou kant af gekom en hy het net gereageer daarop.

P: Ja. Dit is vir hom baie traumaties om voor ander te praat, maar hy sal dit ... Ek weet nie of jy gesien het nie, hy sal dit probeer vir homself goed maak deur amper 'n hanswors tegniek te gebruik.

I1: Daar is hy, ja.

P: Maar dit is net bloot om sy swak selfbeeld rondom dit te verbloem.

I1: Ja.

P: Gelukkig sien die ander kinders nie dit as 'n swak selfbeeld nie, hulle sien dit as oulik.

I1: Ja.

P: Want snaaks is in hierdie stadium vir 'n Graad 7 "cool".

I1: Ja, want hulle doen dit waarskynlik ook.

P: Hy na-aap hulle basies maar net, maar hy doen dit om 'n heel ander rede as hulle.

I1: Ja.

P: Maar dit is 'n oorlewingstegniek wat hy vir homself aangeleer het.

I1: Ja, ek dink tot 'n mate is dit dalk goed.

P: Ja, dit is baie goed.

I1: Dit moet 'n tegniek dink ek ... (onduidelik) ...

P: Ja, wat was die alternatief vir hom om daar te staan en nie sy mond te kan oopmaak nie?

I1: Ja, ja.

P: Daar is nie vir hom 'n goue middeweg nie. Dit is of ek kan nie of ek maak dit so dat ek kan.

I1: Dit is reg.

P: In watter een is ek die meeste sosiaal aanvaarbaar? As ek liewer maar die hanswors probeer wees, as wat hulle vir my lag omdat ek glad nie kan nie.

I1: Ja, ja. As 'n mens sê nou maar een tot een verhouding met hom praat, en jy sou 'n slag sê nou maar vir hom sê, praat met my oor, ek dink dit was 'n hondelisensie of iets waarvoor hy moes gepraat het?

P: Hm, baie beter. Hy sou baie beter vaar.

I1: Okay, want ek het ...

P: Nie dramaties nie. Ek meen ~~dit is nou nog~~ steeds nie op standaard nie, want hy het 'n ~~totaal~~<sup>taal</sup> agterstand as gevolg van sy probleem. Maar hy sou die "trimmings gecut" het, verstaan jy? Wat jy gesien het sou net hy gewees het. En dan sou hy tien teen een kan ek vir jou sê beter gevaar het as wat hy gevaar het, ja.

I1: Hm.

P: Want hy sou gepraat het soos wat hy met sy ouers by die huis praat.

I1: Ja, ja.

P: As hy een tot een teenoor 'n grootmens is, en ek is seker daarvan dit sou baie beter gewees het.

I1: Ja.

P: En die kere wat ek al met hom een tot een gewerk het was daar nie regtig 'n stotter of ek kan nie of 'n ag ek wil nie of daardie giggelrige houding nie.

I1: Ja.

P: Nee, glad nie.

I1: Hy het eintlik verbasend goeie uitspraak, as 'n mens sy ...

P: Ja, as 'n mens sy mate van gehoorgestremdheid, ja, ja.

I1: Ja.

P: Al wat ek kan aflei daaruit, hy moes ongelooflik stimulasie gekry het as kleuter.

I1: Ja.

P: Taalgestimuleerd gewees het.

I1: Ja.

P: Anders sou hy nooit daardie uitspraak bemeester het nie.

I1: Ja, want dit is regtig, dit is ... ek weet nie eers of ek dit sou agtergekom het as ek dit nie geweet het nie. Hy praat verskriklik mooi. Remember when we spoke to him, and compared to the other learners we spoke to, it is definitely ...

I2: Hm.

P: En dit is nie 'n kwessie van dat hy 'n mindere mate van gehoorgebrek het nie, hy het 'n groot gehooruitval.

I1: Ja, ja.

P: En nee, ek dink regtig dit is ontsettend taalgestimuleerd.

I1: Ja.

P: Ek dink die ouma het ook 'n groot rol daarin gespeel. Ek het nou al briefwisseling, kontak met die ouma gehad, en dit is ongelooflik, ek wens ek kan vir jou die brief wys, watter mate van taalbemeestering iemand op 70 jaar het.

I1: My land.

P: Man, dit klink of dit vandag se taal is, en formeel en ordentlike skryfstyl.

I1: Ja.

P: So ek het op 'n stadium vir hom gevra: "Het jou ouma vir jou baie stories geles?". Toe sê hy ja.

.....

Extract 2

P: En ek kan sien hy probeer regtig by tye verskriklik hard. Maar ek moet ook sê maats se invloed.

I1: Ja, ja.

P: Op hierdie stadium is dit my grootste bekommernis oor hom.

I1: Ja.

P: Dit is 'n negatiewe invloed wat slegte maats het.

I1: Ek wou nog daaroor gevra het. Ek sien in die wiskundeklas sit hy en Pete langs mekaar en dan in jou klas sit Pete nie by hom nie. Aan daardie tafel, of miskien moet ek so vra, hoe is dit besluit dat hulle in daardie groepie sit? Het hulle self gekies of sit 'n mens maar so deur die loop van die jaar, sit 'n mens maar bymekaar?

P: Nee, by my het hulle 'n reëling dat na 'n halwe<sup>elke</sup> kwartaal ruil hulle. Maar "at random", jy weet, ek deel hulle dan in. Die laaste kwartaal mag hulle een keer kies waar hulle self wil sit. Met dien verstande as jy gekies het mag ek ook daarna verander en dan is dit verby. Of as die hele klas moeilikheid gee, skuif hulle na die oorspronklike plekke toe.

I1: Ja.

P: So in my klas, jy was nou nog nie die laaste tyd daar nadat hulle self gekies het nie, en toe het hy gekies om by lan te sit daar doer agter in die klas, soos gewoonlik.

I1: Ouch!

P: Ja, daar waar jy gewoonlik sit.

I1: Ja, ja.

P: Het hy toe nou by lan gaan sit, en sonder om 'n groot storie daarvan te maak het ek hom toe na Pete se groep toe geskuif om hom nie te laat sleg voel nie, en met: "Maar jy en Pete is dan altyd groot maats. Kom sit hier dan is jy sommer nader aan my en alles."

I1: Ja.

P: So ek het dit maar ... Hy wil nie rêrig nou by Pete meer wees nie. Hy het nou op ge-  
"couple" ~~em~~ met Ian ~~te wees~~. So hy is nie baie gelukkig om weg van Ian te wees nie, maar  
hy verstaan hy is nie gestraf nie, ek het hom eintlik net by 'n ander maat gesit.

I1: Ja, ja.

P: Sodat hy nader kan wees.

I1: Dit is reg, ja. Goed. So hy het eintlik ... 'n Mens sou aan die eenkant dink hy weet eintlik  
hy moet voor in die klas sit, en dat hy ...

P: Ja, maar daar is groepsdruk. ~~Dit is~~ Op ~~die~~ <sup>dié</sup> stadium nou baie belangriker as wat enige  
akademiese oorwegings is.

I1: Hm, ~~dit is 'n moontlikheid~~, <sup>dis waar</sup>, ja. Hoe beïnvloed Ian hom?

P: Ongelooflik negatief. Dit is vir my die mees jammerhartigste <sup>likste</sup> vriendskap wat hierdie  
jaar gesmee is.

I1: Ja.

P: Jy weet, dit is ... Ek meen, Ian ken jy ook as 'n kind wat regtig 'n belhamel is en ~~ek meen~~  
<sup>nie</sup> iewers sterk is <sup>nie</sup>.

I1: Uitgesproke.

P: Ja, behalwe dat hy uitgesproke sterk is, is daar niks anders wat ek *sterk of* positief aan  
hom op hierdie stadium kon sien nie.

I1: Ja.

P: En dit is moeilik om vir Ian aanhangers te kry. En dan sal hy regtig die, amper wil ek sê,  
die beseerde ou lammetjie vat en hom sy aanhanger maak.

I1: Ja, ja.

P: En ek bedoel Hanno aap hom in alles slaafs na. As lan sy broek op sy boude dra in plaas van optrek, dan doel Hanno dit ook.

I1: Ja.

P: As lan 'n bokser aantrek onder sy skoolklere, dan doen Hanno dit ook.

I1: Hm.

P: As lan weier om rooi sokkies te dra, doen Hanno dit ook. As lan weier om sy hemp in te steek, dan sê Hanno, "ek sal ook nie my hemp insteek nie." Dit is amper tragies.

I1: Ja, ja.

P: En dit is al aanhanger wat lan regtig kon kry.

I1: Hm, hm.

P: En dit is op hierdie stadium hoe dit gaan.

I1: Ja.

P: En 'n mens wil nie inmeng en sê ... Ek ~~kan~~<sup>gaan</sup> nie vir Hanno duidelik eenkant toe vat en sê jy het slegte maats nie. Hanno is nie 'n tipe van kind wat dit sal verstaan nie. Hy smag so na aanvaarding. En regtig, een tot een ... Kyk, hy word deur die groep aanvaar, maar ek dink op die een tot een basis het hy nie wonderlike hegte vriendskappe nie.

I1: Ja.

P: Nou hierdie ou bied hom sy vriendskap.

I1: Ja.

P: En die oomblik wat ek nou gaan tussenbeide tree en my negatief ~~uitspraak~~<sup>uitspreek</sup> daarteenoor, dan gaan ek die verhouding wat ek en hy opgebou het, ook in die wiele ry.

I1: Ja, ja.

P: En Hanno is nie van so 'n aard emosioneel intelligent dat ek vir hom die "hints" kan los oor die gevare in die vriendskap nie. So op hierdie stadium al wat 'n mens kan doen is bid daaroor, jy kan nie inmeng daar nie.

I1: Ja, en die teenoorgestelde kan ook gebeur. As 'n mens hom sou waarsku kan hy eintlik besluit, maar so wat daarvan, en ... (onduidelik) ...

P: O ja, ja, nee, ek dink hy ~~sou~~<sup>bewys</sup> die teendeel, wat hy nooit sal regkry nie.

I1: Ja, ja. ~~En~~<sup>Ek</sup> weet *nie* van hulle ~~is van~~ volgende jaar op hoërskool, gaan hulle in dieselfde hoërskool wees?

P: Nee. Hanno het ek nie, ek het nie die naam van die hoërskool nie, maar toe ek 'n opname gemaak het, het ek ag, ek wou nie te veel uitvra nie.

.....



Extract 3

P: Veral vir 'n kind wat dit nie altyd hoor nie.

I1: Ja.

P: Of wat dit nie reg hoor nie, 'n sekere frekwensieuitval het, wat ek seker is daarvan hy het.

I1: Ja, ja.

P: Wat ek al definitief baie keer gesien het dan, ek dink dit is met enige gehoorgestremde, ek weet nie, julle sal beter wees as ek, dat hulle baie meer uitvalle op hoër frekwensies het as laer frekwensies.

I1: Hm, hm.

P: En met my wat 'n baie laer stem het ...

I1: Ja, gaan dit eintlik goed.

P: Gaan dit goed met my en Hanno.

I1: Ja.

P: Daar is regtig nie ... Jy kan sien die oomblik as iemand sy stem verhef dan het hy amper 'n ... ag, hy trek terug, hy het regtig sy hele fisiese liggaams houding. Kobie is in die klas geneig om so 'n hoë gilstemmetjie te hê. Jy weet, as sy kwaad raak vir die res dan sal sy hulle probeer stilmaak, en hy het regtig 'n liggaamshouding van hy krimp absoluut ineen, hy kan nie daardie hoë frekwensies hanteer nie.

I1: My land, ja. Ek weet, wat ek ook nou agtergekom het van die gehoorapparaat wat vir my interessant is, is dat die gehoorapparate regtig nie selektief klank verhoog nie, maar al die klank versterk.

P: En versterkte hoë klank, jy sal soos 'n hond tjank, man.

I1: Ja.

P: Ja.

I1: En wat ook interessant is, die mikrofoontjie sit agter die oor, so die klank wat agter in die klas is, is nog erger.

P: Is nog erger, hm. Ek het dit gesien, ja.

I1: En dit is baie meer van 'n gedruis half, as hy dalk hier probeer luister as wat van agter af kom. So dit maak vir my heelyd nou sin dat hy eintlik fisies ...

P: Ja, fisies, dit is vir hom seer.

I1: Ja.

P: As ... (onduidelik) ... Laat iemand 'n fluitjie in jou oor blaas, hoe voel dit?

I1: Ja, ja.

P: So jy sal baie kere ook agtergekom het, ek praat nie noodwendig voor hom nie, ek praat agter hom en hy volg nog steeds elke woord, want die gehoorapparaat versterk hierdie laer klanke.

I1: Ja.

P: En maak ek 'n punt daarvan om regtig lae frekwensies te gebruik.

I1: Ja.

P: Of hoe laer ek kan praat hoe beter met hom. En hy hoef dan nie lip te lees nie, hy volg elke woord. So wat vir my baie gemaklik is, is wys met my vinger waar ek is en praat agter hom. Dit is baie meer werd as wat ek voor hom staan en hy probeer liplees.

I1: Ja, ja. Want die nadeel is, as 'n mens ~~hou~~<sup>dan</sup> voor hom staan dan gaan hy kyk wat 'n mens sê en nie noodwendig ~~inneem nie~~...

P: ~~Hy sal nie noodwendig luister, en nie luister nie.~~

I1: Ja.

P: Hy weet as ek agter hom staan moet hy werklik luister en hy nie ... Dit is soos 'n mens wat TV kyk. Ek meen, ons kyk wat op die TV aangaan en die oomblik as jy wegkyk dan het jy nie gehoor nie.

I1: Ja.

P: Maar jy stem jou in om te hoor as jy nie die beeld sien nie.

I1: Ja.

P: Want dit is presies dieselfde. Hy sien net die beeld voor hom, hy sien nie die lippe nie.

I1: Ja.

P: Ek staan agter hom en hy weet hy moet luister.

I1: Ja. Wat sal jy sê is die sterk punte in jou onderrig met ~~TDK~~<sup>TGK</sup>?

P: Ek weet nie, as daar sterk punte is ..

I1: Ja.

.....

Extract 4

P: Net om sulke klein dingetjies in te voeg wat dit vir hulle 'n bietjie meer speel laat lyk. Want jy kan nie dink hoeveel speel is daar nog in 'n 13-jarige kind nie. Ek meen, as ons sê grootmense speel nog, hoeveel te meer speel ... en ons is geneig om van hulle klein volwassenes te wil maak.

I1: Ja, 'n mens ... ja.

P: Omdat hulle fisies so groot, omdat hulle liggaamlik so groot is, verwar 'n mens hulle emosionele waarde<sup>wording</sup> met hulle liggaamlike waarde<sup>wording</sup>.

I1: Ja.

P: Ek dink dit is vir *my* makliker ook omdat ek reeds drie tieners het wat daardeur is.

I1: Hm, hm.

P: So van<sup>wat</sup> tiener wees het ek al 'n redelike ondervinding van, van die emosionele waarde<sup>wording</sup> en wat ek van hulle kan verwag.

I1: Ja.

.....

Extract 5

P: Dit is wat taal so moeilik maak.

I1: Ja, ja. Nee dit is.. Ek het hier 'n paar ... O, dan wil ek dit vra. Wat ... Jy het genoem dat Hanno 'n slegte selfbeeld het, maar wat sal hy spesifiek van homself dink oor sy Afrikaanse vermoëns? Is daar al iets wat deurgeskemer het?

P: Weet jy, ek dink tog hy dink hy “cope” baie goed.

I1: Hm.

P: Ek dink hy het amper 'n onrealistiese beeld van sy taalvermoëns, maar dit is nie noodwendig sleg nie.

I1: Ja.

P: Dit is nie vir my sleg nie, dit dra sy ... Ek dink sy hele menswees, as 'n mens sy menswees in totaliteit beskou, sou ek sê sy selfbeeld is nie wat dit moet wees nie.

I1: Ja.

P: Maar wys vir my enige gehoorgestremde kind op 13 wat 'n uitstekende selfbeeld het.

I1: Hm.

P: Ek weet nie of julle al so een teengekom het nie, maar ek kan amper nie as ek 'n tiener ken voorspel het dat so ... Dit is juis die stadium in sy lewe wat enige gebrek, enige merkie in 'n tiener se gesig, enige haartjie wat uit sy plek uit is, is 'n reuse krisis vir 'n 13-jarige kind.

I1: Ja, ja.

P: Maar wat sy taalvaardighede betref, dink ek hy dink hy “cope” baie goed. Hy kan sy man staan teen enigeen in die klas, en dit wys vir my hy sal nie ineenkrimp as iemand, ag, ek het dit nog nooit gehoor nie, maar ek wil amper sê 'n skewe woord na sy kant toe slinger nie.

I1: Ja, ja.

P: Ek het dit nog nie gehoor nie, maar ek is seker daarvan hy sal baie vinnig sy man staan en terugse wat hy wil sê.

I1: Ja, ja.

P: Dit is wat ek sê, in daardie sin wat taalvaardighede betref, dink ek nie sy selfbeeld is sleg nie. Ek dink amper hy het 'n onrealistiese beeld van sy eie vermoëns.

.....