The relationship between resilience and school: A case study of middle-adolescents in township schools

Motlalepule Ruth Mampane

2010

The relationship between resilience and school: A case study of middle-adolescents in township schools

by

Motlalepule Ruth Mampane

Submitted in partial fulfilment of the requirements for the degree

Philosophiae Doctor
(Educational Psychology)

at the

Department of Educational Psychology
Faculty of Education
University of Pretoria

Supervisor:
Professor AC Bouwer

PRETORIA
2010

Acknowledgements

I wish to express my sincere gratitude and respect to the following people who contributed fully towards the completion of my study:

- My supervisor Prof. A.C. Bouwer for her profound guidance, enriching experience, mentoring, patience, honest opinion and contribution to my scholarly development.

- Mrs. Adrie Van Dyk for her support with the outline arrangement of my thesis and social support.

- Ms. Clarisse Venter for assisting me with literature information whenever I needed it.

- Ms. Jacqui Sommerville and Ms. Nina Strydom of the department of Statistics, University of Pretoria, for their expert advice and assistance with statistical data capturing and analysis.

- The middle-adolescent learners from the three schools in Mamelodi that participated in the research. Especially those who participated in the focus groups. Their experiences have enriched my life.

- To SANPAD RCI Program, for the research scholarship they awarded me and the extensive research training program, I am grateful for the opportunity.

- To my son, Moraswi-Hollo Tiego and my daughter Ngwanangwato Selogadi, for their love and understanding during my PhD studies. To my friends, Seboko Selema and Fr. Abel Gabuza, I am thankful for all the support you provided. I thank God for the blessings and angels He sends in my life. In God I trust.

---oOo---

Declaration of own work

I, Motlalepule Ruth Mampane, declare that the thesis entitled: *The relationship between resilience and school: A case study of middle-adolescents in township schools*, which I hereby submit for the degree Philosophiae Doctor in Educational Psychology at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

_____

Motlalepule Ruth Mampane

Signed on the _____ day of _____ 2010
Pretoria
South Africa

---oOo---

Summary

The relationship between resilience and school:
A case study of middle-adolescents in township schools
by
Motlalepule Ruth Mampane

The purpose of the study was to explore and describe the relationship between resilient and less-resilient middle-adolescent learners and their township school context.

This research was guided by Bioecological theory and the Resiliency Wheel programme to understand resilience as manifested in the proximal processes within the microsystems of the school and the family. The degree of resilience of learners was observed in behaviour and development outcomes inferred from personal characteristics and adverse family conditions demonstrated in the person, proximal processes, context and time.

The study sequentially employed a mixed method approach of quantitative and qualitative research. In Phase 1, the construct 'resilience' was operationalised and defined in a Resilience Scale for Middle-adolescents in a Township School (R-MATS). The questionnaire was validated on 291 middle-adolescent learners in two township schools. In Phase 2, an Interactive Qualitative Analysis (IQA) was performed. Focus groups were conducted with 16 middle-adolescents in the two schools.

In answer to the main research question, '*How does the school influence the resilience of middle-adolescent learners in a black-only township school?',* it was found that the school environment can influence the resilience of middle-adolescent learners in township schools by providing or failing to provide a supportive teaching and learning environment with effective implementation of rules and educational policies, that provide for care and safety of its learners and ensure they realise their future goals.

In answer to the sub-question, '*What are middle-adolescent resilient learners' experiences of their black-only township school system?'* it was found that the resilient middle-adolescent learners acknowledged the contribution of their school to their resilience and development. The learners were aware of the school policies and engaged with them to benefit from their schooling, but were critical of their school if they perceived a lack of provision and support by the school.

In answer to the second sub-question, '*What are middle-adolescent less-resilient learners' experiences of their black-only township school system?'* it was found that the less-resilient learners experienced their school environment as less supportive. They struggled to access school resources and experienced the school as an environment where they could use their personalities to grow and develop, or just exist.

Overall, it was found that township schools do have resources for their learners to use, but implementation of policy and the accessibility of resources are problems to less-resilient learners who struggle within their proximal processes in their school microsystem. Middle-adolescent learners appreciate and require clearly defined rules, structure and consistent implementation to ensure a stable, supportive and caring learning and teaching environment to grant them opportunities for realising their future goals.

Key Words:

Bioecological
Less-resilience
Resilience
Township school
Township
Protective factors
Risk factors
Resiliency Wheel

---oOo---

Acronyms

ART	Affinity Relationship Table
IRD	Interrelationship Diagram
IQA	Interactive Qualitative Analysis
LRG1	Less-resilient Group School 1
LRG2	Less-resilient Group School 2
PPCT	Process-Person-Context-Time Model
RG1	Resilient Group School 1
RG2	Resilient Group School 2
R-MATS	Resilience Questionnaire for Middle-adolescents in a Township School
SANPAD	The South African Netherlands Research Programme on Alternatives in Development
SID	System Influence Diagram

---oOo---

Table of Contents

Page

Chapter 1
Introduction to the study

1.1 INTRODUCTION 1

1.2 RATIONALE OF THE STUDY 4

1.3 THE PURPOSE OF THE STUDY 7

1.4 RESEARCH QUESTIONS 7

1.5 DEFINITION OF KEY CONCEPTS 8
1.5.1 RESILIENCE 8
1.5.2 LESS-RESILIENT 8
1.5.3 PROTECTIVE FACTORS 8
1.5.4 RISK FACTORS 9
1.5.5 MIDDLE-ADOLESCENT 9
1.5.6 TOWNSHIP ENVIRONMENT, TOWNSHIP SCHOOL AND BLACK TOWNSHIP SCHOOL 9

1.6 THEORETICAL FRAMEWORK 10
1.6.1 INTRODUCTION 10
1.6.2 THE RESILIENCY WHEEL FRAMEWORK 10
1.6.3 THE BIOECOLOGICAL APPROACH 12

1.7 PLAN OF ENQUIRY 14
1.7.1 RESEARCH PARADIGM 14
1.7.2 RESEARCH DESIGN 16
1.7.3 DATA COLLECTION PROCEDURE 18
1.7.4 DATA ANALYSIS AND INTERPRETATIONS 19
1.7.5 ETHICAL CONSIDERATIONS 19

1.8 RIGOUR OF RESEARCH 20

1.9 CONTRIBUTIONS AND STRENGTHS OF THE STUDY 21

1.10 PERCEIVED THREATS TO THE STUDY 22

1.11 OUTLINE OF CHAPTERS 22

Page

CHAPTER 2
A theoretical background towards understanding a resilience supporting school environment

2.1 INTRODUCTION 24

2.2 WHAT IS RESILIENCE? 25

2.3 THE DEVELOPMENT OF RESEARCH ON RESILIENCE 28

2.4 WAVES OF RESEARCH ON RESILIENCE DEVELOPMENT 30

2.5 THE THEORETICAL FRAMEWORKS: THE RESILIENCY WHEEL AND THE BIOECOLOGICAL FRAMEWORK 36

2.5.1 INTRODUCTION 36

2.5.2 THE RESILIENCY WHEEL FRAMEWORK 37

2.5.3 THE SIX SEGMENTS OF THE RESILIENCY WHEEL 41

2.5.3.1 Orientation 41

2.5.3.2 Mitigating risk factors in the environment 42

2.5.3.3 Building resilience in the environment 44

2.5.4 BIOECOLOGICAL THEORY OF HUMAN DEVELOPMENT 47

2.5.4.1 Orientation 47

2.5.4.2 The Process 48

2.5.4.3 Person 51

2.5.4.4 Context 54

2.5.4.5 Time 55

2.6 THE CONTEXT OF DEVELOPMENT: THE TOWNSHIP ENVIRONMENT AND THE TOWNSHIP SCHOOL 56

2.6.1 BACKGROUND TO THE TOWNSHIP ENVIRONMENT 55

2.6.2 THE TOWNSHIP SCHOOL 59

2.6.2.1 Background to the township school environment 59

2.6.2.2 Socioeconomic factors in township schools 60

2.6.2.3 The role of the township secondary school in the resilience of learners 62

2.6.2.4 The role of the teacher in supporting the resilience of learners 65

2.7 ADOLESCENT STAGE 67

2.7.1 ORIENTATION 67

2.7.2 MIDDLE-ADOLESCENCE 69

2.8 CONCLUSION 70

---oOo---

Page

CHAPTER 3
Phase 1: The quantitative research, the resilience survey

3.1 INTRODUCTION 73

3.2 RESEARCH PARADIGMS 73

3.3 RESEARCH DESIGN 77

3.4 THE DEVELOPMENT PROCESS OF THE RESILIENCE QUESTIONNAIRE FOR MIDDLE-ADOLESCENTS IN A TOWNSHIP SCHOOL (R-MATS) 80

3.4.1 PRINCIPLES OF THE QUESTIONNAIRE CONSTRUCTION 80

3.4.2 UNDERSTANDING THE RESILIENCE PROCESS WITH A VIEW TO CONSTRUCTING THE QUESTIONNAIRE 82

3.4.3 OPERATIONALISING THE CONSTRUCT 83

3.4.4 RESILIENCE CHARACTERISTICS IN RELATION TO THE OPERATIONALISED DEFINITION 89

3.4.5 DEVELOPING THE R-MATS 93

3.4.5.1 Construction of the items 93

3.4.5.2 Pilot study 1, the items 94

3.4.5.3 Pilot study 2, the questionnaire 94

3.4.5.4 Item Analysis: The Pilot Questionnaires 96

3.5 THE MAIN STUDY 103

3.5.1 APPLICATION FOR RESEARCH AND ETHICAL CLEARANCE 103

3.5.2 THE RESPONDENTS 103

3.5.2.1 The schools 103

3.5.2.2 Middle-adolescent learners 104

3.5.3 DATA COLLECTION 105

3.5.4 DATA PREPARATION 106

3.5.5 ITEM ANALYSIS, SECTION A 107

3.5.6 ITEM ANALYSIS, SECTION B 109

3.5.6.1 Item Analysis, 28 items 109

3.5.6.2 Item Analysis, 24 items 112

3.5.7 THE R-MATS INTER-SECTION ANALYSIS 118

3.5.7.1 Correlation between the total scores of Section A and Section B 118

3.5.7.2 The effect of Section A-items on the total score of Section B 119

Page

3.5.8 FACTOR ANALYSIS: SECTION B OF THE R-MATS 121
3.5.8.1 Factor 1: Confidence and internal locus of control 123
3.5.8.2 Factor 2: Social support 124
3.5.8.3 Factor 3: Toughness and commitment 125
3.5.8.4 Factor 4: Achievement orientation 126

3.6 CONCLUSION 126

---oOo---

Page

CHAPTER 4
Phase 2: The interactive qualitative analysis

4.1 INTRODUCTION 128

4.2 INTERACTIVE QUALITATIVE ANALYSIS 128

4.3 DESCRIPTION OF THE METHOD 130

4.4 RESEARCH DESIGN 131

4.4.1 PARTICIPANTS OF THE STUDY 131

4.4.2 FOCUS GROUPS 132

4.4.3 FOCUS GROUPS ISSUE STATEMENT 133

4.4.4 IDENTIFICATION OF AFFINITIES 135

4.4.4.1 Affinity Generation: Silent nominal process 135

4.4.4.2 Affinity Grouping: Coding of affinities into groups 135

4.4.4.3 Axial Coding: Affinity naming 135

4.4.4.4 Affinity Name Table 142

4.4.4.5 Theoretical coding: Identifying relationships between affinities 143

4.5 AFFINITY ANALYSIS RESILIENT GROUP SCHOOL 1 144

4.5.1 AFFINITY RELATIONSHIP TABLES: RG1 144

4.5.2 PARETO ANALYSIS: RG1 145

4.5.3 AMBIGUOUS RELATIONSHIPS 146

4.5.4 CREATING A GROUP COMPOSITE: THE INTERRELATIONSHIP DIAGRAM (IRD), RG1 147

4.5.5 GENERATING THE SYSTEM INFLUENCE DIAGRAM (SID): RG1 149

4.6 AFFINITY ANALYSIS: RG2 153

4.7 REFLECTION ON THE RG1 AND RG2 SIDs 158

4.8 AFFINITY ANALYSIS: LRG1 159

Page

4.9 AFFINITY ANALYSIS: LRG2 164

4.9.1 ORIENTATION 164

4.9.2 GENERATING THE SYSTEM INFLUENCE DIAGRAM (SID) LRG2 167

4.10 REFLECTION ON THE LRG1 AND LRG2 SIDs 170

4.11 REFLECTION ON THE SIDs PER SCHOOL 170

4.12 IQA INDIVIDUAL INTERVIEWS 173

4.13 CONCLUSION 175

---oOo---

Page

CHAPTER 5
Summary, discussion, limitations, recommendations and conclusion

5.1 SUMMARY 177

5.2 DISCUSSION OF PHASE 1 AND 2 RESULTS USING THE BIOECOLOGICAL MODEL 178

5.2.1 ORIENTATION 178

5.2.2 DISCUSSION OF PHASE 1 RESULTS USING THE BIOECOLOGICAL MODEL 180

5.2.3 DISCUSSION OF PHASE 2 RESULTS USING THE BIOECOLOGICAL MODEL 185

5.3 DISCUSSION OF PHASE 1 AND 2 RESULTS USING THE RESILIENCY WHEEL 189

5.4 FINALLY ANSWERING MY RESEARCH QUESTIONS 194

5.5 LIMITATIONS OF THE STUDY 196

5.5.1 PHASE 1 196

5.5.2 PHASE 2 196

5.6 RECOMMENDATIONS OF THE STUDY 197

5.7 A FINAL REMARK 198

---oOo---

REFERENCES 199

---oOo---

APPENDICES

---ooOoo---

List of Figures

Page

Figure 1.1: The Resiliency Wheel (adapted from Henderson & Milstein 2003:12) 11
Figure 1.2: The Eco-Systemic Framework (adapted from Donald, Lazarus & Lolwana (1997:65) 13
Figure 1.3: Research Paradigms 15
Figure 1.4: The Research Design process (adapted from Babbie & Mouton 2002:73-74) 17
Figure 1.5: Mixed method design matrix (adapted from Johnson & Onwuegbuzie 2004:22) 17

Figure 2.1: Mitigating risk factors in the environment 42
Figure 2.2: Building resilience in the environment 45
Figure 2.3: PPCT Model (Bronfenbrenner adapted from Tudge 2008:69) 48

Figure 3.1: Resilience Questionnaire for Middle-adolescent Learners: Development process 78
Figure 3.2: Research design 79
Figure 3.3: Research process 80
Figure 3.4: Resilience characteristics 93
Figure 3.5: Factor 1: Confidence and internal locus of control 123
Figure 3.6: Factor 2: Social support 124
Figure 3.7: Factor 3: Toughness and commitment 125
Figure 3.8: Factor 4: Achievement orientation 126

Figure 4.1: Data Collection Flow Chart (focus groups) (adapted from Northcutt & McCoy 2004:45) 130
Figure 4.2: Description of focus groups affinities 142
Figure 4.3: Affinity Name Table (adapted from Northcutt & McCoy 2004:151) 144
Figure 4.4: Affinity Relationship Table (adapted from Northcutt & McCoy 2004:151) 143
Figure 4.5: Tentative SID Assignment, RG1 149
Figure 4.6: Cluttered System Influence Diagram, RG1 150
Figure 4.7: The Clean SID, RG1 151
Figure 4.8: Rules, environment and developmental stage 152
Figure 4.9: Cluttered System Influence Diagram, RG2 155
Figure 4.10: Uncluttered System Influence Diagram, RG2 156

Page

Figure 4.11: The Cluttered SID, LRG1 162
Figure 4.12: The Clean SID, LRG1 162
Figure 4.13: Cluttered SID, LRG2 167
Figure 4.14: Clean SID, LRG2 167
Figure 4.15: Knowing Who I Am 169

Figure 5.1: R-MATS Section A risk and protective factors 181
Figure 5.2: Perceived Proximal Processes in the microsystems 183
Figure 5.3: The four resilience factors identified in the R-MATS 184
Figure 5.4: Focus group affinities 185
Figure 5.5: Mapping R-MATS Section A risk factors with Resiliency Wheel components 191
Figure 5.6: Mapping less-resilience factors and the Resiliency Wheel components 192
Figure 5.7: Mapping RG1 affinities with Resiliency Wheel segments 193

---oOo---

List of Tables

Page

Table 3.1: Pilot Questionnaires 1 and 2, Grade 8 and 9 learners 95
Table 3.2: Item Analysis, Section A Questionnaire 1 97
Table 3.3: Item Analysis, Section A Questionnaire 2 97
Table 3.4: Item Analysis, Section B Questionnaire 1 98
Table 3.5: Item Analysis, Section B Questionnaire 2 99
Table 3.6: Age-breakdown and selection of respondents 104
Table 3.7: Item Analysis, the R-MATS Section A 107
Table 3.8: Risk and Protective factors derived from R-MATS Section A 108
Table 3.9: Item Analysis, the R-MATS Section B (28 items) 110
Table 3.10: Comparison between research schools 112
Table 3.11: Comparison between genders 112
Table 3.12: Item analysis: The R-MATS Section B (24 items) 113
Table 3.13: Resilience characteristics and characteristics placing resilience at risk derived from Section B (24 items) 115
Table 3.14: Correlation between the total scores of Section A and Section B 119
Table 3.15: The significance of a risk factor on the resilience of respondents 120
Table 3.16: Four Factor Analysis of Section B of the R-MATS 122

Table 4.1: Focus Group Participants 131
Table 4.2: Focus Group Participants 133
Table 4.3: Affinity Relationship Table: RG1 144
Table 4.4: RG1: Pareto Protocol: RG1 145
Table 4.5: Interrelationship Diagram: RG1 148
Table 4.6: IRD Sorted in descending order of Delta: RG1 148
Table 4.7: The Pareto Protocol: RG2 153
Table 4.8: Interrelationship diagram: RG2 154
Table 4.9: IRD sorted in descending order of delta with tentative SID Assignment: RG2 155
Table 4.10: The Pareto Protocol: LRG1 160
Table 4.11: Interrelationship diagram: LRG1 161

Page

Table 4.12: IRD sorted in descending Order of delta with tentative SID Assignment: LRG1 161

Table 4.13: The Pareto Protocol: LRG2 164

Table 4.14: Conflicting relationships: LRG2 165

Table 4.15: Interrelationship diagram: LRG2 166

Table 4.16: IRD sorted in descending order of delta with tentative SID Assignment: LRG2 166

---ooOoo---

CHAPTER 1
Introduction to the research study

1.1 INTRODUCTION

Resilience manifests when individuals prevail in adverse circumstances and bounce back from hardships and revert to their former level of functioning or rise beyond, to a higher level of performance than before the onset of hardships. Research in the field of resilience indicates that resilience is developmental in nature and interactive with adversity (Blum, McNelly & Nonnemaker 2000:29; Masten 1994:5). The resilience of survivors of the most severely adverse historical and economical events has been well documented in the history of mankind, e.g. holocaust survivors after the Second World War, great people who fought against injustices in society and in South Africa, great academics, politicians and human rights activists. In South Africa, neither the professed inferior and restrictive education system administered to the black population nor apparent constraints of township life deterred the resilient people from advancing well beyond the boundaries set by the government to limit their knowledge, experiences and will to survive. The strength of character shown by the resilient individuals to break the set and restrictive boundaries and establish new world trends in dealing with adversity is one of the motivations for this study.

This study looks at resilient learners in the township schools of today who, against the odds, continue to perform better academically, socially and emotionally than could rightfully be expected from them in their environment. This superior performance by the learners in township schools occurs in a background of adversity as demonstrated by the social and economic challenges faced by the communities, poorly resourced schools (Tihanyi & Du Toit 2005:28) and overcrowded classes with high teacher : learner ratios (Hammett 2008:346; Prinsloo 2007:167; Onwu & Stoffels 2005:82). This study looks at how the school environment contributes to the level of the learners' resilience, both positively and negatively.

Townships in the past were known and revered for their vibrant entertainment, e.g. music and drama; they were a melting pot of languages and cultures created by people from varying cultural backgrounds. These positive factors have remained a magnet for tourism in South Africa, bringing visitors to our museums and houses of political struggle heroes who fought against apartheid, e.g. Nelson Mandela and Archbishop D. Tutu's homes in Soweto and Solomon Mahlangu's home in Mamelodi. Townships embody vibrancy, cultural diversity, pride and a sense of belonging. They have a strong history of origin, survival and accomplishments; their history shows resilience and a sense of achievement. Most

townships in South African are old and each have their own proud historical backgrounds, monuments and communities who strive to uphold their proud origins and history of resilience. My opinion is that each township fosters a sense of pride in the future generations.

Today township life in South Africa is still full of challenges and adversities which relate to the current century, and is a reflection of the economic and social development of the country. The winds of change are partly generated by the developing economy which is placing a larger strain on the township environments because of relaxed influx control policies, which lead to informal housing settlements. Informal housing settlements place a burden on under resourced township environments and schools because they are unplanned developments without any infrastructure in place. This forces townships to share their meagre resources available in their environment. However, one of the strengths of township communities, in most residential environments, include the resilience of some community members to find strategies and ways to generate entrepreneurial activities to survive and attract business to the community. These entrepreneurial skills have in many instances been blamed for creating unsafe and adverse environments for learners, e.g. shebeens built next to a school and being open during school times. These conditions affect the education of the learner and more broadly their performance and behaviour.

The black township adolescent and youth in South Africa have often been the cornerstone of revolutionary changes and are the key to democratic transformations. The township youth of the past as a result, were revered for their fierce and unrelenting vigour in enforcing educational changes to inform democracy and revolutionise the country by initiating political riots and civil disobedience. This however proved detrimental to the educational development of the black child, e.g. the 1976 riots and the period that followed immediately after. According to Van Zyl Slabbert, Malan, Marais, Olivier and Riordan (1994:10), black township youths were at the centre stage of political transformation during the apartheid era. Harber (2001a:68) indicates that schools in South Africa have been affected by violence which has resulted in many children being raised in violent environments. Harber (2001b:262) maintains that the violence that South African children are exposed to in their developmental environment has a negative effect on their development. He (Harber 2001b:262) suggests that violence makes them *'immune to violent actions.... they see violence as an acceptable form of expression and a way of channelling their emotions*'. His views are supported by the recent reports of violent acts carried out by learners on other learners and teachers in schools (Burton 2007:1). Could the violence of today emanate from violent reactions propagated by the State response to the peaceful protests of 16 June 1976? The answer to this question, however, is not the focus of this study, but the behaviour of learners during this

period of school riots and boycotts predisposed them to more risk and danger because state laws and policies were ignored, leading to lawlessness and anarchy in affected schools. The resilience of learners in affected schools appeared to be in doubt as the education and future of learners were placed at risk for political gains.

My argument of less-resilience, inherent in the behaviour of school youths in the aftermath of June 16th 1976 is paradoxical and may be inferred from the demonstrated risk it incurred. The violent murder by the police of Hector Peterson and Hasting Ndlovu, the injury and maiming of youths and community members led to the spread of riots to other townships, characterised by school disruptions, state disobedience, a tense and volatile climate (Saunders 1994:235; South African History Online July 2008). The violent demonstrations by the youth in 1976 were targeted towards the state in order to promote and demand political change and democracy, but the violent acts perpetrated by the youth of today border on delinquency and crime.

In comparison with the earlier challenges experienced by black township adolescents, the stressors and struggles in township schools have changed from political uprising to bullying, violence and disruptive behaviours which further perpetuate unhealthy development for the township high school learner. Kynoch (2003:1) declares that the township of the past era was safer than the current township because of violent crimes. The violence and disruption of healthy development currently observable in township schools and many South African schools as revealed in media reports might expose learners to a future of uncertainty which contravenes their fundamental human right to safety and security and a healthy developmental environment. The National School Violence Study (NSVS) conducted by the Centre for Justice and Crime Prevention (CJCP) shows that children are at a greater risk of experiencing crime at school and that schools have become a breeding ground for crime (Burton 2008a:2, 15, 25, 31). Of the 12,794 learners who participated in the study, 15.3% learners reported various experiences of school violence e.g. assault, robbery, sexual violence, being threatened with violence, bullying, etc., where crimes are committed by fellow learners people they know (Burton 2008a:xi-xiii). Burton (2008a:xiii) further indicates a strong correlation between exposure to crime and violence, and personal experiences of violence by learners both at home and in their communities, as most of the victims of crime were also assaulted at home. Exposure to risk factors has become wider and wider with the continuation of corporal punishment at schools (Burton 2008a:xiii; Ward 2007:22). A related study conducted by the Centre for the Study of AIDS in Limpopo province's four districts, investigating the learners' perceptions of safety, found that schools expose learners to more danger, e.g. drugs, weapons and unsafe playgrounds and learners' greatest fear was the exposure to and threat of experiencing crime (Lubbe & Mampane 2008:133, 135).

The challenges experienced by most schools in South Africa as a result of the violent behaviour of learners has motivated the Gauteng department of education to implement an early warning system, the Hlayiseka School Safety Programme, to prevent further outbursts of violent behaviour in schools (Gauteng Provincial Government, Department of Education, 15 April 2008). The Gauteng MECs for Education and Community Safety, Angie Motshekga and Firoz Cachalia, indicate the importance of schools to develop safety plans and implement safety incident management mechanisms and to educate learners about conflict management and how to resolve discords rationally and without resorting to violence (Gauteng Department of Education 15 April 2008, Gauteng Provincial Government Portal 20 February 2008). The urgent need for the Department of Education to teach learners life skills that will enable them to manage conflict and stressors in their lives and thus promote resilient behaviour and safe environments for development is yet another strong motivation for this study.

This chapter will proceed with a brief discussion on the rationale and the purpose of the study, the research questions, the definition of constructs used in the study, the research framework and the plan of inquiry including the methodology of the study and will conclude with a discussion on the rigour and limitations of the research and an outline of the chapters of the thesis.

1.2 RATIONALE OF THE STUDY

The main influencing factors in deciding on this study are an imperative to further explore the construct resilience as it is manifested in middle-adolescent learners in a black township school, and to understand the role their school plays, as a developmental and social system, in influencing the development of resilience in these learners. Middle-adolescent learners are at a transitional stage of their development, from childhood to adulthood and from an intermediate phase to a senior phase of their school-based education. Furthermore, it was shown in 1.1 that South African schools are experiencing more crime and violence due to various factors and this has predisposed the developing middle-adolescents to a lot more risk, which can contribute negatively to their development and future prospects. Experiences, perceptions and feelings of success and optimism towards successful future goals within environmental conditions that threaten the safety and security of individuals are paramount for the healthy development and the future of middle-adolescent learners in this study. Werner and Smith (1982:158), Joseph (1994:30) and Luthar (1991:600) refer to ‘stress-resistant’ or resilient children. Resilient individuals who persist and remain focused towards a healthy development in conditions of adversity and high risk, evident in township schools and communities, can be likened to those labelled ‘stress-resistant’. The analogy of resilience to

such a disposition of immunity to stress signifies the strength and tenacity of the resilient individual.

A resilient outlook and character allows an individual to have an optimistic view in life, to advance towards future goals and see the glass as half-full with the focus on successful resolutions despite adversity. Werner and Smith (1982:3) confirm that resilient children tend to develop healthily despite exposure to adversity when they signify that: they have '*self-righting tendencies ... that appear to move them towards normal development under all but the most severe circumstances'.* My perception is that middle-adolescent learners in township schools are exposed to more risk factors than protective factors, which threaten their normal development. In such an environment resilience is paramount in resisting the risk factors and promoting the identification, building and utilisation of protective factors to ensure a healthy development and good future perspectives.

Resilience must not be perceived as a once-off occurrence or a mere trait, it is a process and it cannot be isolated from the individual's developmental process, because it is interactive with development. Luthar, Cicchetti and Becker (2000b:546, 552) indicate that resilience is a dynamic developmental process and that resilience studies show changes in developmental pathways over the individual's life span. Most importantly, resilience becomes evident in situations of adversity through manifested 'competence in age-salient developmental tasks' (Masten & Obradović 2006:15). Teaching in schools aims to impart knowledge and to empower learners with skills, competencies and understanding in a variety of learning areas. Resilience cannot be facilitated or measured through the same curricular activity or method used in teaching and assessing academic learning areas, e.g. maths. The Life Orientation learning area aims to impart life skills to learners, including psychosocial and interpersonal skills to enable them to make informed decisions, manage themselves and communicate better. It also aims to influence positive changes in learners and their environment, to lead a productive and effective life. It is difficult to assess the acquisition of such skills and change using regular assessment instruments in class, e.g. tests and projects. An assessment of the successful acquisition of the learned life skills would include looking at the application and knowledge of acquired skills in observable changes in behaviour, the willingness and capacity of the individuals to actively demonstrate growth and maturity in the choices they make and self-expression of emotional, physical and social development and maturity. The measurement of resilience could thus include observable behaviour through demonstration of abilities to 'cope' and deal effectively with the demands and challenges of everyday life and self-reporting.

The school with a focus to help learners succeed beyond academic results and that aims to develop and promote the emotional, physical, social and psychological wellbeing of all its learners is promoting healthy development in their learners. The question remains whether such a school could also be said to automatically have a resilience focus. In order to understand the contributions to resilience by the system, knowledge of how the system functions and the threats facing the system is essential because some of the risk and protective factors are variable and context-based and as a result, some programmes are bound to be contextual and ethno-specific (Lemerle & Stewart 2005:4). An investigation of the school's role in supporting learners' resilience translates into the following question: What role could the school, as a system, play other than, or in addition to, presenting standard curricular programmes to support the resilience of learners?

The focus of this study is rather unique, as it will look at the perception of middle-adolescent learners in a black-only school on what is influencing their resilience, both positively and negatively in the school. The black-only schools are mostly situated in black-only residential areas and with the new democracy, redress in terms of educational resources, both human and material, is often still lacking. The school has the task to cater for a particular socio-economic group in the background of the concurrent environmental problems that compound on the existing adolescent problems of Grade 9 learners.

I submit that every individual and thus in this instance learner, has the potential to be resilient, but to enhance the resilience potential inherent in every individual the social systems, schools, families and communities have a major role to play. The school can invest in either preventative or remedial strategies to promote resilience in learners. However, I am not oblivious of the fact that these collective programmes are not magical wands which can simply eradicate the present stressors and risk factors present in the learners' lives. I am fully aware that it could be misleading to formulate the construct of resilience into programmes that address developmental skills with the aim of teaching such skills in order to influence resilience without acknowledging the limitations of such programmes.

Therefore, school programmes are not what this study aims to address. However, the South African school curriculum for Life Orientation addresses the attributes found by most resilience literature to influence resilience in learners e.g. problem solving abilities, positive self-concept, achievement-oriented attitude, motivation (Benard 2004:29; Thomsen 2002:25-26; Joseph 1994:28-31). The learners' perceptions of what in the school environment including the curriculum and how it is taught influences their resilience will inform me of the strengths and weaknesses of the school as perceived by learners and also on what may be irrelevant or even counter-productive within the school system. Furthermore, the quality of

interaction between the learners and the school will be elucidated by the learners' perceptions on what role the school plays in influencing their resilience. Finally, the nature of adversities, vulnerabilities and accessibility of available resources as experienced by the learners will become clear as a context of their resilience

1.3 THE PURPOSE OF THE STUDY

This thesis forms part of a wider research project sponsored SANPAD in South Africa and the Netherlands, which is looking at the relationship between middle-adolescent learners' degree of resilience (as demonstrated especially in school-related behaviour) and the school context. The purpose of this study is to explore and describe the perceptions of middle-adolescent learners with varying degrees of resilience from schools in a particular township, and the existing transactional process between their school and themselves. The study aims to understand and explain the nature of the relationship between the research variables, these being resilience, the township school environment and its middle-adolescent learners. Ultimately, the aim is to identify and compare the influence of the black-only township school on high and low degrees of resilience shown by middle-adolescent learners. The findings of this study will hopefully lead to recommendations being made which will promote and build resilience enhancing school environments in South African schools by looking at the possibility of transferring the findings to schools with comparable contextual influences.

1.4 RESEARCH QUESTIONS

The main question directs the focus of the study and is exploratory in nature:
How does the school influence the resilience of middle-adolescent learners in a black-only township school?

The main question aims to understand, interpret and explain the relationship between the construct of resilience (including less-resilience) and the school context. The research aims to investigate attributes of the school environment that contribute to the resilience or less-resilience of learners by finding out 'what' in the school environment influences the resilience and less-resilience of learners and 'how' the identified school attributes influence the resilience and less-resilience of learners.

To clarify the main question two sub-questions will be asked:

a. What are middle-adolescent resilient learners' experiences of their black-only township school system?
b. What are middle-adolescent less-resilient learners' experiences of their black-only township school system?

1.5 DEFINITION OF KEY CONCEPTS

1.5.1 RESILIENCE

Many definitions of resilience exist. The definition that is adopted for this study was formulated by members of the SANPAD Project which this study forms part of, namely:

> Resilience is having a disposition to identify and utilize personal capacities, competencies (strengths) and assets in a specific context when faced with perceived adverse situations. The interaction between the individual and the context leads to behaviour that elicits sustained constructive outcomes that include continuous learning (growing and renewing) and flexibly negotiating the situation.

This definition will be deconstructed and operationalised in the formulation of the resilience questionnaire in Chapter 3.

1.5.2 LESS-RESILIENT

The construct less resilient is preferred instead of ‘‘non-resilient’’, which occurs in most literature. Every individual has the innate ability to be resilient and may in degree thus be more or less resilient and not ‘‘non-resilient” (Henderson & Milstein 2003:3; Thomsen 2002:ix). Werner and Smith (1982:49) differentiate between ‘‘non-resilient’’ children and resilient children by referring to the ‘‘non-resilient’’ children as those children who developed serious learning and behavioural problems. Less resilient and “non-resilient” children have the same behavioural characteristics however, the construct less-resilient acknowledges their capacity for resilience, which is less compared to the resilient learners.

1.5.3 PROTECTIVE FACTORS

Resilience is noticed when individuals are experiencing adversity in their life or environment. To ameliorate the situation and protect the individual from adverse circumstances, protective factors play a major role. The following definitions of protective factors describe how they provide protection during adversity:

- Protective factors are influences that modify, ameliorate, or alter a person’s response to some environmental hazards that predispose them to a maladaptive outcome (Rutter 1985:600).
- Protective factors are key constructs in the conceptualisation of resilience. They moderate the effect of individual vulnerabilities or environmental hazards so that a given developmental trajectory reflects more adaptation in a given domain than would be the case if protective processes were not operating (Hauser 1999:4).

1.5.4 RISK FACTORS

Risk factors predispose an individual to harm, they are stressors that exist in life and affect an individual either positively or negatively. The negative effect of risk factors becomes more prominent in the absence of protective factors. Risk factors can be defined as:

- Individual or environmental hazards that increase the person/child's vulnerability to negative developmental outcomes (Engle, Castle & Menon 1996:621).
- Negative experiences associated with problem outcomes for some children (Minnard 2001:233).
- Processes that predispose individuals to specific negative or unwanted outcomes (Mcknight & Loper 2002:188).

1.5.5 MIDDLE-ADOLESCENT

The participants in this study are within the developmental stage of middle-adolescence (period between 14 to 16 years), which is a stage that requires them to search for their identity (Carr-Gregg & Shale 2002:34; Gillis 1996:71). Academically, middle-adolescents are required to make career choices. As a result, they are expected to have the decision making capacity which will enable them to direct their future plans. Middle adolescence is defined as:

> *The crossover period between childhood and adulthood, a period that is characterised by experimentation and the acquisition of skills necessary to make adult decisions* (Gillis 1996:73).

1.5.6 TOWNSHIP ENVIRONMENT, TOWNSHIP SCHOOL AND BLACK TOWNSHIP SCHOOL

- A South African township is an urban residential area which originated in the 1950's as rezoned areas that organised societies into race-space divisions away from central business districts and other areas of employment (Kotze & Donaldson 1998:467). Township refers to the (often underdeveloped) urban living areas that, under Apartheid, were reserved for non-whites (principally black Africans and Coloureds, but also working class Indians) and were usually built on the periphery of towns and cities (Wikipedia n.d). Therefore, a black township is a residential area for blacks, which Bremmer (2000:186) refers to as a 'segregated ghetto'.

- A township school is a school situated in a township area and a black township school refers to a school in a black township and with a predominant number of black learners.

1.6 THEORETICAL FRAMEWORK

1.6.1 INTRODUCTION

This section of the chapter will be fully revisited in Chapter 2 and aims here only briefly to argue and build the theoretical frameworks that will guide this study. Firstly, a resilience framework, the Resiliency Wheel (Henderson & Milstein 2003; Thomsen 2002), will be discussed, ultimately leading to the operationalisation of the construct resilience in Chapter 3. Secondly, resilience will be discussed from the ecological perspective, using the Bioecological Model of Bronfenbrenner and Morris (1998) and Tudge (2008), looking at how the environment influences the development of resilience in middle-adolescent learners and including the complex interconnection and interaction of the systems. The statement below demonstrates the understanding that challenges are part of life and that accomplishing developmental milestones or age-salient challenges successfully denotes successful adaptation:

> *Children develop in a dialectical process of meeting challenges, resolving them, and then meeting new ones. If the challenge is too severe, the developmental process breaks down. Resilience is a name for the capacity of the child to meet a challenge and use it for psychological growth* (Kumpfer 1999:210-211).

1.6.2 THE RESILIENCY WHEEL FRAMEWORK

I have chosen the conceptual framework of Henderson and Milstein (2003), the Resiliency Wheel, to serve as a base for guiding me in the collection, analysis and interpretation of data from the perspective and context of the participants within an existing frame of resilience research (Kumpfer 1999:212). The choice of the Resiliency Wheel framework (2003) is based on its systemic approach, the interactive processes and its stance on preventative processes through the injection of protective factors.

Henderson and Milstein (2003:12), state that resilience can be fostered or built within a school environment using their Resiliency Wheel (which will be fully discussed and critiqued in Chapter 2). They (Henderson & Milstein 2003:14) argue that the conditions required to build resilience in all learners are the same. This assumption implies that, in the case of my study, both resilient and less-resilient learners could require the same protective factors within the particular school environment to foster their resilience. The Resiliency Wheel (Figure 1.1) presents guiding principles used by Henderson and Milstein (2003) and Thomsen (2002) to train teachers on how to build resilience in learners. The principles of the Resiliency Wheel appear generic to most policies in education and are also reflected in the South African Schools Act policy document (Department of Education, SASA 1996), the Life

Orientation curricular programme (Revised National Curriculum Statement 2002), and the Inclusive Education policy (Department of Education, White Paper 6). The current school policies foster the principle of schooling the whole child by '*supporting the education of all learners*' and adhering to an inclusive school policy through its curriculum, assessment and classroom management (Sands, Kozleski & French 2000:150). My argument is to question the ability of school managers and teachers of the participating schools to implement policies and to enable and ensure that resilience in learners is encouraged and supported. Furthermore, to allow learners to relate and discuss their perceptions of the schools' ability to apply, implement and interpret policy through curricular and extra-curricular activities and how the interactive relationships existing between learners and the school foster their resilience or less-resilience.

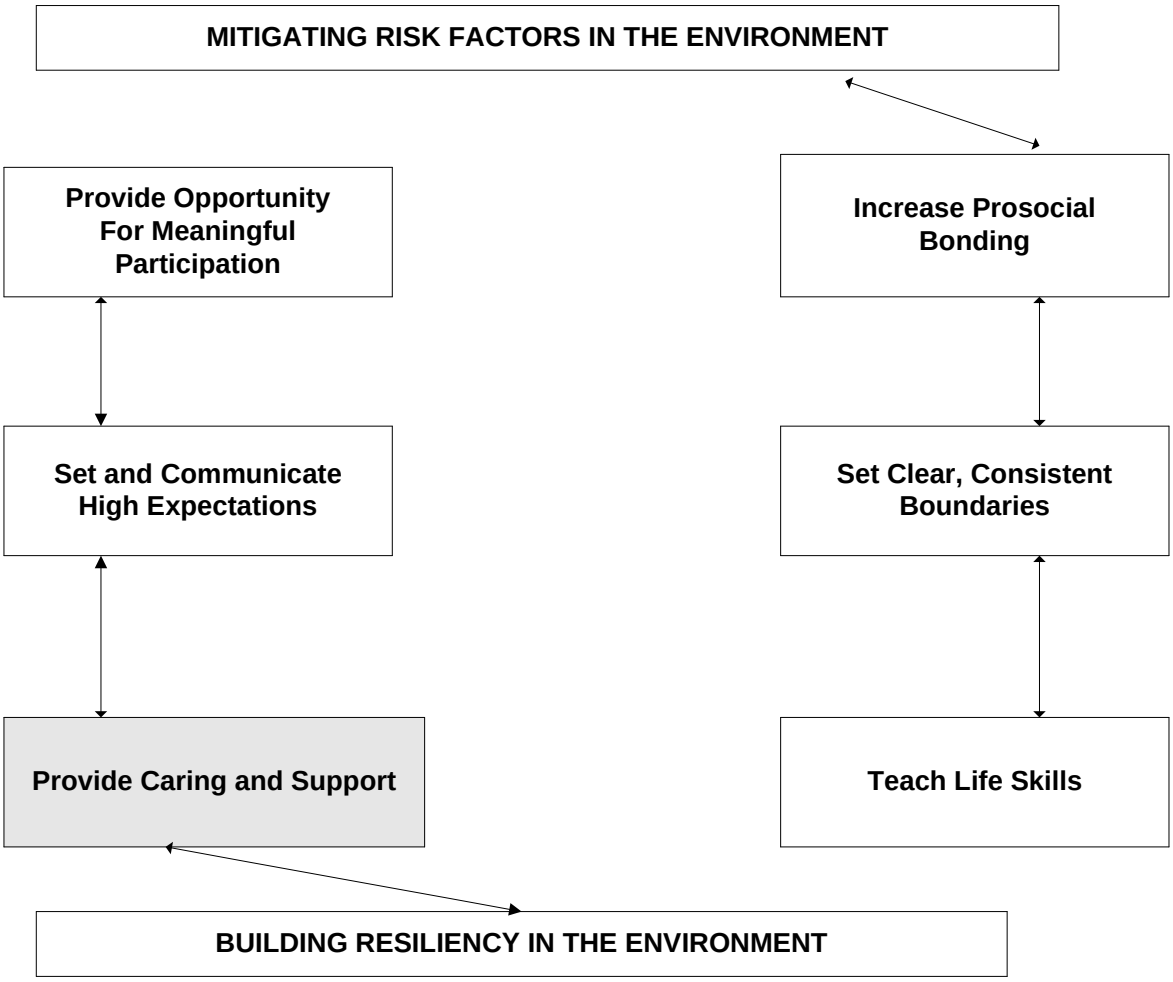

Figure 1.1: **The Resiliency Wheel** (adapted from Henderson & Milstein 2003:12)

The Resiliency Wheel (Henderson & Milstein 2003:12) principles are presented as six steps consistently required by environments of care to foster resilience by providing environmental protective factors and conditions that support individual protective factors (Henderson & Milstein 2003:11-15). The three steps that are identified for mitigating the impact of risk on

individuals with the aim of promoting or fostering resilience are: increasing bonding, setting clear and consistent boundaries and teaching life skills. The three steps suggested for building resilience in learners are: providing care and support, setting and communicating high expectations and providing opportunities for meaningful participation.

The Henderson and Milstein (2003) framework is cognisant of risk factors that can be encountered in the environment and suggest steps that can be considered to alleviate risk. The Resiliency Wheel works on two strategies of alleviating risk and building resilience by providing protection against risk. The framework is relevant for the township environment and township learners because it is not oblivious of particular risk factors that can expose learners to adversities existing in a township environment. The underlying factor for the Resiliency Wheel is a motivation that the presence of risk does not impede building resilience for learners. The longitudinal study of Werner and Smith (1982) of the Kauai children discovered that resilience was fostered by nurturance, support and care, attributes that are implied in the Resiliency Wheel (Werner 1995:81-82). Furthermore, the framework has a holistic approach to child development as it considers the functions, needs and resources of learners and the environment in which they exist, i.e. the biological and social aspects of the individual (Magnusson & Törestad 1993:430-431).

As a result, the Resiliency Wheel framework (Henderson & Milstein 2003), looks at ways of transforming the interaction of the individual learner with the environment by motivating ways to enable access to available resources and to support the resilience of learners. The model does not adopt a deficit approach by looking at ways to 'change' learners in order to make them 'suitable' to the educational environment. Instead, steps are suggested for transforming the environment to support the individual resilience of learners.

1.6.3 THE BIOECOLOGICAL APPROACH

The ecological theory of human development, which has been developed into the Bio-ecological theory of development as posited by Bronfenbrenner and Morris (1998a,b), relates to the developing individual, the environment and the interaction between the two. The Bio-ecological theory will be fully discussed and critiqued in Chapter 2. The use of the Bio-ecological theory gives a clearer picture of my study. It is an evolving model and integrates features of the initial ecological model of the 70's with the newly developed ones of the 90's (Swart & Pettipher 2005:13). The middle-adolescent learner is in the process of a transitional development from childhood towards adulthood and exists in multiple social systems, which interact with each other on a daily basis as part of their ecological system. The social systems within which the middle-adolescent learner exists, are interconnected, interrelated, and interactive with each other and the result is that each system influences and is

influenced by the other (reciprocal interaction) (Bronfenbrenner 1979:18&21; Swart & Pettipher 2005:10). To illustrate the intensity and influence of interactions between the developing individual and the environment, Bronfenbrenner (1979:21) reiterates that the child is not a *tabula rasa*, but a dynamic entity that structures their living environment and as a result, brings meaning to their development as they actively interact with the environment. The school environment, which purports to provide learning and development to the learner, requires a lot of interaction from the learner to ensure the optimal experience of learning. The Ecological theory (Figure 1.2) from which the Bio-ecological theory originates puts the individual at the centre of systems which impact on the individual's development. Middle-adolescent learners in a township environment are influenced and in turn influence events around them. Such interactions between the developing person and the context of development are best represented by Bronfenbrenner's Ecological framework. The framework can help in depicting and capturing the risk and protection experience drawn by the middle-adolescent learner from the environment.

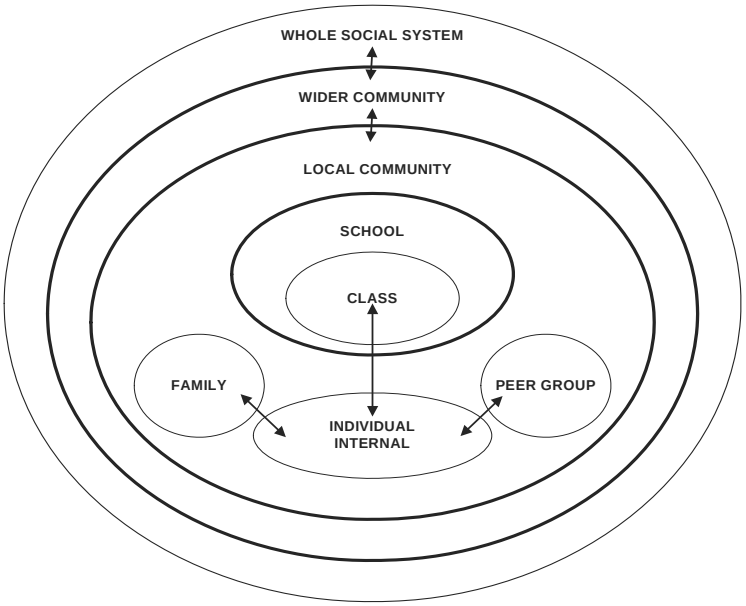

Figure 1.2: **The Eco-Systemic Framework** (adapted from Donald, Lazarus & Lolwana (1997:65)

Bronfenbrenner (1979:7) states that the ecological environment is '*conceived as extending far beyond the immediate situation directly affecting the developing person,'* and includes the links or interconnections that directly and indirectly influence the person. For the purpose of my study, more emphasis will be placed on the school as a microsystem because it is my area of study. According to Bronfenbrenner (1979:22), the microsystem is defined as *'a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics'.* This microsystem is

therefore the actual environment where a person and environment interaction exists, e.g. the family, school, peers, who are all in a dynamic interaction with each other.

1.7 PLAN OF ENQUIRY

1.7.1 RESEARCH PARADIGM

A research paradigm is a scientific frame of reference that the researcher adopts for the study (Garbers 1996:337). Garbers (1996:337) denotes that a paradigm includes:

> *… the metaphysical, theoretical, conceptual and instrumental conflictions of a particular scientist and those of the group which, in the scientist's discipline, has sanctioned the paradigm as the authoritative method of explaining the phenomenon in the field of study.*

Denzin and Lincoln (2005:22) further state that a paradigm is 'a basic set of beliefs that guide action', dealing with the researcher's worldview. Various research paradigms exist and Figure 1.3 gives a synopsis of research paradigms from reviewed literature. This study assumes a mixed method approach structured in two phases (see 1.7.2). Phase 1 (discussed in Chapter 3) is quantitative. Phase 2 (discussed in Chapter 4) falls within the Constructivist and Interpretivist paradigms, as it aims to interpret the participants' perceptions (which are interpretations themselves), constructed during the focus group of the phenomenon resilience and how it relates to the school context. The qualitative nature of the study alludes to Constructivism and Interpretivism by exploring the participants' understanding and constructions of knowledge (i.e. they construct their understanding of the environment and interpret their new constructed knowledge) of their social world and the researcher's interpretation and understanding of the phenomenon which is being studied (Ritchie & Lewis 2004:7). Through Interpretivism, this study intends to understand the lived experiences of participants in their deliberations, descriptions and interpretations of interactions in their social context (Henning *et al.* 2004:19-20; Ritchie & Lewis 2004:7).

Element	Ontological Position	Epistemological Position	Methodologies
Positivism/ Postpositivism	Determination, Reductionism, Empirical observation and measurement, Theory verification (Creswell 2003:6; Denzin & Lincoln 2005:24; Henning *et al.* 2004:17)	Objectivists: Findings are true (Creswell 2003:8; Henning *et al.* 2004:18)	Experiments and surveys: verification of hypotheses, mainly quantitative methods (Creswell 2003:7; Henning *et al.* 2004:17-18).
Advocacy/ Participatory	Political, Empowerment issue-oriented, Collaborative, Change-oriented (Creswell 2003:6,8-9)	Subjectivists: Collaboratively created findings (Creswell 2003:10-11)	Participatory, advocacy or emancipatory, Dialectical Action research, Mainly qualitative methods (Creswell 2003:11)
Constructivism	Understanding, Multiple participant meanings, Social and historical construction, Theory generation (Creswell 2003:6, 8)	Subjectivists: Created findings (Creswell 2003:8)	Qualitative approaches (Creswell 2003:19). Hermeneutical/dialectical: the researcher is a passionate participant within the world being investigated (Creswell 2003:8-9)
Interpretivism	Understanding, Interpreting meanings (Multiple realities), descriptive (Babbie & Mouton 2002:28-29; Henning *et al.* 2004:19-20; Ritchie & Lewis 2004:17&23).	Subjectivists: Value mediated findings (Henning *et al.* 2004:21)	Mainly qualitative research methods, Descriptive analysis, Observations (Henning *et al.* 2004:20)
Pragmatism	Consequence of actions, Problem-centred, Pluralist, Real-world practice oriented (Creswell 2003:6, 8)	Both objective and subjective findings are valued (Creswell 2003:12).	Mixed methods (Creswell 2003:13,19)

Figure 1.3: Research Paradigms

Johnson and Onwuegbuzie (2004:14) indicate that Constructivism and Interpretivism represent the qualitative purist's preferred research paradigms as they argue that multiple realities exists in a research. They (Johnson & Onwuegbuzie 2004:14) maintain that when research has multiple realities, time and context-free generalizations are neither possible nor desirable and research becomes value bound and a difficulty arises when making any inferences about the cause.

This argument appears to be relevant to my study because the perceptions of the participants about what it is in the school environment that supports their resilience can result in many individual specific factors which can be interpreted differently in different contexts. Context remains paramount in the interpretation of the experiences and the cause and effect of factors on the individual's life and experiences remain normative and specific to the

individual. These constructs of the participants' experiences of their environment need to be interpreted in the context in which they occur and using the respondents' worldview. I therefore agree with Johnson and Onwuegbuzie (2004:14) that in this research, multiple-realities will be encountered including a difficulty in determining the causes and effects of the findings. The strength of the Constructivist and Interpretivist research paradigms lie in their promise to answer all the research questions and the research plan aims to address their weaknesses at the level of analysis and drawing conclusions by choosing the Interactive Qualitative Analysis (IQA) method (Northcutt & McCoy 2004). The IQA method has steps that help to inform the researcher about factors that determine the causes and effects in the data collected. IQA is defined as '*a systems approach to qualitative research and the primary purpose is to represent the meaning of a phenomenon in terms of elements (affinities) and the relationships among them'* (Northcutt & McCoy 2004:197). Since IQA utilizes a constructivist approach to data collection and analysis (Northcutt & McCoy 2004:27), this study will allow the participants to use their current and past knowledge, experiences and perceptions to answer the research question.

Creswell (2003:12), Johnson and Onwuegbuzie (2004:18) and Hanson, Creswell, Clark, Petska and Creswell (2005:226) maintain that pragmatism is the best paradigm for a mixed method research because it draws on many ideas, uses diverse approaches and values both subjective and objective knowledge. Johnson and Onwuegbuzie (2004:16) argue that if methods do not provide a 'perfect solution' and do not fully answer the research question a balanced approach should be taken. I maintain that the Constructivist and Interpretivist paradigms chosen will answer the research question especially with the IQA method chosen for the study. I further argue that the paradigms chosen remain constructive and interpretive however coupled with the IQA method a balanced position is maintained (Johnson & Onwuegbuzie 2004:16-17; Northcutt & McCoy 2004:15). A pragmatic rule states that, '*the current meaning or instrumental or provisional truth of an expression is to be determined by the experiences or practical consequences of belief in or use of the expression in the world*' which practically affirms the 'effect or outcome-oriented rule'. Perception and lived experiences represents constructions and interpretations and the 'truths' of participants which will be captured, interpreted and analysed to answer the research question.

1.7.2 RESEARCH DESIGN

A research design refers to the planning of the scientific enquiry, a '*blueprint of how you intend to conduct the research'*, which includes designing a schedule 'of what to find out', 'how' it will be done and 'why' it should be done (Babbie & Mouton 2002:72-74). Babbie and Mouton (2002:75) warn against confusing research design with research methods, they emphasise that a research design attempts to answer the research question by using

different methods and procedures, (see the research process in Figure 1.4). This section of this chapter will address the shaded sections as it gives an indication of the research design and processes.

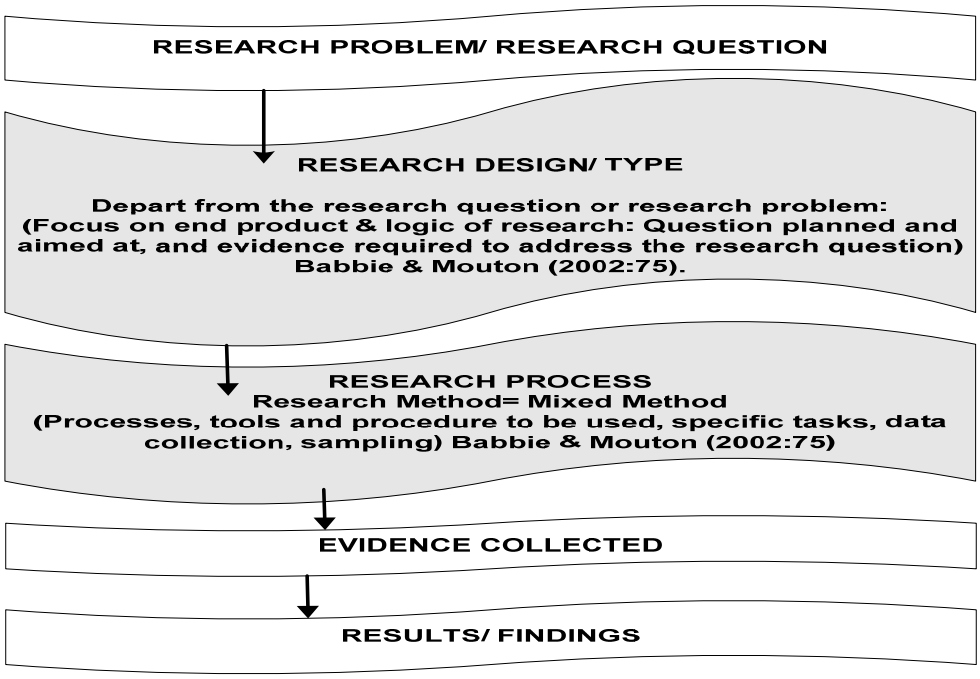

Figure 1.4: The Research Design process (adapted from Babbie & Mouton 2002:73-74)

Figure 1.5 indicates a mixed method research design matrix which includes both quantitative and qualitative research methods followed in two phases. The first phase will adopt a quantitative approach to identify resilient and less-resilient Grade 9 middle-adolescent learners using a self-developed questionnaire (the questionnaire is fully discussed in Chapter 3). The second phase will adopt a qualitative approach with emphasis on exploration of the phenomenon resilience amongst a particular group of participants and contextual description of how the school environment influences resilience in middle-adolescent learners (Henning *et al.* 2004:9). The mixed method approach adopted in this study is sequential, starting with quantitative data collection and analysis in Phase 1, which leads to Phase 2, the qualitative data collection and analysis using the IQA method.

Sequential Order	
QUANTITATIVE →	**QUALITATIVE**
PHASE 1	**PHASE 2**
Highest status in identification of participants	**Highest status in answering the research question**

Figure 1.5: Mixed method design matrix (adapted from Johnson & Onwuegbuzie 2004:22)

Phase 1 is the initial approach which aims to explore the construct resilience in the school context and identify resilient and less-resilient participants of the study using the self-constructed Resilience questionnaire. The selected participant will participate in Phase 2 of the study, which aims to explore and describe the perceptions of the participants on the influences of the school environment on their resilience.

The research will follow a multiple case study approach using two secondary township schools. Henning *et al.* (2004:32) defines a case study as an investigation of a 'bounded system' with unity and totality of boundaries outlined. A school fits the definition with set specific boundaries in terms of structure (infrastructure), policies and institutional focus. Creswell (2003:15) states that in a case study the researcher is able to explore in depth using a variety of data collection procedures, the processes, programs or activities of the system. Using the school as a unit of study enhances this study and helps to address the research question.

1.7.3 DATA COLLECTION PROCEDURE

The two phases of the study (mentioned in 1.7.2 and outlined in Figure 1.5) will be used to answer the main research question (1.4): *How does the school influence the resilience of middle-adolescent learners in a black-only township school?*

Phase 1 will follow a quantitative method by using a self-developed resilience questionnaire. The resilience questionnaire will be designed by deconstructing the definition of resilience to develop valid items, followed by a statistical analysis to determine the validity and reliability of the questionnaire. This phase is fully discussed in Chapter 3. The process of questionnaire design will be characterised by piloting and refining of the questionnaire with a selected class of learners in a school other than the schools of research, School 1. Item analysis will be conducted to establish the reliability of the questions or statements in determining resilience of participants. Depending on the results of the item analysis the resilience questionnaire will be reworked and administered to the research participants in Schools 2 & 3. Item analysis will again be done to the resilience questionnaire and depending on the results, the questionnaire will be reworked leading to a final questionnaire. Factor analysis will be conducted on the final resilience questionnaire and the participants for Phase 2 of the study will be selected based on their resilience score.

Phase 2 will be qualitative in nature and will follow the IQA process, starting with focus groups and followed by interviews with the identified resilient and less-resilient learners. In each school, four resilient learners will be selected blindly, based on their resilience scores, to participate in focus group A, and four less-resilient learners to participate in focus group B.

Learners will not be aware of their resilience status. The purpose of the Focus Groups will be to generate data and produce interview protocols (derived from the affinities developed by the group), identify affinities and the relationship between them and build/ draw mind-maps or pictures of the group's reality. Finally, two learners from each group will be selected to participate in interviews.

1.7.4 DATA ANALYSIS AND INTERPRETATIONS

Two data analyses and interpretations will be done for each phase. Phase 1 will follow a statistical analysis using the item and factor analysis of the resilience questionnaire to determine the quality of items and the questionnaire (Scorepak®: 2005:1) and hopefully to make an item selection for the final version of the instrument for use in black township schools.

Phase 2 of the study will be applying the IQA method. Participants play multiple roles in IQA since they are regarded as the source and analysts of data (Northcutt & McCoy 2004:199). Northcutt and McCoy (2004:43) use a metaphor of a quilt to describe the purpose and process of IQA focus groups as a systemic facilitation and representation of the discourse, to 'create its own interpretive quilt of meaning and then to construct individual quilts of meaning (interviews), where the two meanings are then used together as the foundation for interpretation'. The metaphor of a quilt is thus used to represent a system of affinities (patches), which will be formulated during the focus group discussions. The focus group discussions will also help to clarify the relationships (stitches) that connect the affinities identified. During IQA focus groups participants are required to work silently (individually) and then in groups to construct affinities that best answer the research question from their perspectives. After generating affinities, participants are then required to define and explore the meaning of their affinities and to later group them into themes and form mind maps. The role of participants as constructors of knowledge (generating affinities) is supported by their interpretation of their new knowledge (definition and grouping of affinities into themes). After the focus groups, some participants will be selected (based on their interactivity and responsiveness during the focus groups) for interviews where they will work with the focus group data to either change or agree with the final interview data.

1.7.5 ETHICAL CONSIDERATIONS

I will adhere to the Ethical Code Guidelines of the Faculty of Education, University of Pretoria. The permission to work in schools will be sought from the Provincial Department of Education and the relevant District Office who serve together with managers of the selected schools, as caregivers for learners in a school environment.

The following ethical requirements will be met (Henning *et al.* 2004:73; Ritchie & Lewis 2004:66-70; Creswell 2003:64-66):

(1) Informed consent: participants will be informed of the objective of the study and of the procedure in which they will participate. Participants will further be informed about their voluntary participation and their right to withdraw from the activities when they no longer wish to participate. Because of the age of the participants (middle-adolescents), letters of consent will be sent to parents to ask permission for learners to participate in the study.

(2) Anonymity and confidentiality: participants will be informed of the partial anonymity that will be maintained in the study. Full anonymity outside the research team cannot be guaranteed because of the method of data collection that will be adopted. Focus groups cannot guarantee full anonymity, because participants cannot be monitored for confidentiality outside the research team. However, participants will be assured of confidentiality of results especially by protecting their identity in the final report writing and publication of results.

(3) Protecting participants from harm: the topic of discussion may induce some participants to recall or think of stressful experiences in their lives. After every focus group, discussion participants will therefore participate in a debriefing activity to facilitate relaxation and closure. Participants having signs of severe stress will be referred for counselling.

1.8 RIGOUR OF RESEARCH

The construct rigour is attributed mainly to the quantitative or rationalistic paradigm and the criteria required to reach the goal of rigour are internal validity, reliability and objectivity (Horsburgh 2003:308; Morse, Barrett, Mayan, Olson & Spiers 2002:4; Emden & Sandelowski 1998:207). Rolfe (2006:307) maintains that rigour is achieved if a trained researcher can analyse the same data in the same way and come to the same conclusion, thus establishing the reliability of the results. Rigour in Phase 1 of the study (quantitative phase) will be established through proper questionnaire design and item writing, item analysis of a piloted questionnaire to establish the reliability of items (the appropriate statistical treatment of data) and final item analysis and item selection (Cohen, Manion & Morrison 2000; Babbie & Mouton 2002).

Qualitative research is highly criticised in much of the literature when compared to quantitative research on the basis that it lacks ‘scientific’ rigour and credibility, (Horsburgh 2003:308; Emden & Sandelowski 1998:207). Morse *et al*. (2002:4) state that for research to be considered worthwhile it should have ‘true value, applicability, consistency and neutrality’.

Phase 2 aims to report on the experiences of participants and the focus is more on the authenticity of their report (Silverman 1993:10). Reliability of results in qualitative research is difficult to establish because reliability refers to the degree to which an instrument will give the same measurement each time it is used under the same condition, with the same subjects (Golafshani 2003:598), and this is not possible in this study because focus groups will only be conducted once. In using the IQA process and procedure, I intend to ensure that there is rigour and credibility in my study since the data collection and analysis process of this method is:

- Public, accessible, accountable and non-idiosyncratic
- Replicable within reasonable bounds and
- Not dependent on the nature of the research elements (especially the analysis), but on the rules of rationalization regardless of biases or meaning of elements (Northcutt & McCoy 2004:38).

1.9 CONTRIBUTIONS AND STRENGTHS OF THE STUDY

The findings of the study will give an overview of resilience as perceived and demonstrated by South African middle-adolescent learners in two black only secondary schools and will hopefully contribute to the construct resilience nationally and internationally. The study will also contribute to an understanding of how learners interpret and understand their relationship with the school system and how they function within the system, including the benefits and detriments of being a learner in a black only township school. The learners' perceptions and constructions of their relationship with the school system will hopefully shed a light on how school policy is implemented in the school and how curriculum development and youth intervention initiatives are construed by learners. Furthermore, the perceived threats and resources available in the school system will be highlighted to help in supporting the resilience of learners in black only township schools.

The two schools participating in the research are from the same township and I assume they serve learners from similar backgrounds. However, normative and contextual differences can be expected because of factors such as policy implementation and interpretation, and access and utilisation of resources. As a result, knowledge gathered from the two schools can inform the education department, school managers and research community in the understanding of which factors within the school system contribute towards supporting the resilience of learners and which factors are detrimental to their resilience.

The study may add new knowledge on IQA research methodology from a South African perspective and the findings may contribute to the existing knowledge of IQA studies. The

resilience questionnaire that I constructed to identify the participants of the study will contribute in identifying resilience in learners.

1.10 PERCEIVED THREATS TO THE STUDY

The findings of the study will not be generalized to other schools because of various factors including, the small sample size in Phase 2 of the study and the fact that the study is conducted in only two schools, in only one township. However, a comparison of the results between the two participating schools may lead to inferences and findings can be applicable to other schools in a similar context. A further possible threat to my study may be the IQA methodology, since it is relatively new and there is very little published literature to consult. In South Africa, I will be among the first few individuals to use the IQA method in my thesis, which serves as both a strength and a limitation. The strength will lie in my contribution to the new methodology and the new knowledge which may be uncovered by these means and the threat is in the limited literature available to consult.

Furthermore, my study includes the development and administration of a questionnaire which is essential in the selection of my participants for the second phase of the research. Should the questionnaire fail in effectively identifying the resilient and less-resilient learners, all my further data will be compromised. Finally, the research questions require the participants to retrospect, thus emotions may be aroused that may cloud or affect their rational judgement during the focus groups and interviews. I will need to be sensitive to their feelings and facilitate the process in such a way as to encourage them to function beyond emotions, which might be challenging.

1.11 OUTLINE OF CHAPTERS

Chapter One:
The chapter has presented the purpose of the study, the research problem, the rationale of the study, the conceptual framework and the research design, perceived threats to the study and the overview of chapters.

Chapter Two:
The focus will be on a literature review of what other scholars say about resilience and the school context, culminating in discussion of the conceptual framework of the study, the Resiliency Wheel and the Bio-ecological framework. The developmental phase of middle-adolescence will be looked at briefly and the context of the township school will be reviewed and related to other school contexts inside and outside South Africa.

Chapter Three:

The chapter will describe Phase One of the study. It will, however, also detail the research design and other methodological aspects decided upon to explore the main research question and the sub-questions. The ethical principles of the study will also be attended to. Phase One of the data collection will address the questionnaire design, statistical analysis and selection of learners for Phase Two of the study and the analysis and interpretation of the findings in respect of the questionnaire.

Chapter Four:

The chapter will describe Phase Two of the study. The chapter details the IQA process including its methodological aspects. It is a continuation from Phase One and will discuss the findings and results of the IQA process.

Chapter Five:

The chapter will report on the results and findings of Chapters 3 and 4. The research frameworks of the study will be used for the final analysis and interpretation of the results. Finally the chapter will present a summary of the research, the conclusions regarding resilience theory and its application in the particular environment of the two township schools, the limitations of the study and recommendations for future research.

---oOo---

CHAPTER 2
A theoretical background towards understanding a resilience supporting school environment

2.1 INTRODUCTION

The research aims to understand how a black-only township high school environment influences the resilience of middle-adolescent learners. The research will help understand what it is in a black-only township high school environment that supports as well as hampers the resilience of learners. To better understand a resilience supporting school environment, it is essential to have knowledge of what resilience is and what a resilience supporting school environment relates to. The discussion on resilience will give an overview of the history of resilience research and how it has evolved over the years to what it is today. The progression of resilience research will be reviewed by looking at four different phases of resilience research, first identified by Richardson (2002:302) as the three waves of research in resilience and subsequently extended to four by Masten and Obradović (2006:14) and Masten (2007:921). The discussion on the contribution, both positive and negative, of the school environment to the resilience of learners forms the core of the chapter and the research as it relates to the research question of this study and articulates with the theoretical frameworks that direct the research.

The two theoretical frameworks of the research, the Resiliency Wheel (Henderson & Milstein 2003:12) and the Bioecological framework (Bronfenbrenner & Morris 1998) communicate effectively as they both interpret the importance of the interactive nature of the relationship between the individual and the environment. Both the environment which functions as a context for development and the individual represent systems. The person is a system and the environment (both physical and social) that the person functions in and relates to, is a system. Bronfenbrenner (1979:7) indicates that effective functioning of places or settings such as schools and families in providing an effective context for development is dependent on the nature of the social interactions that exist between the settings where the person is actively participating in the interactions. The construct 'system' refers to the context of development and study, which in this research refers to the school and the developing middle-adolescent learner who exists within the environment and all the social interactions that take place within and between them. A system is defined as a '**complex whole formed from related parts:** a combination of related parts organized into a complex whole' or a '**whole body:** the human or animal body as a unit' (MSN Encarta, 2007). The context of development including social interactions between all living and non-living organisms in the environment denote the interactive nature of the systems and the bidirectional relationships that exist between the systems. Bronfenbrenner (1979:20) refers to such interactive and

bidirectional relationships between the systems as representing a 'progressive mutual accommodation that exists between the actively developing individual and the changing properties of the immediate settings'. The influence and role of the black-only township environment on the resilience of the middle-adolescent learner is, from the bioecological perspective, not linear, but acknowledges the social interactions that exist between the school and the middle-adolescent learner (Bronfenbrenner 1979:5).

This chapter aims to consolidate the discussion on resilience research, followed by an analysis of one of the theoretical frameworks, the Resiliency Wheel, and its relevance to the study. The second theoretical framework, the Bioecological approach of Bronfenbrenner and Morris (1998), and its possible contribution to interpretation of the research will be considered. A brief discussion of the middle-adolescent learner as the participant of the study will be provided. In conclusion, the township and black-only high school environment will be discussed with some consideration of the learning area Life Orientation and its possible role in the resilience of learners.

2.2 WHAT IS RESILIENCE?

Research indicates that the construct of resilience is context-specific (Harvey & Delfabbro 2004:5; Tusaie & Dyer 2004:6; Wilkes 2002:229; Brown, D'Emidio-Caston & Benard 2001:4; Smith 1999:156), i.e. influenced by the expected developmental tasks of the specific population group under study, where studies of infants, adolescents, families and adults adopted various methodologies to accommodate the various developmental tasks of the research participants. Resilience research includes normative expectations of adaptation and involves processes viewed in relation to patterns of child-rearing, definitions of health, healthy development and judgements of developmental outcomes of the population under study (Roosa 2000:567; Dyer & McGuinness 1999:281; Howard, Dryden & Johnson 1999:317; Smokowski, Reynolds & Bezruczko 1999:426; Rutter 1999:135; Engle, Castle & Menon 1996:627; Werner & Smith 1982:5). Thus, the individual resilience characteristics and the environmental and individual risk and protective factors that formed the initial areas of research focus in resilience study, related to the normative factors, developmental traits and attributes of the population group under study (Rutter 1999:136-137; Smokowski *et al.* 1999:427; Garmezy 1996:14; Werner 1995:82; Rutter 1990:206; Werner & Smith 1982:54-59).

The definition of resilience gives a distinction of the behaviour of an individual when confronted with adversity and denotes recoiling, leaping back or bouncing back, referring to the flexible nature of the individual to return or recover to the original form of functioning after the tension caused by the stressors (Masten 2007:923; Harper 2001a:1626). Resilience is a broad concept, which encompasses positive patterns of adaptation in the context of adversity

(Masten & Obradović 2006:14). Masten (2007:923) and Masten and Obradović (2006:14) maintain that in developmental sciences the resilience focus is mostly on individuals but, the construct is inclusive and can be applied to any functional system in which individual development takes place e.g. family and schools. Masten and Gerwirtz (2006:1) indicate that resilience is a general term which requires definition and operationalisation before the researcher can study the phenomenon because of the multiple definitions of the construct, which are domain-specific and contextually operationalised by individual researchers.

Masten, Hubbard, Gest, Tellegen, Garmezy and Ramirez (1999:144), Masten and Obradović (2006:19) distinguish three forms or stages of resilience based on levels of **adversity**, **adaptation** and **competence** of the individual, namely resilient (good adaptation and high adversity history), competent (good adaptation and low adversity history) and maladaptive (poor adaptation and high adversity history). The differentiated levels of resilience further indicate the complexities encountered when defining the construct resilience. Werner (1995:81), Kinard (1998:370) and Smith (1999:157) concur that most researchers have defined the construct resilience to describe three things: '**good developmental outcomes** despite high risk status, **sustained competence** under stress and **recovery from trauma**'. Various authors refer to adversity (high risk, stress and trauma) and good development (adaptation, competence and recovery) in defining resilience, which also reiterates the formulation of bouncing back or reverting to the original form of competence. Resilience, denoting good developmental outcomes, relates to favourable developmental pathways and the expected developmental behaviours of the participants at a particular age of development (Tarter & Vanyukov 1999:94-95; Werner 1995:82; Werner & Smith 1982:5-6).

However, Olsson, Bond, Burns, Vella-Brodrick and Sawyer (2003:1) state that a lack of discrimination between the constructs of outcome and process in defining resilience is utterly confusing and can lead to 'needless complexity'. The resilience process aims to explain the existing interaction between the individual and the environmental protective factors which form part of the resilience characteristics, and the risk factors which include inhibitors or factors that threaten the resilience of the individual within the context of development. The risk factors are the stressors that are part of life and the resilient individual is able to overcome stressors and achieve healthy development. Garmezy (1996:11), Garmezy, Masten and Tellegen (1984:102), Masten (2007:923) and Werner and Smith (1982:158) refer to resilient individuals as 'stress-resistant' because of their ability to overcome adversity and demonstrate resilience in development.

The individual and environmental risk and protective factors present in the individual's life appear to be variable, normative and contextual. Consequently, a single factor can be a risk

factor in one situation and a protective factor in another, which then actually becomes beneficial to the development of the individual (Masten 1999b:288; Garmezy 1996:14; Gore & Eckenrode 1996:29; Rutter 1990:185; Werner & Smith 1982:5). Rutter (1990:184-186) states that risk factors do not have a straightforward direct effect, therefore recognising that the interactive process of risk and protective factors is essential in the resilience process. The interactive and progressive transactional process that exists between the individual and the environment and not just the individual and environmental resilience factors per se, protect against the risk factors and determine resilience (Rutter 2000:667-668; Leshner 1999:2; Werner & Smith 1982:133). The interactive process translates to the fundamental transactional process in resilience and developmental competencies, which is further reiterated by Rutter (2005:4-5) and Sameroff and Seifer (1983:1263), when they emphasise the importance of the environment in providing a unique and differentiated context in human development. Sameroff and Seifer (1983:1264) postulate that the environment is actively involved in child development and they found that '*development was the outcome of the relationship of an active organism to an active environment'.* Thus, resilience research acknowledges that the individual does not exist in a vacuum but is influenced and in turn influences the environment in which they exist.

Consequently, the construct resilience is complex, variable, dynamic, with multiple spheres of influence (domains) and it employs multiple-methodology in research (Haase 2004:290; Howard *et al.* 1999:317-318; Rutter 1999:120-121; Garmezy 1996:9-10). According to Bronfenbrenner (1974:2; 1979:22), a system is not a single and static entity, but includes physical settings, individuals, activities and reciprocal interactions. The developmental process together with the interactions that exist between individual learners and their environment constitute a system. To determine the resilience of any individual, the researcher requires knowledge of how the system in which the individual is involved functions. Masten (2007:923) and Masten and Obradović (2006:14) mention that resilience is '**inferential**' which indicates the need for deductive reasoning or interpretation when judging the resilience of an individual. Resilience is inferred from the behaviour of the individual in relation to the environmental circumstances the individual is exposed to. To determine the resilience of the individual requires an understanding and knowledge of whether they are developing as they should (functioning effectively) and essentially knowledge of the underlying or potential threats to their development and their potential to positive adaptations (Masten & Obradović 2006:14).

Not all individuals are equally 'stress-resistant' or manage to function equally effectively under adversity. Some succumb to risk and fail to develop effectively. Such individuals who struggle to cope and to demonstrate expected or 'normal' developmental goals and 'age-

salient' developmental outcomes are less-resilient. This research assumes resilience to be on a continuum, in a process of 'bouncing-***back***'. An individual, I believe, can only 'bounce-back' after an interruption of a process, a 'fall', and to regain the previous state of functioning is an active process. There is a likelihood of many 'spring-backs' contributing to the desired stage of functioning and less-resilience relates to that condition where there is no certainty or surety of bouncing all the way back. Therefore, less-resilience is not about 'falling', but about the degree and quality of getting up again. Identified 'non-resilient' children in the longitudinal research of Werner and Smith (1982:133) are described as vulnerable children who live in a persistently disordered family environment that provide little support and/or who have experienced biological insults which prevent them from experiencing successful and healthy developmental outcomes. This explanation refers to the environmental risks and adversities that hamper the capacity of the individual to be resilient. Masten (1994:4) denotes that through external behaviour good adaptation becomes competence and social adjustment, while poor adaptation refers to antisocial behaviour and maladjustment. In this study, 'less-resilient' middle-adolescent learners will refer to those individuals who struggle to cope, adapt and function effectively in their environment.

The definition of resilience constructed by the SANPAD project team and adopted for this study is a new contribution to the field of resilience research and was briefly introduced in Chapter 1 (1.5.1). The definition states that resilience is having a disposition to identify and utilize personal capacities, competencies (strengths) and assets in a specific context when faced with perceived adverse situations. The interaction between the individual and the context leads to behaviour that elicits sustained constructive outcomes that include continuous learning (growing and renewing) and flexibly negotiating the situation. The definition is deconstructed and operationalised in Chapter 3 (3.5.1) to serve as a guideline in constructing a questionnaire which will be used in Phase 1 of the study to identify resilient and less-resilient learners.

2.3 THE DEVELOPMENT OF RESEARCH ON RESILIENCE

Research regarding resilience has evolved over the years from the identification of individual resilience characteristics within the person and the environment, which relates to the protective factors that serve to protect the individual from the impending risk in the environment, and risk factors that expose the individual to risk. In time, resilience research progressed to the understanding and the acknowledgement of the social interactions and the interactive nature of the relationship between the individual and the environment for resilience or less-resilience to manifest.

The foundation of research on resilience originated from the scientific fields of medicine, psychology and education in the 1960s (Masten & Gewirtz 2006:1) and in the 1970s when resilience research in the context of developmental psychopathology took centre stage (Masten & Obradović 2006:13; Masten & Powell 2003:1-2). Phillips (2008:47) and Ungar (2006:53) concur with Masten's (2001) view of resilience as the 'magic' that radiated from life yielding positive and unexpected outcomes in the face of adversity:

> *The great surprise of resilience research is the ordinariness of the phenomena. Resilience does not come from rare and special qualities, but from ordinary everyday magic of ordinary, normative human resources in the minds, brains, and bodies of children, in their families and relationships, and in their communities. This has profound implications for promoting competence and human capital in individuals and society* (Marshall & Benard 2003:2).

Children who are predisposed and vulnerable to psychosocial problems and psychopathology but have against all expectations managed to succeed in life and demonstrate resilience bear testament to the magical nature of resilience in development (Masten & Reed 2005:74; Cicchetti 1990:2; Masten, Morrison, Pellegrini & Tellegen 1990:236). Research on genetics, environmental influence and behavioural outcomes of schizophrenic mothers led to unexpected results in respect of some of the offspring who, unlike their parents and siblings, became resilient in the face of adversity (Sameroff 1998:1288; Seifer, Sameroff, Dickstein, Keitner, Miller, Rasmussen & Hayden 1996:424; Garmezy 1976:3-5). The discovery of resilience characteristics in children of schizophrenic mothers indicated a move from a deficit and problem-based model to a strength-based and positive model in developmental psychopathology research.

Resilience research progressed from the emphasis on deficits and risk factors in developmental tasks versus protective factors, including epidemiology / pathogenesis versus wellness / salutogenesis in development which elucidated and illustrated a dichotomy of health / non-health in human development and a further pathogenic viewpoint that viewed health as a dichotomy rather than a continuum. The current approach to resilience research, just as the salutogenesis approach, views health as a continuum and recognises stressors as omnipresent and not as just inherently bad (Antonovsky 1987:12). Resilience research falls within the positive psychology paradigm. Positive psychology builds on the existing field of psychology which focuses on studying positive human traits and helping individuals and communities to survive and flourish with emphasis on competencies, problems and resources of the individual and the environment (Seligman 2005:8; Wright & Lopez 2005:26).

The Resilience theory has, as a result, moved increasingly away from viewing stressors and risk factors as pathogenic and requiring inoculation. Instead, the focus is now on resources (individual, context of development such as school, processes and social interactions) that can facilitate positive adaptation (Antonovsky 1987:12). Therefore, the paradigms of wellness, positive movement and the resilience theory are all closely aligned because of their strength-based approach to human development. The origins of resilience theory are aligned and founded in the acknowledgement of individual strengths and the capacity to keep rebounding, growing and developing despite the exposure to challenges and adverse conditions. Resilience viewed from a strength-based approach is therefore associated with healthy development despite risk and adversity, culminating in healthy adaptation and growth. Thomsen (2002:ix) confirms that in the absence of mitigating circumstances, almost every individual is born with the capacity and the ability to be resilient and to grow into a competent adult.

2.4 WAVES OF RESEARCH ON RESILIENCE DEVELOPMENT

Richardson (2002:302) best demonstrates the progression of research development in the field of resilience as he identified and documented three waves of research development that evolved in the process of resilience inquiry. The focus of research progressed from the identification of individual characteristics towards a more complex question of 'what and where' of the sources of resilience, what he (Richardson 2002:302) referred to, as the motivational energy within the individual for resilience to manifest. Masten and Obradović (2006:14) have recently added another wave of resilience research as they move towards an analysis of resilience research developments in all the disciplines of human research. In acknowledgement of the three waves of resilience posited by Richardson (2002), Masten and Obradović (2006:14) indicate that those studies ranged from various disciplines of research, e.g. psychiatry, psychology (mainly developmental and clinical) and child development and that they introduced resilience concepts and methods of study that formed the basis of the fourth wave of research. Various forms of controversies, critical comments and cautionary notes about resilience have been raised which necessitate further research into the field of resilience. Richardson's (2002) analysis of developments in resilience research does not specifically relate a progressive development of events, in that the waves of research run concurrently and not consecutively, but it gives an indication of how resilience research inclines from one form of defining resilience as mere traits to a more complex definition of its process nature.

The **first wave** of resilience inquiry is described as the phenomenological wave, which defines resilience qualities and strengths and which represents a shift from a deficit-approach in research with children towards a strength-based approach (Richardson

2002:309). The phenomenological wave is the identification wave, the 'what wave', that gives descriptions of resilience qualities or characteristics by defining a resilient individual (Richardson 2002:302). Margalit (2003:84) and Masten (2007:922) concur with Richardson (2002) by indicating that the first wave focuses on finding out 'who are' the resilient individuals and accentuates the characteristics and correlates of resilience. The product of the first wave of research in resilience is a list of individual characteristics (protective factors) identified as factors indicative of supporting resilience (Masten 2007:922). The resilience characteristics enable the individual to demonstrate the resilience response when exposed to stressors or risk and to avoid the impending state of malfunctioning, to regain or even surpass the previous state of functioning (a rebounding process) when pressure has eased or has been overcome.

According to Masten and Obradović (2006:14), the first wave of resilience research has documented the work of behavioural scientists who highlighted the significance of children who survived and developed well under harsh environmental conditions. The shortfall with the first wave of research is the expectation that protective factors alone support and influence the resilience of individuals. The expectation would include the perception that an individual found to possess resilient characteristics, including inborn traits, should demonstrate resilience throughout the developmental process. Such expectation is a fallacy, given the ordinary pressures in life which are bound to disrupt the developmental process. Every individual is bound to experience stressors and negotiate for the expected developmental outcomes. The focus of the first wave is on resilience as a trait, a mere list of characteristics that contribute to the ability of an individual to beat the odds. How the individual manages to beat the odds is not explained. Possessing particular qualities is marvelled at much more than the application of the qualities in achieving resilience. Even so, Phase One of this research will aim to identify resilient and less-resilient learners by utilising first wave properties.

The questionnaire will contain behavioural statements developed from resilience characteristics found in resilience research, that can best define and distinguish a resilient or a less-resilient individual, using their affirmation or attribution of such behaviours to themselves. In preparation for the questionnaire to be used in Phase 1 of the research, Figure 3.4 in Chapter 3 explores resilience characteristics in relation to the definition of resilience and elaborates on how the characteristics relate to resilience in individuals. However, viewing resilience as simply a demonstration of particular intrinsic and extrinsic qualities would assume that every individual in possession of such qualities is then resilient - a generalisation that fails to recognise the complexities of how resilience is achieved and

maintained in development, by disregarding and playing down the disruptive nature of stressors and adversities in life.

The **second wave** of resilience inquiry emphasises the process nature of resilience as opposed to just the trait identification approach. Richardson (2002:310-311) describes it as wanting to find out 'how' the resilience characteristics are acquired, and Masten and Obradović (2006:14) as looking at the process versus the construct nature of resilience and detailing the regulatory processes of resilience. The second wave (the 'how'-wave) defines how resilience is achieved and maintained at various phases of development (Richardson 2002:310). It cannot be assumed that any individual can, after a traumatic event, just 'bounce back' like a ball does, without even taking a moment to reflect and think about what happened. The 'how'-wave of resilience research examines how resilience happens, assuming that it is not just an automatic reaction to adversity and stressors but follows a systematic series of actions and activities. Richardson (2002:310) maintains that resilience is achieved through the process of disruption and reintegration indicating a 'way of life' where resilience relates to learned responses to life or living in order to overcome disruptions and facilitate normalcy in life.

Resilience represents an interactive process that encompasses the biological, physical and spiritual aspects of an individual, the environmental factors (exposure to opportunities, threats and protection) and the mitigating factors or activating agents (adversity, stressors or life events) which throw a person 'off balance' and compel an individual to achieve resilience as a response to dispel discomforts (Kumpfer 1999:185). Resilience requires positioning a person at equilibrium, a balanced or an OK state of functioning where disruptions are minimal or not life threatening (accepted disruptions), the perceived state of normal functioning (Richardson 2002:310-313; Kumpfer 1999:211). Richardson (2002:313) indicates that reintegration into a resilient state after exposure to adversity (a resilience process), is resilience and it means growth or adaptation through disruption, which is then much more than a general definition of recovery or bouncing back.

The active process of regaining resilience after disruptions indicates growths, development, maturity and application of skills. The disruptions change how things were, they challenge an individual to act to preserve normalcy and surpass stressors to even rise above the stressor as a victor. According to Masten and Obradović (2006:14), the second wave of research is a formidable task and is still in progress. Masten (2007:922, 927) indicates that the challenges experienced in this wave of research include waiting for resilience processes to 'kick' in naturally (i.e. without external intervention) and preventing developmental problems or disasters instead of intervening and providing support for individuals and children who are

drifting into developmental problems. Most resilience research is longitudinal, reporting on a lengthy period of observing naturally occurring resilience while in the meantime many children growing up in risk conditions, in need of intervention, are ignored (Masten 2007:922-923).

The second wave of resilience has been criticised because it requires more time and research to determine how resilience in individuals manifests. Resilience research in this wave continues the focus of the first wave by identifying the protective factors which promote resilience in individuals with the added aim of understanding 'how' resilience occurs, e.g. the longitudinal study of Kauai children conducted by Werner and Smith (1982) identified resilience factors, resilience building factors and how resilient individuals interact in their environment. However, the study observed the resilience process but did not discover how it manifests.

The second phase of this study uses focus groups and interviews to understand how learners view and understand the relationship between their school and their resilience. I will be investigating how the resilient and less-resilient learners define the school's role in their resilience, how they interact with the school to maintain and grow in their resilience. The participants' descriptions and narratives of the school's relationship to their resilience will explain the experiences and interactions of the past, present and their perceived future. The expected results allude to the process nature of resilience as it reports on the perceived interactions, experiences and understanding of the participants in respect of their relationship with the school. In aiming to answer 'how' the school influences the resilience or less-resilience of learners by interpreting the perceived relationships, this study could possibly belong to the second wave of resilience research.

A quest for knowledge and understanding of 'how' resilience manifests, progressed to 'what' can be done within the process, which informed the third wave of resilience research (Masten 2007:922-923). Masten (2007:926) states that the programmes approach to supporting resilience came as a response to an urgent need to help children 'suffering from or drifting towards environmental disasters'. Consequently, the third wave of resilience research focuses on preventative intervention while the research on 'how' resilience occurs continues.

The **third wave** of the resilience inquiry encompasses the 'what and where' of the sources of resilience (Richardson 2002:313), equated to the force of strength or energy within individuals which compels them to self-actualize, and the research aims to search for such strengths in order to nurture them (Richardson 2002:313-317). Richardson (2002:313-319)

goes deeper into various fields of study to postulate the nature of resilience e.g. philosophy, physics, psychology, Eastern medicine, neuroscience, etc. He has established that the questions 'what and where' of the source of resilience, are the oldest and have been the subject of lengthy research in various fields with an aim to discover the source of 'energy'. For instance, the Physics theory of relativity and of driving forces which control the universe, are aligned to this wave of resilience research (Richardson 2002:314). These intervening forces foster and motivate an individual to want to be resilient. The external interventions include therapeutic programmes that provide protective factors in order to nurture and preserve the resilience of individuals.

Richardson's (2002:313) focus starts with the individual's innate abilities, the 'what' within the individual that forces one to be resilient, the individual's powers to overcome stressors in order to conserve wellness rather than on an overall programme (which is outside the person). Masten (2007:923) maintains that the third wave focuses on experiments to test resilience ideas using prevention and intervention programmes with the aim of promoting wellness and preventing unhealthy development.

Somewhat in contrast to Richardson's interpretation, Masten and Obradović (2006:14) approach the third wave of resilience research from the intervention perspective, to inform policies and programmes, aimed at promoting resilience in children and institutions that work with children. Masten's (2007:923) focus is extrinsic to the individual, it relates to how researchers intervene, and provide 'cushions' or protective factors to help children in distress by designing programmes that will facilitate and support their resilience.

The third wave of resilience research takes into consideration the first two waves as it acknowledges the presence of resilience characteristics and the resilience process. The research also aims to understand the motivational force that compels the individual to be resilient. This wave in my understanding wants to find out 'what' makes the individual resilient and 'where' does this 'what' come from. In the process of conducting research to find the intrinsic source and motivational force behind resilience, programmes which offer support and protection extrinsically are introduced to alleviate an individual's exposure to risk. The interventions introduced by therapeutic programmes do not interrupt research on how resilience occurs naturally, but help in speeding up the process and providing relieve to children under stressful conditions.

Masten *et al.* (1999:143-169) examined the competence of children from childhood to late adolescence, using cut-off scores to determine their state of competence, namely resilience, competence and maladaptive tendencies based on resources or protective factors and

adversity or risk factors. The findings of the study indicate the importance of protective factors in support of resilience and thus highlight the third wave's focus on injecting resources to help alleviate risk and promote resilience, including the significance of resources in determining the state of competence. Masten *et al.* (1999:145) indicate that a state of competence relates to the presence and quality of psychosocial resources, emphasizing that in most cases, good resources are less common among children growing up in the context of adversity. However, in cases where reasonably good resources are available, competence outcomes become good even in the context of chronic and severe stressors. They (Masten *et al.* 1999:145) further refer to maladaptive adolescents as often presenting with broad-based competence problems, a tendency towards being stress-reactive and a history of adversity and low resources.

South African educational policy requires schools to provide curricular programmes, e.g. on life skills, health and safety, that aim to support and empower learners to develop healthily and equip them with skills to make informed choices. The study interrogates the relationship between the resilience of learners and the school with its embedded programmes and resources. The study investigates the 'what' and the 'how' of the relationship between the school and resilient and less-resilient learners, who will be asked to relate how the school contributes to their resilience or less-resilience. The focus of the study is not on the existing programme(s) in the school and thus it might only indirectly interrogate the embedded programme(s). The data and findings will determine whether this study might be placed in the third wave of resilience research.

Masten and Obradović (2006:14) maintain that the first three waves in the resilience research highlight and focus on the behavioural aspects of children in their development of resilience. The foundation of the first three waves from different disciplines in human development has produced a vast amount of research in resilience. Masten and Obradović (2006:13) indicate that the **fourth wave** of research aims to link and integrate all the disciplines in resilience research. The rise of the fourth wave became apparent at the conference on Resilience in Children hosted by the New York Academy of Science in 2006, when scientists showed interest in integrative research (Masten 2007:925). The fourth wave, according to Masten (2007:922-923), aims to study resilience from the scientific fields of e.g. genetics, brain and development and their interplay, looks at resilience from multiple levels of functioning, and it always requires collaboration between different disciplines (Masten & Obradović 2006:23).

The fourth wave of resilience research is motivated by advancements made in the fields of technology in studying bio-behavioural processes (Masten 2007:922; Masten & Obradović

2006:23) and acknowledges the role of various disciplines in establishing the resilience link between the different fields of study (Masten 2007:925). The fourth wave is a call to coordinate the research for a better understanding of resilience research, and to link biology and neuroscience to behavioural adaptations and development resulting in an integrated and multilevel understanding of resilience in development (Masten & Obradović 2006:13). The fourth wave of resilience research promises to explicate the second wave (research on the process of resilience) through integrative research (Masten 2007:925).

The fourth wave of resilience research promises a further scientific focus on the definition of resilience, looking at how resilience will be defined and measured by e.g. a genetic scientist and a brain scientist and how risk, vulnerability and protective factors be will delineated (Masten 2007:924). Masten (2007:925) warns that to understand the process contributing to resilience is not easy and requires much work and the fourth wave will require integrative research and analysis across all levels and disciplines and that the technology involved and statistical advances will make the work feasible, but definitely not easy.

Masten (2007:927) demonstrates the importance of a multidisciplinary and collaborative approach with a functional example of what happens in a major disaster. In such instances, no individual or system functions alone, many systems collaborate and enlist the help of each other to manage the catastrophe, e.g. psychological services, computers, communication media, various ecosystems, emergency systems and health systems. This research does not focus on the fourth wave, but acknowledges that resilience is by nature systemic.

2.5 THE THEORETICAL FRAMEWORKS: THE RESILIENCY WHEEL AND THE BIOECOLOGICAL FRAMEWORK

2.5.1 INTRODUCTION

> *Children develop in a dialectical process of meeting challenges, resolving them, and then meeting new ones. If the challenge is too severe, the developmental process breaks down. Resilience is a name for the capacity of the child to meet a challenge and use it for psychological growth (*Kumpfer 1999:210-211).

This section of the chapter aims to argue and build the theoretical frameworks that will guide this study. The research question (1.4) seeks to understand the relationship between the school and the resilience of learners. The Resiliency Wheel has been applied in school environments as a tool to help build and motivate resilience in educators, management and learners (Henderson & Milstein 2003:1-4; Thomsen 2002:3). Schools as institutions of

teaching and learning play a significant role in the development and socialisation of the individual including teaching life skills, so that Henderson and Milstein (2003:17) actually refer to schools as 'resiliency builders'. The Resiliency Wheel is designed as a preventative programme, a response to the third wave of resilience research's call for extrinsic resilience building resources to protect children and youth from the impending stressors and risks in the environment. The purpose of the Resiliency Wheel is to prevent unhealthy development to building resilience and to provide support to learners who are in-need of support.

My argument is that various systems, i.e. the family, the school and community institutions, e.g. religious organisations and fellowship organisations, have the responsibility to educate the children and youths towards positive and healthy development and impart life skills. The Resiliency Wheel is a programme that can be utilised by any institution working with youths and children to motivate for healthy development. As a result, it serves as a structured model in my study to guide interpretation of the data and findings of this research, in understanding what learners in a township school similarly and differently perceive important in their school environment to support their resilience.

Firstly, the resilience framework will be discussed looking at the risk mitigating factors and resilience building factors in the environment, using the Resiliency Wheel (Henderson & Milstein 2003) and subsequently, resilience will be discussed in the context of the school, positing the Resiliency Wheel within the school context. The second framework, the Bioecological framework (Bronfenbrenner & Morris 1998), will be discussed looking especially at the school system and the learner as part of the system functioning within the school.

2.5.2 THE RESILIENCY WHEEL FRAMEWORK

The Resiliency Wheel is a six strategy resilience model proposed by Henderson and Milstein (2003) for the promotion of resilience within the school environment. It represents a model of care by promoting resilience in the environment and fostering resilience in individuals. The six strategies of the Resiliency Wheel (see Figure 1.1) are: Increase prosocial bonding, Set clear, consistent boundaries, Teach life skills, Provide caring and support, Set and communicate high expectations and Provide opportunities for meaningful participation.

The Resiliency Wheel can be applied to both individuals and environments to address risk factors and to help identify protective factors to support the resilience of individuals. The Resiliency Wheel is an intervention strategy that falls within the third wave of resilience research as it utilises a programme as a resource to support resilience in development. The framework is relevant to the study because it takes into cognisance the risk and protective

factors expected in the context of development and places the learner amidst the perceived school resources to encourage and promote healthy development. It further provides an intervention framework and a preventative strategy as a motivation to building resilience in the environment by providing resilience building categories or characteristics identified during the first wave of resilience research. The resilience categories listed as the strategies of the wheel are protective factors expected in an environment like the school to help learners develop healthily in spite of the presence of adversity. The Resiliency Wheel is a resiliency building tool.

This study will not use the Resiliency Wheel as a descriptive model against which the research schools must conform. In my data collection, the research question and the chosen method of study are the focus of the research and will determine the direction of the research. The findings and results of the study will then be analysed with reference to the Resiliency Wheel, to argue and build on the framework specifically for a South African township school.

The Resiliency Wheel helps to define the role the school can play in moderating the effect of risk factors and promoting resilience in learners and teachers within the school environment. The model assumes a systemic approach as it incorporates the interaction between the environmental and individual factors in promoting resilience and alleviating risk within the school environment. Henderson (1999:8) defines the Resiliency Wheel as a resiliency protection, a *'web of protection, support and nurture to facilitate each child's self-righting tendencies*'.

Thomsen (2002) applied the Resiliency Wheel in an educational environment with success to enable and motivate teachers and school administrators to use positive encouragement, recognise strengths in learners and to enhance healthy development in all learners and support them in building their resilience. The framework is used generally to encourage teachers to create an environment conducive for resilience to develop. Masten (2004:316; 1999:161) asserts that providing good resources is essential in promoting resilience in learners and that resilience can manifest even in the most adverse conditions in the presence of resources or protective factors.

Even though Masten (1999:161-162) implies that the presence of good resources motivates for resilience outcomes despite severe or chronic stressors, a conceptualisation of 'good resources' can remain contextual. The R-MATS (discussed fully in Chapter 3) has delineated some risks and protective factors viewed to be contributory towards unhealthy and healthy development specifically of township school learners. Such protective factors can attribute to

'good resources' in this study. The notion that the quality of resources is important in the resilience of learners is a further motivation for this study because what learners identify as contributory towards their resilience in the school environment should in effect be regarded important to their development. Schools are important institutions in shaping the development of future goals of learners and they contribute towards academic and cultural success of most learners. It is thus important to understand what learners perceive as important in the school environment in relation to their resilience. Such important contributory factors are contextual, specific to the learners and relate to the township school's strengths and 'good resources', weaknesses and 'bad resources' and perceived importance to the learners.

The Resiliency Wheel functions from the assumption that every learner has innate resilience or potential for resilience and in situations of less-resilience, the onus is on the environment to provide risk mitigating factors and protective factors for resilience to manifest. The Resiliency Wheel strategies comprise categories of support, care, nurturance and protection required between the individual and the environment to support resilience.

In this study, where the relationship between the school environment and the resilient and less-resilient middle-adolescent learner is investigated, the relationship between the participants and the school will encompass their perceptions about the school environment. Previous discussions on the resilience process of the second wave of research indicated that not much is known about how resilience manifests. This study does not aim to understand how the interactive processes occur but wants to understand by 'what' in the relationship and 'how' the resilience and less-resilience of learners are influenced. My assumption is that school resources, programmes, policies, characteristics and factors will be described as the 'what' that contributes to the resilience of learners and that their functions and influences as the motivating agents for the learner to want to be resilient, will answer the 'how' of the research question.

The Resiliency Wheel has been applied in educational environments, to educators and learners, and thus seems relevant and suited as a framework for understanding resilience in a school environment. The one strategy of the Resiliency Wheel, Teaching life skills, has special relevance to this study because in South Africa, life skill education is part of the curriculum, under the Life Orientation learning area. Furthermore, most life skills have been identified as characteristics of resilience and are actually used in this study, Phase 1, to design the R-MATS. The relevance of the Resiliency Wheel to this study is firstly aligned in terms of those strategies, which are incorporated in designing the questionnaire thereby

positing the profile of the participating learners and will secondly be considered as a frame of reference in interpretation of the data from Phases 1 and 2.

Research on educational resilience indicates that teachers and schools have the potential and power to impact on the resilience of learners to change their lives, influencing or hindering their resilience (Ttofa 2006:33; Bosworth & Earthman 2002:300; Thomsen 2002:9-11; Benard 1997:2). Benard (1997:1) and Thomsen (2002:12) emphasise the innate resilience of every individual when they refer to the resilient capacity each individual possesses as the 'seeds' for resilience and the power to transform and change despite the risk factors. Benard (1995:2) argues that the innate capacity for resilience enables an individual to develop resilience characteristics or protective factors like social competence and problem solving skills. Werner and Smith (1992:202) refer to this innate ability of the individual to be resilient as the 'self-righting mechanism,' a 'corrective lens that moves children towards normal adult development under all but the most adverse circumstances'. The assumption adopted by the Resiliency Wheel in positing that every learner has innate resilience is relevant to this study. I assume the less-resilient learners to be resilient, only presently less so in comparison with the resilient learners.

As stated, the Resiliency Wheel will serve as a benchmark and a base for guiding me in the interpretation and analysis of data. The position I am assuming is not to reinvent the wheel or to validate the framework, but to view and interpret the research data from the perspective and context of the participants within an existing frame of resilience research (Kumpfer 1999:212). The strengths and relevance of the Resiliency Wheel framework lies in its ability to acknowledge the presence of risk in the environment and suggest strategies that have proved essential to build and promote the resilience of learners within a school system using existing educational policies and practices. Masten (2004:316) affirms that school bonding mediates good developmental outcomes and the Resiliency Wheel strategies of promoting care, support, prosocial bonding, creating meaningful participation and setting high expectations all allude to creating meaningful relationships and bonding.

The disadvantage of choosing the Resiliency Wheel as a framework for research in a South African school is its programmatic nature. The focus of the school is to offer curricular and extra-curricular activities, which mainly include physical activities including arts and culture. Life skills offered at school are part of the formal school curriculum and, like all curricular subjects, aimed at promoting cognitive, emotional, physical and social aspects of a child's development with no extra emphasis dedicated to its relevance in building the resilience of learners. This study assumes, based on the Life Orientation programme, that learners are empowered with essential life skills which can give them the motivational energy to want to

be resilient. Another obstacle of using the Resiliency Wheel as a framework could be that not all teachers have access to the Life Orientation subject, while learners have access to many teachers in a school. Some teachers might have no regard for the strategies offered and suggested by the Resiliency Wheel. Furthermore, the motivation, depth and perceived relevance of the Life Orientation subject to healthy development by learners and teachers are essential in positioning the Life Orientation subject as a tool to help foster resilience in learners. The teachers' level of education and training and strategies used to teach life skills are important in ensuring that learners are empowered with necessary skills and protective factors to foster resilience. These factors will have to be considered in the interpretation of the data.

Henderson and Milstein (2003:14) argue that the conditions required to build resilience are the same for all learners, which makes the Resiliency Wheel as a framework for interpretation suitable to various individuals and conditions. This study uses the assumption to investigate whether resilient and less-resilient learners will require the same protective factors within a particular township school environment to foster resilience. Learners from School 1 and 2 could require similar protective factors in their school environment despite possible differences in the intensity of contextual adversity and availability of resources. In prospect, the study could presumably contribute more themes to the existing model of the Resiliency Wheel which will be identified by both resilient and less-resilient learners in their township schools.

2.5.3 THE SIX SEGMENTS OF THE RESILIENCY WHEEL

2.5.3.1 Orientation

The Resiliency Wheel is defined by six consistent themes or strategies which Henderson and Milstein (2003:11) also refer to as the six steps in fostering resilience. The themes are grouped into two continual sections with each section consisting of three themes. For the purpose of this study, I will not refer to the Resiliency Wheel segments as steps because **steps** constitute order of occurrence, consistency, process of influence and logical progression. The Resiliency Wheel segments cannot be viewed as steps in my assumption because such strict ordinal occurrence and influence, where accomplishment of one segment leads to or influences another, is not reflected in the work of Henderson and Milstein (2003). Therefore, **strategies** will be used and not **steps.**

According to Henderson and Milstein (2003:11), the component of Mitigating risk factors in the environment is supported by research findings which originate from the risk factor research, consisting of three strategies which were found to be essential in alleviating the

impact of risk in children and youth and setting the impetus for resilience to develop. The three strategies are indicated in the Resiliency Wheel (Figure 1.1) under the section of **Mitigating risk factors in the environment**. The other component of **Building resilience in the environment** encompasses three strategies essential for resilience to develop in the environment. The Resiliency Wheel thus encompasses functions from the risk alleviating factors and resilience building factors perspective, or the risk and protective factors perspective.

2.5.3.2 Mitigating risk factors in the environment

(1) Increase prosocial bonding

The three strategies in the component of mitigating the impact of risk in the environment, indicated in Figure 2.1, will be discussed first. The strategies are based on findings of research conducted by various resilience researchers (Ttofa 2006:35; Catalano, Berglund, Ryan, Lonczak & Hawkins 2004:106; Bosworth & Earthman 2002:300).

This strategy involves utilising the support of individual connections in the form of relations with prosocial individuals, or liking for a particular activity, to encourage strong and positive bonding. A prosocial behaviour represents actions or acts of behaviour that are deemed generally beneficial to others (Penner, Dovidio, Piliavin & Schroender 2005:366). A prosocial individual constitutes a person who helps others, an individual who is more inclined to perform an altruistic act. The assumption is that positive bonding can be achieved with a person, object or activity. In a school environment, bonding can be achieved through learning activities and extra-curricular activities. Bosworth and Earthman (2002:301) refer to the study conducted by Werner (1995) which discovered that children's perceptions of teachers as caring adults contributed positively to their resilience.

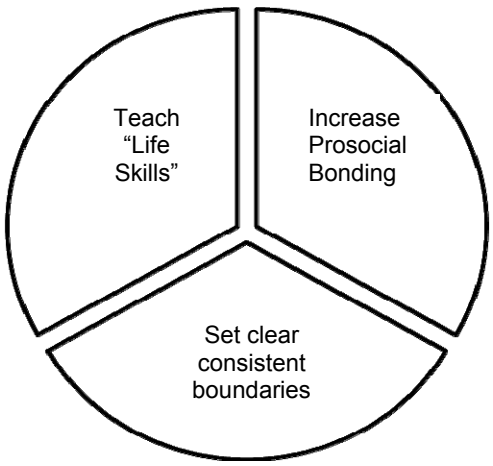

Figure 2.1: Mitigating risk factors in the environment

Positive developmental outcomes and healthy interpersonal relationships are important components of a positive school climate. Schools have a positive role to play and should model positive social relationships. Similarly, in South African schools, the teacher has seven professional roles to play in education (the roles are fully discussed in section 2.6.2.4) namely, learning mediator; interpreter and designer of learning; leader, administrator and manager; scholar, researcher and lifelong learner; community, citizen and pastoral role and assessor and subject specialist (Department of Education 2000:12). The role of the teacher as a pastoral carer includes providing and developing a supportive and empowering environment for learners and responding to their educational needs (Department of Education 2000:14). The pastoral role requires the teacher to demonstrate, encourage and maintain supportive and caring relationships with all learners in school. This study assumes that every teacher in South African schools is aware of the seven roles of the teacher stipulated in the National Education Policy Act, Norms and Standards for Educators (Department of Education 2000).

(2) Set clear, consistent boundaries

This strategy relates to the school's consistency in the development, interpretation and implementation of policies, especially with regard to clarification of expected behaviour of learners, and how risk behaviour is addressed within the school environment. The Department of Education expects every school to draft and adopt a policy on code of conduct as stipulated in the South African Schools Act (SASA) 84 (1996). The policy aims to establish an educational environment that caters for discipline, purpose, improvement and quality of teaching and learning. The expected behaviours, procedures, disciplinary proceedings and principles for all involved in learning and teaching, i.e. parents, teachers, learners, administrators and other school staff, are fully stipulated to protect teachers and learners and enforce a healthy teaching and learning environment. Corporal punishment, as a form of discipline is abolished from all schools in South Africa and the code of conduct must safeguard the interest of learners and all parties involved in the institution (Department of Education 1996:5).

The school is expected to enforce its code of conduct policy and to put structures in place to ensure that learners are aware of such policies, know what is expected of them and adhere to rules and regulations. Rules are important in life and guide development. Bosworth and Earthman (2002:301), assert that rules are essential in establishing logical consequence for individual behaviour. A sense of determination and potency develops in learners, youths and children who develop in environments that establish and enforce rules and structure (Bosworth & Earthman 2002:301). School rules guide, give structure and direction, set

boundaries and clear guidelines that help to limit and empower the learner in terms of what is allowed and what not.

(3) Teach life skills

The strategy relates to the school curriculum. A school geared to promote resilience in learners is expected to teach the skills that feature in cooperation, healthy conflict resolution, assertiveness, communication, problem solving, decision-making and healthy stress management. The South African school curriculum includes Life Orientation, a life and social skills programme which runs across all grades. Life skills education relates to the teaching of resilience characteristics, which help the learner to effectively navigate the risks in the environment. Life skills help the learner to engage and interact effectively with adults and peers within the school environment (Henderson & Milstein 2003:13). Bosworth and Earthman (2002:301) state that many of the documented individual and intrinsic characteristics of resilience focus on social competencies, e.g. good communication skills, problem solving skills and positive self-confidence. Some skills learned in the Life Orientation curriculum have been consistently identified by resilience researchers as resilience characteristics or resilience outcomes, namely autonomy, social competence, problem solving, sense of purpose and future perspectives (Benard 1991:3-13; 1995:2). Wolin (2003:20) identified seven resilient characteristics relating to the life skills curriculum which Thomsen (2002:23), Henderson and Milstein (2003:10) and Wolin and Wolin (1993:3, 5-6) view as characteristics of the resilient individual, namely insight, independence, relationships, initiative, creativity, humour and morality. The South African Life Orientation curriculum's purpose is to assist learners 'to respond to challenges and to play an active and responsible role in the economy and society, make informed, morally responsible and accountable decisions about their health and environment' (Department of Education 2002:4). The purpose of Life Orientation builds upon some of the seven resilience characteristics identified by Wolin (2003:20).

2.5.3.3 Building resilience in the environment

The second set of strategies (Figure 2.2) in the Resiliency Wheel relates to building resilience in the environment. They consist mainly of environmental factors that are presumed 'very important' in most individuals' lives (Henderson & Milstein 2003:13; Thomsen 2002:17). The three strategies originate from consistent research findings on resilience of youths and children (Henderson & Milstein 2003; Thomsen 2002; Benard 1995 & 1991; Werner 1995; Werner & Smith 1982).

Figure 2.2: Building resilience in the environment

(1) Provide caring and support

The provision of unconditional positive regard and encouragement is regarded by Henderson and Milstein (2003) as essential in the promotion of resilience. This strategy is paramount in promoting resilience and represents a critical element in the Resiliency Wheel. To emphasize its importance, it is highlighted (Henderson & Milstein 2003:13; Thomsen 2002:4; Figures 1.1 & 2.2).

Henderson and Milstein (2003:13) posit the strategy as not only fundamental, but the most critical in overcoming adversity, indicating that it is almost impossible to overcome adversity without it. The required care and support do not necessarily come from family members, but could involve other individuals including friends, neighbours, peers, teachers, church members, etc. (Henderson & Milstein 2003:13; Werner & Smith 1982:98-99). The support provided translates to unconditional positive regard and encouragement from caring individuals (Brooks & Goldstein 2001:110). Prosocial bonding and Providing care and support are closely linked as they both relate to relationships.

Benard (1995:3) posits the strategy as a way of life that transgresses all the boundaries of care and support, a part of school ethos especially in a caring school environment and a basis for the other two strategies. Bosworth and Earthman (2002:301) explain care and support as demonstrated through a welcoming school environment, a positive connection between learners and the school, a sense of belonging, teachers' responsiveness to learners and learner's experiences of rewards and praise in school. The professional role of the teacher as a pastoral carer aligns closely to this strategy and further emphasises the importance of training teachers in South Africa to turn schools into centres of care and support for learners.

(2) Set and communicate high expectations

To motivate learners and to encourage them to strive for their goals and achieve their potential, high but realistic goals and positive expectations should be articulated. Henderson and Milstein (2003:13), Benard (1995:3) and Bosworth and Earthman (2002:301) stipulate that schools that practice and encourage high expectations of learners experience a high rate of academic success and a low rate of problem behaviour (e.g. delinquency, drug problems, drop-out). Benard (1995:3) states when relationships convey a sense of worth, resilience characteristics like high expectations, future perspectives and confidence to succeed develop in learners. Krovets (1999:x, 10) argues that creating high expectations enables the learner to have future aspirations and overcome challenges. By communicating high expectations to learners, the teacher conveys confidence and trust in the learner's abilities and demonstrates awareness of the learners' talents.

A caring teacher is able to encourage and guide the learner to set high but achievable goals. One of the professional roles of the teacher is to be a subject specialist with the appropriate skills to manage and approach the subject with meticulous professionalism, which enables proper assessment of the performance and potential of the learner (Department of Education 2000:13). As a result, helping learners to set achievable goals is a skill that teachers are well equipped to address.

(3) Provide opportunities for meaningful participation

This strategy promotes learner participation in school activities and decision-making. Learners are also, like adults, afforded the responsibility of participating in some of the school decision-making processes and planning activities. Benard (1995:4) indicates that providing learners with opportunities for meaningful participation is a natural progression in a school that sets and communicates high expectations and points out that the need for participation, care and respect are fundamental in human development. Benard (1995:4) further postulates that schools that fail to meet these fundamental needs alienate learners. In illustrating the importance and relevance of practicing a meaningful participation strategy, Bosworth and Earthman (2002:300) illustrate that the application of the strategy in a class of children who were failing academically, led to positive results and much improved academic achievement. The results suggest that learner involvement in school activities can lead to greater recovery in academic achievements (Bosworth & Earthman 2002:300). The South African Schools Act provides for learner participation through democratically elected structures to participate in school governance, e.g. learners from Grade 8 upwards can be elected as members of the School Governing Body to participate in drafting some of the school policies, like the code of conduct (Department of Education 1996:5, 9).

The Bioecological Model of human development which centres on the dynamic relationship that exists between a person and the environment serves as a pivotal framework to further expand on the importance of the reciprocal relationship between individuals and the environment. The framework serves to further elucidate the focus of this study, the relationship between the school environment and the learner, as it aims to recognise the possible interactive and multifaceted relationship between the school system and the learner. Together, the two research frameworks allude to the process-based nature of development and the reciprocity of interactions and the impending effect that has on the nature of development.

2.5.4 BIOECOLOGICAL THEORY OF HUMAN DEVELOPMENT

2.5.4.1 Orientation

> *Human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychosocial human organism and the persons, objects and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time* (Lerner 2005:xviii, 6).

The ecological theory of human development, which has been developed into the bioecological theory of development as posited by Bronfenbrenner and Morris (1998), relates to the developing individual, the environment and the interaction between the two. The bioecological theory is positioned in the science of human development and illustrates the developmental relationship between the individual and the environment (Bronfenbrenner & Evans 2000:117, 120-121). The theory's emphasis on human development encompasses the influential aspect of genetics and environment in development, the interactive nature of intrinsic and extrinsic factors i.e. how **genotypes** are transformed into **phenotypes** (Bronfenbrenner & Evans 2000:119; Tarter, Vanyukov, Giancola, Dawes, Blackson, Mezzich & Clark 1999:658-663; Bronfenbrenner & Ceci 1994:568-570).

To incorporate the nurture and nature aspects of development, emphasis is placed on the process nature of the model denoting continuity, development over a lifetime and the reciprocal interaction between the person and the context. The principle of understanding the interaction between the individual and the environment is also reflected in the Resiliency Wheel and the resilience construct. The bioecological theory recognises the individual as both influencing and being influenced by the environment and acknowledges the active and diverse relationship that exists between the two. The symbiotic relationship between the

individual and the environment is implied in the construct bioecological, which is constituted of the biological entity, **Bio** and the environment, **Ecology**.

The bioecological model is based on a scientific study of human development and has evolved over time, as claimed by Bronfenbrenner (2005:3), when declaring that it denotes a 'phenomenon of continuity and change in the biopsychological characteristics of human beings both as individuals and groups'. The definition acknowledges that human development is a continual and reciprocal interaction of the person and the environment in the process of growth and change characterised by progressive developmental changes and evolution over time. Bronfenbrenner and Ceci (1994:571-572) postulate that central to the bioecological model is the theoretical principle that states that developmental outcomes are a result of genetics and environmental interactions, and the proximal processes, which are explored by the PPCT Model (Tudge 2008:69).

The bioecological model is characterised by four defining properties namely, the developmental process, person, context and time (Bronfenbrenner 2005:7; Lerner 2005:xv; Bronfenbrenner & Ceci 1994:570; Bronfenbrenner & Evans 2000:117). The four defining characteristics are further presented below and illustrated in Figure 2.3, the *Process-Person-Context-Time (PPCT) Model.*

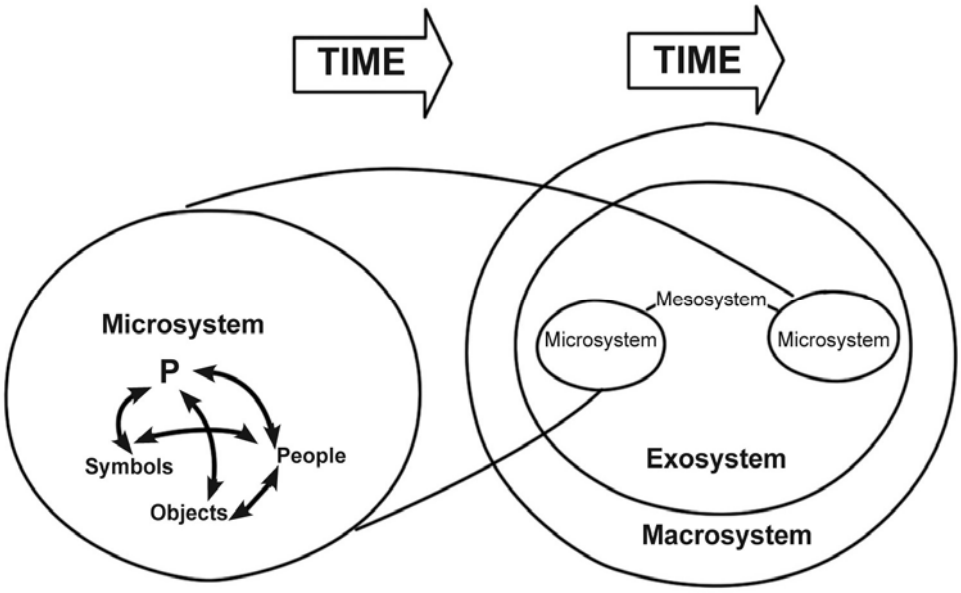

Figure 2.3: PPCT Model (Bronfenbrenner adapted from Tudge 2008:69)

2.5.4.2 The Process

The Process is known as the proximal process and entails particular forms of interactions that exist between the individual and the environment or context. The interactions must invite the individual's attention, exploration, manipulation, elaboration and imagination

(Bronfenbrenner 2005:7-8; Lerner 2005:xv). The proximal process is defined as regular, progressive and more complex reciprocal interaction between a living organism and the immediate environment over an extended period of time, e.g. learning new skills, problem solving, feeding a baby, caring for others, etc. (Bronfenbrenner 2005:7). Tudge (2008:68) refers to the proximal process interactions as everyday activities in which the individual participates as a way of understanding and interpreting their world. The proximal process is also referred to as the primary engine of effective development and the joint function of the individual and the environment, serving to optimise the genetic potential of the individual (Lerner 2005:8-9; Bronfenbrenner & Evans 2000:118; Bronfenbrenner 2005:6; Bronfenbrenner & Ceci 1994:572).

Figure 2.3 shows how the person (P) interacts in the microsystem with other people, objects and symbols in the proximal process. The reciprocal interactions in the immediate external environment (Microsystem) of the person (P) with objects, symbols and other persons occur on a regular basis and over an extended period of time, which is represented by the Time arrow above the figure. The bidirectional arrows between the person (P), objects, symbols and other people in the immediate environment of the microsystem include interactions that occur simultaneously or separately (Bronfenbrenner & Evans 2000:118). The proximal process which occurs in the microsystem is extended to other contexts outside the immediate influence of the person. The two lines position the proximal processes of the P with the other systems. The person still interacts with objects, symbols and people in the microsystems, for the middle-adolescent learner it would be e.g. home and school which together constituted the mesosystem. The exosystem and macrosystem containing the mesosystem and microsystem represent the influence of the environment on development and the spread of the proximal processes across time, development and systems. The P represented in the middle of the two microsystems, is greatly influenced and influences the systems, some directly and others indirectly within the developmental process. The Time arrows indicate the chronosystem which encompasses change and consistency over time across the life span and the developmental process.

The principle of proximal process is relevant to this study, which will determine whether and what relationship exists between the school environment and the resilience of the learners. The result of proximal processes is two major developmental outcomes, namely competence and dysfunction. Competence is defined as the ‘acquisition and further development of knowledge, skills and ability to conduct and direct one’s own behaviour across situations and developmental domains’ (Bronfenbrenner & Evans 2000:118). The extreme negative end of the continuum of competence is dysfunction, which is defined as ‘recurrent manifestation of difficulties in maintaining control and integration of behaviour across situations and different

domains of development' (Bronfenbrenner & Evans 2000:118). The question that Bronfenbrenner and Evans (2000:118) ask about the two outcomes of proximal process is, '**What brings about these outcomes?'** The same question is asked in the second wave of resilience research in trying to understand the resilience process. The resilience process, in accordance with the principle of proximal process, refers to competence and mal-adaptive development, where competence denotes a measure of success in achieving healthy development and mal-adaptive development relates to unhealthy developmental outcomes (Masten 1999:145).

I therefore argue that the outcome of the resilience process closely relates to a product of the proximal processes, because of the developmental outcomes and transactional characteristics of both, indicating an interactive relationship between the individual and the environment (Masten & Obradović 2006:15; Blum *et al.* 2002:29). Both the Bioecological and Resiliency Wheel frameworks function from the premise of human development, reciprocity of activity between an individual and the environment, and continuity of development over time. However, the bioecological model posits two extremes of growth and development which Bronfenbrenner and Evans (2000:118) name a **dichotomy** of behavioural outcomes, competence and dysfunction, whereas the Resiliency Wheel illustrates outcomes on a continuum: resilience which relates to good developmental outcomes and competence in development, and less-resilience which relates to poor developmental outcomes or less competence but with potential for resilience.

Middle-adolescents exist in multiple social systems (the family, school, community, etc), which interact with each other at mesosystem level on a daily basis as part of an ecological system. The social systems are interconnected, interrelated, interactive and reciprocal (Swart & Pettipher 2005:10; Bronfenbrenner 1979:18 & 21). Looking at the intensity and influence of interactions between the developing individual and the environment, Bronfenbrenner (1979:21) confirms that the child is not a tabula rasa, but a dynamic entity who also structures the living environment. Therefore, the relationship exists in the interactions. For the purpose of my study, emphasis will be placed on the school as a system of development because the influence of the school system on the resilience of the learner will be investigated.

According to Bronfenbrenner (1979:22), the microsystem is defined as *'a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics'.* The microsystem is therefore the actual environment where a person-environment interaction exists, e.g. the family, school, peers.

To answer the earlier question, '**Which aspects of proximal processes produce competence or dysfunction?**' requires looking at the exposure (measure or extent of contact) of the individual to the proximal processes in which the person engages (Bronfenbrenner & Evans 2000:118), since this is what influences the outcome of development. The exposure is measured by the duration, frequency, timing and intensity of contact maintained by the person and the proximal process (Bronfenbrenner & Evans 2000:118-119). The duration refers to the length of time and the period of exposure to the proximal processes, e.g. years of exposure and experience of violence and crime, abuse, other risk or protective factors in the environment. The frequency seeks to understand how often proximal processes occur and whether they can be measured in years, months, days, hours e.g. how often has the learner repeated a grade, does he/she fight with other learners, etc. Timing of interactions refers to the duration and moment of response to interactions, e.g. delayed or sudden response to the problem, immediate attendance to the learner's problem by the teacher. The intensity of interaction refers to the strength of exposure which can be brief, prolonged or frequent e.g. chronic abuse, sudden death of parent or significant other, continual provision of care and support. The exposure to the proximal processes and environmental conditions is important when understanding the developmental outcomes of a person.

Lerner (2005:8-9) indicates that even though the proximal processes remain the primary engine of development, there is a much greater source and force of energy that drives the engine and influences the development, namely the primary caregivers who provide **care and support** to the developing individual. The role of the primary caregivers can be provided by parents or others in the environment e.g. friends, neighbours, community members, etc. The provision of care and support by caring adults or significant others is a protective factor for resilience and constitutes one of the segments of the Resiliency Wheel.

2.5.4.3 Person

The person characteristic pertains to a developmental outcome and is one of the elements that influences the form, power, content and direction of proximal processes throughout development (Bronfenbrenner & Evans 2000:119). To assure development, the person is required to interact regularly over an extended period with the environment (Bronfenbrenner 2005:6). To ensure that a developing child, especially in the formative years, develops intellectually, emotionally, socially and morally, requires regular, consistent and progressive exposure and participation in progressively more complex activities over and extended period of time and the life-span (Lerner 2005:9). The environment has an effect on development and behaviour represents a measure and outcome of the individual's interactions and responses to a particular context. Phase 1 utilises the R-MATS, a self-report

questionnaire characterised by items designed as behavioural characteristics to identify resilient and less-resilient learners and Phase 2 seeks to understand the relationship between the school environment and the resilience of learners. I assume that learners will use observed and identified behaviours and outcomes of all role players in the school environment e.g. teachers, other school staff, peers and parents to describe the perceived relationship. Observed behaviours which are used in this study to describe perceived relationships between the resilient and less-resilient learners and their school environment is important to understand existing interactions and the resulting developmental outcomes. The proximal process which includes everyday interactions between the individual and the immediate environment incorporates the described and observed behaviours of individuals in this study. Furthermore, resilience is inferred from behaviour and a developmental outcome demonstrated in 'age-salient' developmental outcome.

Three characteristics of the Person, namely disposition or force, resources and demand, are essential in influencing the course and direction of human development. The three characteristics have an influence on the differences, the direction, power and the developmental effect of the proximal processes (Tudge 2008:70; Elliott & Tudge 2007:96; Lerner 2005:xvi-xvii; Bronfenbrenner 2005:6-7).

(1) Dispositions

Disposition characteristics serve to move and maintain the proximal processes in a particular developmental domain (Lerner 2005:xvi). Tudge (2008:70) refers to force characteristics and not disposition characteristics which he relates to differences of temperament, motivation, persistence, etc. Tudge (2008:70) states that because of the force characteristics children from the same environment, e.g. family with access to same resources, can have different developmental trajectories because of their motivation and persistence in performing their duties and tasks in life. According to Swart and Pettipher (2005:14) disposition or force characteristics can influence the direction and power of proximal processes and mobilise, sustain operations, or interfere with, limit or even prevent the occurrence of proximal processes. Such disposition or force characteristics include e.g. impulsiveness, distractibility, aggressiveness, violence, shyness, etc (Swart & Pettipher 2005:14). Disposition or force characteristics in this study relates to the force within an individual that motivates them to want to succeed in life and to be resilient, this motivation cannot easily be observed in this study, but the developmental outcomes of resilience and less-resilience in learners relate to what drives the competence and maladaptive functioning of learners. The disposition or force characteristics support the energy that causes the individual to be resilient, and what the third wave of resilience research relates to.

(2) Bioecological Resources

Bioecological resources are resources of ability, experiences, knowledge and skills essential for effective functioning of the proximal process at a specific phase of developmental (Lerner 2005:xvi). According to Tudge (2008:70), they partly constitute mental and emotional resources e.g. past experiences, skills, intelligence, social and material resources etc. Resources relate to the protective factors that support resilience in development most covered by the R-MATS e.g. housing, food, employment, parental care and support, educational opportunities, etc. Masten *et al.* (1999:145) refer to protective factors as resources and indicate that they play a significant role in determining the resilience of individuals. Protective factors form a cushion of protection against the impending risk factors in the environment. Resources are essential for healthy development by providing the individual with necessary support to achieve developmental tasks.

(3) Demand Characteristics

Demand characteristics function to invite or discourage environmental forces that work to foster or disrupt the functions of proximal processes (Lerner 2005:xvi). The demand characteristics are essential in eliciting responses from others in the environment. Swart and Pettipher (2005:14) and Bouwer (2005:51) indicate that demand characteristics are personal characteristics that are able to provoke or discourage reactions from the environment and influences relationships with others e.g. fussy or happy baby, hyperactivity versus passivity, problem-focused, solution-focused, etc. Tudge (2008:70) refers to 'personal stimulus' characteristics because they act as an 'immediate stimulus' to another person e.g. age, gender, skin colour, physical appearance. Demand characteristics can be related to physical characteristics and observable personality traits that become apparent when people interact and can be used to describe a person. They can result in a positive or negative response from the environment. Werner and Smith (1982) found that children with good temperament e.g. smile and use sense of humour to reduce stress, cheerful, optimistic and hopeful were able to elicit good responses from adults and were well loved which was the opposite with children with bad temperament.

Finally, it is important to acknowledge that the form, power, content and direction of the proximal processes differ significantly from one individual to the other, based on the uniqueness of the individual, specific developmental outcomes and changes that occurs over time (Lerner 2005:6). Every person is unique and thus interacts with the environment differently leading to individual specific developmental outcome across life-span e.g. developmental outcomes of learners from the same school and class exposed to same external resources and risks might differ because of how they interact with the environment and their stage of maturation. The factor of time in development is represented by the

developmental changes that take place in the environment over the life-span of the individual e.g. the middle-adolescent phase.

2.5.4.4 Context

Context pertains to the environment within which development occurs. Bronfenbrenner (1979:22) refers to many levels of influence in a person's environment where the individual is in the centre of all the interactive systems. The PPCT Model Figure 2.4 illustrate the Proximal Process of human development, an evolving, biosphychological human being, the Person (P) engaged in complex reciprocal interactions in the environment with people, objects and symbols, the interactions exists in all systems of development (Tudge 2008:69; Bronfenbrenner 1994:38). The Microsystem is the immediate environment where face-to-face interactions occur and where Proximal processes operates for development to occur (Bronfenbrenner 1994:39). Other systems of development's influence is illustrated by arrows indicating linkages of processes taking place as more settings are involved when more microsystems interact e.g. family and school, family and work, communities and families or schools, governments and families and communities, etc (Tudge 2008:69). The PPTC Model in Figure 2.4 clearly illustrates four systems of development within which the Person functions and exists and the fifth system is illustrated by the time arrow. The five systems are Microsystem, Mesosystem, Exosystem, Macrosystem and Chronosystem (Tudge 2008:69; Swart & Pettipher 2005:11-12; Bronfenbrenner 1979:22-26).

The **Microsystem** represents patterns of activities, roles and interpersonal relations in a given face-to-face setting e.g. home, school, peer group, workplace. The **Mesosystem** refers to linkages and processes that take place between two or more microsystems involving the developing person e.g. school and home, home and workplace, etc. The **Exosystem** denotes linkages and processes that take place between two or more settings, where one setting does not have to be a microsystem containing the developing person, but the person is affected by developments that occur in that setting. An example of the exosystem is where a child is affected by what is happening at a parent's work, a parent is affected by what is happening between the school and the community, etc. The influence on a person is indirect. The **Macrosystem** is the consistencies of the microsystems, mesosystems and exosystems that exist or could exist at a cultural level, belief systems and the underlying ideology. For instance, schools may have the same purpose of educating learners all over the world, but with basic differences characteristic to a particular country. Tudge (2008:69) explains that the macrosystem envelopes all the systems, is influenced and in-turn influences them, it is a 'context encompassing any group (culture, subculture or other extended social structures) whose members share value or belief system'. The **Chronosystem** encompasses change or consistency over time of the characteristics of a person and the environment in which a

person lives, e.g. changes in family structure, socioeconomic status, employment, place of residence etc (Bronfenbrenner 1994:40). The chronosystem represents developmental time-frames and interactions between the systems and their influence on the individual's development (Swart & Pettipher 2005:12). In human development time is measured by chronological age and the chronosystem represents time as an attribute of the developing person over the life span and a property of the surrounding environment across history (Bronfenbrenner 1994:40).

2.5.4.5 Time

Time refers to the changing social and cultural influences on development as well as the individual's developmental period within which the proximal processes are taking place. Bronfenbrenner (2005:7) states that the element of time has a special importance in development because it relates to the period of development and the changes that occur over the period of development. To show that development has occurred, there is a need to recognise an influence on the biopsychological characteristics of the developing person over the extended period or life-span (Bronfenbrenner 2005:7). Tudge (2000:3) emphasises the significance of studying development within its context and over time. Swart and Pettipher (2005:15) explain the importance, role and significance of time and its effect on society and the future through developmental outcomes and processes which can produce large scale changes over an extended period of time. They (Swart & Pettipher 2005:15) further emphasise the influence of environment in the effectiveness of proximal processes when they state that across space and time, unstable and unpredictable environments minimise the effectiveness of proximal processes. Three levels of time are identified which are microtime, mesotime and macrotime (Swart & Pettipher 2005:15). Microtime refers to continuity versus discontinuity, mesotime refers to the periodic nature of episodes over broad time intervals like days and weeks and macrotime relates to changing expectation and events in larger societies within and across generations. In this study, the concept of time is represented by the developmental phase of middle-adolescence, the grade-level of education and contexts such as the secondary school and current socio-political, socio-economic and social conditions. The Grade 9 learners are in a position to make informed decisions about their future educational prospects because it is the last grade of the compulsory education band (15 year olds) and an exit and entry point to other educational streams.

Time can also be represented in terms of e.g. hours, days, months, and time spent collecting data in schools. The school timetable permits learners to spend more than 5 hours a day at school (25+hrs a week) during the school calendar, which ensures maximum exposure to curricular activities and resources that can inform healthy development.

The PPCT Model posits the individual in a context of development and seeks to understand developmental outcomes resulting from proximal processes (Tudge 2008:69). The nature, resources and time or period of exposure to interactions influence developmental outcomes. The person, who is affected by resources and individual characteristics, is central in directing the proximal processes. This is because the person is central to his/her own development. The middle-adolescent learner, represented within the PPCT Model, constitutes the Person factor and the resilience processes (resilience and less-resilience) give inference to the proximal processes. The school forms the context of development and research and time constitutes the data collection period, phase of study and development and the school period. A township school is situated in a previously disadvantaged area, with limited resources still remaining a challenge. Masten *et al.* (1999:161) indicate that developmental outcomes relate to psychosocial resources. Their findings showed that competence relates to highly resourced conditions, and mal-adaptation to less-resourced environmental conditions.

2.6 THE CONTEXT OF DEVELOPMENT: THE TOWNSHIP ENVIRONMENT AND THE TOWNSHIP SCHOOL

2.6.1 BACKGROUND TO THE TOWNSHIP ENVIRONMENT

The study is conducted in Mamelodi township situated east of Pretoria (the administrative capital of South Africa), about 40kms from the city centre and on the base and lower slopes of the Magaliesberg Mountain (Potgieter 2002:45; Department of Environmental Affairs and Tourism 2000:1). Mamelodi township was originally known as Vlakfontein named after Vlakfontein 329JR farm where the first township residents were settled and the name was changed to Mamelodi in 1962 (Department of Environmental Affairs and Tourism 2000:1). The first houses to be build on the farm in June 1953 were 16 and accommodated blacks removed from Riverside, Eersterus, Eastwood and Lady Selborne (Zekeye 2004:850; Potgieter 2002:44 Mashabela 1988:104). Among the first original residents of Mamelodi were herdsmen and farmers employed in the bottle making and brick making factories of Eerste Fabrieken in Sammy Marks (Potgieter 2002:44). The name Mamelodi which means ‘mother of melodies’ (mother of whistles) was given to Paul Kruger by blacks because he could whistle and imitate birds (Potgieter 2002:44; Mashabela 1988:104). Mamelodi is divided into East and West by Moretele River with most residents living on both sides of the township and most informal settlements on the east side of Mamelodi (Potgieter 2002:45) where this study is being conducted. According to Potgieter (2002:45), Mamelodi is among the most densely populated and poorest residential areas in the Tshwane Metropolitan Area with 45% economically active residents. The Tshwane Metropolitan established a low-cost housing

settlement in Nellmapius south of Mamelodi to alleviate house shortage and overcrowding and to provide accommodation to low income families (Potgieter 2002:46).

Mamelodi participated significantly in the liberation struggle of South Africa and its history is characterised by political struggles and revolts against the former apartheid government. The Department of Environmental Affairs and Tourism and the Mamelodi Heritage Forum launched the Mamelodi Heritage Route at a popular venue, the Solomon Mahlangu Freedom Square on the 22nd September 2000, where the then minister of Environmental Affairs and Tourism, Vallie Moosa emphasised the historical heritage of Mamelodi. The residential places of political heroes who died during the struggle are among the tourist attractions, like Solomon Mahlangu (hanged April 6, 1979), Stanza Bopape (died 12 June 1988) and Dr. Fabian and his wife Mrs. Rubeuri (died December 1986) (Zegeye 2004:854; Department of Environmental Affairs and Tourism 2000:1). The house of Dr. Nico Smith, a minister of the Dutch Reformed Church who moved to his Mamelodi house as a demonstration against the apartheid laws of separate development and racism, is also a tourist attraction (Zegeye 2004:854; Potgieter 2002:47).

Mamelodi is known for entertainment and fun activities. Soccer is the most popular sport and Mamelodi Sundowns is a successful team from Mamelodi and by carrying the township's name, it contributes towards international exposure (Potgieter 2002:44). African jazz is a popular type of music enjoyed by festival lovers often featured at the local Moreleta Park recreational centre and world renowned jazz musicians like Don Laka and Vusi Mahlasela come from Mamelodi (Potgieter 2002:47). The township is also popular with shebeens that offer entertainment to locals with traditional food and music.

Sapire (1992:673) traces the history and origin of townships to illegal land occupation confirming that squatting is not new to South Africa, starting with the organised squatter movements, the struggle of urbanising blacks in the 1890s, to the land seizers and peri-urban settlements in the Rand during the 1940s which forced the government into destroying the illegal settlements in the 1950s. The passing of the Prevention of Illegal Squatting Act of 1952 led to construction of formal housing, now known as townships as a measure to control squatter settlements, but township dwellers continued a different form of squatting in the backyards during the 1960s and 1970s (Sapire 1992:673-675). The 1980s saw again the bold occupation of vacant lands by squatters despite the existing Prevention of Illegal Squatting Act of 1952 and by 1989 and 1990 backyard dwellers joined in the occupation of vacant land (Sapire 1992:677). Some of the reasons for the emergence of the 1980s' informal settlements in the Pretoria Witwatersrand and Vereeniging region of Gauteng include the repressive urbanisation policies, acute housing shortages, the recession and

changing conditions in former homelands and farming areas (Sapire 1992:673). Percival and Homer-Dixon (1998:289) refer to the former president of South Africa and a Nobel Peace Prize winner, Mr. F.W. de Klerk, who confirmed that the illegal occupation of vacant land by millions of black South Africans forced the apartheid government to change and not international sanctions per se, because it caused social upheaval and strained community and state institutions.

Squatting leads to destruction of the environment and forces the government to swiftly act and provide essential services to avert health problems and further environmental degradation. The illegal occupation of land and the high concentration of population on limited land destroy natural vegetation and the chances of conserving and protecting flora and fauna which might become extinct if not protected (Percival & Homer-Dixon 1998:289; Mears 1997:607). Invasions and unplanned occupation of vacant land are detrimental to the existing infrastructure and force residents to share the strained resources. The government of South Africa because of its slow progress on providing housing to multitudes of homeless people appears powerless to eradicate and stop the culture of illegal occupation of vacant land.

The illegal occupation of land occurs across South Africa, in cities and suburbs. Verster (2009:5) in the weekly suburban newspaper, Record (1 May 2009), confirms the continuing illegal occupations of vacant land mostly by construction workers in the eastern suburbs of Pretoria, Moreleta and Waterkloof Ridge, which have led to lengthy legal processes (Moreleta) and the degradation of natural resources, and fear of decline in the value of residential properties. It can be assumed that illegal occupation of land like in the above example is motivated by the need to reside closer to places of employment.

Mamelodi township however, has several informal settlements, some of which have been transformed into legal settlements through the housing subsidy scheme by the government's national housing programme (Huchzermeyer 2002:67). Sapire (1992:679) indicates most employed inhabitants of informal settlements occupy the lowest paying and least skilled jobs, when compared to their township counterparts. As a result, equitable sharing of scarce resources by township and informal settlement residents including social services, health and education services is essential for healthy development of all inhabitants. Schools which will participate in the research form part of the shared scarce resources and all the participating schools accommodate learners from the township's formal and informal residential areas.

In conclusion, township residential areas originated as a form of social class demarcation between blacks and whites and as low cost housing developments for black labourers to

remain closer to places of employment. Today, townships accommodate people from all socioeconomic backgrounds, but because of their historical background and the demographic distribution of the population, they have remained mainly racially segregated, almost completely occupied by black and coloured people only and are the catchment areas for the township schools. Soudien (2004:97-106) indicates that, due to demographic distribution, formerly black-only schools have remained racially segregated and the exodus of children from middle-class families to multiracial schools has left black-only schools with learners from mostly lower social class families.

2.6.2 THE TOWNSHIP SCHOOL

2.6.2.1 Background to the township school environment

According to Harber (2001b:261), township life has mostly been associated with violence and has occasionally been referred to as 'war zones' when the safety of residents became compromised. Therefore, most children raised in such violent environments have learned to assimilate the violence as an integral part of their lives (Harber 2001b:271). Leoschut (2006:3) defines South African society as being 'very violent', with crime and violence as 'part of routine of many youths', a view that gives a bleak definition of any country.

The National School Violence Study (NSVS 2008) conducted by the Centre for Justice and Crime Prevention in 245 South African schools, indicates that violence in schools relates to home violence and is used by most learners, as a legitimate form of resolving conflict (Burton 2008a:xi). The research (Burton 2008a) confirms the violence and crime and adverse conditions of the developmental environment facing a learner in a township school. Lubbe and Mampane (2008:136) point to a study on perceptions of safety, conducted with learners in the Limpopo province which found that most learners live in extreme fear of experiencing crime and absence of adult supervision. Xaba (2006:566) alludes to the unsafe learning environment in township schools due to their demographic location and poor resources.

To further highlight the lack of safety and impending risk factors in township schools, Zegeye (2004:870) indicates that township youth report that drugs, crime, poverty, unemployment, rape, teenage pregnancy and HIV/AIDS are among the major problems in their environment. Leoschut (2006:7) expands on contributors to youth delinquency such as exposure to violent communities and homes. Burton (2008a:xi) agrees and he affirms that school violence is linked to home and community violence and that children who experience and are exposed to crime have in most cases experienced violence before, at home or in their community. Such experiences increase the vulnerability of youths to crime and being victims of crime.

Middle-adolescent learners are part of the youth who themselves are expected to make sense of their hostile environment and to have a successful and positive future perspective.

As a result, township schools are characterised by violence and crime and exposed to adverse environmental conditions associated with low socioeconomic factors e.g. poverty and unemployment. Furthermore, it appears that most township schools struggle to access educational resources, which are essential to facilitate and create a better learning environment for the learners. The access I had to schools when planning to conduct this study made me aware that not every school in Mamelodi township is equipped with computers and have access to internet and working electricity especially in classes. Some of the school buildings require much renovation with heavy steel classroom doors without handles, broken chalk boards and cracked classroom floors. The lights in two of the classrooms I used for data collection were not working, the library with old dusty books was used as teacher's office and not opened for learners' access while computer rooms were used by Grade 12 learners and the teaching staff only. Such deprived conditions and lack of resources create disparity and magnify socioeconomic status as either a barrier or an opportunity to better education within the broader public education system of the country. The Department of Education (2008:6) confirms that progress in the equitable allocation of resources to previously disadvantaged schools is evident but 'inadequate and uneven' with 80% of school still without science laboratories and lack of computers and 68% of schools with 'inadequate classrooms leading to overcrowding in nearly a quarter of schools'.

Studies conducted by Bush and Heystek (2003:129) and Harber and Muthukrishna (2000:424) indicate that most schools in South Africa remain poorly resourced especially in townships and rural areas. I concur with the above authors' views based on this research which was conducted in two schools in a township surrounded by huge informal settlement areas with no formal housing structure. In the morning and afternoon, after school many learners from informal settlement areas are seen walking to and from schools. The housing structure in many informal settlements is characterised by a single roomed corrugated iron room which houses the whole family. Learners from the informal settlements are mostly from destitute families.

2.6.2.2 Socioeconomic factors in township schools

Poverty which is a risk factor in the township school environment, can be attributed to the demographics of township settlements in this country (Prinsloo 2007:155; 2005:28). The demographic and socioeconomic distribution of townships in South Africa contributes to racially segregated settlements with scarce resources in public schools. The significance of parents' contribution to the resources of the school through school fees positions most

township schools at a disadvantage because of the socioeconomic status of township parents. Legally South African schools do not segregate learners according to colour and learning ability due to its constitution and the inclusive education policy, White Paper 6 (Department of Education 2001). As a result, former Model C schools, mostly situated in cities and suburbs, are almost fully racially integrated but township schools have remained racially segregated even after 15 years of democracy (1994-2009).

The South African Schools Act (1996) Sections 39-41 state that the School Governing Body and parents have to agree on the school fees and the School Governing Body can legally pursue school fees from paying parents should they ignore their responsibilities to pay fees (Department of Education 1996:16,17). The school fee structure is mostly associated with the socioeconomic status of parents e.g. learners from poor environments will be charged less school fees and vice versa. The school fees structure in all the school systems public and private, becomes a measure of socioeconomic status and affordability of education and as a result, access to better resources has become reliant on parental financial contributions. The socioeconomic status of parents and the school fee structure in the education system contribute effectively to the skew distribution of learners according to affordability and access to resources. Township schools as a result are much more affordable to parents with low socioeconomic status, because they charge less money in comparison to most suburban and multiracial public schools. Soudien (2004:107) declares that the socioeconomic factor applied through the school fee policy, perpetuates segregation measures by using affordability of school fees as a guiding factor and an inhibitory or exclusionary measure for parents when choosing to send a child to a particular school.

Tihanyi and Du Toit (2005:35) and Tihanyi (2007:181) also point out that school fees serve to restrict learners' access to education and opportunities. Even with the influence of the socioeconomic status of the township community, Bush and Heystek (2003:133) specify that some learners are not able to pay minimal fees due to unemployment and poverty. To support poor and unemployed families and alleviate the burden of paying school fees, the Department of Education has selected some schools in communities as no-fee paying schools. Such schools do not charge school fees as learners receive a government subsidy for their education. The two schools of research do not fall in this category.

Socioeconomic status of families is important in deciding on the school a learner will attend unless the parents are well informed about the rights of the child to education, since the South African Schools Act (1996) Section 3(a) states that no learner should be denied access to education because parents are unable to pay school fees (Department of Education 1996:4). Furthermore, the educational performance of the school can be a

motivating factor for parents to send their children to a particular school because of the annually published Grade 12 performance of learners.

2.6.2.3 The role of the township secondary school in influencing the resilience of learners

The study assumes that the township secondary school plays a role in influencing the resilience and less-resilience of middle-adolescent learners. A resilient individual is seen as having the ability to recover and bounce back from adversity or harsh conditions, where the presence of adversity or harsh conditions and resources or protective factors is paramount for resilience to manifest or develop. Masten and Obradović (2006:14) in their definition of resilience allude to two factors, positive patterns of adaptation and adversity, i.e. developmental outcomes and risk. This is one of the directions of this study. Identifying resilient and less-resilient learners in Phase 1 of the study and the township school with its historical background of adversity allude to the two factors i.e. competence outcomes and adverse context. Activities and interactions between learners and other stakeholders in a school environment fall in the category of proximal processes and the school provides the environment for learners to explore, manipulate facts and knowledge, attend to new experiences, dream and use their imagination in structured activities to develop and aim for future goals (Lerner 2005:xv; Bronfenbrenner 2005:6). The perceived proximal processes existing between learners and the township school environment will be interrogated, explored, related and discussed in Chapter 4. The perceived relationships between learners and the school are stories of resilience, based on competence in developmental outcomes or less-resilience, based on maladjustment in developmental outcomes.

Masten and Obradović (2006:14) specify that to determine the resilience of any system or sub-system requires knowledge and understanding of the following factors about the system:

- Whether the system is doing what it is supposed to be doing (here the role of the school as an institution of teaching and learning is important. Chapters 4 and 5 will highlight the role the school plays in the resilience of learners in the interpretation of findings)
- Understanding the underlying threats or potential risks to positive adaptations of the system e.g. existing risk factors and protective factors (Chapter 4 aims to elucidate the perceived protective and risk factors between the school and learners in their interrogation of the research question)
- Understanding and judgement of potentials to positive adaptations and significant threats to positive adaptations of the system (the perceived relationship between the school and learners alludes to how it influences the resilience of learners; this is discussed in detail in Chapters 4 and 5).

Furthermore, the school plays a supportive role in the resilience of learners with its curricular activities. According to educational research in resilience (Thomsen 2002:4-5), teaching life skills in schools is essential in supporting the resilience of learners. In South Africa, the life skill programme is encompassed in the Life Orientation curriculum.

The Life Orientation curriculum focuses on holistic development of the learner, i.e. social, personal, emotional, cognitive and physical development and how these facets of development interact to facilitate positive and healthy development (Department of Education 2002:4). The Life Orientation programme centres on helping learners to develop skills, knowledge, values and attitudes that empower them to make informed decisions and to act appropriately (Department of Education 2002:4). Life skills learned through the Life Orientation programme have been identified as building blocks or characteristics of resilience in most resilience literature (Benard 2004:32; Thomsen 2002:37; Brooks & Goldstein 2001:13; Krovetz 1999:vii; Kumpfer 1999:198; Joseph 1994:32; Werner & Smith 1982:57). Some of the resilience characteristics which have been identified in resilient individuals, e.g. problem solving skills, positive self-concept and self-awareness, form a component of the Life Orientation curriculum under the focus of personal development. Some of the resilience characteristics are fully discussed in Chapter 3 under questionnaire design.

According to the Department of Education (2002:4), the Life Orientation programme proposes to guide and prepare learners for life, to equip them for meaningful and successful living and development in their environment and empower them to discover and use their talents to achieve to the best of their abilities and to contribute meaningfully in their environment (family, school and community). The school therefore provides learners with training, skills, knowledge and the opportunity for healthy and positive development through programmes that empower them to respond to challenges and rebound from adverse environmental conditions.

Other structures within the school system that serve to support the resilience of learners include school policies, staff, parents and learners and supportive interactions. The vision, mission and motto (which serve to unite and build pride in learners) of the school become a unique measure of the school that helps learners to identify with the school. The school also helps to promote order, responsibility, values and attitudes by enforcing rules, regulations and a code of conduct that creates a contract between parents, learners, teachers, management and other school staff. Establishing proper and effective channels of communication enables all parties to have equitable access to information and proper conflict resolution structures. Such communications in a school environment are convened through meetings of all stakeholders (Department of Education 1996:9). Through its policies, the

supportive school will create opportunities and an enabling environment for learners and educators to function effectively, and strategies to minimise and tackle emerging and existing problems, challenges and obstacles.

According to Wang, Haertel and Walberg (1994:49-51), schools that support the resilience of learners are effective schools and have the following criteria:

- Set clearly defined boundaries. Communicate clear rules and regulations and disciplinary procedures. The code of conduct of the school aims to set clear and definite boundaries about the expected behaviour and the disciplinary procedures to be followed in accordance with the policy. The Resiliency Wheel strategy, Set clear, consistent boundaries, alludes to the importance of ensuring that learners know the expected behaviour in the school environment and understand what incentives and disciplinary measures are in place when required.
- Help learners to develop their communication skills. Communication skills are life skills and fall in the Teach life skills segment of the Resiliency Wheel. The Life Orientation programme offered at schools as part of the formal curriculum offers life skills to learners. Communication is essential to enable learners to voice their concerns, to seek clarity in areas of learning difficulty, form social relations and negotiate support and care from others in the environment. Learners who are able to communicate their concerns, verbally and or non-verbally, have a chance to be heard and attended to, unlike learners who fail to communicate their concerns.
- Encourage learners to achieve to the best of their abilities, e.g. encourage them to study and do their schoolwork. The segment of the Resiliency Wheel, Set and communicate high expectations, alludes to this strategy. To motivate learners to achieve according to their ability is important in education because it communicates confidence and acknowledges the learners' ability to achieve and succeed if they try harder.
- Encourage close working relations between students and teachers and discourage an environment of anonymity. This criterion aligns to the strategy Increase prosocial bonding of the Resiliency Wheel. A good working relationship of respect is important between teachers and learners to ensure good management of teaching and learning and to allow learners access to teachers when needing guidance.
- Provide programmes that encourage learners to take responsibility for helping each other to learn and to ensure that there is a friendly school environment e.g. good peer relationships. The Resiliency Wheel segment, Provide caring and support, is about encouragement, positive relationships, caring and support and positive connections between learners and staff. A supportive school, according to Wang *et*

al. (1994:53), has high expectations of their learners. Teachers at a school that supports the resilience of learners are encouraged to help learners to develop values and attitudes necessary for persevering at school and achieving to the best of their abilities. Such teachers are effective in creating an enabling and supportive environment for learners to achieve their educational goals and social skills (Wang *et al.* 1994:60). According to Wang *et al.* (1994:60), effective teaching and teachers help to reduce vulnerability and stress levels of learners by using various strategies to ensure personal and academic competence of learners. In describing supportive teachers, Freiberg (1994:153) indicates that such teachers relate to their learners, they tend to help rather than push, they recognise and acknowledge the presence of learners mostly by greeting them and finding out and showing interest in how the learners are doing (their wellbeing).

In conclusion, for a school to succeed in effectively supporting the resilience of its learners, it requires good and effective implementation of school policies, commitment of all staff, learners, parents, and good management skills, and efficient resources to function effectively, and supportive and good working relationships of all stakeholders (parents, learners, teachers, school management staff and other staff members). A school in a township environment has the potential of being effective in supporting the resilience of learners. The South African Schools Act, 84 (1996) guides schools on how to function effectively and to implement laws essential for whole school development, including, the training of staff and stakeholders, i.e. school principals, teachers and support staff, learners and parents. To interpret and apply policy is paramount to creating a safe school environment, and one of the 7 professional roles of the teacher, the Community, citizenship and pastoral role, alludes to promoting a supportive school environment.

2.6.2.4 The role of the teacher in supporting the resilience of learners

Although township schools are experiencing risk and adversity, many schools continue to produce good academic results. The former premier of Gauteng Province Mr. Mbhazima Shilowa praised and acknowledged schools that produced good Grade 12 results (Government Communication and Information System, 3 January 2008; 22 March 2007; Gauteng Provincial Government, 24 March 2007). Successful and progressive township schools have emerged over the years because of a good culture of teaching and learning and school management. Teachers employed in township schools are qualified professionals as stated in the Norms and Standards of Educators policy (Department of Education 2000) and are central to the successful performance of learners in schools.

According to the Norms and Standards of Educators, the seven roles of the teacher and the associated competences are norms for teacher or educator development and central to their qualification (Department of Education 2000:12). The seventh role, of education specialist, is an overarching role on which the qualification is designed and it includes other roles (Department of Education 2000:12). Furthermore, the roles are essential in developing and distinguishing the profession of teaching. A brief description of each role follows below with an example to illustrate how the role can be operationalised by teachers (Department of Education 2000:12-22).

1) Learning mediator, the educator will mediate learning in a manner sensitive to the diverse needs of learners, communicate effectively and show respect and recognition for differences in others, e.g. create a learning environment in which creative thinking is encouraged, use media and other resources, adapt teaching to the developmental stage of learners etc.

2) Interpreter and designer of learning programmes and materials, the educator will understand, interpret and design learning programmes to accommodate the diverse needs of learners, e.g. design learning resources, select resources suitable for the developmental stage of learners, use learner feedback to assess learning.

3) Leader, administrator and manager, the educator will make decisions appropriate to the level of learners and manage learning in the classroom, e.g. manage classroom teaching, resolve conflicts in the classroom etc.

4) Community, citizenship and pastoral agent, the educator will promote a critical, committed and ethical attitude towards developing a sense of respect and responsibility towards others. A competent teacher will, according to the Department of Education (2000:18-19), be able to perform the following:

   - develop life skills, work-skills, a critical, ethical and committed political attitude and healthy lifestyle to learners;
   - provide guidance to learners about work and study possibilities;
   - respond to current social and educational problems with particular emphasis on violence, drug abuse, poverty, child and women abuse;
   - counsel and / or tutor learners in need of assistance with social or learning problems; demonstrate caring, committed and professional behaviour, protection of learners / children and the development of the whole person; conceptualise and plan the school extra-mural programme including sport, artistic and cultural activities; operate as a mentor and provide mentoring support to student educators and colleagues.

   This role is paramount to providing care and support to learners exposed to harsh and adverse conditions and becomes the strength of the school. Furthermore,

teachers have a responsibility to ensure the safety of learners in school both in their role as secondary educators and *in loco parentis* (Prinsloo 2005:7). The section of the Resiliency Wheel, Provide care and support, aligns closely to this role.

5) Scholar, researcher and lifelong learner, the educator will achieve ongoing personal, academic, professional and occupational growth, e.g. show interest in current affairs, use technology and media to research and access resources and critically analyse the school curriculum.

6) Assessor, the educator will understand that assessment is essential for teaching and learning processes, e.g. provide feedback to learners in a sensitive and educationally helpful way, report on academic progress and use assessment effectively.

7) Learning area / subject / discipline / phase specialist, the educator will be grounded in knowledge, skills, values, principles, methods and procedures relevant to the discipline and subject.

The school is designed with policies in mind to protect, care for and support the healthy development in learners. Much of the responsibility lies in the implementation of policies and success in achieving desired goals of effective teaching and learning. A good and effective school serves as a safety net for learners and presents them with options of care and support. The role of the teacher is thus central to ensuring that effective learning takes place and schools are centres of care and support to learners. Teachers are central to teaching and learning; they interpret the curriculum and present learning to learners in a language that is at their level of development and understanding. As assessors, they are able to determine the academic, cultural and social competence of learners and can help learners to work on their weaknesses and strengths to achieve competence in their learning. Teachers are fundamental to successful teaching and learning, they manage classrooms, and curriculum and can serve as good role models to learners. A supportive and caring teacher who adheres to all the seven professional roles is a valuable resource to the school, community and learners.

2.7 ADOLESCENT STAGE

2.7.1 ORIENTATION

The developmental stage of adolescence begins at the onset of puberty and extends through to the teenage period and is characterised by rapid physical growth, social, emotional and physiological changes and a search for identity (who am I?) (Carr-Gregg & Shale 2002:32; Lerner & Galambos 1998:415; Mwamwenda 1996:63; Gillis 1994:70). In certain cultural

practices in South Africa, the adolescent stage is a period for undergoing circumcision, initiations, tests for bravery (manhood and womanhood) and for celebrating and attending to the special status of adolescence (Mampane 2004:39-40; Mwamwenda 1996:63). Lerner and Galambos (1998:416) state that adolescence occurs at multilevel contexts because it involves connections between biological, cognitive, physiological and socio-cultural factors and emphasises that no single influence acts alone, there is interaction and reciprocity of interconnection in the development. The context of development and experiential factors are important in influencing the cognitive development of adolescents (Lerner & Galambos 1998:416) and in a township school environment this factor is important to consider in this developmental stage of uncertainty and transitions.

The adolescent stage is long, extending from 12years- 20years and is divided into three stages with a characteristic question for each stage: puberty or early adolescence (Am I normal?), middle-adolescence (Who am I?) and late-adolescence (What is my place in the world?) (Carr-Gregg & Shale 2002:2; Gillis 1994:70-71). However, Gillis (1994:71) warns against compartmentalising the developmental stages, he regards the stage as a continuum because the adolescents 'move back and forth between the stages'. Therefore, the focus should be placed on the child and success in the resolution of the earlier stage, where the child is progressing from. This study's focus on middle-adolescence is based on the age and grade of the learner (15), which fully place the learner into this developmental phase. I am cognisant of the developmental challenges of progressing from childhood to adulthood by the middle-adolescent learner.

Adolescence is a developmental stage characterised by developmental changes and transitions, and a period to celebrate and be involved in experimentation and to some learners it is a break with the past and involvement with the future e.g. transition from primary school to high school, and in late adolescence from school to work (Lerner & Galambos 1998:414; Gillis 1994:67). As adolescents experiment with their newly found knowledge in their cognitive, emotional, physical and social facets, adults in their midst might interpret some developmental behaviours to be deviant and problematic. However, such experimentations are characteristic of the developmental phase (Carr-Gregg & Shale 2002:44; Gillis 1994:67). Social environment plays a significant role in the development of the adolescent. Changes, expectations and environmental demands presented by family, school and society affect the development and maturation of the adolescent. Adolescents are, however, expected to cope with the demands and challenges in the environment and to adapt to their new roles in society and family. According to Roux (1997:34), adolescents in South Africa are concerned about the 'physical, relational, social and cultural contexts of the education situation in which they find themselves'. It is my assumption that these concerns

are still relevant in 2009 because of the environmental conditions learners find themselves in, e.g. crime, violence and educational transitions. Roux (1997:42) states that white South African adolescents voiced their concern on their role in the new South Africa in relation to other race groups. This concern in my opinion is shared by all adolescents in South Africa because it forces them to search for their contribution in the country and their future perspectives and, especially with unemployment and policies on equity, most learners are worried about their chances of a better future. The concern about physical environment in the study of Roux (1997:40) refers mostly to global issues and conservation of the environment (pollution, depletion of the ozone layer) and socially responsible behaviour and morality, e.g. caring for animals. However, in a township environment adolescents might also refer to environmental concerns with a different focus, e.g. pollution due to littering and lack of space due to congestion.

2.7.2 MIDDLE-ADOLESCENCE

Middle-adolescence begins at ±14-16 years, in their transitional period towards adulthood. The middle-adolescent is in-between childhood and adulthood at the 'crossover period' and their motto is 'I am almost grown-up, but I still need answers to a great many questions'. Lerner and Galambos (1998:417) refer to individual differences and diversity in adolescents and multiple pathways in this developmental stage when they state that normal adolescent developments are variable because of e.g. diversity between cultures and temperamental characteristics like mood swings, and such differences impact on developmental outcomes of the adolescent. Lerner and Galambos (1998:417) state that in adolescent development inter-individual (between-persons) differences and intra-individual (within-person) changes are 'rule' and thus generalisations that exclude class, race or ethnicity of the individual are not useful. This indicates the relevance of environmental and group parameters when working with a group of learners in this developmental stage.

Gillis (1994:73) states that middle-adolescence is a time to experiment and acquire new skills, where experimentation involves feelings of ambivalence and insecurity and the following characteristics are attributed to the middle-adolescent learner:

- Physical growth: complexities in body changes
- Sex drive: interest in opposite sex relationships
- Thinking: ability to hypothesise and deal with abstract concepts, introspection, self-analysis
- Family relationships: the family remain the basis of support and control but the school is also the environment of development
- Peer relationships: more time is spent at school than at home and peer and mutual interest groups begin to replace family in supportive roles

- Egocentricity: there is allowance for different perspectives and awareness and sensitivity to the opinions of others

Middle-adolescence is a stage of self-discovery and exploration and puts a learner in a position to search for answers. The energy and motivation to search is inherent in the developmental stage, they need to discover the environment and find solutions and answers to the questions they have. As a developing adult, the middle-adolescent requires guidance, support and structure to successfully navigate the environment and achieve the required developmental milestones. The search can produce good and bad results, competent and maladaptive outcomes depending on the individual and environmental factors. Life skills, adult and peer support and other forms of protection (protective factors) are essential in helping the middle-adolescent succeed in the search and journey to adulthood. The school is one of the environments of learning where such skills are learned. The learning area of Life Orientation is structured to suite learners according to their developmental needs (in terms of grade specification) and to effect healthy development in totality.

In conclusion, middle-adolescence as a developmental stage is also characterised by risk factors, as adolescence marks a transitional period between childhood and adulthood where identity formation develops and can include periods of confusion and risk taking. The challenges characteristic of this stage often include an identity crisis, which adds further stress for learners as they try to find and understand who they are in an environment which frequently appears to be hostile and unsupportive to their developmental needs. The role of the school is fundamental in ameliorating environmental risk and accentuating the strengths of the learners through various programmes, curricular and extracurricular activities to encourage resilience. The township secondary school is fundamental in helping to define the future of middle-adolescent learners in a township environment. Even with the emergence of threats to positive development in the township environment, a skewed distribution of resources and poor social and economic factors, protective factors do exist in schools. The research question aims to find out ‘what is it’ in the school environment that supports resilience (protective factors) or less-resilience (risk factors) of learners.

2.8 CONCLUSION

This chapter introduced and discussed lengthily the origins of the construct resilience, and the research conducted on resilience leading to identification of the four waves of resilience research. The definition of resilience, constructed by the SANPAD Project team, which is a new contribution to the field of resilience and findings from the first wave of resilience research were operationalised and deconstructed to construct a Likert-type scale questionnaire to be used in Phase 1 of this study to identify resilient and less-resilient middle-

adolescent learners. The construct resilience constitutes bouncing back and showing developmental competence in the context of adversity, and thus acknowledges resources, risk, development, person-context interaction and successful development versus maladjustment (should the learner be less-resilient). Competence in development also denotes successful accomplishment of 'age-salient' developmental tasks leading to healthy development and less-resilience denotes problems in adaptation leading to unhealthy development. Resilient individuals are characterised by having or being able to access resilience characteristics which are assets, protective factors or resources internal and external to the individual. Some resilience characteristics were identified and used to construct the questionnaire for this study.

The resilience theoretical framework, the Resiliency Wheel, is used to elucidate how resilience manifests or is demonstrated in the school environment and how to identify resilience in learners. The Resiliency Wheel can also play a supportive role in building resilience in learners and the school environment. The school environment constitutes a microsystem, the environment where face-to-face interactions occur. The role of the Resiliency Wheel in this study, as a framework of reference, was discussed to ensure that the research question remain the focus of the research.

The second theoretical framework of the study, the Bioecological theory which addresses all levels of interactions between the person and the environment from the immediate microsystem to the highest level of interaction in the macrosystem, and the PPCT Model and its relevance to the study was discussed. The proximal processes constitute reciprocal interactions that occur on a regular basis between the person with objects, symbols and other persons in the environment over an extended period of time. The proximal process can lead to competence as well as dysfunction. Constructive proximal processes in this study relate to resilience or success in accomplishing 'age-salient' developmental tasks and thus maintaining healthy development over one's life course and dysfunctional proximal processes relate to less-resilience or maladjustment in development. The person constitutes the middle-adolescent learner who interacts continually and reciprocally with other learners, teachers, school policies and other subjects and symbols within the school environment. The context is the school environment, which is the focus of the study. The chronosystem is represented by Time in the PPCT Model and is reflected in transition over the life course (middle-adolescence), and the social and cultural circumstances (the effects of environmental circumstances over time e.g. crime, poverty, school failure).
In conclusion, the theoretical frameworks, the Resiliency Wheel and the Bioecological framework emphasise the relevance of person-context interactions. The two frameworks acknowledge the importance of resources and the presence of risk in the interactions. The

proximal processes, everyday activities and joint functions of the individual and the environment (Tudge 2008:68) define these interactions. The outcome of proximal processes can be either competence in achieving healthy development or maladjustment when unhealthy development occurs. Such outcomes can either demonstrate resilience or less-resilience in development. The individual learner, who is the focus of this study, can demonstrate competence or maladjustment in their relationships with the school.

---oOo---

CHAPTER 3
Phase 1: The quantitative research, the resilience survey

3.1 INTRODUCTION

Chapter One outlined the two-phased research design adopted for the study. This chapter will detail the quantitative phase process of the study and serves as the basis for Phase 2 of the research. The main research question, *'How does the school influence the resilience of middle-adolescent learners in a black-only township school',* required first the reliable identification of resilient and less-resilient middle-adolescent learners in township schools. This chapter reports the effort to construct a reliable and valid instrument to help identify resilient and less-resilient middle-adolescent learners who would then participate to answer the main research question in Phase 2 of the study, to be reported in Chapter 4.

The underlying principle of this chapter is to ground the construct resilience as manifested by middle-adolescents in a township school through the construction of a questionnaire, developing and validating the questionnaire to ensure it can be used for future research. I will firstly recapture the research paradigms and the research designs which were outlined in Chapter One followed by the explanation of the process followed in the construction of the R-MATS questionnaire. Finally, the statistical analysis and the results of the R-MATS will be discussed.

3.2 RESEARCH PARADIGMS

The research followed a mixed method design using two phases sequentially, with each adhering to its own paradigm, to better understand and explore the concept resilience within the particular context of a township school (Creswell 1994:177; 2003:17). The initial phase, a questionnaire development and a small-scale survey, was quantitative in nature and aimed to identify resilient and less resilient participants and contribute towards developing a South African measure of resilience. The second phase of the research was qualitative in nature, using the IQA method and aimed to investigate the relationship between the resilience of middle-adolescent resilient and less-resilient learners, and the school environment.

In this study, the concept paradigm will refer to theory and method, referring to quantitative, qualitative and IQA (Creswell 1994:1). A quantitative study encompasses a quantitative paradigm and assumptions and a qualitative study encompasses and relies on the assumptions of a qualitative paradigm (Creswell 1994:1-2). Sale, Lohfeld and Brazil

(2002:48) indicate that one of the differences between quantitative and qualitative research methods refers to objectivity (existence of the external referent to gauge the truth) and subjectivity (personal interpretations and meanings attached to the phenomenon under study, which indicate the 'truth', the reality as constructed and interpreted by participants) of the study.

The combination of methods in this research was used to neutralize biases and overcome deficiencies inherent in a single research method, to enhance the validity, strength and reliability of the study, and to enhance the interpretative potential of the study. Creswell's (1994:175) conception of combining methods agrees with the assumption of this study in that the triangulation of methods served to converge results. The findings from the survey questionnaire will ultimately be compared with the findings from the focus group discussions and interviews. The survey was essential in identifying the resilient and less-resilient middle-adolescent learners who would participate in the focus groups and interviews. Focus groups and interviews were essential in addressing the research question regarding the relationship between the school and the resilience of middle-adolescent learners participating in the study. The methods complement each other ensuring the emergence of the construct resilience as perceived by middle-adolescent learners in a township school and the role the school plays in their resilience. The triangulation of methods in this research therefore required a sequential application of methods, to ensure a developmental approach where one method informed the other (Creswell 1994:175), which leaves room for expansion of the study in the future and the creation of the scope for the study to develop further, and to encourage new perspectives.

Creswell (1994:175) questions the mixed method approach regarding what should be mixed paradigm and/or method because specific paradigms have specific methods. Sale *et al.* (2002:48-50) disagree with the notion of mixed methods when they indicate that methods cannot be 'mixed' as they study different 'phenomena' even within the same study. They (Sale *et al.* 2002:48) indicate that a successful approach to a 'mixed method paradigm' lies in the distinction of the phenomenon under study by differentiating between the 'measurement of the construct' and 'lived experiences' and reconciling the phenomena to the method used. Their view (Sale *et al.* 2002:48) indicates that the research question is addressed differently or the phenomenon is looked at differently when using a mixed method approach, which is true because the research question and the sub-questions inform the type of method the researcher applies. The approach this study applied to justify the use of mixed methods, was to identify the constructs under study, to identify resilient and less-resilient middle-adolescent learners developing a survey questionnaire, to 'measure' the resilience of possible participants and then to explore the interactions of the selected participants with the school,

the 'lived experiences' as perceived by them, using focus groups and semi-structured interviews. In this regard, the survey questionnaire gave a general view of who the resilient and less-resilient middle-adolescent learners were. The focus groups and semi-structured interviews gave insight into what and how resilience was constructed and interpreted in a school context by more and less resilient middle-adolescent learners, what Reichardt and Cook (in Foss & Ellefsen 2002:245) term 'the dimensions of discovery vs. verification'.

Furthermore, the study assumed the mixed method approach to better understand the construct resilience using a two-phase design in which the phases were conducted separately (Creswell 1994:177). The disadvantage of the adopted two-phase approach, indicated by Creswell (1994:177), includes the difficulty the researcher and reader may experience in discerning the connection between the two methods used. To avoid confusing the reader in this study, the methods and results of each phase of the study will be reported separately and the findings of the study will in a final exercise be converged or triangulated in accordance with the design of the study.

Regarding the strength of selecting a mixed-method approach, Johnson and Onwuegbuzie (2004:15-16) assume a move from paradigm contradictions and war normally encountered in most methodological literature between quantitative and qualitative paradigms, as they relate the similarities and agreements between the two traditions. Their (Johnson & Onwuegbuzie 2004:15-16) approach supports the combination or triangulation of methods in research and highlights the often-ignored similarities of the two paradigms. The similarities encompass the common approach to research, which includes the use of empirical observations to address the research question (describe data, construct explanatory arguments from data, speculate about outcomes), safeguarding the inquiry to minimize confirmation biases and the 'attempt to provide warranted assertions' about subjects of study (people, environment).

The mixed method approach served to further inform the researcher by providing new insight into the complex phenomenon of the study, resilience, and gave rigor to the research. The two methods when mixed tend to complement each other. The quantitative method allowed the researcher to infer about what was examined, 'you see only what you are looking at', while the qualitative methods helped to 'expand the gaze to elements that were never examined or fully elucidated' (Borkan 2004:4). The IQA method embraces both constructivist and interpretivist approaches to research. IQA assumes that the researcher and the participants are interdependent implying limited separation between the researcher and the subject of the research (participants) to avert the positivistic approach of leaving the interpretation of data solely to the researcher (Northcutt & McCoy 2004:16).

Constructivism indicates that participants are actively participating in constructing new knowledge as they interact with each other and leave the process with new information added to their pre-existing knowledge (Strommen & Lincoln 1992:468). This certainly happens in the IQA method. The constructivist approach to research includes acknowledging the knowledge of the participants in the research process and not viewing them as helpless subjects influenced by their context and circumstances. Strong (2005:90-93) indicates that constructivists' view of experiences is not objective as people use language and culture to translate their experiences and to subjectively interpret them, thus the experiences are subjectively constructed and interpreted and not objectively discovered. This view sets limits to people's knowledge because Confrey (1990:108) indicates that knowledge is a cognitive act and understanding of knowledge is constructed through experiences, while the character of experience is influenced by the cognitive lenses a person uses to access knowledge, thus constructivists' views relate to people's construction of experiences with each other (Strong 2005:90).

Babbie and Mouton (2002:30) refer to Garfinkel's (1960's) interpretation of human behaviour as a depiction of certain expressions of underlying common sense behaviours that help to bring order and smoothness to their everyday lives. As the participants continually interpret and present their knowledge, understanding and meaning of their interactions in their social worlds, they construct new experiences with each other, thus alluding to the constructivist nature of research.

The research techniques used for Phase Two of the research, which allowed participants to reflect, and construct new knowledge, included focus group discussions (using the IQA method) and interviews. The constructivist approach was adopted as a method aligned to both the qualitative paradigm and IQA paradigm with the assumption that through the research techniques employed, participants construct new knowledge as they interact with each other or as they interrogate the phenomenon of the research. In this study, the participants (middle-adolescent learners), through the process of IQA method generated and interpreted data on resilience and the school context and constructed meanings of the phenomenon resilience in relation to the school context and how it influences their ability to rebound from adversities.

The qualitative paradigm is also aligned to the interpretivist approach, which enabled the middle-adolescent learners in the interviews to interpret their own lived experiences as they perceived them, giving a subjective interpretation of the phenomenon as they experienced it. Through Interpretivism, a study intends to understand the lived experiences of participants in their deliberations, descriptions and interpretations of interactions in their social context

(Henning *et al.* 2004:19-20; Ritchie & Lewis 2004:7). The interpretive approach represents the argument that human beings are in the process of constantly 'making sense of their world' as they 'continuously interpret, create and give meaning to define, justify and rationalize actions, people also are in the habit of continually constructing, changing and developing their interpretations of their world (Babbie & Mouton 2002:28-29).

The interpretative nature of a study alludes to research participants as 'investigators and interpreters of their actions' when they interpret their behaviours within the social contexts as stated by Ritchie and Lewis (2004:6), that 'perception relates not only to the senses but to human interpretations of what our senses tell us'. Ritchie and Lewis (2004:7) further state that 'qualitative research places much emphasis and value on human interpretative aspects of knowing about the social world and the significance of the investigator's own interpretations and understanding of the phenomenon studied'. The interpretivist approach includes the notion that people generate and give their own descriptions and meanings to their interactions in their social worlds. The researcher also assumes the position of an interpretivist to interpret data (interpretations of participants) collected from the participants. However, the researcher's interpretations are not permitted to contradict or disregard the participants' meanings, which could lead to data misinterpretation, but he/she is required to give objective and clear descriptions and understandings of the participants' interpretations of their interactions in their social world. In this process, literature knowledge and research of the phenomenon under study is also used.

In the focus group discussions and interviews, I used the interpretive framework to infer the participants' (middle-adolescents') perceptions of their experiences of resilience and how the school context influences their ability to rebound from adversities.

3.3 RESEARCH DESIGN

The research followed a mixed method design or triangulation of methods with the purpose to increase the validity, reliability, strength and interpretation of data, to decrease researcher biases, and to provide multiple perspectives on the research. It was also essential to highlight the issues that required exploration during data collection (Thurmond 2001:253; Frechtling & Sharp 1997:1-8). The initial phase of the research, Phase One, included working on the questionnaire through the process of questionnaire development, piloting, administration and statistical analysis of the main study data (see Figure 3.1 for questionnaire development). After statistical analysis and validation of the final questionnaire items, the selection of the research participants for Phase Two was made.

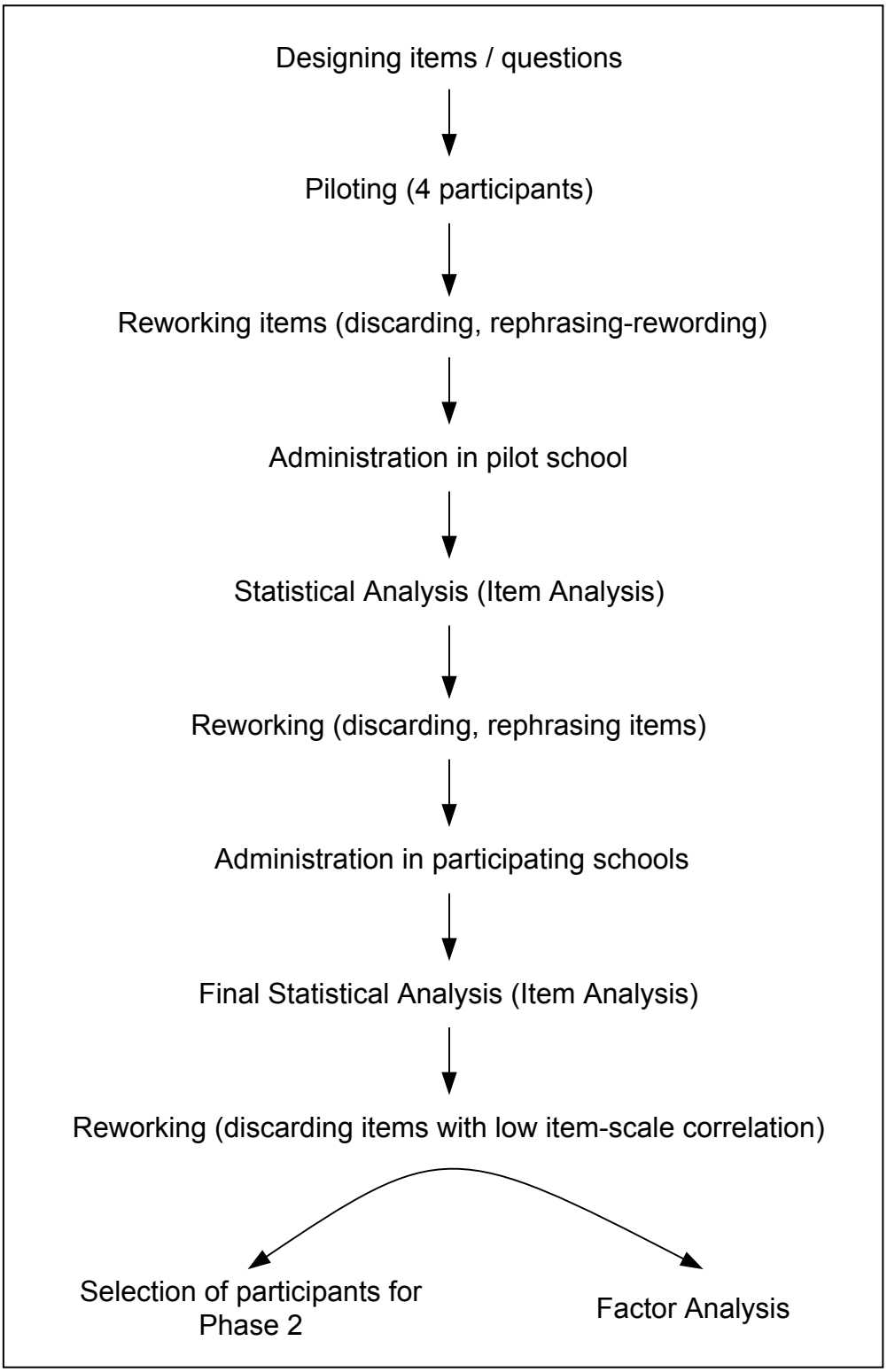

Figure 3.1: Resilience Questionnaire for Middle-adolescent Learners: Development process

Phase One was essential for developing the research instrument, to identify resilient and less-resilient learners as the participants of the research as well as hopefully to gain understanding of the construct resilience for learners from township schools. Phase Two followed the IQA method and aimed to answer the research question and understand the

perceived relationships that exist between the resilient and less-resilient learners and their school environment. Figure 3.2 gives a graphic representation of the research design, incorporating the two phases.

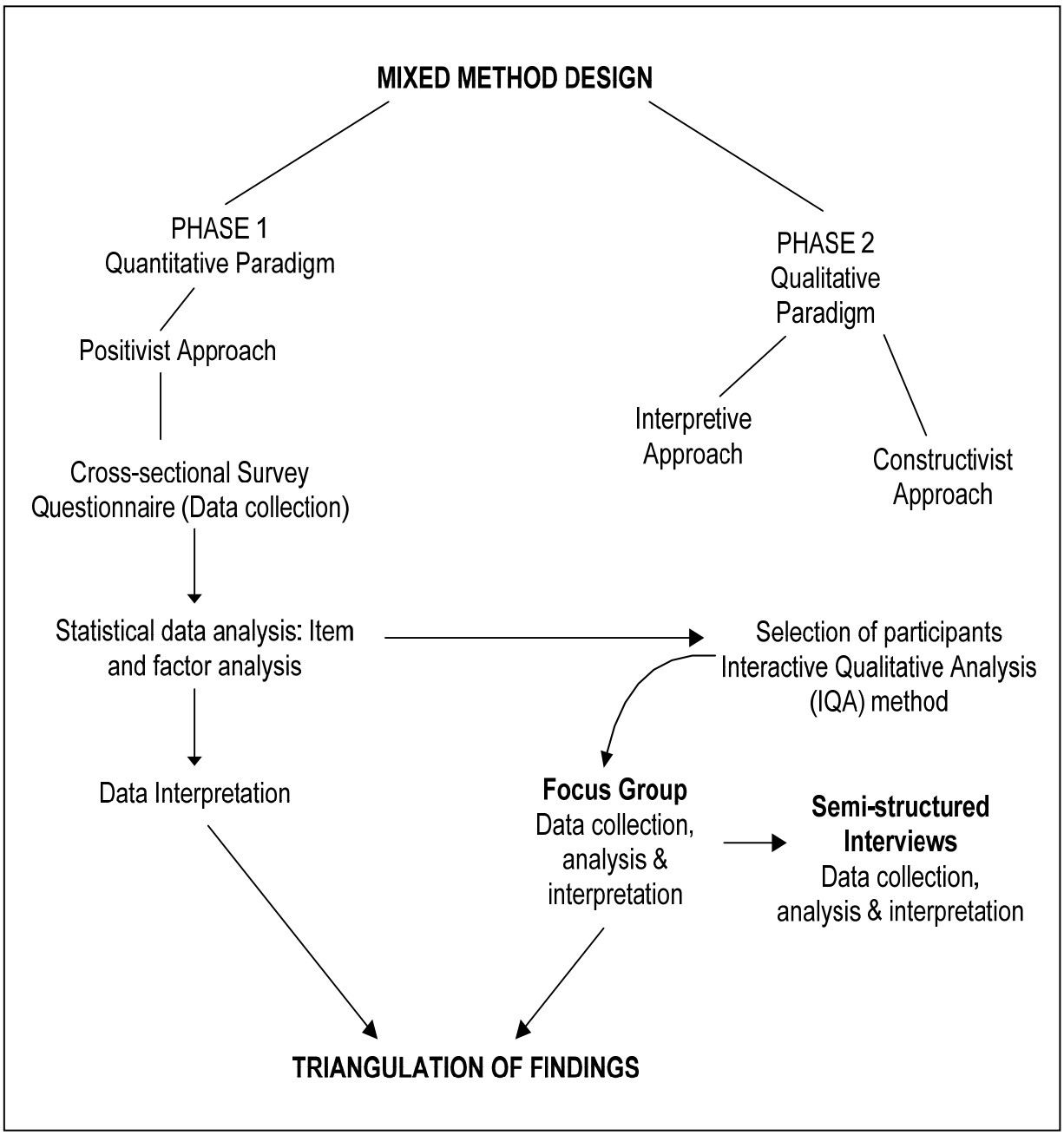

Figure 3.2: Research design

Figure 3.3 elucidates how each phase of the research was conducted by giving a synoptic overview.

<table>
<tr><td colspan="6">PHASE 1
QUANTITATIVE (Survey Questionnaire)
Participants: Grade 8 & 9 middle-adolescent learners from a pilot school and Grade 9 learners from two research schools</td></tr>
<tr><td>Questionnaire development
Literature review
Definition of the construct resilience. Resilience characteristics. Developmental middle-adolescent factors</td><td>Operationalisation of the construct resilience
Behavioural descriptions in terms of which to measure the construct</td><td>Questionnaire
Formulation of questions or statements to represent the behavioural characteristics used to define resilience</td><td>Questionnaire Piloting
Reworking the questionnaire after item analysis and feedback from participants, including item selection and redesigning some items for easy understanding</td><td>Questionnaire administration
Administering questionnaire to Grade 9 middle-adolescent learners in the two research schools</td><td>Questionnaire analysis (Statistical)
Item and factor analysis to determine and enhance the validity of the questionnaire</td></tr>
<tr><td colspan="6">PHASE 2
QUALITATIVE (IQA focus groups & semi-structured interviews)
Participants: Grade 9 middle-adolescent learners in 2 Schools, the selection based on their resilience scores</td></tr>
<tr><td colspan="2">School 1: Resilient</td><td colspan="2">School 1: Less- resilient</td><td colspan="2">School 2: Resilient</td><td>School 2: Less-resilient</td></tr>
<tr><td colspan="2">Focus group
Participants: 4 learners
(2 Boys & 2 Girls)</td><td colspan="2">Focus group
Participants: 4 learners
(2 Boys & 2 Girls)</td><td colspan="2">Focus group
Participants: 4 learners
(2 Boys & 2 Girls)</td><td>Focus group
Participants: 4 learners
(2 Boys & 2 Girls)</td></tr>
<tr><td colspan="2">Semi-structured interviews
Participants: 2 learners selected from the 4 above
(1 Boy & 1 Girl)</td><td colspan="2">Semi-structured interviews
Participants: 2 learners selected from the 4 above
(1 Boy & 1 Girl)</td><td colspan="2">Semi-structured interviews
Participants: 2 learners selected from the 4 above
(1 Boy & 1 Girl)</td><td>Semi-structured interviews
Participants: 2 learners selected from the 4 above
(1 Boy & 1 Girl)</td></tr>
<tr><td colspan="2">Data interpretation and analysis by participants and researcher</td><td colspan="2">Data interpretation and analysis by participants and researcher</td><td colspan="2">Data interpretation and analysis by participants and researcher</td><td>Data interpretation and analysis by participants and researcher</td></tr>
<tr><td colspan="7">Data analysis, interpretation and inferences</td></tr>
</table>

Figure 3.3: Research process

3.4 DEVELOPMENT PROCESS OF THE RESILIENCE QUESTIONNAIRE FOR MIDDLE-ADOLESCENTS IN A TOWNSHIP SCHOOL (R-MATS)

3.4.1 PRINCIPLES OF THE QUESTIONNAIRE CONSTRUCTION

The guiding principles as discussed in the paragraphs below were adhered to in constructing the questionnaire, the R-MATS (Ritchie & Lewis 2004; Babbie & Mouton 2002; Cohen, Manion & Morrison 2000; Dawis 1987; Peterson 2000;).

It became important to ensure that statements were clearly designed to avoid ambiguity and remained relevant to the middle-adolescent learners' developmental phase. To promote clarity and prevent confusing participants, great care was taken to avoid double questions in one sentence. Furthermore, by careful piloting the researcher ensured that participants understood clearly all questions asked. The researcher used the process of piloting to

engage the participants actively and to ask them to provide feedback especially on the readability and cultural sensitivity of the instrument by indicating items they did not understand and those they regarded irrelevant to their situation.

Township schools cater chiefly for learners who are not first language English speakers. It was therefore essential for the researcher to ensure that the language used was easily understandable and relevant to the middle-adolescent age cohort in a township school environment. English, which is the medium of instruction at the level of Grade 8 and 9, is the Second Language for participants and the pilot process aimed to ensure sensitivity for their language level and a measure of guarantee to accommodate the language usage specifically of the township learners. The questionnaire aimed to mirror as far as possible the English language used by learners in township schools and to ensure that its readability level conformed to that of the learners.

Minding that middle-adolescent learners are in a transition phase from childhood to adulthood, specific behaviours characteristic of this stage of development needed to be taken into account. Therefore, the questionnaire needed to consider that generalized statements indifferent to the middle-adolescence phase in respect of the construct resilience and its characteristics would result in general responses that would not be specific to the research question. A domain-specific instrument prevents participants from generating judgements based on their hopeful and imagined tasks. Instead, it forces them to generate statements based on exploratory and predictive judgements which are task-specific (Pajares 1996:547). Therefore, great care was taken to ensure that statements of behaviour or task were domain-specific and developmentally specific.

The use of abstract constructs or theorised questions in the items was avoided to prevent multiple-meanings, confusion and ambiguity. Instead, clear statements that defined behaviour directly related to their own views and circumstances were considered. The questionnaire aimed to capture the perceptions of participants and it was important to use statements that allowed learners to relate perceptions of their lived behavioural experiences and the intended or anticipated behaviours in their social interactions, which formed part of their everyday reality. The perceptions of participants were measured by using behavioural statements indicated by descriptive categories or frequency of behaviour categories. In using a Likert-type scale for self-measurement of behaviour, the use of cardinal numbers was avoided to ensure that learners were not confused or misled into assuming that high value numbers ‘always’ represent ‘good or better’ behavioural outcomes. Instead, descriptive categories, e.g. frequency or degree, were preferred (see Appendix A).

3.4.2 UNDERSTANDING THE RESILIENCE PROCESS WITH A VIEW TO CONSTRUCTING THE QUESTIONNAIRE

Definitions of resilience refer to successful or positive adaptation despite risk and adversity (Masten & Powell 2003:4; Luthar, Cicchetti & Becker 2000b:544; Haggerty, Sherrod, Garmezy & Rutter 1996:9; Masten 1994:3;) and the emphasis is on positive outcome. Waxman, Gray and Padròn (2004:39) indicate that the concept recognises the pain, struggle and suffering involved in the process of being resilient. Masten (1994:7) indicates that resilience is a process and that understanding of the resilience process requires a description of interactions of all the components essential to produce good adaptation despite risk and adversity. Our project team in the SANPAD research on Resilience between South Africa and the Netherlands developed the following working definition of resilience which I will use throughout the study:

> *Resilience is having a disposition to identify and utilize personal capacities, competencies (strengths) and assets in a specific context when faced with perceived adverse situations. The interaction between the individual and the context leads to behaviour that elicits sustained constructive outcomes that include continuous learning (growing and renewing) and flexibly negotiating the situation.*

Successful adaptation in this definition, when operationalised for this study, refers to the ability of the individual to successfully accomplish the developmental milestones as a middle-adolescent learner in a township school, and this refers to the individual learner's pattern of development over time including school adaptations. Normal development in adolescence includes adjustments to various developmental tasks including developing and maintaining relationships, dealing with pubertal changes and the development of a consistent identity. Delays or failure in achieving the appropriate or 'age-salient' developmental task over the developmental phase forms the basis for unhealthy development or psychopathology, whereas successful achievement of the developmental task despite risk and adversity forms the basis for healthy development and resilience (Masten *et al.* 2004:1075, 1077; Masten 1994:4).

The developmental pattern of the individual middle-adolescent learner, including the influence of both environmental and genetic conditions is mapped by the individual's consistent behavioural characteristics over the developmental phase. Furthermore, research indicates that studies of at-risk populations, especially of individuals perceived to have beaten the 'odds', help to identify developmental pathways and factors essential for healthy development (Wang *et al*. 1994:47). My study of middle-adolescent learners in a township school aims to identify such factors which aid the learners to beat the odds. The factors to be identified include survival strategies developed in the process of playing an active role

(learned behavioural characteristics and survival skills) by actively engaging or interacting with the environment and emerging healthily from such adverse environmental circumstances. According to Wang *et al.* (1994:48), such activities of resilient individuals serve as 'self-righting mechanisms', which can be used to provide feedback and to identify successful strategies essential for survival in adverse circumstances.

To understand the behavioural characteristics of the individual learner in a township school as a reflection or indication of resilience, a questionnaire focusing on self-reports of the developmental pattern of the learner, including resilience characteristics operationalised from the construct, would be used. The purpose of operationalising the definition of resilience was to understand the processes and strategies resilient individuals in township schools undergo and use to overcome risk and adversity resulting in healthy adaptations and development. The understanding of the resilience process is essential in the development of context-specific intervention strategies and knowledge about fostering resilience in middle-adolescent learners. Such assessment of the individual functioning through self-report perceived the environmental conditions of the adolescent to be challenging due to the developmental phase of adolescence and the challenging township conditions in South Africa.

3.4.3 OPERATIONALISING THE CONSTRUCT

The definition of resilience used in this study states that **'resilience is having a (1) disposition to (2) identify and (3) utilize (4) personal capacities, competencies (strengths) and (5) assets in a specific context when faced with perceived (6) adverse situations. The (7) interaction between the individual and the context leads to (8) behaviour that elicits sustained constructive outcomes that include (9) continuous learning (growing and renewing) and (10) flexibly negotiating the situation'.** The operationalisation of the construct for middle-adolescent learners and their developmental environments including township, home and school environment, focuses on explanation of the terms numbered in the definition.

(1) Disposition

According to the Fowler and Fowler (1991:337), disposition refers to 'a natural tendency' or 'an inclination'. The definition relates to an individual's acknowledgement of intention. Having the disposition to identify and utilize available resources is having the willingness and the inclination to access and use strengths and assets as an act of volition, and in the process use them to effect and facilitate healthy and positive development. For instance, a learner with practical problem-solving skills, when experiencing problems, will have the ability to mobilise his/her strengths to find a solution to the problems. Statements in the questionnaire

that illustrate the disposition of the individual will include affirmation of behaviour, **'I can',** to indicate the motivation, willingness, intention, readiness and eagerness of an individual to commit to an activity or focus energy on positive actions. Since 'disposition' in the definition is attached to identification and utilization of strengths, such an individual will have knowledge or confidence concerning the existence of such resources (available assets) and the motivation to access and utilize them effectively to achieve healthy development. Accessing strengths and assets requires knowledge of processes and procedures on how to go about it. Items on disposition in the questionnaire include the acknowledgement or motivation to make an effort to solve a problem, looking for a solution to promote a healthy behavioural outcome e.g. 'I go to my teacher when I need to talk', 'I try different ways to get something right'.

(2) Identify

To identify means to 'recognise' or 'make out'. It relates to the ability of an individual to introspect, investigate, recognise and be aware of, in this case, internal and external strengths, competencies and assets that can help to manage and deal effectively with challenges in life. The existence of strengths (internal and external) to the individual does not always purposefully relate to individual awareness and acknowledgement of such strengths, nor to knowledge of how to access and use them. There is a possibility that middle-adolescent learners might fail to successfully self-evaluate and to identify internal strengths, which contribute to their resilience. It is very important for an individual to have awareness or motivation to identify such strengths in order to use them effectively. Statements in the questionnaire that address the identification of strengths indicate admission of character strength, availability and accessibility of strengths, e.g. 'People know that I am good at what I do', 'I believe that I have talents'.

(3) Utilize

To utilize means to 'make use of' what is available, with some set purpose'. The term relates to having knowledge of how to access strengths and to employ them effectively, to enhance the effective functioning of the individual. It also relates to the effective use of one's strengths to achieve positive outcomes and to practising good problem-solving skills. Effective application and use of available resources or strengths (internal and external to the individual) is essential and it is important to be aware of personal strengths in order to use them effectively to lead a healthy life. Statements in the questionnaire that relate to the utilization of strengths include commitment to actions taken to effect positive outcomes e.g. **'**I go to my teacher when I need to talk', 'I ask my friends for help when I need it'.

(4) Personal strengths

According to Wolin (2003:19), strengths are internal individual traits or qualities that coexist with weaknesses and vulnerabilities and they can be learned. Some authors refer to character strengths instead and they relate to individual qualities like problem-solving skills, intellectual curiosity, courage, self-efficacy, optimism, interpersonal skills, perseverance, creativity, initiative, humour, morality, relationships, independence and insight (Hippe 2004:240; Park 2004:40; Park, Peterson & Seligman 2004:607; Seligman 1998:2). Seligman (1998:2) further indicates that individual strengths serve to buffer the individual against mental illness. According to Hippe (2004:240), resilient individuals have self-awareness and are conscious of their strengths and weaknesses. Most of the strengths can be learned through life skill programmes offered in schools. Teaching life skills to learners is considered by Thomsen (2002:3) even to mitigate risk in the environment and thus help to enhance resilience. Statements in the questionnaire that address personal strengths include positive statements that admit to the presence of such strengths, e.g. 'I can achieve good things if I try hard', 'I will be successful one day', 'I have good talents'.

(5) Assets in a specific context

Developmental assets (they are developmental in nature and vary according to the developmental stage of a person) or strengths are the positive building blocks that provide the individual with competencies essential for age-appropriate self-regulation (Scales 1999:113). Assets in the context of this study refer to individual (intrinsic) and extrinsic assets within the social context of the middle-adolescent learner. Assets can be defined as resources available within the social context or system for the individual to use with the purpose to support, inform, guide and serve as a source of knowledge to the individual and to fundamentally effect healthy development. Assets include both human and physical resources, e.g. structures within the school like the library, books, teachers, peers, mentorship programmes, parent-body structures and school policies. Middle-adolescents have the responsibility to know or identify the assets within their social system; it is an active process of involving oneself in the structures of the system and an act of volition, a decision to seek knowledge and answers. The onus to identify, utilize, access and mobilize assets lies with the middle-adolescent learner. To facilitate utilization of assets, the middle-adolescent learner needs to have a conceptual map of what is available and how to access the resources or assets, what is called asset mapping. The navigation map of assets can help the middle-adolescent to find the way in the environment with confidence, to access knowledge which can empower them, and to access support to effect healthy development. Most resilience literature equates assets to protective factors, which are 'positive characteristics, predispositions and influences in an adolescent's life that serve to buffer an individual from negative influences' (Evans, Sanderson, Griffin, Reininger, Vincent, Parra-

Medina, Valois & Taylor 2004:424.e23), including family relationships, adult role models and engagement in structured activities. The difference between an asset approach and resilience approach is that the asset approach focuses mainly on resources and protective factors and how to access, utilise and mobilise them. While the resilience approach focuses mainly on developmental outcomes and individual strengths, it is a process of development which manifests in the presence of assets and stressors.

(6) Context

According to Ungar (2006a:3), Tusaie and Dyer (2004:7), Wilkes (2002:229), Smith (1999:156), and Rutter (1993:626), resilience is affected by context and influenced by the environment. Resilience is therefore context-specific and context-dependent. The context within which the child develops (community, family, even schools) determines what is regarded as healthy developmental behaviour over and above universally determined healthy behaviours (Ungar 2006a:4). As such, mainstreaming resilience characteristics can sometimes be a problem if they clash with cultural or group values and knowledge. Ungar (2006a:4) indicates that cultural variations play an important role in influencing the resilience of children. Most literature indicates that resilience becomes evident or is manifested in situations of adversity. The questionnaire aimed to identify the resilient and less-resilient middle-adolescent learners in a township school while focus group discussions aimed to determine the relationship between the school context and the degree of resilience of the selected participating resilient and less-resilient middle-adolescent learners. Statements in the questionnaire that relate to context include behavioural activities manifested in the social context of the participants (the school), e.g., ‘I get into trouble at school’, ‘I feel safe at school’, 'There is violence at school’.

(7) Adverse situation

Research indicates that resilience occurs or is manifested in the face of adversity or adverse environmental conditions (Ungar 2006a:1; Gilligan 2000:37; Robinson 2000:570; Roosa 2000:567; Dyer & McGuinness 1996:277; Rutter 1999:119; Garmezy 1996:11). A township school accommodates learners mostly from the local township area, including the informal residential sector when required. The informal residential settlements are mostly characterised by conditions of squalor, including unemployment, poverty and poor service delivery. The adverse situations characteristic of middle-adolescent learners in a township school can range from poverty within the family including unemployment, and crime in the area that can interfere with the learner’s ability to move freely within the community and attend school effectively. School failure, which is characterised by repeating a grade, is also an adverse, situation. A learner who is bullied by peers also experiences an adverse situation, as do those affected or infected by HIV and AIDS. Furthermore, abuse within the

family, the death of parents or significant others and incidences of stigma and discrimination at home, at school or in the community are conditions of adversity.

Adolescents who do not develop major developmental problems while raised in adverse environmental conditions, demonstrate resilience (Fergusson & Horwood 2003:2). For resilience to be practised, a person has to bounce back from adversity and continue to lead a healthy life. Overcoming adversity testifies to a measure of individual strength and competence, away from the development of psychopathology. Measuring adversity would look at the adolescent's life events and experiences that have been stressful (Masten *et al.* 1999:150). Statements in the questionnaire that address adversity in the environment and life of the individual pertain to current and past hardships and stressors, like experiences of death or sickness in the family, poverty, violence, exposure to drugs, school failure or academic problems, e.g. 'I do not have money to buy a school uniform', 'I have failed a high school grade before', 'My family struggle to pay for my school needs', 'I have lost my parent(s)'.

(8) Behaviour with constructive outcome

The behaviour of middle-adolescent learners when constructive in relation to school policies, rules and expectations supports healthy development within the school context. This outcome of behaviour relates closely to communication structures and interactions within the school system. The middle-adolescent learner needs to have knowledge of expected school behaviour and this puts the onus on school management structures to communicate the information e.g. how is information on rules of conduct and school policies communicated and translated to learners? What structures within the school system support behaviour management? How are procedures and processes interpreted to the learners?

The school as a system has various sub-systems that interact and influence each other and the learner exists within all the sub-systems with each section promoting its behavioural expectations and norms e.g. the classroom, the administration section, the extra-curricular section and the relationships and interactions with peers across all the sections of the school. The behaviour that promotes healthy development and interactions within each sub-system will contribute to positive outcomes (even though not necessarily the expected outcome based on merit and unit of measurement especially, e.g. academic performance scores) and the learner can be pronounced to be functioning effectively and productively to effect acceptable relationships within that context. Constructive behaviour contributes to positive outcomes and indicates that the learner is learning and accessing knowledge and demonstrating growth in their environment. Examples of statements that demonstrate this factor include: 'In class I help other learners who are struggling', 'When my friends do

something wrong I try to correct them', 'It is important for me to obey the school rules', 'I listen to the teacher in class.'

(9) Continuous learning

This characteristic of resilience indicates the process and developmental nature of resilience since the individual is in a process of learning and grows with every experience and problem he/ she overcomes. The resilient middle-adolescent learner learns from previous lessons and hurdles and uses the knowledge in overcoming new challenges, that is he/she becomes 'cleverer or wiser' with every experience. This ensures that when faced with new challenges they can draw from successful strategies employed in the past to successfully overcome their problems in the new situation. They become knowledgeable and experienced in dealing with certain calamities because of multiple exposures to stressors.

Continuous learning indicates that the experience gained from exposure to adversity becomes meaningful and is used again to overcome other stressors. However, the strategies employed should be constructive and meaningful to the individual to ensure maintenance of positive development and productive behaviour. Continuous learning is about not repeating past mistakes but 'learning from one's mistakes', it is about knowing how to deal with similar stressors because one has developed strategies or support networks to help with the stressors. It does not, however, indicate that one will not bend under such stressors, especially multiple stressors, but it means one will enlist support or strategies learned to deal with the problem. Multiple stressors can include one or more deaths in a family, chronic disease and poverty. Examples of behaviour that supports the characteristic of continuous learning include 'I am not afraid to try new things', 'I know I can learn from my mistakes', 'Working hard makes you clever and does not turn you into a teachers' pet'.

(10) Flexibly negotiating the situation

The resilience characteristic of flexibly negotiating the situation refers to the resilient middle-adolescent learner's ability to be flexible in dealing with adversity and not to follow rigid and ineffective strategies that do not help in resolving the problem. The individual learner has to admit and be aware of problem-solving strategies that are effective and to avoid being stuck in unproductive and rigid thoughts when dealing with a problem. To negotiate the situation flexibly requires strength of character and confidence to admit when an employed strategy is not working and a new perspective is required to resolve the situation. The individual has to learn to gauge and decide to change strategies when the adopted approach to a problem is not effective and to negotiate a new approach that seems to have the possibility to resolve the problem. Different strategies or approaches to problem-solving are necessary to be able to successfully manage this resilience attribute. The learner has to use his/ her support

structures to learn of other measures that can be employed to resolve the adverse situation when the known and familiar approaches appear to be ineffective. This attribute ties closely with continuous learning and requires the learner to demonstrate learned skills in problem-solving by using multiple strategies to manage the situation and to learn most effective strategies that can be employed in similar situations in the future. Examples of statements that look at this resilience characteristic include 'I use different ways to work out a difficult problem', 'No problem can be too hard to work out, I just need a way to get it right'.

3.4.4 RESILIENCE CHARACTERISTICS IN RELATION TO THE OPERATIONALISED DEFINITION

The definition of the construct resilience as unpacked above shares a lot of similarities with resilience characteristics identified in most resilience literature. The identified resilience characteristics together with the operationalised definition of resilience were essential in the construction of the questionnaire. Many authors, including Freiberg (1994:155), Krovetz (1999:7), Masten (1994:14), Oswald, Johnson and Howard (2003:52) and Wang *et al.* (1994:48-49), identified the resilience characteristics outlined in Figure 3.4 to be essential for the development of resilience in individuals, which also informed the design of the R-MATS.

Resilience characteristics	Sub-characteristics	Attributes of the characteristic based on reviewed literature
Social support: It is a comprehensive concept ranging from material assistance, cognitive aspects e.g. helping an individual to solve a problem and emotional or affective aspects e.g. showing a liking- relation to an individual (Rigby 2000:58). 'Information leading the individual to perceive that he or she is cared for, esteemed, and valued by members of his or her social network' Dubow, Tisak, Causey, Hryshko and Reid (1991:584)	Connection to other competent adults	This characteristic is concerned with supportive relationships an individual has to find, create and maintain with other people. According to Bandura, Pastorelli, Barbaranelli and Caprara (1999:259), presence of social support in an individual's life reduces vulnerability to stress, depression and physical illness. According to literature, most resilient individuals have at least one strong relationship with an adult and developing resilience requires caring and supportive relationships (Johnson & Wiechelt 2004:661; Masten & Reed 2005:85; Thomsen 2002:17; Tusaie & Dyer 2004:4; Wang *et al.* 1994:56; Werner & Smith 1982:97-98).
	Appeal to other people and the ability to be receptive	According to Aronowitz (2005:202- 203), adolescents with connections to caring, competent and responsive adults 'were able to envision a positive future for themselves' and developed feelings of competence. Connected relationship with a competent adult helps to reduce risk behaviours in adolescents (Aronowitz 2005:206). Benard (1991:4) concurs with Werner and Smith (1982:56) by stating that resilient children are considered more responsive, active, flexible and adaptive and are able to elicit positive responses from others.
	Stable relationships	A stable relationship with someone and / or support from a significant other can lead to better social adjustments and buffer one from major stressful life events (Jackson & Warren 2000:1442). Furthermore, a stable and secure relationship with an adult or significant person helps developing individuals to experience competence, confidence, trust, initiative and autonomy (Werner & Smith 1992:209).

Resilience characteristics	Sub-characteristics	Attributes of the characteristic based on reviewed literature
Self-directedness: supported by belief in the child's sense of control, responsive significant others who are consistent, warm, supportive, encouraging, etc. (Gilligan 2000:41), self-efficacy		This construct is also referred to as a sense of personal control (Ross & Broh 2000:272) and can be defined as a belief in one's competence to tackle difficult tasks and to cope with adversity in specific demanding situations (Luszczynska & Gutiérrez-Dońa 2005:81) and believing that outcomes are contingent on one's choices and actions (Ross & Broh 2000:272). The construct relates to choice of activities, individual efforts, persistence, thought processes and emotional reactions when confronted (Maurer & Andrews 2000:965). The best measure of self-efficacy includes both magnitude and confidence (Maurer & Andrews 2000:966). Self-efficacy as such is an important factor of resilience because it has a direct impact on dealing with or responding to adverse situations (influence task performance) and allows an individual to evaluate own competencies in executing and responding to any task. Pajares (1996:545) indicates that self-efficacy beliefs are strong predictor of the level of success an individual achieves. Individual perceptions and judgement of competencies and strengths to execute a task are essential in self-efficacy beliefs and such judgements of self are influenced by self-concept, because judgement of self and individual strengths and competencies will affect the individual's behaviour, performance and perceptions of self. The study will only relate to perceived self-efficacy because a true measure of the participants' self-efficacy will not be conducted and will rely on their own perceptions or judgements of competencies.
Positive self-worth: indicates the degree to which one is self - assured regarding one's individual capacities and believes in one's own moral worth and virtue (Owens 1994:393)		Owens (1994:393) attests that positive self-worth is linked to pro-social attitude and behaviour and psychological well-being. Self-worth relates to perceptions of self and indicates the tendency of an individual to establish and maintain a positive self-image (Eccles & Wigfield 2002:122). For learners to maintain a positive sense of self-worth in a school environment they need to protect their sense of academic competence and to believe in their academic competence. These assumptions imply an inter-dependent relationship between academic competence and positive self-worth (Eccles & Wigfield 2002:122). An individual with a positive sense of self has a positive sense of worth, a clear purpose in life, and a sense of control. They have an understanding of who they are, what they want to achieve in life and the direction they need to take to make their goals real. To have a positive sense of achieving and dealing with tasks effectively includes the confidence of being able to accomplish tasks effectively and successfully (to the best of their ability). This component of positive sense of self relates to the self-esteem of the adolescent and is not about thinking of what the adolescent is capable of achieving. It is more about knowing (the knowledge, confidence and acknowledgement of strengths and talents) about what one is capable of doing and the boundaries of one's strengths (the worth of an individual).
Experiencing success, in one or more areas of their lives		Success attributes positive outcome and a sense of achievement while failure, the opposite of success, signifies undesirable outcomes and has a negative impact on the individual's sense of self-worth and emotional security. Adolescents who experience success in their social and academic life tend to experience more satisfaction and confidence and less stress in their lives (Rew & Horner 2003:382). Rew and Horner (2003:382-383) found that unsuccessful performances of youths in school settings serve as a risk factor for school dropout and delinquency while successful achievements in school foster resilience in learners. The authors also found that lack of school success results in learners disengaging themselves from the school setting (they feel less connected, not belonging to the school) and engaging in antisocial behaviour and incompetence.

Resilience characteristics	Sub-characteristics	Attributes of the characteristic based on reviewed literature
Positive self-concept		Ross and Broh (2000:171) observe that self perceptions influence the self-concept. Self perceptions develop from experiences and interpretations gained from the environment including reinforcements, evaluations or feedback received from significant others and the individual's behavioural attributes (Ross & Broh 2000:271). According to Ross and Broh (2000:271), self-esteem and sense of personal control are the two major components of self-concept. Sense of personal control also refers to self-efficacy, mastery and personal autonomy in some literature (Ross & Broh 2000:272).
Interpersonal skills		Interpersonal skills comprise the ability to interact with others and to access social support using competencies like problem-solving, assertiveness, anger management, communication, conflict resolution and social skills. The lack of interpersonal skills can lead to behavioural problems (Taylor, Eddy & Biglan 1999:170; Somchit & Sriyaporn 2004:295). Interpersonal skills relate to abilities that help the individual to be able to live with others, the competencies that can help the learner to integrate thoughts, feelings and actions and help in the achievement of personal and social goals (Oliver, Collin, Burns & Nicholas 2006:4; Somchit & Sriyaporn 2004:294).
Ability to communicate effectively		MacKay (2003:106) indicates that communication has two functions, content and relationship (information about things that should happen and acknowledgement and correspondence of love and affection). MacKay (2003:106) further refers to Walsh's three components of effective communication, namely: clarity of expression (sending clear and consistent messages and awareness to clarify ambiguous signals), open emotional expression (sharing of feelings and emotions which is characterised by mutual empathy and toleration of differences) and collaborative problem-solving (identifying problems and relevant options to address the problem and work jointly to address them). MacKay (2003:106) declares that effective communication is highly critical in adverse situations because communication is more likely to fail in such situations. With families, resilience mostly occurs in situations where they are able to manage conflict well and is based on good communication and problem-solving skills. According to Jaccard, Dodge and Dittus (2002:12), to achieve meaningful parental communication involves exposing the adolescent to the communication which includes making them attend and comprehend the communication and accept the communicated meaning as valid and being able to store the meaning in memory in order to accurately retrieve it in the future. The process that leads to meaningful communication thus includes exposure to the meaning communicated, attention, comprehension, acceptance, retention and accurate retrieval from memory.
High expectations		Aronowitz (2005:204) points out that coaching (encouragement, support and motivation) by adults manifests in concern for the success of the adolescent, a caring relationship and belief in their positive outcomes, and helps to elevate the expectations of adolescents. High expectations include encouraging learners to do well. Benard (2000:22) indicates that positive and high expectations structure, guide and challenge the learners to go beyond what they believe they can do. Kerka (2003:1) indicates that having high expectations for adolescents, supported by teacher supportiveness, fosters high school achievements. According to Gilligan (1997:15), teachers who have high expectations for their learners' work and behaviour indicate they believe in their innate capacity.

Resilience characteristics	Sub-characteristics	Attributes of the characteristic based on reviewed literature
Belief that life has meaning		Zika and Chamberlain (1992:133) state that a person's sense of meaning is stable, with 'gradual transformations across the life span in conjunction with changing belief and value systems'. The belief that life has meaning relates to positive mental health outcomes, to the notion that personal meaning is mediated by providing interpretations of life experiences to guide behaviour, and to the realization that personal meaning is always accompanied by feelings of satisfaction and fulfilment (Zika & Chamberlain 1992:135).
Problem-solving skill		Dubow *et al.* (1991:585) talk about social problem-solving skills, which they define as 'the ability to generate alternative solutions to social interaction problems, evaluate the possible consequences and choose the most effective solution to the problems'.
Acceptance of responsibility for self and others	Internal locus of control	To accept responsibility for one's own actions and / or transgressions includes acknowledging and accounting for one's actions. It includes taking control of one's actions even in the presence of challenges and contradictions and making decisions and acknowledging doing otherwise (Vanderzee, Buunk, & Sanderman 1997:1842-1844). It includes not blaming others for one's own behaviour or attributing blame to others for one's actions, but taking both blame and tributes for one's own behaviour or choices and owning up to one's actions. Internal locus of control and autonomy involve personal control and thus allow the person the freedom to choose. Internal locus of control is a personality variable that concerns people's expectancies that they can control and direct inner strengths in their lives (Spector & O'Connell 1994:2).
	Autonomy	Autonomy refers to having a sense of identity and the ability to act independently, to exert some control over one's environment, including a sense of task mastery, internal locus of control and self-efficacy (Benard 1995:1). Autonomy refers to the sense of being the cause of one's own behaviour characterised by increased behavioural persistence and performance that reflects more effective and better mental and physical health (Crocker & Park 2004:399). Individuals feel a sense of autonomy when they realise or achieve their personal goals, values and interests (Assor, Kaplan & Roth 2002:262). According to Spear and Kulbok (2004:149), autonomy is an active-process phenomenon which can be viewed as a continuum between dependence and autonomy. The challenge for the middle-adolescent is to understand that the desire to be autonomous does not preclude maintaining connectedness with family and society.
Sense of purpose for the future		People with a sense of purpose or future see themselves as necessary or important to others by the fact of being family members or part of social structures (Thomsen 2002:16). Benard (1991:7) indicates that a sense of purpose and taking responsibility to influence and determine the future is essential for human survival and effective for coping with multiple life stressors.

Resilience characteristics	Sub-characteristics	Attributes of the characteristic based on reviewed literature
Realistic future plans		To have realistic future plans includes the ability of the middle-adolescent to ensure that the plans are practical and within the adolescent's reach. Shanahan and Flaherty (2001:389) infer that future orientations include aspirations for the future and are related to patterns of time use in adolescence (how the adolescent invest and spend their time especially doing constructive work that will benefit future goals), where for a school going adolescent much time is presumed to be allocated to school work and thus preparing for future work and employment. Realistic plans might require hard work, determination and endurance to achieve, but they can be accomplished, and they are within the individual's abilities and strengths. To be able to make realistic plans, middle-adolescents need to have knowledge of their strengths, limitations and abilities. Adolescents are in a process of making plans for their future regarding their independence, educational choices, social relationships and other responsibilities. They need to have awareness of developmental challenges that can interfere with their future plans. Realistic plans include awareness of essential steps to take in achieving the future plans.
High educational aspirations		The aspirations of an individual include one's desires, goals or a 'possible self', an ' imagined self', what one wants to become and does not want to be. To actualize or realise an aspiration requires much effort, energy and resources from the individual and the environment. Educational aspirations include the desire to achieve educationally and the value an individual invests in educational achievement. The relevance of curricular activities helps with educational aspirations (the skills learned need to complement the aspired or required job). According to Kao and Tienda (1998:349-354), educational aspirations influence scholastic outcomes and are influenced directly by significant others who convey their expectations and indirectly by role modelling and economic success. This relates to the possibility that adolescents from low socioeconomic backgrounds might rightfully expect their educational success and perceive successful future careers to result in economic success, and thus position them into a middle-class category.
Social competence		Social competence acknowledges the importance of behaviour in determining social status among peers and other people in the environment, where positively directed actions indicate healthy development and competence.

Figure 3.4: Resilience characteristics

3.4.5 DEVELOPING THE R-MATS

3.4.5.1 Construction of the items

I constructed items based on attributes from the operationalised definition of resilience discussed in 3.4.3 and the resilience characteristics discussed in Figure 3.4, guided by existing questionnaires (Peterson 2000:70; Sax 1997:149, 500; Dawis 1987:481-484) and the findings of my masters' study (Mampane 2004). A pool of between 80-100 items was constructed, containing descriptions of positive and negative behaviours assumed to reflect resilience. Respondents would be required to self-evaluate in terms of the degree of behaviour applicable (True all the time, True most of the time, Half true, A little bit true,

Totally untrue). Numerical values 1-5 represented the degrees of behaviour, but they were used for scoring purposes only and were not visible to the respondents (Sax 1997:149), to discourage the tendency found in an earlier study (Mampane & Bouwer 2006:450), among learners in townships to choose high numbers or scores in self-assessment. Du Plessis (2005:109) also refers to the extremity bias or the tendency to choose extreme values on a scale.

3.4.5.2 Pilot study 1, the items

A small pilot study was conducted with two Grade 8 learners (boy and girl) and two Grade 9 learners (boy and girl) from School 0, using a 40-item set of representative items selected from the pool. The purpose was to obtain feedback on the readability, relevance, comprehensibility, cultural sensitivity, appropriate language usage and the length of the questionnaire. The Life Orientation teacher helped to select four willing, eloquent learners with good academic record to participate in the pilot, using the Life Orientation period (learners were working on worksheets without teacher participation during the period). Time allocated for administration of the questionnaire was 45 minutes, which was the time of a learning period. All learners completed the questionnaire within 30 minutes. I then discussed the questionnaire with the learners to hear their comments. They struggled to understand the degrees of behaviour, (True all the time, True most of the times, Half true or half false, A little bit true, Totally untrue/ False). It became evident that scaling categories of behaviour in terms of choice without using numeric values was difficult for them and this challenge drove me to formulate more comprehensible wording of the categories to ensure clarity. Negative items were challenging for them, they struggled to interpret what the item actually meant. One learner struggled to understand the word 'tough' in the statement '*I am a tough person'.* After this initial piloting, the feedback received assisted in reworking the items and producing two pilot questionnaires which covered similar resilience characteristics but were differently worded, as well as a separate set of items looking at risk factors.

3.4.5.3 Pilot study 2, the questionnaire

The purpose of Pilot 2 was to determine whether the items and instructions were clear, unambiguous and relevant, to determine the time required to complete the questionnaire during group administration, and to select the items for the scale to be used in the main study. Two questionnaires were constructed (see Appendix A). Section A of both versions consisted of 11 identical items addressing environmental risk factors, i.e. family background, relationships within the learner's home environment, socioeconomic factors and other social factors. Items in Section A gave respondents three options to indicate the presence or absence of adversity in their environment with a **Yes, Sometimes or No**. Section B of each

version contained 34 items on resilience characteristics and gave participants five options to indicate how characteristic of themselves the resilient or less-resilient behaviour was: **True all the time, True most of the time, Half true, A little bit true** or **Totally untrue.** The two categories, Half true or half false and Totally untrue/ false were reworded and simplified.

The Head of the Department (HoD) and the Life Orientation teacher of the pilot school assisted with the allocation of classes and identification of periods to use. Life Orientation periods were selected since most of the time learners worked on their own on provided worksheets. Five classes of Grade 8 and 9 learners, totalling 165, participated in the study. The pilot questionnaires were mixed to ensure that every class of participants got both versions. The only difference was Section B, which was on page 2. The front page was similarly designed except for an A and B at the right top corner to indicate Questionnaire 1(A) and Questionnaire 2 (B). The mixing of questionnaires offered the possibility of learners sitting in the same desk to receive different questionnaires, with 86 learners answering Questionnaire 1 and 79 learners answering Questionnaire 2 (see Table 3.1).

Table 3.1: Pilot Questionnaires 1 and 2, Grade 8 and 9 learners

	Questionnaire 1		Questionnaire 2	
Grade	**Male**	**Female**	**Male**	**Female**
8	24	33	18	22
9	16	13	12	27
Totals	40	46	30	49
	86		79	

Respondents had 45 minutes for the pilot questionnaire. Most learners completed the questionnaire in 25 minutes about 10 minutes were used for preparation and instructions, and 10 minutes for feedback and comments after the administration of the questionnaire. The learners commented on the clarity of instructions, comprehensibility of the items, language used and ambiguity of items.

Missing data on Questionnaire 1 and 2 included biographic information and some risk factors items in Section A and incomplete questions in Section B on the resilience characteristics. Some learners omitted questions they did not understand and did not ask for clarity. Learners who completed on time appeared to understand the questionnaire and were mostly confident about their contribution and would elaborate on what the questionnaire meant. Learners who took long to answer struggled to give comments, they read slowly, struggled with the categories of choice (they could not make a choice) and some even looked at their neighbours' responses. The overall feedback received from learners who were confident,

mostly in Grade 9, was positive remarks about the wording and their understanding of items. However, they still battled to comprehend the response categories and indicated that the detailed explanation had helped them. The category of '*sometimes*' (Section A) confused them because some undecided learners felt obliged to make a choice in that category e.g. indicating that they sometimes live in a brick house. The lack of question discrimination indicated their inability to self-assess and self-evaluate. In Section A, they struggled with qualifying words like 'at least' and some learners grappled with the explanation of 'abuse', apparently thinking of all forms of abuse.

3.4.5.4 Item Analysis: The Pilot Questionnaires

(1) Section A: The risk factors

A conventional item and test analysis program using ITEMAN (tm) for 32-bit Windows, Version 3.6 was conducted on the two questionnaires to determine item-scale correlations, thus as far as possible to establish the reliability of the scale before administration to the research schools. Item Analysis is a process that compares the participants' responses to the individual items with the total score to enable assessment of the effectiveness of each item (Sax 1997:236, Scorepak® 2005:1). The aim of item analysis is to measure and improve the quality of items in order to eliminate ambiguous and misleading items, rework those that can be improved and to estimate the internal consistency of the questionnaire (Scorepak® 2005:1, Osterlind 1998:257). Items with a positive relationship with the total score in most cases have high internal consistency. A correlation of above 0.30 gives an indication of a good relationship, between 0.10 -0.30 fair and below 0.10 poor (Scorepak® 2005:2, Kline 1994:127). Tables 3.2 and 3.3 show the results of the item analysis for Sections A of Questionnaires 1 and 2.

Even though Section A was similar for both Questionnaire 1 and 2, and the questionnaires were mixed to ensure random distribution among respondents in each class, Table 3.2 and 3.3 show great disparities between the item-scale correlations for Section A of Questionnaire 1 and 2. Also, the Cronbach alpha for Section A Questionnaire 1 was 0.622 and 0.311 for Questionnaire 2.

Table 3.2: Item Analysis, Section A Questionnaire 1*

Item number	Item	Mean	Variance	Item-Scale Correlation	Number per item.	% Endorsing		
						Yes	Sometimes	No
1	At least one member of my family has a job	1.118	0.221	.33	85	94	0	6
2	I live in a brick house	1.116	0.219	**.16**	86	94	0	6
3	My parent / s are still alive	1.235	0.415	.64	85	88	0	12
4	I fight a lot with other children at school	1.417	0.338	.41	84	63	32	5
5	I have enough food to eat at home	1.198	0.275	.63	86	86	8	6
6	I have many problems	1.628	0.513	.52	86	51	35	14
7	There is someone at home who abuses me	1.071	0.089	.35	85	94	5	1
8	I stay with at least one of my parents	1.593	0.799	.52	86	69	3	28
9	I feel I am treated badly at home	1.259	0.239	.63	85	76	21	2
10	My life is very good	1.349	0.274	.49	86	67	30	2
11	I have repeated a grade at high school	1.116	0.219	.35	86	94	0	6

*Item-scale correlation <.30 in bold

Table 3.3: Item Analysis, Section A Questionnaire 2*

Item number	Item	Mean	Variance	Item-Scale Correlation	Number per item.	% Endorsing		
						Yes	Sometimes	No
1	At least one member of my family has a job	1.038	0.062	**.25**	79	97	1	1
2	I live in a brick house	1.190	0.306	.41	79	89	4	8
3	My parent / s are still alive	1.013	0.013	**.21**	78	99	1	0
4	I fight a lot with other children at school	1.253	0.240	.36	79	77	20	3
5	I have enough food to eat at home	1.089	0.106	.39	79	92	6	1
6	I have many problems	1.557	0.373	.55	79	51	43	6
7	There is someone at home who abuses me	1.063	0.110	**.27**	79	96	1	3
8	I stay with at least one of my parents	1.405	0.621	.42	79	78	3	19
9	I feel I am treated badly at home	1.299	0.235	.45	77	71	27	1
10	My life is very good	1.436	0.272	**.28**	78	58	41	1
11	I have repeated a grade at high school	1.177	0.323	.33	79	91	0	9

*Item-scale correlation <.30 in bold

The disparity between the item analysis results of Section A in Questionnaire 1 and 2 is not at all understandable since the questionnaires were mixed per class and the procedure followed when administering the questionnaire was uniform and Section A was the first section to be answered by all respondents. However, all Section A items were revisited based on the feedback received from participants and retained for use with the final questionnaire. The response category of 'Sometimes' was removed because factual questions on risk require a 'Yes' or 'No' to establish the presence or absence of risk factors and to encourage respondents to make a decisive choice.

(2) Section B: The resilience characteristics

Tables 3.4 and 3.5 show the item analysis results of Section B, Questionnaire 1 and 2. The Cronbach alpha was 0.804 for Questionnaire 1 and 0.715 for Questionnaire 2. According to Bland and Altman (1997:572), the higher the alpha the more reliable the questionnaire and a score of 0.7 and above is acceptable. Even though both questionnaires had an acceptable Cronbach Alpha of above 0.7, Questionnaire 1 was decided upon because of the higher alpha.

Table 3.4: Item Analysis, Section B Questionnaire 1*

Number	Selection	Mean	Variance	Item-Scale Correlation	Number per Item	% Endorsing				
						True all the time	True most of the times	Half true	A little bit true	Totally untrue
1	No[1]	1.859	1.039	**.20**	85	45	35	14	1	5
2	Yes[2]	1.729	1.444	.52	85	65	16	6	7	6
3	Yes	1.779	0.730	.42	86	45	35	17	1	1
4	Rew[3]	1.929	0.489	**.26**	85	26	58	14	2	0
5	No	1.721	0.992	**.23**	86	57	22	15	3	2
6	Yes	2.047	1.626	.55	86	49	21	14	9	7
7	Yes	1.812	1.094	.48	85	48	35	8	4	5
8	Yes	1.349	0.809	.37	86	83	8	5	1	3
9	Yes	1.244	0.394	.39	86	83	13	3	0	1
10	Yes	2.788	1.838	**.12**	85	24	20	25	18	14
11	No	2.395	1.844	**.18**	86	38	17	19	17	8
12	Yes	1.663	1.433	.32	86	71	9	8	6	6
13	Yes	1.523	1.180	.38	86	76	10	5	5	5

[1] Items with No were discarded
[2] Items with Yes were retained wholly without any alteration
[3] Item with Rew were reworked and retained

Number	Selection	Mean	Variance	Item-Scale Correlation	Number per Item	% Endorsing				
						True all the time	True most of the times	Half true	A little bit true	Totally untrue
14	Yes	1.465	0.923	.37	86	73	16	6	0	5
15	Yes	1.464	0.749	.49	84	70	19	7	1	2
16	No	3.106	2.330	**.09**	85	22	18	14	19	27
17	Rew	1.271	0.550	.57	85	84	11	4	0	2
18	Yes	1.826	0.679	.41	86	41	40	16	3	0
19	Yes	2.058	1.566	.55	86	45	24	19	2	9
20	Yes	1.965	0.917	.52	86	38	35	20	6	1
21	Yes	2.709	2.439	.38	86	30	24	15	5	26
22	Yes	1.256	0.376	.31	86	81	14	2	2	0
23	Yes	1.682	1.087	.50	85	60	22	12	1	5
24	No	1.256	0.400	.54	86	80	17	0	1	1
25	Yes	1.964	1.630	.44	84	54	18	15	5	8
26	Yes	1.895	1.001	.40	86	41	41	10	5	3
27	Yes	2.012	1.360	.41	86	42	33	16	1	8
28	No	1.302	0.537	.60	86	83	7	9	0	1
29	No	2.388	1.767	**.24**	85	38	16	24	14	8
30	Yes	2.186	1.872	.65	86	43	26	14	5	13
31	Rew	1.624	1.341	**.09**	85	72	11	6	7	5
32	Rew	1.826	1.330	.40	86	56	23	7	10	3
33	Yes	1.259	0.592	.41	85	86	8	2	1	2
34	Yes	1.895	1.210	.34	86	48	30	10	8	3

**Item-scale correlation <.30 in bold

Table 3.5: Item Analysis, Section B Questionnaire 2*

No	Selection	Mean	Var.	Item-Scale Correlation	Number per Item	% Endorsing				
						True all the time	True most of the times	Half true	A little bit true	Totally untrue
1	No[4]	2.759	3.043	**.05**	79	44	5	10	11	29
2	No	2.291	1.624	**.07**	79	37	24	20	11	8
3	Rew[5]	1.244	0.389	**.11**	78	83	12	3	3	0

[4] Items with No were discarded
[5] Items with Rew ere reworked and retained

No	Selection	Mean	Var.	Item-Scale Correlation	Number per Item	% Endorsing				
						True all the time	True most of the times	Half true	A little bit true	Totally untrue
4	No	1.557	0.930	**.25**	79	68	15	11	3	3
5	No	1.203	0.339	**.19**	79	86	10	1	3	0
6	No	1.443	0.956	**.26**	79	80	5	9	4	3
7	No	3.823	1.893	**-.20**	79	14	3	14	27	43
8	No	1.658	1.592	**.17**	79	75	5	8	5	8
9	No	1.582	0.952	**.28**	79	68	13	13	5	1
10	No	1.808	1.284	**.28**	78	55	24	10	5	5
11	No	1.937	1.350	.45	79	46	33	11	3	8
12	No	1.923	1.584	.31	78	55	19	10	9	6
13	No	2.291	2.054	.32	79	44	16	19	6	14
14	No	1.408	0.952	**.24**	76	79	12	4	0	5
15	No	2.114	1.747	.49	79	48	18	18	8	9
16	No	2.013	2.342	.47	79	65	8	4	10	14
17	No	1.570	1.638	**.28**	79	81	4	1	5	9
18	No	2.899	2.926	**.11**	79	34	16	8	9	33
19	No	2.241	2.233	.41	79	52	9	16	9	14
20	No	2.026	2.129	.41	77	58	14	6	8	13
21	No	2.304	1.958	.38	79	43	15	23	6	13
22	No	1.228	0.505	.30	79	87	8	1	3	1
23	No	1.570	1.232	.44	79	72	14	4	5	5
24	No	1.590	1.293	.40	78	72	13	6	3	6
25	No	1.848	2.104	.50	79	71	5	4	9	11
26	No	1.823	1.310	.44	79	56	22	13	5	5
27	No	1.494	1.060	.48	79	75	13	6	1	5
28	No	2.215	2.093	.50	79	49	15	11	13	11
29	No	2.333	1.812	.36	78	40	17	24	9	10
30	No	2.013	2.229	.56	77	62	10	6	5	16
31	No	1.392	1.124	.40	79	86	3	3	4	5
32	No	1.423	1.013	**.26**	78	81	8	4	4	4
33	No	2.519	2.427	.33	79	41	16	13	11	19
34	No	2.405	2.064	.38	79	44	6	25	13	11

*Item-scale correlation <.30 in bold

In addition to the item analysis data, Table 3.4 and 3.5 indicate the decisions concerning item selection for the questionnaire to be used in the main study. The decisions concerning Items 4, 10, 17, 24, 28, 31, and 32 of Questionnaire 1 and Item 3 of Questionnaire 2 require some explanation. The reasons behind my decisions included looking at the response distribution across all the response options and the intention of the item, not only the item-scale correlations. The full questionnaire is included in Appendix A.

Among 85 respondents, only 26% agreed that **Item 4** (*I do my best to find the right answer to a problem, even when it is very hard I do not give up)* was always true to them and none disagreed with the item. It would seem impossible that absolutely none of the 85 respondents ever gave up trying to find the right answer to a problem. The item was reworked and retained because I assumed the 26% respondents gave a true reflection of their positive position, but the 0% was a biased response**.** Also, the item-scale correlation of .26 appeared sufficiently high to merit inclusion of the item once it was reworked.

Item 10 (*Other children make fun of me and hurt my feelings)* had a unique response distribution, with the majority (24% and 20%) admitting to the problem and 25% refusing to commit to a choice either way. Only 14% disagreed with the statement and admitted that other children make fun of them and hurt their feelings. The item was retained despite its exceptionally low item-scale correlation because of its possible contribution to understanding the participants' perceptions of social relationships with peers.

Item 17 (*I believe that I am able to do better and to pass at school)* was reworked in an effort to influence the doubtful distribution of 84% + 11% positive and only 2% + 0% negative responses.

Item 24 (*I know if I work hard I will be able to do better in class)* was deleted in spite of its strong item-scale correlation of .54. As with Item 17, the item had an overly strong positive response of 80% + 17% and only 2% of the participants responded negatively. Since the two items were closely related in terms of content, I opted for the more open wording of Item 17. Item 24 supports a common realistic and factual statement that hard work leads to success and the respondents' positive responses were actually 'right'. The purpose of the item in discriminating between resilient and less-resilient learners could thus be clouded by the shared beliefs, leading to sameness.

Item 28 (*I know if I work hard I would be successful one day*) was deleted in spite of its strong item-scale correlation of .60, for the same reason as Item 24.

Item 31 (*My friends force me to do bad things*) indicates 72% + 11% of respondents agreed with this negative statement and only 12% disagreed. The item was reworked and paired with Item 10, both looking at social relations and peer-pressure.

In **Item 32** *(Teachers explain more in class, they give extra examples)* the word 'more' was replaced with 'a lot' to specify and emphasise teacher support and awareness of the support by the respondents.

From Questionnaire 2, only **Item 3** (*My family want to know if I am OK)* was selected and reworked in spite of its exceedingly low item-scale correlation of .11. Item 3 was paired with Item **8** (*I feel safe and loved at home, they want to know if I am OK'.* See Appendix B for the R-MATS administered in the main study.

The variance which is a measure of variability, gives the average of the squared distance from the mean and is a measure of how far the data are from the mean. Thus, the smaller the variance, the closer the data to the mean and the lower the spread. The variance of most of the items discussed above is low (Items 4, 17, 24, 28 from Questionnaire 1 and Item 3 from Questionnaire 2) indicating little scatter.

The decision not to use the item-scale correlations as the only consideration in selecting items was based on the understanding that an attitude scale runs the risk of subjective biases a finding that middle-adolescents in a township school show an inclination to over-evaluate themselves by choosing high categories as measures of their behaviour (Mampane & Bouwer 2006:450, Du Plessis 2005:109). Unlike a performance scale that gives a true measure of competence and ability and should therefore result in reliable item-scale correlations, an attitude scale gives subjective personal interpretations that represent the 'truth' as respondents choose to show it and this could result in less reliability of the item-scale correlations.

In compiling the questionnaire for the main study, I was furthermore guided by the principle to ensure a fair distribution of similar but differently phrased items addressing specific resilience characteristics and also included a few negatively phrased items to combat acquiescence (Du Plessis 2005:109) and to determine the consistency of answers provided. Finally, the middle response category (*Half-true*) was removed to discourage undecided learners from over-using the middle point and to encourage them to make a choice between the categories of 'truth' provided. The categories of '*A little bit true*' and '*Totally untrue*' were replaced by '*Untrue most of the time*' and '*Untrue all the time*' and their positions were

reversed. This move aimed to combat the inclination to choose extreme categories and to 'force' respondents to choose a 'true' category.

The questionnaire for the main study, now the Resilience Scale for Middle-adolescents in a Township School (R-MATS), ultimately consisted of Section A (11 items on risk factors) and Section B (28 items on resilience characteristics). Negative items (Items **4, 6, 7 9** and **11**) would be reversed through a statistical formula during item analysis.

3.5 THE MAIN STUDY

3.5.1 APPLICATION FOR RESEARCH AND ETHICAL CLEARANCE

Permission to conduct research in public schools was obtained from the Gauteng Department of Education and the Tshwane South District office (see Appendix C). Four schools were identified even though only three schools (one for piloting and two for data collection) were required for research, to avoid disappointment from ill motivated school management and teachers who might delay the research process. Copies of permission letters from the Department of Education and District Office were presented to selected schools. Upon meeting all ethical requirements for the research, ethical clearance was obtained from the Ethics Unit of the University Of Pretoria.

3.5.2 THE RESPONDENTS

3.5.2.1 The schools

The four schools in Mamelodi township that were identified per convenience to participate in the research are within short distance from each other, easily accessible and accommodate learners from Mamelodi formal and informal settlements. School 0 was selected as the pilot school and Schools 1 and 2 as research schools. The Head of Life Orientation Department at School 1 is an Educational Psychologist and agreed to support learners who might require referral for counselling on their adversities after participating in the research. The preferred School 2 was not welcoming and proved unsupportive to the research, so the back-up school became the Research School 2. The Life Orientation teacher at School 2 who serves in the school as a counsellor to support learners and to address problems learners encounter, agreed to counsel learners who might require counselling after the research.

As a pre-requisite to conducting research in public schools, I submitted to the school principal, permission letters obtained from the Department of Education and the district office. I further requested the principal and the Life Orientation teacher to send on my behalf

letters of consent to parents of learners (from identified classes). However, learners failed to submit letters back to Life Orientation teachers and not all identified classes participated due to time-table constraints.

3.5.2.2 Middle-adolescent learners

Initially, the research was intended to target middle-adolescent learners in Grade 8 and 9. After the pilot study, it was evident that many Grade 8 learners were still unsure of their new school environment and were not confident in giving feedback about the questionnaire and the school environment, and that their contribution might be minimal or even confounding in Phase 2 of the study. The middle-adolescent age group (14-16 years) are in Grade 8-10 because of the age norms policy, outlined in Notice 2433 of 1998 of the South African Schools Act (No: 94 of 1996), which states that the age to start school (Grade R) is 6 years. To calculate the appropriate age for a grade, the number 6 is added to the grade number. This indicates that a Grade 8 learner is expected to be 14yrs and a Grade 9 learner 15 years. It was consequently decided to restrict the investigation in both Phase One and Two to learners in Grade 9 meeting the 14-16 years age requirement.

Table 3.6 gives an overview of the 291 Grade 9 learners from School 1 and 2 who completed the R-MATS and their age breakdown. The learners' dates of birth and the date of data collection (School 1: 12th February 2008 and School 2: 5th March 2008), were used to calculate and retain the middle-adolescent age group, with younger and older learners being excluded from the sample. A total of 213 middle-adolescents were included in the study while 78 learners (below 14 years and above 16 years) were excluded from the sample.

Table 3.6: Age-breakdown and selection of respondents*

AGE	FULL SAMPLE	FINAL SAMPLE
13	8	
14	62	213
15	122	
16	29	
17	54	
18	8	
19	1	
20	1	
Age Missing	6	
TOTAL	291	

*Selection shaded

Of the excluded respondents 70 were over age, and the most (54) were 17 years old. With 26,8% of the total number of respondents outside the prescribed age range for Grade 9, it is certainly possible that the age factor played a role in influencing the class dynamics, peer relations and teacher-class relations during curricular activities, even though the teacher's approach to discipline, class management and work expectations should be in line with the school curriculum, policies, norms and values. The perceptions, experiences and expectations of the 17-year-olds about school and learning could possibly differ from those of younger peers in class. Furthermore, it could be expected that age had an influence on the self-esteem of the respondents included in the study. The younger Grade 9 respondents (14-15 years) could be assumed to be on par with Grade and age expectations and thus doing well and being competent. The older Grade 9 respondents (16 years) could be assumed to struggle academically, have a history of grade-failure and thus lag behind with grade-salient tasks.

3.5.3 DATA COLLECTION

The R-MATS was administered during school hours using 10 minutes before the Life Orientation learning period, and the full 45 minutes of the Life Orientation period. In both the participating schools, the Life Orientation teachers were Heads of Department and were given the responsibility by the principal to assist me with the research, and they were able to allocate me the selected classes. Although classes were selected in advance, on a few occasions teachers were not able to locate the learners because they had moved to other classes. The constraint was that I had to adopt the pace of the Life Orientation teacher, because it was difficult to identify classes by myself and to read the school time-table. Because I needed extra time for learners to fill-in consent forms to meet the ethical requirements, they identified classes that could finish earlier allowing me the 10 minutes (See Appendix D for the consent forms). Learners were eager to participate and in no instance did anyone indicate their unwillingness to participate in the study. The procedure required an introduction of the research, where I introduced myself and explained the purpose and the nature of the research and the ethical requirements to be followed. The respondents were informed that some would be identified to participate in focus groups and interviews at a later stage. I read the consent form aloud and allowed them five minutes to reread it on their own and fill their names and sign.

The R-MATS consisted of two sections, A and B. To avoid collecting data with missing information, I structured the administration of the R-MATS in steps, e.g. the whole class started with filling-in the identification information before they could continue with the rest of the questionnaire. I read the instructions to the whole class emphasising the main instruction '*there is no right and wrong answer*', to bring to light the importance of subjective truth and to

sensitise the respondents about their uniqueness and the specific relevance of each question to each individual. To further highlight the instructions, examples were done with the class.

Section B was started only after all the respondents had finished Section A. I read the instructions to them and explained the categories of truth. The main instruction urged them not to allow the response to one question to influence the next question. The aim of the instruction was to appeal to them to think first before they decided on a category and to be aware that each question addressed a different behavioural characteristic. Examples were done to further emphasise the uniqueness and specific relevance of questions and responses to individuals. Only when all the respondents had indicated they understood the instructions, were they allowed to complete Section B. Throughout the administration of the R-MATS the respondents were allowed to ask clarity seeking questions by raising their hands for my attention.

3.5.4 DATA PREPARATION

The completed questionnaires were scored manually before they were captured by the statistician. Items were allocated ordinal numbers for scoring and descriptive purposes during statistical analysis. Each respondent was allocated a learner number represented by V1-V291. Numbers were allocated randomly starting with School 1 followed by School 2. V- was used as a prefix to all ordinal numbers per advice of the statistician. A male respondent was identified in V2 and female V3, Grade V4, School V5. The question items of Section A started from V6-V16 (11 items) and Section B continued from V17-V44 (28 items).

After administration of the R-MATS, the negative items were highlighted in both Section A and B for the statistical reversal of scores. Initially, I reversed the scores manually, but I was advised by the statistician to, instead, highlight the items so that she could reverse them using statistical commands to eliminate human error. Section A had two values of choice, 1 (*Yes*) and 2 (*No*). Section B had four values of choice 1 (*True all the time)*, 2 (*True most of the time),* 4 (*Untrue all the time)* and 3 (*Untrue most of the time)*, in that order. Section B scoring required careful analysis because of the two types of score reversal, the two last columns of *'Untrue'* and the reversal of negative items. The columns of '*Untrue*' were purposefully switched to prevent extreme biases.

To further guard against errors during manual scoring and the capturing of data by the statistician, I received a print out of all data captured for careful analysis and comparison against all the questionnaires. Item analysis followed after checking of all captured data.

3.5.5 ITEM ANALYSIS, SECTION A

Section A of the R-MATS served to provide background information of the participants essential for understanding the environmental stressors each participant was exposed to. Resilience research indicates that resilience is interactive with adversity, so it might thus be relevant to background Section B, on the resilience characteristics, with Section A, the adverse conditions, to understand which adversities would require mitigation when working with a middle-adolescent from a township school.

Table 3.7 shows the results of the item analysis on Section A. The Cronbach alpha for Section A was 0.566, which is less than the acceptable 0.7. Since five items (Items 1,2,3,8 and 11) are factual and the remaining six are open to the respondents' perceptions, this might account for the low alpha and it could be argued it is not a relevant statistic for Section A.

Table 3.7: Item Analysis, the R-MATS Section A*

Item number	Item	Mean	Variance	Item-Scale Correlation	Number per item.	% Endorsing	
						Yes	No
1	One or more members of my family have a job	1.238	0.181	.49	210	76	24
2	I live in a brick house	1.490	0.250	.29	208	51	49
3	One or both my parents are still alive	1.143	0.122	.48	210	86	14
4	*I fight a lot with other children at school*	1.061	0.058	.40	212	94	6
5	I have enough food to eat at home	1.226	0.175	.56	212	77	23
6	*I have many problems*	1.157	0.132	.59	210	84	16
7	*There is someone at home who abuses me*	1.081	0.074	.47	211	92	8
8	I stay with one or both my parents	1.223	0.173	.45	211	78	22
9	*I feel I am treated badly at home*	1.148	0.126	.45	210	85	15
10	My life is very good	1.104	0.093	.41	211	90	10
11	*I have repeated a grade at high school*	1.226	0.175	.29	212	77	23

*Negative items and item-scale correlation <.30 in bold

Table 3.7 indicates the results of a reworked Section A which was slightly different from the original one used in the pilot study (Table 3.2 and 3.3), in having revised some items and deleted the middle response category of '*Sometimes*'. In the pilot study, the category of

'*Sometimes'* had been chosen in all items obviously, except **Item 11. Items 4, 6, 9** and **10** had considerable numbers of respondents who were indecisive (who chose '*Sometimes*'). Section A as used in the main study required respondents to make a decisive choice between a '*Yes*' and a '*No*', resulting overall in an increase of '*No'*-responses, notably also in Items 4, 6, 9 and 10.

The item-scale correlation gives an indication of the relationship between an item and the risk factors overall. Items 2 and 11 indicate a slightly weak item-scale correlation of <.30. Both Item 2 and 11 address factual distinctions, those of settlement and academic performance, and not factors that may be influenced by perceptions, which might explain the weaker item-scale correlation.

Table 3.8 gives a deduction of risk and protective factors the respondents experienced in their environment as concluded from Table 3.7. In addition, Table 3.8 serves as a sample description, encapsulating some aspects of their living circumstances.

Table 3.8: Risk and Protective factors derived from R-MATS Section A

RISK FACTORS	%	PROTECTIVE FACTORS	%
1. Unemployment	24	Employment	76
2. No formal house structure	49	Formal housing, brick house	51
3. Orphan, parent or parents died	14	Parents alive	86
4. Fights a lot at school, poor problem-solving skills	94	Not involved in fights, good problem-solving skills	6
5. Insufficient food	23	Sufficient food	77
6. Many stressors	84	Few stressors	16
7. Abuse at home	92	Feels protected, no abuse	8
8. Not living with parents	22	Living with parents	78
9. Bad treatment at home	85	Good treatment at home	15
10. Bad life experiences	10	Good life experiences	90
11. Repeated a grade, academic problems	77	Adequate academic progress, passed Grade 8	23

A high percentage (>75%) of respondents confirmed that **Items 4, 6, 7, 9 and 11** contributed to their adversities. Item 4 addresses management of peer and social relationships and 94%, the highest number, affirmed they 'fight a lot' at school with other children, which alludes to exposure to violence and poor problem-solving skills. The theme of exposure to violence and abuse was further confirmed by 92% and 85% of respondents for Items 7 and 9 respectively, where the theme of violence had expanded from the microsystem of school to that of the

home. Exposure and experience of violence appeared to be the major type of stressor in the respondents' lives. Violence and abuse can occur in physical, emotional and sexual ways. However, the questionnaire items did not seek to investigate the form of violence or abuse the respondents were exposed to. The exposure and experiences of violence represent chronic forms of stressors and it becomes worse if it occurs both at home and in school, there appeared to be no let-up for the middle-adolescent respondent. It is not surprising that 84% (Item 6) indicated they had many stressors in their lives. Item 11 indicates that 77% of the respondents had repeated a grade in high school. Since a Grade 9 learner has been in high school for only 2 years, 77% is a huge percentage, indicating pervasive academic problems and unsatisfactory academic performance. The item gives more clarity to Table 3.6, where 64 respondents were excluded from the sample because they were over-aged and above 16years.

The sample shows an almost even distribution of respondents from township (51%) and informal settlements (49%). Unemployment (24%) and lack of food (23%) were not among the most frequent stressors, but the figure is worrying considering some parents or caregivers are unemployed and learners do not have enough food to eat. Some respondents had experienced the loss of a parent (14%) and 22% lived with someone other than their parent. The loss of a parent, the consequence of unemployment, malnourishment and living in an informal settlement contribute to chronic forms of stress and require much more action than the individual alone can achieve to overcome. With the stressors as reported, it is surprising that only 10% of the respondents viewed their lives as stressful and their experiences as bad. The rest (90%) of the respondents demonstrated an optimistic view to life, they seemed to view challenges as opportunities and had a positive outlook on life. This overall positive state of the respondents' perspective is a matter of concern for this study because it portrays a simplistic view which might influence how they portray themselves in Section B.

3.5.6 ITEM ANALYSIS, SECTION B

3.5.6.1 Item Analysis, 28 items

Section B of the R-MATS consisted of 28 items describing resilience characteristics on a four-point Likert-type Scale. Table 3.9 gives a summary of the initial item analysis on the full 28 items

Table 3.9: Item Analysis, the R-MATS Section B (28 items)*

Item	Mean	Variance	Item-scale correlation	% Endorsing			
				True all the time	True most of the time	Untrue all the time	Untrue most of the time
1. I have an adult to talk to at home, who listens to me	1.615	1.007	.48	67	15	8	10
2. I make sure that I do my classwork and homework	1.268	0.318	.38	78	19	2	1
3. I do my best to find the right answer to a problem	1.495	0.580	.37	62	31	2	5
4. My teacher works hard to help me understand my work better	1.360	0.373	.39	70	25	4	1
5. I am in control of what happens to me	1.647	0.847	.31	58	28	6	8
6. I feel safe and loved at home, they want to know if I am OK	1.282	0.465	.40	82	10	5	3
7. Doing well at school is very important to me	1.136	0.155	.47	88	10	2	0
8. Other children make fun of me and hurt my feelings	***2.474***	***1.132***	***.20***	***26***	***19***	***37***	***18***
9. Nobody ever asks me if I am OK	***2.170***	***1.273***	***.11***	***40***	***19***	***24***	***17***
10. I do not listen to any adult person at home, I do my own thing	***1.995***	***1.061***	***.26***	***41***	***32***	***15***	***13***
11. My future and success depend on my hard work	1.352	0.562	.49	77	15	4	4
12. I believe that I have good talents	1.349	0.482	.43	75	18	4	3
13. I do not allow people to stop me from trying to do my best in my work	1.419	0.624	.47	72	18	5	5
14. I believe that I am able to do better	1.311	0.450	.61	77	17	2	3
15. Even when my problems are just too much, I do not give up trying to make it work	1.712	0.875	.43	54	30	8	8
16. I know someone at school who cares about me and I can talk to	1.800	1.170	.40	57	20	9	14
17. I use different ways to work out a difficult problem	1.792	0.881	.40	48	34	9	9
18. There is at least one teacher I can talk to who listens to me and encourages me to do my best	1.820	1.105	.52	54	23	11	12
19. I believe that one day things will be better for me	1.224	0.298	.49	83	13	3	1
20. I do not like to be absent from school, I hate to miss the teaching	1.479	0.790	.40	72	15	6	7
21. I know a good person whose behaviour is an example to me	1.651	0.811	.50	57	27	9	7
22. Even when I do not understand in class I don't give up trying	1.627	0.913	.36	61	25	4	10
23. My teachers made me see that I am good with my work and can do well in class	1.491	0.552	.48	63	29	5	3
24. My teachers support me to aim high and to think of my bright future	1.410	0.566	.43	71	21	3	4
25. When I am with my friends I am more ready to do bad things	***1.929***	***0.981***	***.25***	***43***	***31***	***16***	***10***
26. Teachers explain a lot in class, they give extra examples	1.415	0.516	.30	69	23	5	3

Item	Mean	Variance	Item-scale correlation	% Endorsing			
				True all the time	True most of the time	Untrue all the time	Untrue most of the time
27. My future is in my hands, nobody can take that away from me	1.341	0.670	.41	82	9	2	7
28. I am a tough person	1.624	0.882	.31	61	23	7	9

*Negative items and item-scale correlation <.30 in bold

Table 3.9 indicates that **Items 8, 9, 10 and 25** had an item-scale correlation of <.30 and as a result they were discarded from the final scale. Item 8 and 10 may be taken to contain double statements. Although Item 6 and 9 have a similar reference, namely someone interested in knowing if you are OK, Item 6 focused on the home environment while Item 9 was non-specific and the items performed differently. Item 25 relates to peer-pressure and managing social relationships.

Ultimately, the deletion of the four items was a statistical decision because of their weak item-scale correlations and I cannot at this stage confidently assume that respondents failed to comprehend negative items and double-statements because it was not consistently true. Having discarded the items with weak item-scale correlation, the final Section B of the R-MATS remained with 24 items. All further statistical procedures, including a final item analysis, were conducted on this final version of Section B of the R-MATS.

To further ascertain the validity of the R-MATS in identifying resilient and less-resilient learners in township schools, it is essential at this stage to indicate whether there were any statistical differences between the respondents from the two schools, different gender and age. BMDP Statistical Software was used to perform BMDP3D T-Test on Section A and Section B of the R-MATS.

The purpose of the t-tests is to compare the means of two groups to determine the likelihood of the differences occurring by chance (Del Siegle 2003:3). The program BMDP3D T-test performed two group (paired) t-tests, the POOLED T test for equal variance used when the number of subjects is the same or the variance is similar, and the LEVENE F used to determine the equality of variance and normally used when the number of subjects in the two groups is different (Del Siegle 2003:10). The sample of this study was characterised by being in the same grade, from the same township but of different sample sizes, as indicated on Tables 3.10 and 3.11.

Table 3.10: Comparison between research schools

STATISTICAL TESTS	SCHOOL 1	SCHOOL 2
Mean	1.4722	1.4954
Standard deviation	0.3800	0.3353
Sample size	109	104
LEVENE F	0.2735	
POOLED T	0.6380	

Table 3.11: Comparison between genders

STATISTICAL TESTS	MALE	FEMALE
Mean	1.5038	1.4512
Standard deviation	0.3691	0.3399
Sample size	131	82
LEVENE F	0.6262	
POOLED T	0.2979	

Table 3.10 shows no significant difference between School 1 and 2 and Table 3.11 points out that there is no significant difference between the male and female respondents. All the data could therefore be pooled together for the final item analysis, i.e. 24 items, and the factor analysis.

3.5.6.2 Item Analysis, 24 items

A final item analysis of Section B conducted once the weak items had been discarded, confirmed a strong item-scale correlation of > .30 on all of the remaining 24 items. The Cronbach alpha for this set was 0.818, which suggests finally a good measure of statistical reliability of Section B. In addition to establishing increased reliability of the participant selection for Phase Two of this research, the results suggest that the R-MATS could also be utilised more broadly for future research with middle-adolescents from township schools. Table 3.12 contains the results of the final item analysis on Section B of the R-MATS.

Table 3.12: Item analysis: The R-MATS Section B (24 items)

Item	Mean	Variance.	Item-scale correlation	% Endorsing			
				True all the time	True most of the time	Untrue all the time	Untrue most of the time
1. I have an adult to talk to at home, who listens to me	1.615	1.007	.52	67	15	8	10
2. I make sure that I do my classwork and homework	1.268	0.318	.43	78	19	2	1
3. I do my best to find the right answer to a problem	1.495	0.580	.41	62	31	2	5
4. My teacher works hard to help me understand my work better	1.360	0.373	.40	70	25	4	1
5. I am in control of what happens to me	1.647	0.847	.37	58	28	6	8
6. I feel safe and loved at home, they want to know if I am OK	1.282	0.465	.37	82	10	5	3
7. Doing well at school is very important to me	1.136	0.155	.46	88	10	2	0
8. My future and success depend on my hard work	1.352	0.562	.49	77	15	4	4
9. I believe that I have good talents	1.349	0.482	.46	75	18	4	3
10. I do not allow people to stop me from trying to do my best in my work	1.419	0.624	.47	72	18	5	5
11. I believe that I am able to do better	1.311	0.450	.63	77	17	2	3
12. Even when my problems are just too much, I do not give up trying to make it work	1.712	0.875	.47	54	30	8	8
13. I know someone at school who cares about me and I can talk to	1.800	1.170	.44	57	20	9	14
14. I use different ways to work out a difficult problem	1.792	0.881	.43	48	34	9	9
15. There is at least one teacher I can talk to who listens to me and encourages me to do my best	1.820	1.105	.56	54	23	11	12
16. I believe that one day things will be better for me	1.224	0.298	.51	83	13	3	1
17. I do not like to be absent from school, I hate to miss the teaching	1.479	0.790	.41	72	15	6	7
18. I know a good person whose behaviour is an example to me	1.651	0.811	.51	57	27	9	7
19. Even when I do not understand in class I don't give up trying	1.627	0.913	.40	61	25	4	10
20. My teachers made me see that I am good with my work andcan do well in class	1.491	0.552	.50	63	29	5	3
21. My teachers support me to aim high and to think of my bright future	1.410	0.566	.45	71	21	3	4
22. Teachers explain a lot in class, they give extra examples	1.415	0.516	.34	69	23	5	3
23. My future is in my hands, nobody can take that away from me	1.341	0.670	.41	82	9	2	7
24. I am a tough person	1.624	0.882	.34	61	23	7	9

Despite good item-scale correlations of >0.3, Table 3.12 indicates that respondents continued to over-evaluate themselves. By far the majority of respondents rated themselves positively (the first two columns, '*True all the time*' and '*True most of the time'*) with regard to resilience characteristic items and very few chose categories of '*Untrue all the time*' and '*Untrue most of the time'*. The pattern of over-evaluation (Mampane & Bouwer 2006:450) persists, with the adolescents responding affirmatively to almost every statement.

Item 2 indicates that 97% of the 213 respondents 'make sure that they do their homework and classwork' and only 3% said the opposite. Considering the respondents are Grade 9 middle-adolescents (14-16 year olds) it is highly unlikely that this profile could be true, it would be hard to believe learners in this age group can continuously claim this kind of responsible and exemplary academic behaviour. By comparison, Item 13 could be giving a slightly more accurate reflection of the respondents' school environment, because it is highly likely for learners to struggle in identifying and accessing a teacher or any form of adult support at school. The 23% of respondents who reported they have no one who cares about them and to whom they can talk at school, gives a reasonable assumption of events in a school environment, especially early in the year, even though 23% remains a relatively small percentage. Again 23% of the respondents in Item 15 reported that there isn't a single teacher who listens and encourages them to do their best, a worrying fact that confirms what Item 13 indicated.

Table 3.12 highlights possible problems when working with an attitude scale. The R-MATS as an attitude scale is influenced by the ability of an individual to self-evaluate and the willingness to give honest reports of one's own behaviour. Although self-reports have value because they allow respondents to give their own opinion, they require knowledge of self and the ability and willingness to self-evaluate. Du Plessis (2005:109) mentions response biases that can occur during self-reporting, namely acquiescence, social desirability and extreme bias. Acquiescence is the tendency of the participants to agree with all the items, giving positive responses and being compliant (Du Plessis 2005:109). Table 3.12 shows high endorsement of the first two categories and a low endorsement of the two '*Untrue'*-categories. The inability of the respondents to choose the last two categories alludes to acquiescence bias. Social desirability, the tendency of respondents to answer questions in a way they presume will be favourable to the researcher (Du Plessis 2005:109), is also noticeable with this study. It is my view that the respondents disregarded their own honest view and tended to 'act good' or subscribed to the 'normative' standard when they agreed with what was 'supposed to be good', the 'norm' and disagreed with what was in their opinion 'supposed to be bad'.

The extreme bias, the tendency of respondents to consistently choose extreme categories (Du Plessis 2005:109) is not reflected in this study since the predominance of first-column responses, is not at all balanced by the number of last-column responses.

The second and third columns of Table 3.12 (the mean and the variance) give an indication of the measure of dispersion and variability of items around the mean. The last four columns (*% Endorsing*) further give light into the dispersion of scores around the mean. The variance measures the variability of how individual responses deviate from the mean (Osterlind 1998:266). The larger the variance, the more the scores deviate from the mean and the smaller the variance, the less the items deviate from the mean (Osterlind 1998:266). Items 2, 4, 7 and 16 had a small variance of ≤0.3 and the lowest percentage of respondents who endorsed the item as '*Untrue all the time'* and *'Untrue most of the time',* between 2% and 5%. Items 1, 13 and 15 had a large variance of >1 and accordingly a greater percentage of respondents endorsing the item as '*Untrue all the time'* and *'Untrue most of the time',* between 18% and 23%. However, it cannot be ignored that all items had a slightly low mean of 1+ and none had a mean even of 2, emphasising yet again the vast preponderance of optimal self-evaluation.

The R-MATS provided the respondents with the opportunity to reflect, self-evaluate and decide whether the behavioural statements gave a true reflection of themselves or not and not what or how they desired, aimed or planned to conduct their future lives. However, it is difficult to ascertain what the participants' state of reasoning was during the survey, whether they looked at their real self, imagined self or perceived self.

Table 3.13 gives an account of resilience characteristics (protective factors) and characteristics placing resilience at risk as derived from Table 3.12, as the percentage of respondents endorsing the item as true to them, '*True all the time'* and *'True most of the time'* and untrue to them, '*Untrue all the time'* and *'Untrue most of the time'.*

Table 3.13: Resilience characteristics and characteristics placing resilience at risk derived from Section B (24 items)

Resilience Characteristics (Protective factors)	%True all the time	%True most of the time	Characteristics placing resilience at risk (Risk Factors)	%Untrue all the time	% Untrue most of the time
Has adult who listens and whom to talk to at home	67	15	Lacks adult who listens and whom to talk to at home	8	10
Ensures to do classwork and homework	78	19	Does not ensure to do schoolwork and homework	2	1

Resilience Characteristics (Protective factors)	%True all the time	%True most of the time	Characteristics placing resilience at risk (Risk Factors)	%Untrue all the time	% Untrue most of the time
Does best to find answers to a problem	62	31	Doesn't do best to find answers to problems	2	5
Teacher works hard to help in understanding work	70	25	Teacher is not seen to work hard to help in understanding the work	4	1
Has sense of control	58	28	Lacks sense of control	6	8
Feeling safe and loved at home with family enquiring about wellbeing (OK)	82	10	Feeling unloved, unsafe and family fail to enquire about wellbeing	5	3
Doing well at school is very important	88	10	Doing well at school is not seen as very important	2	0
Future and success depends on hard work	77	15	Future and success is not seen to depend on hard work	4	4
Believes in having talents	75	18	Sceptic about having talents	4	3
Doesn't allow people to stop him/her from doing best work	72	18	Allows people to stop him/her from doing the best work	5	5
Believes in own ability to do better	77	17	Sceptic about own ability to do better	2	3
Never gives up trying to make it work, even with many problems	54	30	Tends to give up trying when problems are many or too much	8	8
Knowledge of someone who cares and whom to talk to at school	57	20	Unaware of someone who cares and whom to talk to at school	9	14
Uses different strategies (ways) to solve a problem	48	34	Does not use different strategies (ways) to solve a problem	9	9
Knowledge of a teacher to talk to, who listens and encourages best performance	54	23	Unaware of a teacher to talk to and who can listen and encourage best performance	11	12
Believes in a better future	83	13	Has no hope in the future	3	1
Loves attending school (no truancy)	72	15	Truancy	6	7
Has good role model	57	27	Has no good role model	9	7
Does not give up trying, even when work is hard to understand	61	25	Gives up trying when work is hard to understand	4	10
Teacher helps with understanding academic ability and strengths	63	29	No teacher helps with understanding own academic ability and strengths	5	3
Teacher support in setting academic goals and plans for the future	71	21	No support from teachers in setting academic goals and planning for the future	3	4
Teachers give more explanations and examples in class	69	23	Teachers do not give more explanations and examples in class.	5	3
Sure of own future, certain nobody can take it away	82	9	Unsure of future, other people might influence one's future	2	7
Resilience, hardiness (tough person)	61	23	Less-resilient, sees self as weak	7	9

The columns of percentages in Table 3.13 endorsing the respondents' 'truths' again highlight their tendency towards high appraisals and portrayal of themselves as resilient, showing their overall representations of their internal and external strengths and assets as contributors to their image of themselves as resilient and less-resilient. As with Table 3.12, Table 3.13 therefore cannot be taken as a fully reliable indicator of the respondents' awareness and ability to access and utilise resources within themselves and in their environment, although the trend it shows is still informative. Phase Two might indeed cast further light on this dilemma of interpretation.

Overall, judged by frequency, achieving academic success and future goals appeared to be very important resilient characteristics or protective factors for the respondents in this study. The two '*True'*- columns indicate the respondents' own initiative in working towards achieving academic success and future goals by 78% + 19% who ensure they do their school work, 88% + 10% who value doing well in school, 77% + 15% who acknowledge that hard work leads to future goals and success, 72% + 18% who show commitment to goals, 83% + 13% and in another item 82% + 9% who have a positive future perspective and 72% + 15% who love attending school.

At a second level of frequency, the respondents acknowledged the support and contribution from teachers towards their better understanding and success in academic work, by accentuating their abilities and strengths and setting goals: 70% + 25% and 69% + 23% (the teacher works hard to ensure they understand the lesson content, gives explanations and examples), 63% + 29% (the teacher helps them to understand their own abilities and strengths) and 71% and 21% (the teacher helped in setting goals).

A third set of protective factors comprised determination and focus towards finding solutions to problems, with 62% + 31% who do their best to find answers, 54% + 30% and 61% + 25 % who show determination and never give up and 48% + 34% who use different strategies to solve a problem.

At the fourth level of frequency, the respondents demonstrated awareness and confidence in their strengths by indicating awareness and conviction of their talents (75% + 18%) and belief in own ability to do better (77% + 17%) and acknowledgement of their resilience, being tough (61% + 23%).

The final level of mixed frequency included resilience characteristics, which reflected feelings of safety and the ability to rely on others for love, accessing social support, having a family

that care about their wellbeing (82% + 10 %), and having someone to talk to who listens (57% + 20% and 54% + 23%) and acknowledgement of having role models (57% + 27%).

The small percentage of respondents who chose '*Untrue'* responses highlighted the characteristics contributing to risk in their environment, providing the beginnings of a framework that can help in structuring the required protection to build the resilience of middle-adolescents in township schools.

The two columns endorsing the respondents' '*Untrue'* can be seen to reflect 'true' perceptions of the respondents who deviated from the majority, by not over evaluating themselves. Therefore, the factors that were endorsed by >10% respondents to place their resilience at risk and of the respondents will be discuss.

The first set of factors that exposed respondents to risk comprised lack of access to adults or someone who listen, care and whom to talk to, at home and school (8% + 10%, 9% + 14%), who encourage best performance (11% + 12%) and who can set exemplary behaviour, a good role model (9% + 7%).

The second set of risk factors comprised lack of determination or perseverance when faced with hard work or problems and poor problem solving strategies, (8% + 8%, 4% + 10%) tend to give up trying when work is hard and/ or problems are many and (9% + 9%) never use different strategies to solve problems.

The final mixed level of risk factors comprised lack of sense of control (6% + 8%), non-attendance of school or truancy (6% + 7%) and sense of weakness, not seeing themselves as tough (7% + 9%).

3.5.7 THE R-MATS INTER-SECTION ANALYSIS

3.5.7.1 Correlation between the total scores of Section A and Section B

Using the BMDP Statistical Software, the Pearson and Spearman Correlation Coefficients between Section A and B statistical variables were calculated. According to Yates, Starnes and Moore (2005:348, 352), correlation (*r*) measures the direction and strength of the relationship between two quantitative variables. The values of *r* fall between -1 and 1. The strength of the relationship increases as *r* moves away from zero towards -1 or 1, where a closer to zero *r* indicates a low degree of correlation (0= no relationship) and *r*=1 represents a perfect positive correlation (Yates *et al.* 2005:348, 352). Table 3.14 gives the results of the correlation analysis between total scores of Section A and Section B. For Section A, the

responses had been scored in terms of 1 for absence of risk and 2 for the presence of risk, meaning the higher the total score, the stronger the presence of risk factors. For section B, the responses had been scored in terms of 1 and 2 for resilience (presence of protective factors) and 3 and 4 for less-resilient (absence of protective factors), meaning the lower the total score, the stronger the resilience (see data preparation, 3.5.4). If *r* is positive, it therefore indicates a negative correlation.

Table 3.14: Correlation between the total scores of Section A and Section B

Variables	*r* Section A	*r* Section B	Correlation coefficient
Section a	1.0	0.24227	Pearson
	1.0	0.24711	Spearman
Section b	0.24227	1.0	Pearson
	0.24711	1.0	Spearman

Table 3.14 shows a weak positive correlation of *r*= 0.2 (Pearson and Spearman coefficients) between the total scores of Section A and Section B, i.e. the respondents who were exposed to more risk factors (Section A) showed somewhat less-resilience according to their higher total scores (Section B). Table 3.14 thus points out that the presence of many risk factors in the environment could have contributed to less-resilience in this sample of middle-adolescent respondents in the township schools. This finding corroborates the finding of Compas, Hinden and Gerhardt (1995:27) that risk impacts negatively on the competence of individuals and their resilience and exposure to chronic stress and adversity and lack of resources to mitigate the risk, leads to maladjustment and thus less-resilience. However, Masten and Obradović (2006:14, 19) on the other hand emphasise that resilience occurs in the context of adversity, where competence is viewed as good adaptation with a low adversity history and resilience as good adaptation and high adversity history. Less-resilience (maladaptive) is viewed as poor adaptation with the history of high adversity (Masten & Obradović 2006:19).

3.5.7.2 The effect of Section A-items on the total score of Section B

Table 3.14 has shown that the exposure to more risk impacts negatively on the resilience of the respondents. However, I was not certain if all the 11 risk items of Section A had a significant negative effect on the resilience of the respondents. BMDP Statistical Software was used to perform the BMDP3D T-Test between the items of Section A and the total score of Section B of the R-MATS. Overall, the BMDP3D provides two versions of the t-test for the equality of means, the POOLED T which assumes that the population variance of the two groups are equal and the SEPARATE T which does not assume that (as per explanation of the statistician). For the purpose of this study, I will only give analysis of the POOLED T test.

The LAVENE F (for analysis of variance and the variability between two means) and the POOLED T tests (for mean difference) were used to determine the statistical significance of the effect of Section A on the total score of Section B.

Using Section A responses, the respondents were divided into two groups for each item, the '*Yes'* and the '*No'* group. The '*Yes'* group had experienced the specific risk in their lives and the *'No'* group represented the 'normal' population who had not experienced the specific risk at the time of the research. Section A '*Yes*' can be likened to the 'experimental group' because they had been 'exposed' to a risk and the '*No*' group to the 'control group', represented the 'normal' population. Exposure to a risk could be seen to represent the 'experimental treatment' in this research and MEAN-B could be seen to represent the 'effect' of the 'treatment'. The significance of the effect of a risk factor on the resilience of the respondent was measured by the difference between the resilience mean of the 'Yes' and the 'No' group (Carver 1978:380).

Table 3.15: The significance of a risk factor on the resilience of respondents

Item	Mean yes	Mean no	Std dev		Number		*P*= poole t
			Yes	No	Yes	No	
One or more members of my family have a job	1.4809	1.4990	0.3784	0.2975	160	50	0.7564
I live in a brick house	1.4743	1.5001	0.3377	0.3839	106	102	0.6080
One or both my parents are still alive	1.4693	1.5754	0.3571	0.3739	180	30	0.1360
I fight a lot with other children at school	**1.8727**	**1.4578**	**0.3727**	**0.3440**	**13**	**199**	**0.0000***
The item is statistically significant at the 1% level of significance. It implies that fighting a lot with other children at school is likely to influence the resilience of the respondents negatively.							
I have enough food to eat at home	**1.4576**	**1.5707**	**0.3539**	**0.3666**	**164**	**48**	**0.0548*****
The item is statistically significant at the10% level of significance. The results suggest that not having enough food to eat at home affected the resilience of the respondents in this study.							
I have many problems	**1.6162**	**1.4576**	**0.2906**	**0.3668**	**33**	**177**	**0.0198****
The item is statistically significant at the 5% level of significance. It suggests that having many problems affected the resilience of the respondents.							
There is someone at home who abuses me	1.6083	1.4728	0.3293	0.3611	17	194	0.1370
I stay with one or both of my parents	1.4860	1.4768	0.3517	0.3899	164	47	0.8767
I feel I am treated badly at home	**1.5841**	**1.4592**	**0.3135**	**0.3580**	**31**	**179**	**0.0694*****
The item is statistically significant at the 10% level of significance. It suggests that bad treatment at home affected the resilience of the respondents negatively. However, Item 7 (abuse at home) proved to be statistically insignificant, which suggests that respondents might have viewed bad treatment and abuse to mean different things.							

Item	Mean yes	Mean no	Std dev		Number		P= poole t
			Yes	No	Yes	No	
My life is very good	1.4695	1.5944	0.3609	0.3374	189	22	0.1236
I have repeated a grade at high school	**1.5718**	**1.4573**	**0.3983**	**0.3437**	**48**	**164**	**0.0517*** **
The item is statistically significant at the 10% level of significance. It suggests that repeating a grade had a negative influence on the resilience of the respondents.							

*≤1% level of significance
**≤5% level of significance
***≤10% level of significance

Table 3.15 supports the assumption that exposure to some type of risk would affect the resilience of the respondents negatively. Knowledge of the types of risk that influence the resilience of respondents negatively is important and contributes towards building a framework of factors to mitigate the risk when supporting the resilience of middle-adolescents in township schools.

The identified risk factors of Section A are among the common adversities in township and similar environments where the socio-economic factors of the family played a significant role in the access to social and public services. As a result, the R-MATS highlighted the external and internal factors that can be addressed to help support the resilience of middle-adolescents in a township school.

3.5.8 FACTOR ANALYSIS: SECTION B OF THE R-MATS

BMDP4M Statistical Software was used to do exploratory factor analysis on Section B of the R-MATS. The purpose of the exploratory factor analysis was to determine and explore the underlying factors that could help explain the relationships among the variables, to group the variables into common characteristics (group inter-correlated items together), to explain the variance in the observed variables and to assess the construct validity of the instrument (Pett, Lackey & Sullivan 2003:2-4). The item analysis which established the item-scale correlations conducted on Section B for 24 items, formed the basis for factor analysis, because the process helped to determine the factorability of items (Pett *et al.* 2003:87).

Pett *et al.* (2003:87) warn against retaining and discarding items based on item-scale correlation during item- analysis, because it might lead to problems during factor analysis. The authors (Pett *et al.* 2003:87) argue that only retaining items that have high item-scale correlations could lead to the problem of multicolinearity which might cause problems when determining the uniqueness of variables to a factor, which would then compel the researcher

to drop one or more of the high-correlated items from the analysis. On the other hand, if item-scale correlation is low (<0.3), there would be a problem of finding common items during factor analysis, so I finally opted for a 24-item factor analysis. A four factor analysis was conducted and the rotated factor loadings are illustrated in Table 3.16.

Table 3.16: Four Factor Analysis of Section B of the R-MATS

No	Item	Factor Loading			
		1	2	3	4
1	I have an adult to talk to at home, who listens to me	0.232	**0.269**	0.069	-0.002
2	I make sure that I do my classwork and homework	0.141	0.063	0.152	**0.395**
3	I do my best to find the right answer to a problem	0.094	0.223	0.236	-0.060
4	My teacher works hard to help me understand my work better	0.239	0.011	0.038	0.142
5	I am in control of what happens to me	**0.442**	-0.056	0.224	**-0.449**
6	I feel safe and loved at home, they want to know if I am OK	0.139	0.062	-0.022	**0.453**
7	Doing well at school is very important to me	0.184	-0.005	0.205	**0.455**
8	My future and success depend on my hard work	**0.311**	0.030	0.162	0.174
9	I believe that I have good talents	**0.613**	-0.006	-0.113	-0.124
10	I do not allow people to stop me from trying to do my best in my work	**0.339**	0.041	0.122	-0.025
11	I believe that I am able to do better	**0.587**	0.098	0.012	0.167
12	Even when my problems are just too much, I do not give up trying to make it work	0.025	0.217	**0.442**	-0.175
13	I know someone at school who cares about me and I can talk to	0.133	**0.434**	-0.042	-0.003
14	I use different ways to work out a difficult problem.	0.093	**0.269**	0.130	-0.046
15	There is at least one teacher I can talk to who listens to me and encourages me to do my best	-0.221	**1.066**	-0.084	0.155
16	I believe that one day things will be better for me	**0.638**	-0.054	-0.026	0.164
17	I do not like to be absent from school, I hate to miss the teaching	0.029	0.101	**0.388**	0.085
18	I know a good person whose behaviour is an example to me	**0.457**	0.021	0.019	0.054
19	Even when I do not understand in class I don't give up trying	-0.134	-0.095	**0.687**	0.119
20	My teachers made me see that I am good with my work and can do well in class	**0.485**	0.068	-0.011	0.142
21	My teachers support me to aim high and to think of my bright future	0.149	0.052	0.241	**0.375**
22	Teachers explain a lot in class, they give extra examples	0.225	0.082	0.050	-0.004
23	My future is in my hands, nobody can take that away from me	0.242	0.146	-0.029	0.033
24	I am a tough person	0.018	-0.036	**0.383**	-0.002
VARIANCE EXPLAINED BY THE FACTOR		2.397	1.650	1.284	1.137

Items that loaded strongly (≥.30) on a factor are in bold and underlined. Items 1 and 14 loaded weakly on Factor 2 (both 0.269) but even with their weak loading, they will be discussed under Factor 2 because they approach 0.3. Items 3, 4, 22 and 23 failed to load strongly on any factor.

3.5.8.1 Factor 1: Confidence and internal locus of control

Items that loaded strongly with Factor 1 are illustrated in Table 3.16 and Figure 3.5. Based on the description of the items and their grouping, Factor 1 can be defined to represent confidence in one's own ability and strength and the focus is on internal strengths to succeed in achieving set goals or one's future.

5. I am in control of what happens to me Confidence, internal locus of control, sense of awareness, taking charge, taking responsibility
8. My future and success depend on my hard work Goal driven, future perspective and commitment, confidence, responsibility, internal locus of control
9. I believe that I have good talents Confidence, awareness of talents and strengths, belief in own ability
10. I do not allow people to stop me from trying to do my best in my work Confidence, internal locus of control, responsibility, commitment, goal focused, belief in own ability and strengths
11. I believe that I am able to do better Confidence, goal orientation, awareness of strength and potential, belief in own ability and potential
16. I believe that one day things will be better for me Confidence, goal orientation (future-perspective), hope, optimism
18. I know a good person whose behaviour is an example to me OK with role models, taking ownership and responsibility to shape own future, future focus
20. My teachers made me see that I am good with my work and can do well in class Confidence in own ability, achievement orientation and goal focus, sense of being important (I matter to the teacher, even the teacher is aware of my strengths), internal locus of control

Figure 3.5: Factor 1: Confidence and internal locus of control

The factor-set of items indicate a sense of awareness of one's own strength and ability, an internal locus of control which is characterised by knowledge of one's ability and potential to achieve, e.g. 'I will not allow people to stop me'. A strong sense of confidence and focus on goals is portrayed, which could be represented by statements like 'I know how to succeed, I know I will succeed'. The items represent high expectations and confidence in one's potential and one's appeal to others, which could be summed by statements like 'I know what I am capable of', 'Others know what I am capable of', 'I am good'. The sense of responsibility is highlighted in the search for answers and in finding solutions which indicate a proactive

approach, a sense of duty, taking charge and acknowledging own strengths. The item of acknowledging role models indicates a sense of comfort in learning from others and following their guidance.

Joseph (1994:256) specifies that knowledge and trust in one's abilities and good judgement is a strength of resilient individuals and relates to positive self-concept. Maurer and Andrews (2000:966) explain that confidence is the best measure of self-efficacy and Rew and Horner (2003:382) confirm that confident adolescents tend to experience success and satisfaction in their social and academic life and less stress. Individuals who accept responsibility and take control of their actions, even in the presence of challenges, demonstrate internal locus of control (Vanderzee, Buunk & Sanderman 1997:1842).

3.5.8.2 Factor 2: Social support

Table 3.16 shows that Items 13 and 15 loaded strongly on Factor 2 and Items 1 and 14 had weaker loadings. Figure 3.7 gives an overview of items which grouped under this factor.

1. I have an adult to talk to at home, who listens to me Adult support and appeal, awareness of self-worth, feeling of importance 'I matter, someone listens when I talk'
13. I know someone at school who cares about me and I can talk to Knowledge and awareness of support, feeling of importance, 'Someone cares, listens when I talk', 'I matter', appeal to others
14. I use different ways to work out a difficult problem Flexibility, goal-orientation; solution focus, problem-solving, 'I have it in me to succeed', 'I am strategic and persevering'
15. There is at least one teacher I can talk to who listens to me and encourages me to do my best Adult (teacher) support, appeal to adults, sense of importance, 'I matter', motivation

Figure 3.6: Factor 2: Social support

Factor 2 indicates the ability to identify and utilise support (mostly adult support), also in relation to problems, and demonstrates a connection to competent people. The disposition to appeal to others and to be receptive is clearly demonstrated. The factor demonstrates the acknowledgement of attention from others, having someone who listens and being granted the opportunity to talk. The overall sense is to feel important, not alone, to matter, to have someone who cares and the assurance of where to go when in need of help. The sense of security and comfort of knowing where to access 'important people who care', demonstrates success in utilising available resources and being strategic in utilising them. The factor indicates initiative of approach, assumption of responsibility and assurance of success in

identifying and accessing available support and the ability to utilise it to advance one's healthy development and to achieve competence in the environment.

Social support is one of the resilience characteristics addressed in Figure 3.4. Werner and Smith (1982:97-98) confirmed that resilient children in their study had at least one adult person who cared about them, furthermore, literature indicates that developing resilience requires caring and supportive relationships (Johnson & Wiechelt 2004:661; Masten & Reed 2005:85; Thomsen 2002:17; Tusaie & Dyer 2004:4; Wang *et al.* 1994:56; Werner & Smith 1982:97-98).

3.5.8.3 Factor 3: Toughness and commitment

Table 3.16 and Figure 3.7 indicate that four items loaded on Factor 3. The items indicate hardiness, a sense of commitment and orientation towards achievement and performance, the focus is on working hard in order to succeed and never giving-up.

12. **Even when my problems are just too much, I do not give up trying to make it work** Toughness, perseverance, courage, problem-solving, goal-orientation, commitment, perseverance
17. **I do not like to be absent from school, I hate to miss the teaching** Commitment, goal-orientation, responsibility of own future
19. Even when I do not understand in class I don't give up trying Focus on achievement and solution, utilising own ability, perseverance, motivation, commitment, confidence, toughness
24. I am a tough person Toughness, self-confidence, resolution about strengths, pride in own ability, strengths and potential

Figure 3.7: Factor 3: Toughness and commitment

The theme of hardiness is strong in this factor with the commitment to achieving goals and a strong drive to succeed in overcoming problems. The factor illustrates perseverance, internal locus of control and responsibility for ones' own actions, which can be summed by statements as: 'I am tough', 'I can make it', 'It is my responsibility to succeed, achieve'. The factor shows confidence in one's own potentials and abilities and the focus is on gaining success. There is indication of toughness and the focus is on one's goals. The definition of resilience refers to bouncing back from a stressful situation, which demonstrates the toughness of an individual to revert to a former state of functioning instead of wallowing in pain and misery (Joseph 1994:25-33, Masten 2007:923). Resilient individuals remain tough because they do not allow stressful situations to dampen their spirit for ever, they bounce back.

3.5.8.4 Factor 4: Achievement orientation

Table 3.16 and Figure 3.8 indicate four items loaded on Factor 4. Factor 4 focuses on performance and achievements.

2. I make sure that I do my classwork and homework Achievement orientation, taking responsibility; goal-driven, goal-orientation, taking ownership, sense of control
6. I feel safe and loved at home, they want to know if I am OK Success, coping, achievement, 'I am important', awareness of self-worth, confidence, result focus
7. Doing well at school is very important to me Achievement orientation, goal-driven, future focus
21. My teachers support me to aim high and to think of my bright future Setting high expectations, achievement, goal focus, future focus

Figure 3.8: Factor 4: Achievement orientation

The items focus on succeeding, to ascertain a bright future. A strong drive and goal to succeed and a sense of achievement are demonstrated in the items. The factor shows determination to take ownership in order to achieve success and affirms one's strengths 'It is my responsibility to succeed, achieve', 'I have potential and I have high expectations'.

One of the resilience characteristics identified in the Resiliency Wheel is *Set and communicate high expectations*, which encompasses motivating learners and encouraging them to strive for their goals and to achieve their potential. Henderson and Milstein (2003:13) emphasise articulating high but realistic goals and positive expectations to learners as one of the resilience building factors. Henderson and Milstein (2003:13), Benard (1995:3) and Bosworth and Earthman (2002:301) stipulate that schools that practice and encourage high expectations of learners experience a high rate of academic success and a low rate of problem behaviour.

3.6 CONCLUSION

The chapter has discussed fully Phase 1 of the research process, which included the operationalisation of the resilience construct into designing the questionnaire (R-MATS), piloting, administration and testing of the consistency and validity of the questionnaire items for use by middle-adolescents in township schools. The decision to divide the R-MATS into Section A and B helped in determining the effect of specific risk factors on the resilience of the respondents.

Furthermore, the constructed resilience and risk items helped to delineate the risk and protective factors perceived present in the environment by the respondents. The R-MATS helped to position respondents into categories of resilience and less-resilience and their notion of resilience was demonstrated through statistical data analysis (item and factor analysis).

Various themes of risk and protection were identified from item analysis data which will be compared and contrasted with Phase Two data during triangulation of data in Chapter 5. Factor analysis helped to structure the R-MATS items into categories of resilience, which further helped to define the resilience characteristics highlighted in the factors. The four identified factors indicate how resilient and less-resilient middle-adolescent learners in township schools defined themselves, their relationship with their environment and how they interacted with their environment.

Partly, the chapter helped in answering the research question as it touched on how the respondents defined themselves in the context of their environment, how they interact with their environment and how they defined their roles. The resilient and less-resilient respondents who will be identified to participate in Phase 2 of the study will further help in elucidating the research question during IQA focus groups. Finally, the findings of Chapter 3 and 4 will be discussed against the two research frameworks discussed in Chapter 2.

---oOo---

CHAPTER 4
Phase 2: The interactive qualitative analysis

4.1 INTRODUCTION

This chapter will discuss Phase Two of the research, the qualitative process, using the Interactive Qualitative Analysis (IQA) method. The research question will be interrogated using IQA focus groups and interviews. The selected identified resilient and less-resilient middle-adolescent learners from the two research schools will answer the main research question, '*How does the school influence the resilience of middle-adolescent learners in a black-only township school?'*

Firstly, the IQA will be discussed to reorientate the reader about this new research method and to briefly outline its prescribed and suggested research process. The discussion on the research design will include the IQA research process of data generation and construction, analysis and interpretation. In conclusion, the results and findings to the main research question of the study will be presented and discussed.

4.2 INTERACTIVE QUALITATIVE ANALYSIS

Interactive Qualitative Analysis is a systems approach to research developed by Northcutt and McCoy (2004). The techniques used in IQA are based on the Total Quality Management (TQM) literature (Northcutt & McCoy 2004:xiii). The focus of the IQA method is founded on the social systems theory and one of its main rationale, is to represent meanings of the phenomenon under study using affinities or elements and to illustrate the relationships that exist between them (Northcutt & McCoy 2004:xxi). A further purpose of the IQA method includes drawing a picture of the system represented by the group's perceptions as guided and motivated by the issue statement and captured through their mindmaps (Northcutt & McCoy 2004:xx, 149). The issue statement is used to operationalize the research question. The metaphor used by Northcutt and McCoy (2004:43) to represent the discourse of how a system is drawn from an IQA research process, is that of creating a 'quilt'. Using affinities during IQA focus groups, they declare that '*the purpose of IQA is to allow the group to create its own interpretive quilt, and then to similarly construct individual quilts of meaning'* (Northcutt & McCoy 2004:43). To elaborate on the analogy of IQA with the 'quilt', focus groups are used to identify elements of the 'quilt' (affinities) and the relationships that exist between the affinities represent the 'stitches' (Northcutt & McCoy 2004:44).

The initial step of the IQA in this phase is focus groups. Through focus groups, affinities will be generated in the process of collecting, organising and analysing data (Northcutt & McCoy 2004:xxi-xxii). Through the IQA method, provision will be made in Phase Two to identify different categories of meanings constructed by participants and to report on findings made by different groups of participants, the resilient middle-adolescents and the less-resilient middle-adolescent learners, about the relationship between their resilience and the school environment.

IQA functions from a constructivist and interpretivist approach (Northcutt & McCoy 2004:xxi). The constructivist approach acknowledges that participants are actively involved with constructing their own knowledge instead of just absorbing and receiving knowledge from others or a researcher in the case of this study (Harris & Graham 1994:233, Strommen & Lincoln 1992:468). Confrey (1990:108) defines constructivism by stating the origin of knowledge and inferring that all knowledge is the product of human cognition:

> *Constructivism can be described as essentially a theory about the limits of human knowledge, a belief that all knowledge is necessarily a product of our own cognitive acts. We can have no direct or unmediated knowledge of any external or objective reality. We construct our understanding through our experiences, and the character of our experience is influenced profoundly by our cognitive lenses.*

In IQA, the participants through the help of the researcher assume the role of both the researcher and participants in the research as they generate and interpret data collected during focus groups. Through Interpretivism, the study intends to understand the lived experiences of participants clarified during their deliberations, descriptions and interpretations of their interactions in their social context (Henning *et al.* 2004:19-20; Ritchie & Lewis 2003:7). Furthermore, the qualitative nature of the study alludes to interpretivism as it explores through the facilitative role of the researcher, the participants' understanding and knowledge (i.e. interpretation) of their social world, guided by the researcher's interpretation and understanding of the phenomenon under study (Ritchie & Lewis 2004:7).

A research process using the IQA method will normally follow four phases: research design, focus group, interviews and finally writing a report (Northcutt & McCoy 2004:44). The IQA focus group has several stages which will be fully discussed in 4.3. Figure 4.1 gives an indication of the research flow chart adapted from Northcutt and McCoy (2004) to illustrate the process which I followed when conducting the IQA focus group process.

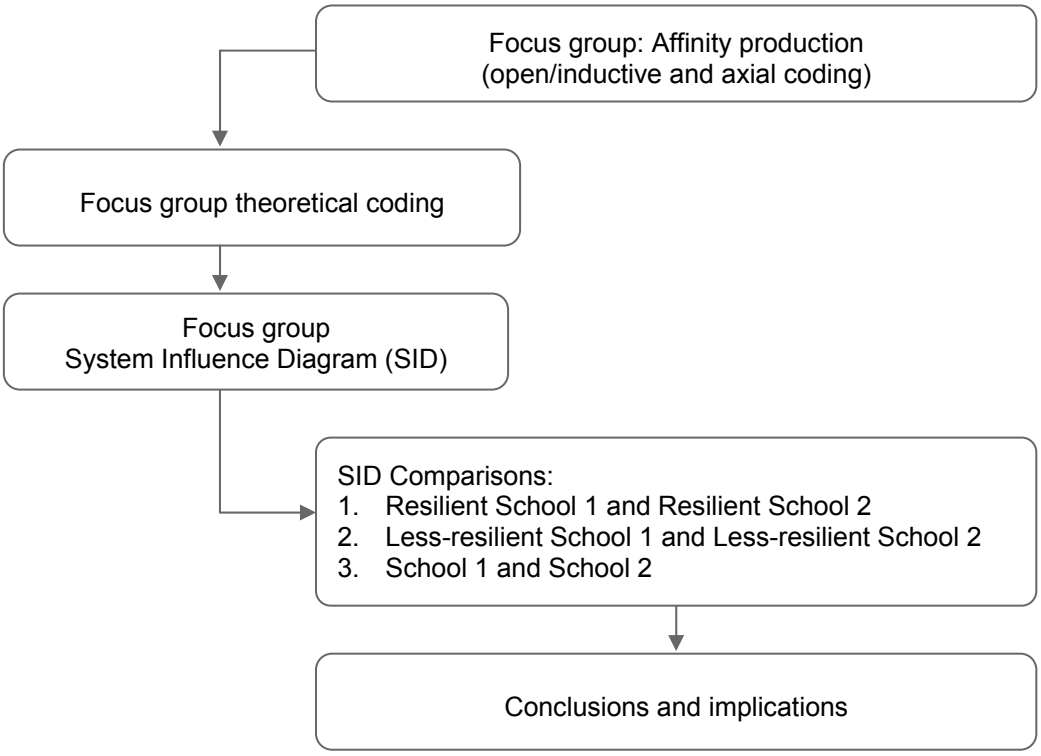

Figure 4.1: Data Collection Flow Chart (focus groups) (adapted from Northcutt & McCoy 2004:45)

4.3 DESCRIPTION OF THE METHOD

The IQA method follows a structured process arranged in a requisite sequence, starting from the research question that underlines the nature of the problem as the first step. The authors of IQA, Northcutt and McCoy (2004:44), provide data collection and analysis protocols 'designed to minimize erosion' and to help the researcher to guide the participants to generate and analyse data with minimal external influence. In defining the construct *research*, Northcutt and McCoy (2004:28) relate it to an activity that answers at most three questions in the order of the appearance below, namely:

- What are the components of the system?
- How are the components related to each other?
- How do the systems compare?

The third question only exists if the research has more than one system, however if there is only one system, as in this study, there will only be two questions asked.

This study focused on the social system (the school) and the existing interactions between resilient and less-resilient middle-adolescent learners and the school as a system. IQA defines social systems as 'systems in which human interpretation of meaning is involved' (Northcutt & McCoy 2004:40). The elements of the social system can represent the individual

(psychological or individual) characteristics, the systems' characteristics (programmes run and their structure) or the perceived interactions (relationships). Northcutt and McCoy (2004:40) indicate that the elements of the system are as diverse as the various ways of making meaning, but the relationship among the elements are consistent. The relationships (perceived relationships) among the elements, interpreted through the IQA method and process, demonstrate the perceived cause and effect or influence, delineating the pattern of influence among the elements in the form of a diagram (Northcutt & McCoy 2004:41).

4.4 RESEARCH DESIGN

4.4.1 PARTICIPANTS OF THE STUDY

Participants from School 1 and 2 were selected to participate in Phase Two of the study based on their resilience score (Mean of Section B of the R-MATS), the parents' consent and their willingness to participate in the research. Overall, eight participants per school were selected: four each from the lowest and highest means, respectively indicating a high and lesser degree of resilience. The selected resilient participants from School 1 had all obtained the resilience mean of 1 and the less-resilient participants a less-resilience mean of 2+, while the mean of the resilient and the less-resilient participants from School 2 varied between 1.04 - 1.16 and 1.95 - 2.37 (see Table 4.1).

Table 4.1: Focus Group Participants

School	Learner number	Mean of section b	Gender	Resilience status
			F/ M	RG/ LRG*
1	5	1	F	RG
	6	1	F	
	59	1	M	
	93	1	M	
1	24	2	M	LRG
	67	2.04	F	
	8	2.08	F	
	21	2.37	M	
2	261	1.04	F	RG
	167	1.12	M	
	183	1.16	M	
	252	1.16	F	

School	Learner number	Mean of section b	Gender	Resilience status
2	179	1.95	F	LRG
	176	2	F	
	203	2.04	M	
	238	2.37	M	

*RG: Resilient Group, LRG: Less-resilient Group

Focus groups were conducted after curricular activities (after school). The participants were informed about their selection to take part in focus groups and were given consent forms for parental permission. Not all initially selected participants were available, some parents declined their children's participation citing other responsibilities and commitments. It was not easy to access the selected participants from School 2, most were absent from school, the teacher discovered that some were no longer attending school and some learners did not return the parents' consent forms. The challenges were overcome by identifying participants who obtained the resilience mean score of ≤1.3 for the resilient group and ≥1.9 for the less-resilient group. The identified participants were willing to join the focus groups and their parents signed consent forms.

4.4.2 FOCUS GROUPS

Focus groups use 'guided interactional discussions, as a means to generate rich details of complex experiences and reasoning behind individual's actions, beliefs, perceptions and attitudes' (Powell & Single 1996:499-500). Reed and Payton (1997:765) define focus groups as group discussions organised to explore a specific issue as a collective activity. In IQA, focus groups serve to identify the characteristics of the systems (school context, home and community), the social contexts and representations of the participants' experiences with the phenomenon of the research within these contexts (Northcutt & McCoy 2004:44).

Two focus groups, each with four participants, that is 4 resilient and 4 less-resilient learners, and each group consisting of two boys and two girls, were conducted sequentially per school, i.e. School 1 was completed first followed by School 2, and 16 learners participated in the focus groups (see Table 4.2). The learners were not aware of their resilience status and the construct *resilience* was never used with the participants during the research.

Table 4.2: Focus Group Participants

Participants	School 1	School 2	
Resilient Group (RG)	4	4	
Less-Resilient Group (LRG)	4	4	
Total Participants	8	8	16

The use of smaller groups appeared convenient because the IQA process is long and required much commitment, consistency and regular, uninterrupted attendance of sessions by the participants. As a result, it was very important for participants to understand and commit to the sessions. Ritchie and Lewis (2004:59) maintain that smaller groups of pairs or triads can be used during focus groups and they can provide a good balance between group and individual context. The authors also indicate that such small groups can provide more 'scope for individual depth of focus as well as the opportunity to see how ideas develop'. Furthermore, small groups are more useful and effective when working with younger people and sensitive issues (Ritchie & Lewis 2004:59). In contrast, Northcutt and McCoy (2004:87) propose that the researcher should make an attempt to avoid using smaller groups for focus groups, not because they will affect affinity production, but to avoid skew data during theoretical coding. They assert that data become skew when for instance, the influence of one individual out of five in a focus group weighs 20% (Northcutt & McCoy 2004:87).

However, in this study, small groups proved more functional. As asserted by Ritchie and Lewis (2004:59), it was essential to ensure that participants were comfortable and contributed fully, because the exercise was rigorous and highly interactive. The focus groups each extended over several days (the pace of the participants determined the conclusion, and the time allocated required ensuring participants' safety when travelling home and ensuring they finish on time to allow for homework). Smaller groups allowed the participants the opportunity to be articulate and to participate fully in the discussions to produce more detailed discussion. The continuous discussion and interaction among the participants helped them to further refine and describe their perspectives especially against the backdrop of each other's experiences and this contributed towards generating creative thinking, solutions and strategies regarding the research question (Ritchie & Lewis 2004:58).

4.4.3 FOCUS GROUPS ISSUE STATEMENT

By using the issue statement IQA aims to guide and help participants to understand the research question especially at the level of their development and understanding.

The issue statement was used to deconstruct and operationalise the research question. The issue statement required the focus groups to engage and interrogate the research question and to generate affinities which can be perceived as related to the research question.

The issue statement was a guided imagery used as a warming-up exercise to help participants to relax, clear their minds and to introduce the research question (See Annexure E). Before embarking on the focus group discussions, the issue statement was piloted with two groups of learners (two learners per group). The aim of the pilot was to finetune the language used, and to discover if the statement was able to elicit required responses from the participants in exploring the research question. The feedback received from the pilot study helped in structuring the procedure for introducing the issue statement during the focus groups.

To achieve full participation, it was essential to ensure that the participants were relaxed before the start of the focus group. They all received printed copies of the issue statement, and then I requested them to relax, close their eyes and listen to my voice as I read the issue statement to them. This exercise required them to listen and visualise what was being read, to use their imagination and think about themselves and their environment. It requested them to have a brief recollection of their development from early childhood, including the experiences of growing-up, the challenges, strengths, successes and failures and the motivational forces that gave them the strength to want to make it and the challenges to 'want to' or to just 'give-up' trying or 'making it'. The imagery of their growth and development was associated with discovering the self, 'Who am I?' because it represented the story of their developing self. Questions were posed after the imagery to make participants aware that 'who they are' or 'what they are' is a product of years of development and success and various forms of adversities with possibilities of making it or failing.

The issue statement was drawn from the main research question:
How does the school influence the resilience of middle-adolescent learners in a black-only township school?

Against the background of the research question, the following questions were asked to elucidate the research question and to ensure that participants understood what was required of them during affinity generation:

(1) How does the school contribute to who you are?
(2) How does the school fail to contribute to who you are?
(3) What is it that the school does that makes you who you are?
(4) What is it that the school fails to do that affects who you are?

The affinities or themes generated during the focus groups related to the participants' experiences in relation to the research question.

4.4.4 IDENTIFICATION OF AFFINITIES

4.4.4.1 Affinity Generation: Silent nominal process

Themes, which Northcutt and McCoy (2004:81) term affinities, were generated with each focus group. Generation of affinities started with the silent nominal phase, the brainstorming session which encouraged the participants to produce individual thoughts, feelings and ideas (Northcutt & McCoy 2004:91). Hackman and Wageman (1995:314) indicate that brainstorming is used to generate ideas and its purpose is to 'tap on the creativity' of the participants. After the issue statement, the participants were provided with index cards and marking pens, to write or place their thoughts either as a word, a phrase or sentence (Northcutt & McCoy 2004:91). They were instructed to work alone and write one thought, phrase, word or sentence per card and to write as many cards as they could. There was no time-limit for this activity. I encouraged them not to sensor their thinking but to simply write down their thoughts as they came to mind. When all participants had finished writing, they silently and randomly pasted their cards on the white board on the classroom wall. I read each card out aloud for clarity. The group members had to elaborate on affinities which were unclear and write new meanings on the card. During this process of data clarification, if new thoughts developed, participants were encouraged to capture them on new cards and to paste them on the wall. The nominal phase led to the affinity grouping.

4.4.4.2 Affinity Grouping: Coding of affinities into groups

This phase of the focus group activity required participants to arrange the cards with similar meanings into groups. This process is called inductive coding and followed the previous phase of broad generalisation of affinities by working from specific to general (Northcutt & McCoy 2004:97). Firstly, each participant was required to silently move cards with similar ideas or meaning into one group. When the activity had progressed far enough to require negotiation, they were allowed to discuss and reach consensus, without voting on the grouping of cards. I guided them into engaging in full discussions before reaching consensus about the groupings or themes.

4.4.4.3 Axial Coding: Affinity naming

After inductive coding, the participants were requested to label the affinities, refine their meaning, and to generate names or titles for the affinity groups (Northcutt & McCoy 2004:99). Naming of affinities was deductive because it required them to be more specific

and to deduce the affinity name from the meaning of the multiple cards represented in that particular group (Northcutt & McCoy 2004:100). The process took more time because it required the researcher to capture data as the participants were talking and to seek clarity when required. A paragraph was written about each theme using the index cards and their discussions, after which it was brought back to the participants the following day for further discussion and consensus.

Northcutt and McCoy (2004:100) stipulate that paragraphs should be descriptive and 'grounded in the text' and use specific quotes of data collected from index cards or participants' conversation during discussions. When describing the affinity themes, I had to be clear and direct and remain faithful to the language used by the participants and consult them for clarity and input (Northcutt & McCoy 2004:100).

The writing of paragraphs continued until the participants were satisfied with the definitions provided and were able to use the meanings for the next activity, theoretical coding. Figure 4.2 gives the description of affinities generated by the participants during the four focus groups in the two schools. The figure illustrates affinities generated by RG1 (Resilient Group 1, the resilient group from School1), RG2 (Resilient Group 2, from School2), LRG1 (Less-resilient Group 1, the less-resilient group from School 1) and LRG 2 (Less-resilient Group 2, from School 2). The definition of each affinity from literature and dictionaries is provided to background the affinity generated by the participants and to position their interpretations and constructions of their affinities against the existing constructs.

Participants' definition	Literature definition
RG1	
Positive Future Goals in life	
The affinity is about future goals and aims in life. It is about what learners want to be in life and their future. It concerns doing and achieving something good for oneself, to help oneself and others. Successful future goals include positive achievements and not failure. It is about something that one really wants to achieve, about one's dreams. A person thinks or prepares from the start of schooling about what one wants to be in the future, and prepares oneself to achieve and accomplish gaols and to access what one wants to be. A goal is about achieving a better life for oneself, reaching out to others for service, and enriching one's significant others with one's success.	To harbour a belief that life has meaning and one has a place and role to play in the universe (Kumpfer 1999:198, Joseph 1994:16). To be optimistic, have goal and direction (Joseph 1994:16). To have achievement motivation, educational aspirations, special interests, imagination, hope, creativity, coherence and a sense of meaning (Joseph 1994:16, Benard 2004:28-35, Kumpfer 1999:198). Positive aspirations for the future (Shanahan & Flaherty 2001:389).
Challenges in life	
This affinity is about barriers or obstacles one experiences in one's daily life, both at school, in the community and in one's home. It includes struggling to make decisions to work hard and to overcome bad influences of peers by doing good things. Challenges include the importance and need to avoid parental criticism, judgements and dissatisfaction over	A challenge is something that by its nature or character serves as a call to battle or contest and requires a special effort (Dictionary.com 2009). It is a test of somebody's abilities, or a situation that tests somebody's abilities in a stimulating way (Encarta World English Dictionary 1998-

Participants' definition	Literature definition
one's alleged bad choices and decisions over relationships and peer relations. There are many challenges in life. Most challenges are about friends (peer-relationships) and schoolwork, especially when moral and value choices have to be made. Bad friends are more challenging because they demand one to do bad things to fit in, e.g. girls having relationships with older men, businessmen or men with cars and for boys, smoking. To be a good influence to bad friends is a challenge, one has to work hard to convince them to do the right thing. On the other hand, if one is bad and one has good friends, they might change one to be good just like them. Good friends will benefit one more at school because one can do school work and teachers like learners who do their work.	2005).
School environment	
This affinity is about the school environment and its influence on teaching and learning and social development. It relates to the environment that promotes positive feelings towards school, e.g. feelings of love and enjoyment and the environment that is supportive to the needs of learners. Learners see the school as a protection from engaging in delinquent behaviours, protecting them from crime, and as a learning environment that imparts and provides knowledge to learners about life. The school environment promotes and creates order and structure, e.g. '*if there was no school there will not be order because we will all stay at home and do nothing'.* It is also seen as a structured environment that educates, gives direction, shapes future goals and helps in the development of the learner, e.g. '*school gives you direction and shapes your future, it is important'.* The relationship that exists between learners and teachers impacts on the quality of support offered and received. A supportive school environment is about encouragement, care and protection of the learners' needs.	Environment refers to the ecology, all external factors surrounding and affecting a given organism at any time; the social and cultural forces that shape the life of a person or a population; the aggregate of surrounding things, conditions, or influences; surrounding milieu. (Dictionary.Com 2009).
Adolescence	
This affinity is about the developmental stage of adolescence and the challenges one is exposed to, including peer-pressure and peer-relationships. An adolescent is in the stage (transitional period) of moving from being a child (childhood) to being an adult (adulthood). Teenagers experience more peer-pressure from friends especially when one does not agree with them or with what they want to do e.g. '*sometimes when we change classes friends will want you to bunk classes and go stand somewhere or hide with them, when you resist they call you names like Miss Goody Two-Shoes'*. '*Sometimes there is so much pressure to choose between friends and schoolwork, you have to make a choice'.* The affinity is also about challenges experienced when relating with adults, '*there can be relationship problems between parents and teenagers'* e.g. teenagers can disrespect their parents by not listening to their advice and wanting to do their own thing and assert their independence. '*Teenagers want someone who will understand them and whom they understand too'. 'Parents and adults need to learn how to talk to teenagers and to respect them'*.	Adolescence is a period of transition between childhood and adulthood, it is a developmental bridge between being a child and becoming an adult (Louw & Louw 2007:278).
School Rules	
This affinity is about knowledge, understanding and respect for the school's code of conduct. It acknowledges that school rules should not be questioned and should be respected. The understanding that as high school learners, sharing boundaries with a primary school, one should be a	Rules are principles or regulations governing conduct, action, procedure and arrangement (Dictionary.com 2009).

Participants' definition	Literature definition
role model and good example to the primary school learners by always observing school rules. Criticism by girls of some school rules which were perceived to be unfair emerged, e.g. not being allowed to wear earrings. The 'unfair' rules were not acknowledged or accepted and were poorly enforced by teachers leading to inconsistency e.g. '*some teachers are strict and adhere to the code of conduct while others do not*.' Another criticism emerged about exclusion of learners from the process of developing or negotiating for school rules e.g. '*school management is not allowed to make rules without consulting learners'*. Some rules were perceived to be OK, e.g. forbidding other forms of body piercing like tongue piercing and respect for wearing school uniform.	
RG2	
Education	
This affinity is about teaching and learning and getting more knowledge. School gives learners the chance to learn and be educated. Education gives one the chance to be something in life. The good thing about school is after completing each grade, one becomes better. The progress at the end of Grade 12 gives one the opportunity to study for one's career. What is learned daily becomes very important for one's future. Education is essential for a brighter future. At school, one does not just learn about school subjects, one also experiences more things, e.g. like sports, culture and discipline (manners). School also teaches one about one's culture and roots, the past and understanding of where one comes from and how to understand one's culture better, but it is sad that Arts and Culture ends with Grade 9 and is not offered in Grades 10-12.	Education is the act or process of imparting or acquiring knowledge through teaching and learning especially at school, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life (Dictionary.com 2009).
Reaching one's goals	
School teaches about many things, like success and how to succeed in reaching one's goals and dreams. Goals are about dreams and education is the one and only tool to help in reaching goals. The experiences of youths searching for dreams without investing in education are seen to be dire to their future. The security of enjoying future goals is education. Entertainment industries are seen as inviting but malicious because most youths yearn for fame and fortune without realising that fame and fortune fade. The industry is labelled 'cut-throat' entertainment industry which is not easy to survive. Most young people are seen to quit school to join the world of entertainment for only 'one reason', to become famous and drive expensive cars without investing in education which should be a back-up should everything else fail.	Goals refer to the result or achievement toward which effort is directed; aim; end (Dictionary.com 2009). Reaching goals refers to working towards achieving a targeted purpose or aim. Reaching goals requires one to persevere and function against the odds; to tolerate a certain degree of frustration in the process of pursuing one's aims (Joseph 1994:30, 39)
School Curriculum	
This affinity is about school curriculum and its importance to the future of learners. Teaching and education include school subjects, they are what teachers use to teach, and to help learners learn e.g. if one is good at Maths, English, Accounting, etc., one gets respect from the teacher and other learners. They know one works hard to get good marks, when one does well at school, other learners ask one to explain in class. School curriculum helps learners to understand more about oneself, one's roots and cultural practices and other cultures, it also gives one the foundation about what one wants to be, e.g. one learns about what one could be if one followed certain subjects.	A curriculum is the set of courses, and their content, offered at a school; it refers to (i) the range of courses from which students choose what subject matters to study, and (ii) a specific learning programme. A school curriculum is offered at an institution that allows and encourages learners to learn, under the supervision of teachers (Reference.com 2009).

Participants' definition	Literature definition
Ensuring Care and safety	
This affinity is about the role of the school in ensuring care and safety of learners by enforcing discipline, school rules and maintaining order. School teaches about manners through school rules, e.g. respect for other learners, teachers, oneself, etc. Learners define safety as being free from danger and problems. Feeling free from fear of bad experiences or not experiencing fearful thoughts of something bad that can happen to oneself. Safety is about feeling secure and confident that nothing bad will harm oneself, and that nothing bad from outside will come into the school to hurt oneself e.g. '*it is very important for me to come to school as I am, sharp and go home sharp*'. Learners viewed care as modelled behaviour e.g. '*care is observed in the way teachers treat and respect us and how we treat and respect each other*', and '*when teachers treat us well we also learn to treat others well*'. Teachers model care because when they teach learners how to care for oneself, one learns to practise the behaviour at school and at home	To ensure care involves being concerned or interested, to provide needed assistance or watchful supervision (Dictionary.com 2009). To ensure safety includes doing activities that seek to minimize or to eliminate hazardous conditions that can cause bodily injury (Reference.com 2009). Ensuring care and safety involves providing assistance to prevent harm to individuals.
School resources	
This affinity is about the resources that are available at school for one to use. The affinity includes the dissatisfaction about unused resources, e.g. the school library, and the computer laboratory that was reserved for Grade 11 & 12 learners. E.g. '*We are not able to do school assignments because the library is never open and we are forced go far to use the community library.' 'Some teachers abuse you when you ask information, they do not want to explain more and how will you understand what they are teaching if you are not able to use the library*?' '*We have computers at school but we are not allowed to use them, only teachers and Grade 11-12 are allowed to use computers, it is frustrating because we want to learn so much about the things that we do not understand and new things but here at school we are denied the chance to do that'.* Learners stated the school had sufficient resources that were mostly inaccessible.	Resources refer to things that can be used for support or help, a source of supply, support, or aid, especially one that can be readily drawn upon when needed, property, assets (Dictionary.com 2009). School resources refer to assets of the school.
LRG 1	
Being friendly	
The affinity is about social relations and having the right attitude. It is about respect for others and modelling respect. A friendly person is someone who is able to live and work well with people and to live with them in peace without fighting. The school creates a social environment for one to meet new people, to know each other, and to be friends. One learns to help and to live well with others without fighting, to listen to teachers and to do school work. People love a friendly person, and such an individual will have a successful and better life. The school creates the opportunity for different people to work together, but some are rude and do not like to work well with others. Some learners have power and control others, especially when teachers are not looking. Rude learners do not like peace, but chaos and disorder. One who is not friendly has a bad attitude. The attitude one has towards other people can make one to respect and treat others well or to be rude and hurt others.	Being friendly involves being sympathetic and showing relationship; one who shows no hostility, an individual who is favourably disposed; inclined to approve, help, or support others (Dictionary.com 2009). Being friendly involves being inclined to help and support others.

Participants' definition	Literature definition
Bullying	
The affinity is dichotomous to being friendly it is about being a bad person, bullying and turning 'evil'. A bully is not a good or a friendly person, but a naughty and delinquent person. A bully will steal, behave badly and do unacceptable things. Older learners who are in Grade 11-12 are bullies. Grade 10 has bullies but they are not as bad as older learners. '*Some learners at school are bad, they smoke at school and do all bad things.*' '*They beat others, take your money, lunch and even steal your school bag, during breaks when we go to toilets you find bullies hanging there smoking cigarettes and dagga', 'The boys' toilets are worse they are full of smoke and you cannot walk in, they are cloudy and you cannot see where you are going*'.	Bullying is deliberate, conscious desire to hurt, threaten and frighten someone (Louw & Louw 2007:261). Bullying includes physical (beating, threats of violence), emotional (spreading rumours, terrorising, defaming), verbal (name-calling, threats), non-verbal (offensive signs, pulling face), relational (excluding, ostracising, maltreatment) and sexual (sexual harassment) (Louw & Louw 2007:261-262)
Socialisation	
This affinity is about socialisation, how one was raised, one's values and culture. During the upbringing, parents teach one how to behave in certain ways and how to respect others. Parents need to teach their children to respect the rights of others to exist and encourage them to learn to coexist and share with other children and most importantly, teach them humility. At home, most children learn that there are other people to share the resources with, which teaches one not to be selfish and dominate others. A selfish attitude is not admirable, is rude and not considered a socialised behaviour. '*You cannot just want to walk over other people and enjoy it when others fear you and run around when they see you', 'As a person, I do not want to be like that, I want to be equal with other people and I do not want to think that I am better or above others'. 'Better people do not forget where they come from, they know their roots', 'The secret of being successful lies in being humble and knowing where you come from'.*	Socialisation is a process by which the child learns to conform to the moral standards, role expectations and requirements for acceptable behaviour of his or her particular community or culture (Louw & Louw 2007:138-139).
Challenges	
The affinity relates to the problems one experiences in one's environment (home and school), like poverty e.g. '*When you are poor you do not have money and you come to school without lunch or lunch money*'. Teachers can also help by providing problem solving strategies, '*The school help (sic) us because sometimes when we have problems from home we can tell one teacher and he/she can help you with the solution*'. Challenges include lack of support from home, '*At home* they *might not want to help you with homework and your parents might not be working and no money for school fees'*. Sometimes challenges can be addressed by showing kindness and sharing resources with those who have none and by giving one a shoulder to lean on when in trouble. '*At school you can help other children who come to school without lunch money or with nothing to eat, you share your money with them e.g. if you have R10 you can give him/her R5.00*'. '*You can also be good in school by helping other children who are being bullied you can comfort them and tell them that it will get better*'.	A challenge is something that by its nature or character serves as a call to battle or contest and requires a special effort (Dictionary.com 2009). It is a test of somebody's abilities, or a situation that tests somebody's abilities in a stimulating way (Encarta World English Dictionary 1998-2005).
Future Goals (what I want to be when I grow-up)	
This affinity is about what one wants to be when one grows-up. It is about reaching goals and doing the job one wants. Future goals and dreams are seen as collective efforts and achievements where significant others are able to share in the joy of each other. The school gives one the opportunity to have a good future and to learn. The subjects one takes at school shape one to be able to have a good future e.g. *'Maths, Accounting and Business economics can help you if*	To harbour a belief that life has meaning and one has a place and role to play in the universe (Kumpfer 1999:198, Joseph 1994:16). To be optimistic, have goal and direction (Joseph 1994:16). To have achievement motivation, educational aspirations, special interests, imagination, hope, creativity, coherence and a sense of meaning (Joseph 1994:16, Benard

Participants' definition	Literature definition
you want to have your own business because you will know how to budget and count money'. Having a good future is compared to enjoying good life with the people one loves. When one is happy because one has achieved one's goals and dreams, all the loved ones share in the happiness.	2004:28-35, Kumpfer 1999:198). Positive aspirations for the future (Shanahan & Flaherty 2001:389).
LRG 2	
Self-development	
This affinity is about what one can achieve and accomplish at school, it is about growth and development. It emphasises that at school one can achieve a lot if one has respect for teachers, rules and other learners. It emphasises positive development and being a better person. The school gives one the opportunity to grow and be better than one was when one started school. Being a better person is about learning to respect others and acknowledging the important role other people play in one's life. '*You have to respect other people who will also respect you and by so doing you gain your respect'*. It is also about the role one can play at school, like wanting to be part of the student body, e.g. president of the Learners' Representative Council (LRC), a class representative, etc. Being a better person requires change, improvement and behaving in a better way, e.g. '*Change in behaviour and accepting that what you used to be is bad makes you a better person because you are brave enough to accept your own mistakes and see right from wrong'*.	Self-development refers to the development of one's capabilities or potentialities (Dictionary.com 2009). It is a self-guided improvement, which could be economically, intellectually, or emotionally, psychologically and spiritually (Reference.com 2009).
Self-identity	
The affinity is about growing and developing into the kind of person one wants to be. It is about self-discovery and self-knowledge, like who one is and what one stands for in life e.g. one's values, needs and beliefs. It also includes knowing what one is going to be when one grows-up. It is about discovering more about oneself (self-discovery) and learning to understand oneself. Not all learners will develop in the same way because it is a choice each learner makes. Some learners do not change, they continue doing bad things and they do not see the light. So being at school does not benefit all learners the same and learners also make different choices about what they want to be at school. '*Knowing who you are is important because you must be proud of yourself and be who you are'. 'You must not pretend to be something you are not, be proud of who you are'. 'You need to behave and learn how to communicate so that you can be what you want to be in your life'.*	Identity refers to the individual's awareness of him or herself as an independent, unique person with special place in society (Louw & Louw 2007:309). Identity development implies the need to define ' Who' you are, 'What' is important to you and What' directions you want to take in your life (Louw & Louw 2007:309).
Reaching goals	
This affinity is about reaching what one wants to be and knowing about the rewards of realizing one's goals. The school makes one to study hard so that one can be able to reach one's goals, e.g. '*This school made me to start to work hard to make my dreams come true like singing'*. Education is very important because without education one cannot achieve one's goals. '*The school helped me to think for myself and helped me to see my future.'* Education is important for one to realise one's goals, e.g. '*The school helps me to become something in this country'*. One also learns about respect for teachers, other learners and oneself e.g. '*They showed me how to take care of other people so that I can be a policeman, so that I can take care of others'*. The school also teaches one to be a good person and protects one from doing bad things e.g. drinking, smoking, stealing and swearing.	Goals refer to the result or achievement toward which effort is directed; aim; end (Dictionary.com 2009). Reaching goals refers to working towards achieving targeted purpose or aim. Reaching goals requires one to persevere and function against the odds; to tolerate a certain degree of frustration in the process of pursuing your aims (Joseph 1994:30, 39)

Participants' definition	Literature definition
School curriculum	
This affinity is about the subjects offered at school. Learners acknowledge that school subjects are important in shaping one's future. It is important for the school to provide subjects that will facilitate future success. Subjects like music and computer literacy (computer lessons) are seen to be essential for one's success and it is regrettable if one does not have the opportunity to learn the subjects. '*The school does not offer all the subjects that we want, not having subjects you want (singing, computer lessons) is frustrating'. 'It sometimes makes going to school useless because you do not learn all the things you want to learn'*. '*What is the use of going to school all your life and still not have the choice to learn what you want'*?	A curriculum is the set of courses, and their content, offered at a school; it refers to the range of courses from which students choose what subject matters to study, and (ii) a specific learning programme (Reference.com 2009). A school curriculum is offered at an institution that allows and encourages learners to learn, under the supervision of teachers.
School resources	
This affinity is about access to school facilities, e.g. the use of computers and library facilities. The school resources are meant to help one learn better so that one can be a better person, but one is not allowed to use the library and to learn with computers. Learners view the lack of access to resources as an impediment to their performance in school, '*We share school books, and there is not enough books'.'The school does not open the library to read books.' 'When we do homework and classwork we can use the library to get more information but it is never open.' 'We do not know how to use computers, they never give us a chance.'* Learners indicated frustration and helplessness about the school's decision to deny them access to available resources.	Resources refer to things that can be used for support or help, a source of supply, support, or aid, especially one that can be readily drawn upon when needed, property, assets (Dictionary.com 2009). School resources refer to assets of the school.

Figure 4.2: Description of focus groups affinities

4.4.4.4 Affinity Name Table

The Affinity Name Table is a visual representation and the labelling of the affinities identified during axial coding (Northcutt & McCoy 2004:98). The affinities from the above paragraph description and narratives of each focus group were captured and presented to the participants. The process followed after the participants had finalised the affinity naming and were satisfied with the paragraphs written. The names were captured sequentially (the order did not reflect importance or significance) starting with the first one and presenting them to participants so that they could be acquainted with the affinities they had generated. Each participant then received a table with the affinity names of his/her focus group for theoretical coding. The Affinity Name Tables listed below show the affinities from the four focus groups conducted in the two schools as discussed in Figure 4.2.

Affinity Names RG1*	**Affinity Names RG2****
1. Positive future goals	1. Education
2. Challenges in life	2. Reaching one's goals
3. School environment	3. School curriculum
4. Adolescence	4. Ensuring care and safety
5. School rules	5. School resources
Affinity Names LRG1*	**Affinity Names LRG2****
1. Being friendly	1. Self-development
2. Bullying	2. Self-identify
3. Socialisation	3. Reaching goals
4. Challenges	4. School curriculum
5. Future goals	5. School resources

*Resilient Group School 1 / **Resilient Group School 2
*Less-resilient Group School / ** Less-resilient Group School 2

Figure 4.3: Affinity Name Table (adapted from Northcutt & McCoy 2004:151)

4.4.4.5 Theoretical coding: Identifying relationships between affinities

Using the Affinity Name Table, I then explained to the participants how to identify the relationship between the affinities in terms of cause and effect using the Affinity Relationship Table (ART). Northcutt and McCoy (2004:149) define theoretical coding as 'ascertaining the perceived cause and effect relationship among all affinities in a system'. The process includes 'teaching' the participants about determining the cause and effect relationship of affinities, using 'if' and 'then' (if/then) statements with every pair of affinities (see Appendix F). Northcutt and McCoy (2004:150) refer to the 'if/then' coding as the Hypothesis Building Protocol or hypothesis construction.

The Total Quality Management literature refers to the cause-and-effect diagram as also a fishbone which is used to represent the relationship between a problem and its potential causes (Hackman & Wageman 1995:314). The ART of Northcutt and McCoy (2004:151) (see Figure 4.4) illustrates three types of relationships that can be inferred from the affinities, that is participants can choose whether, in the case of this study, 1 influences 2 (1→2), or 2 leads to 1 (1←2) or there is no relationship between 1 and 2 (1<>2). For the purpose of this study, numbers (1 and 2) instead of alphabets, A and B are used to represent relationships.

Possible Relationships
1 → 2 (1 influences 2)
1 ← 2 (2 influences 1)
1 <> 2 (No Relationship)

Figure 4.4: Affinity Relationship Table (adapted from Northcutt & McCoy 2004:151)

4.5 AFFINITY ANALYSIS RESILIENT GROUP SCHOOL 1

4.5.1 AFFINITY RELATIONSHIP TABLES: RG1

The initial step required participants to determine and record the direction of the relationship between affinities if there was any, using the ART, and to explain the relationship by creating the 'if/then' statements for each relationship (Northcutt & McCoy 2004:154). The final result, which was captured by the researcher, came from the voting of participants, as the group consensus. IQA uses Pareto rule of thumb to achieve consensus (Northcutt & McCoy 2004:157). Northcutt and McCoy (2004:157) argue that group consensus is key to good data. I will first present the full discussion of the RG1 process before presenting RG2, LRG1 and 2, so that the last groups to be presented will simply include tables and figures. See Table 4.3 for the ART generated by RG1.

The frequency columns captured the votes of participants about the direction of the Affinity Pair Relationship and the no-relationship vote was not captured, which makes up for the missing votes.

Table 4.3: Affinity Relationship Table: RG1

Affinity Name RG1 1. Positive future goals 2. Challenges in life 3. School environment 4. Adolescence 5. School Rules.		**Possible Relationships** 1 → 2 1 ← 2 1 <> 2 (No Relationship)	
ART with Theoretical Code Frequency Table			
Affinity Pair Relationship	Frequency	Affinity Pair Relationship	Frequency
1 → 2	0	2 ← 4	3
1 ← 2	4	2 → 5	0
1 → 3	0	2 ← 5	0
1 ← 3	4	3 → 4	4
1 → 4	0	3 ← 4	0
1 ← 4	3	3 → 5	1
1 → 5	0	3 ← 5	3
1 ← 5	4	4 → 5	4
2 → 3	0	4 ← 5	0
2 ← 3	3		
2 → 4	0		

Northcutt and McCoy (2004:156) state that when the ART is completed, the focus group can be dismissed, to allow the researcher to code and analyse the data using IQA maps and tables. Two participants (a boy and a girl) were identified from each focus group (based on their level of participation, .i.e. the highly active and eloquent participants) to participate later in interviews which were planned for focus group follow-up to help clarify data.

4.5.2 PARETO ANALYSIS: RG1

The Pareto Principle is based on the observation of an Italian economist, Vilfredo Pareto (1848-1923), who demonstrated that 80% of the wealth of the nation was distributed among the 20% of the population who represented the 'vital few', and the remaining 20% of the nation's wealth was distributed among the remaining 80% of the population, the 'trivial many' (Craft & Leake 2002:729). The Pareto Principle merely states that 20% of the participants' input produces 80% of the results. According to Craft and Leake (2002:730), the Pareto Principle is applied to most situations that have a cause and effect relationship as it involves

> *... discovering the factors causing the results and arranging them in order of their impact on the result and isolating the top 20% for further analysis and action.*

Northcutt and McCoy (2004:157) elaborate further, that when applying the Pareto Principle,

> *…it is quite likely that there will be some disagreement among either individuals or subgroups about the nature of a given relationship. IQA uses the Pareto rule of thumb operationally to achieve consensus and analytically to create a statistical group composite.*

The Pareto Cumulative Frequency Chart provides an efficient and satisfying method for achieving consensus to group members who find themselves in an initial stage of disagreement (Northcutt & McCoy 2004:157). Hackman and Wageman (1995:314), arguing from the TQM perspective, state that Pareto analysis is used to 'identify the major factors that contribute to a problem and to distinguish the vital few from the trivial many causes'. Table 4.4 illustrates the frequency of affinities in descending order with Pareto and Power analysis.

Table 4.4: RG1: Pareto Protocol: RG1

Affinity Pair Relationship	Frequency Sorted (Descending)	Cumulative Frequency	Cumulative Percent (Relation)	Cumulative Percent (Frequency)	Power
		*	**	***	****
1 < 2	4	4	5.0	12.1	7.1
1 < 3	4	8	10.0	24.2	14.2

Affinity Pair Relationship	Frequency Sorted (Descending)	Cumulative Frequency	Cumulative Percent (Relation)	Cumulative Percent (Frequency)	Power
		*	**	***	****
1 < 5	4	12	15.0	36.4	21.4
3 > 4	4	16	20.0	48.5	28.5
4 > 5	4	20	25.0	60.6	35.6
1 < 4	3	23	30.0	69.7	39.7
2 < 3	3	26	35.0	78.8	43.8
2 < 4	3	29	40.0	87.9	47.9
3 < 5	3	32	45.0	97.0	52.0
3 > 5	1	33	50.0	100.0	50.0
1 > 2	0	33	55.0	100.0	45.0
1 > 3	0	33	60.0	100.0	40.0
1 > 4	0	33	65.0	100.0	35.0
1 > 5	0	33	70.0	100.0	30.0
2 > 3	0	33	75.0	100.0	25.0
2 > 4	0	33	80.0	100.0	20.0
2 > 5	0	33	85.0	100.0	15.0
2 < 5	0	33	90.0	100.0	10.0
3 < 4	0	33	95.0	100.0	5.0
4 < 5	0	33	100.0	100.0	0.0
Total Frequency	**33**	Equals Total Frequency	Equals 100%	Equals 100%	Power = E-D

***Running total, frequency of votes for an affinity pair added to the previous total
**Cumulative percentage based on the number of total possible relationships (each relationship represents 1/20)
***Cumulative percentage based on the number of votes cast (33)
****Power is the degree of optimization of the system, the difference between cumulative percent (frequency) and cumulative percent (relation)

4.5.3 AMBIGUOUS RELATIONSHIPS

Northcutt and McCoy (204:161-162) explain that ambiguous relationships occur during theoretical coding when the participants suggest opposite relationships to a pair of affinities e.g. A→B and A←B. The authors indicate that during Pareto Analysis this conflicting argument is not resolved. Ambiguous relationships occur when participants are not able to identify another affinity that might intervene between or interact with the two existing affinities, leading to the group identifying a direct relationship between a pair of affinities while in fact, the relationship is indirect (Northcutt & McCoy 2004:162). The authors hypothesise that a 'third affinity, C' topology might cast some light, if both affinities A and B

are the result of an undetected common influence affinity 'C' or undetected feedback loop 'C' which will covary in some meaningful way (Northcutt & McCoy 2004:162). The ambiguity is resolved by 'coding the ambiguous relationship with the highest frequency with the appropriate arrow and coding the relationship with the smaller frequency with a question mark (?)', i.e. putting the ambiguous relationships into 'suspension' to allow the creation of the System Influence Diagram (SID) using the unambiguous relationships (Northcutt & McCoy 2004:163). Using columns 1 and 2 of the Pareto Protocol table (Table 4.4), the relationships that represent roughly 80% of the variation are selected for conflict analysis. Column 5 represents the cumulative percentage which guides the 80% selection. In the selected relationship for Table 4.4, the RG1 is reflected up to 97%. The Pareto Protocol instructions state, 'When the percentage reaches 80%, note the Frequency number in Column 2. This is the cutoff for acceptable affinity relationships. If the same frequency number continues beyond 80% the cutoff is where the next frequency number value changes'. Therefore, the cutoff for RG1 reflected all the relationships up to 97%.

The ambiguous relationships are made of conflicting relationships with arrows facing both directions. The RG1 did not have conflicting relationships.

4.5.4 CREATING A GROUP COMPOSITE: THE INTERRELATIONSHIP DIAGRAM (IRD), RG1

The Interrelationship diagram (IRD) is a step that aims to summarize the focus group activity and rationalise the system, by displaying arrows that 'show whether an affinity in a pair is a perceived cause or effect or if there is no relationship', it thus contains all the perceived relationships in the system (Northcutt & McCoy 2004:170). The IRD table indicates arrows that explain the cause of the relationship as explained under ART, i.e. (1→2) indicates, 1 is the cause of or influences 2 and 2 is the effect of 1 or is influenced by 1. Tables 4.5 and 4.6 illustrate the IRD of RG1. The tables show that each relationship is recorded twice as indicated by arrows pointing up (*Outs)* and left (*Ins)* (empty spaces signify absence of a relationship) and the difference between the two gives the value of *delta* (∆) (Northcutt & McCoy 2004:172). The value of the delta is used as a marker to represent the position of an affinity when drawing a System Influence Diagram (SID). Positive delta signifies a relative driver of the system. Negative delta signifies relative effects or outcomes of the system (Northcutt & McCoy 2004:173). Table 4.5 is sorted in the descending order of delta, as illustrated in Table 4.6.

Table 4.5: Interrelationship Diagram: RG1

Affinity Names: RG1

1. Positive future goals
2. Challenges in life
3. School environment
4. Adolescence
5. School Rules

Tabular IRD*								
	1	**2**	**3**	**4**	**5**	**OUT**	**IN**	**Δ**
1		←	←	←	←	0	4	-4
2	↑		←	←		1	2	-1
3	↑	↑		↑	←	3	1	2
4	↑	↑	←		↑	3	1	2
5	↑		↑	←		2	1	1

*Count the number of up arrows (↑) or *Outs*
*Count the number of left arrows (←) or *Ins*
*Subtract the number of *Ins* from the *Outs* to determine the (Δ) *Deltas* Δ = Out - In

Table 4.6: IRD Sorted in descending order of Delta: RG1

Tabular IRD – Sorted in descending Order of Δ								
	1	**2**	**3**	**4**	**5**	**OUT**	**IN**	**Δ**
3	↑	↑		↑	←	3	1	2
4	↑	↑	←		↑	3	1	2
5	↑		↑	←		2	1	1
2	↑		←	←		1	2	-1
1		←	←	←	←	0	4	-4

According to Northcutt and McCoy (2004:173), drivers can be deduced from the IRD table, where the Primary Driver of the system has a high positive delta with many *Outs* and no *Ins,* indicating it affects many other affinities and is not affected by any affinity. The '*No Ins Rule'* states that any affinity with no *Ins* is a Primary Driver (Northcutt & McCoy 2004:173). The Secondary drive has both *Outs* and *Ins,* but with more *Outs* than *Ins* (Northcutt & McCoy 2004:173). The Affinity with equal *Outs* and *Ins* is called a 'Circulator/ Pivot', indicating the middle position in the system. The Primary Outcome is identified by high negative numbers from many *Ins* and no *Outs,* indicating a significant effect from many affinities, but it does not affect others, while the Secondary Outcome is identified by both *Ins* and *Outs* with more *Ins* than *Outs,* revealing a relative effect (Northcutt & McCoy 2004:173). The *'No Outs Rule'* states that 'any affinity with no *Outs* is always a Primary Outcome (Northcutt & McCoy

2004:173). An IRD that presents with no zero values in all *Outs* or *Ins* does not indicate that there are no drivers or outcomes, but it indicates that the affinity is a strong relative cause or effect that influences or is influenced by other affinities. Such affinities can be labelled primary (Northcutt & McCoy 2004:173-174). Figure 4.5 shows the Tentative SID Assignment for RG1, which is the summary of drivers and outcomes deduced from Table 4.6.

Tentative SID Assignment: RG1		
3	Primary Driver	School Environment
4	Primary Driver	Adolescence
5	Secondary Driver	School Rules
2	Secondary Outcome	Challenges in life
1	Primary Outcome	Positive future goals

Figure 4.5: Tentative SID Assignment, RG1

4.5.5 GENERATING THE SYSTEM INFLUENCE DIAGRAM (SID): RG1

The SID is created by arranging the affinities horizontally according to their types as they appear in the Tentative SID Assignment. The Tentative SID Assignment of RG1 is represented in Figure 4.5. If a particular type contains more than one affinity, they are placed vertically in descending order of delta (Northcutt & McCoy 2004:178). A SID is constructed by using the example of the ART, i.e. arrows are drawn to represent the relationship between the affinities as they appear on the IRD and the initial SID. The *Cluttered SID* (see Figure 4.6) represents all the links (Northcutt & McCoy 2004:178). Northcutt & McCoy (2004:179) maintain that it becomes difficult to draw relationship arrows when affinities are arranged horizontally or flat and to resolve the difficulty they suggest to spread the affinities to make a circle. I have therefore arranged the affinities in circular form to draw the SID and reverted to a horizontal or flat SID with the final uncluttered SID.

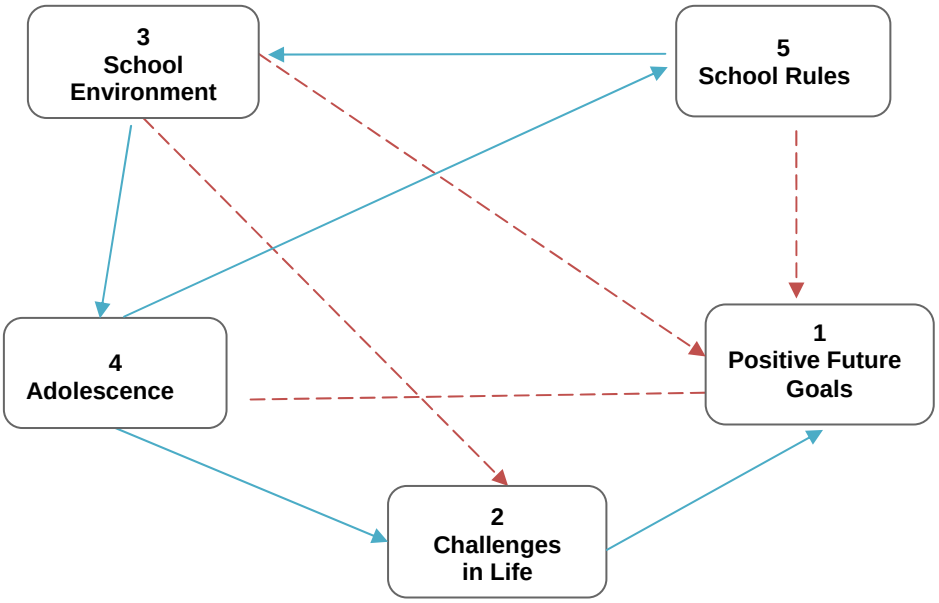

Figure 4.6: Cluttered System Influence Diagram, RG1

The Cluttered SID contains redundant links, both a direct and indirect route. The direct links are represented by dotted lines in Figure 4.6. When the direct link is removed, the indirect path from the driver to the outcome still exists. Removing the indirect links obviously causes loss of linkage information (Northcutt & McCoy 2004:178).The direct route 3-1 can be removed, there is a path 3-4-2-1; 3-2 can be removed, an intermediary path exists, 3-4-2; 4-1 can be removed, 4-2-1 is the intermediary path; and 5-1 can be removed with 5-3-4-2-1 remaining as the intermediary path. Figure 4.7 presents a clean SID, with all the redundant links removed. Northcutt and McCoy (2004:38) refer to the cluttered SID as 'high in complexity and low in simplicity' and the uncluttered SID as 'high in simplicity and low in complexity'. According to Northcutt and McCoy (2004:180), the clean SID aims to best communicate the effect-structure of the system 'as long as no links are broken' and a good general rule of thumb when arranging affinities is from left to right in the order of delta. Figure 4.5 was used additionally to guide me when arranging affinities from left to right in the descending order of delta, so that the clean SID would represent both influence and the driver/pivot/outcome status in the relationships among the affinities.

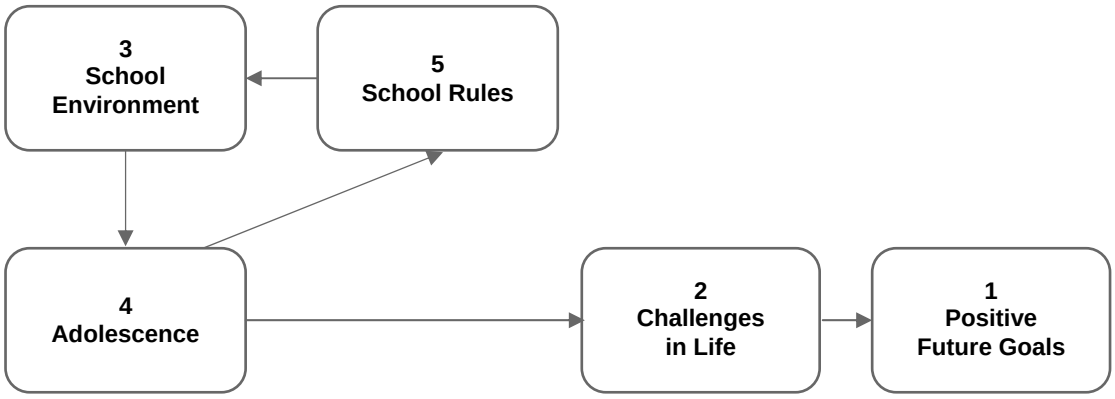

Figure 4.7: The Clean SID, RG1

In response to the questions, 'How does the school contribute to who you are?' and 'What is it that the school does that makes you who you are?' the resilient participants from School 1 perceived the affinities, *School Environment* and *Adolescence* as the Primary Drivers and *Positive Future Goals* as the Primary Outcome. Looking at the descriptions of affinities by RG1 in Figure 4.2, the resilient middle-adolescents of School 1 simply stated that their particular school environment influences or determines how teaching and learning take place to support their needs as adolescents. The school environment has a direct influence on the developmental phase of adolescence and is directly influenced by *School Rules.* The three affinities result in a feedback loop, starting at one affinity and leading back to the affinity (Northcutt & McCoy 2004:30-32). The adolescence stage determines which *Challenges in Life* they are presently facing, which in turn influences them to strive for their *Positive Future goals*.

In their perception, the school environment delivers on its mandate of teaching and learning in ways which are sensitive to and understand the demands and challenges of adolescence with the aim that one should positively achieve one's future goals. The resilient middle-adolescents of School 1 further point out the influential role of school rules to shape practices in the school environment, which indicates that even though the school environment is the primary driver, it is directly influenced by one affinity, the school rules.

The developmental phase of adolescence, even though it is a primary driver, also plays an intermediary role through which the school environment influences other affinities in the system, indicating that the school accommodates this phase differently than it would, for example, have accommodated preteens. The developmental phase of adolescence exposes the resilient learner to specific challenges in life and how the individual processes the challenges, will impact on his/her future goals. Successful resolution of challenges leads to positive future goals, which is what the resilient participants expect from life. Unsuccessful

resolution of challenges would lead to negative future goals, or to failure in attaining the goals.

It is not surprising to note that the developmental stage of adolescence influences what the participants experience as challenges in life, which can be associated with the 'stormy' and stressful nature of the stage (Louw & Louw 2007:282). The SID of RG1 indicates that adolescents' successful resolution or lack of success in resolving challenges will directly affect their future goals. The importance of success in managing and resolving life's challenges is highlighted by its direct influence on one's future. Positive future goals is the ultimate outcome in the view of the resilient middle-adolescents in School 1, it represents who they are and what the school contributes to who they are. The school provides an environment with rules and structure, a nurturing environment which guides and skills them towards managing and dealing with their developmental challenges and thus equips them to be successful individuals in the future. The recursive loop, shown in Figure 4.8, is discussed below.

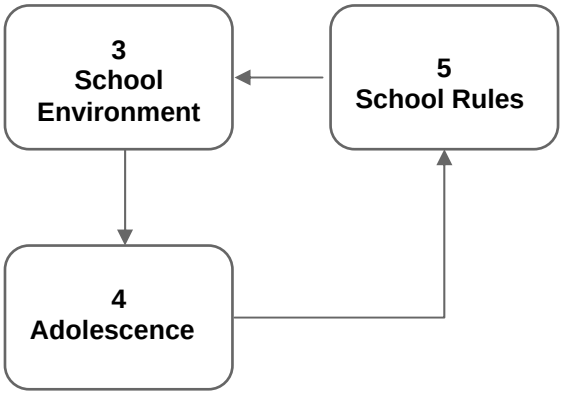

Figure 4.8: Rules, environment and developmental stage

Figure 4.8 illustrates a feedback relationship that exists among the three driver affinities of school environment, adolescence and school rules. The relationship states that the school environment is a nurturing and supportive environment for the middle-adolescent to learn and develop effectively. The school provides a structured learning environment with rules and principles which guide and direct the adolescent learners' behaviour in order for teaching and learning to take place effectively. One learner summed the importance of the school environment as follows: *'If there was no school there will not be order because we will all stay at home and do nothing'*. A school environment functioning well due to the consistent implementation of healthy, clear rules that give supremacy to order and structure, nurtures the development of the adolescent and provides for the satisfaction of the adolescent. The resilient adolescents in School 1 stated that for one to develop effectively and function productively in one's school environment one needs rules and structure to guide and protect

the learners. The resilient participants from School 1 recognised the importance of consistency and the security of knowing what is right and wrong, including moral development, in a school environment to support the unique needs and challenges of adolescence. The school environment is influenced by school rules and school rules constitute principles of governance and include policies, ethos, vision and missions of the school. The whole school approach is guided by the functional vision, mission and principles of governance. A school that caters for the needs of the learner should function within the functionalist model, where order takes precedence with clearly defined roles and expectations, which is well explained by Jansen's (2004:384) declaration that 'every component of the school, working with the others, enables the institution to function smoothly and predictably in achieving the mission and objectives of the school'.

In the following sections, the affinity analyses of RG2, LRG1 and LRG2 will be presented, their SIDs will be discussed and some comparative discussion will be attempted on the resilient and less-resilient focus groups of the two schools. To avoid repetition, the process detailed throughout this section in the presentation of the RG1 affinity analysis, will not be explained again.

4.6 AFFINITY ANALYSIS: RG2

The SID of RG2 was created by arranging its affinities according to the Tentative SID Assignment, see Tables 4.8 and 4.9. The Pareto Protocol for RG2, Table 4.7, shows that the cutoff reflected all the relationships up to 92.3%. There were no conflicting relationships.

Table 4.7: The Pareto Protocol RG2

Affinity Pair Relationship	Frequency Sorted (Descending)	Cumulative Frequency	Cumulative Percent (Relation)	Cumulative Percent (Frequency)	Power
1 > 4	4	4	5.0	15.4	10.4
4 < 5	4	8	10.0	30.8	20.8
1 < 2	3	11	15.0	42.3	27.3
1 < 5	3	14	20.0	53.8	33.8
2 > 4	3	17	25.0	65.4	40.4
2 < 5	3	20	30.0	76.9	46.9
1 > 3	2	22	35.0	84.6	49.6
3 > 4	2	24	40.0	92.3	52.3
2 > 3	1	25	45.0	96.2	51.2
3 < 5	1	26	50.0	100.0	50.0

Affinity Pair Relationship	Frequency Sorted (Descending)	Cumulative Frequency	Cumulative Percent (Relation)	Cumulative Percent (Frequency)	Power
1 > 2	0	26	55.0	100.0	45.0
1 < 3	0	26	60.0	100.0	40.0
1 < 4	0	26	65.0	100.0	35.0
1 > 5	0	26	70.0	100.0	30.0
2 < 3	0	26	75.0	100.0	25.0
2 < 4	0	26	80.0	100.0	20.0
2 > 5	0	26	85.0	100.0	15.0
3 < 4	0	26	90.0	100.0	10.0
3 > 5	0	26	95.0	100.0	5.0
4 > 5	0	26	100.0	100.0	0.0
Total Frequency	**26**	Equals Total Frequency	Equals 100%	Equals 100%	Power = E-D

Table 4.8: Interrelationship diagram: RG2

Affinity Names: RG2

1. Education
2. Reaching one's goals
3. School Curriculum
4. Ensuring Care and Safety
5. School Resources

Tabular IRD

	1	2	3	4	5	OUT	IN	Δ
1		←	↑	↑	←	2	2	0
2	↑			↑	←	2	1	1
3	←			↑		1	1	0
4	←	←	←		←	0	4	-4
5	↑	↑		↑		3	0	3

Table 4.9: IRD sorted in descending order of delta with tentative SID Assignment: RG2

Tabular IRD – Sorted in descending Order of Δ								
	1	**2**	**3**	**4**	**5**	**OUT**	**IN**	**Δ**
5	↑	↑		↑		3	0	3
2	↑			↑	←	2	1	1
1		←	↑	↑	←	2	2	0
3	←			↑		1	1	0
4	←	←	←		←	0	4	-4

Tentative SID Assignment RG2		
5	Primary Driver	School resources
2	Secondary Driver	Reaching one's goals
1	Circulator / Pivot	Education
3	Circulator / Pivot	School curriculum
4	Primary Outcome	Ensuring care and safety

Figure 4.9 illustrates the cluttered SID produced by the resilient participants of School 2, in answer to the focus group issue statement question.

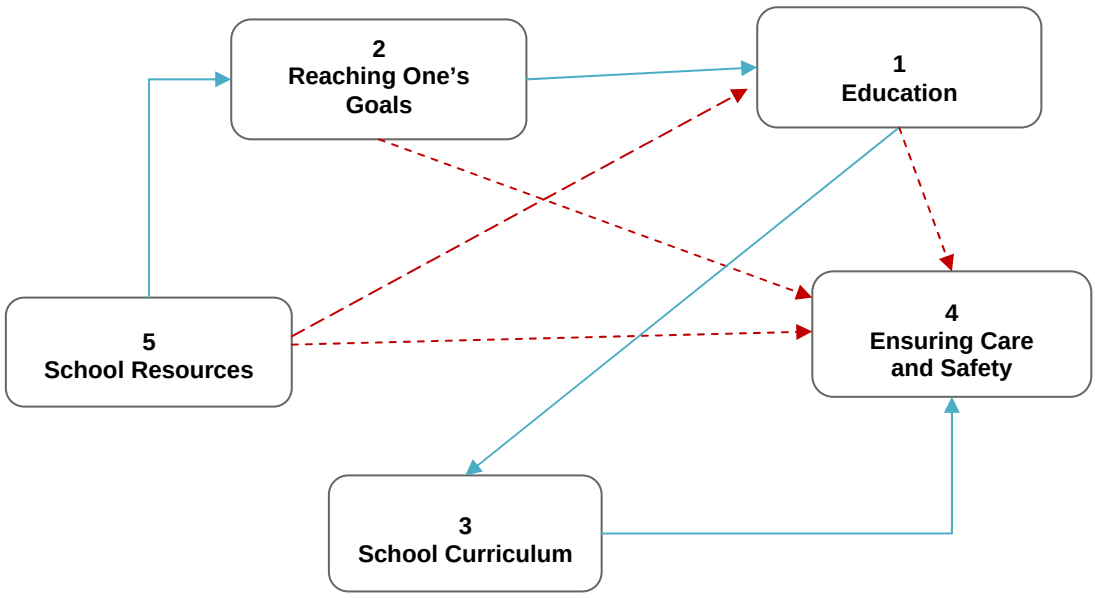

Figure 4.9: Cluttered System Influence Diagram, RG2

The dotted lines indicate redundant direct links that can be replaced by intermediary links that exist. The direct link 5-4 can be removed, an intermediary path exists 5-2-1-3-4; 5-1 can be removed, 5-2-1 is the intermediary path; 2-4 can be removed with 2-1-3-4 as the intermediary path; 1-4 can be removed, there is a path1-3-4. Figure 4.10 illustrates a clean

SID with all redundant links removed, indicating influence (→) as well as the equal status of the two pivots (presented as ovals).

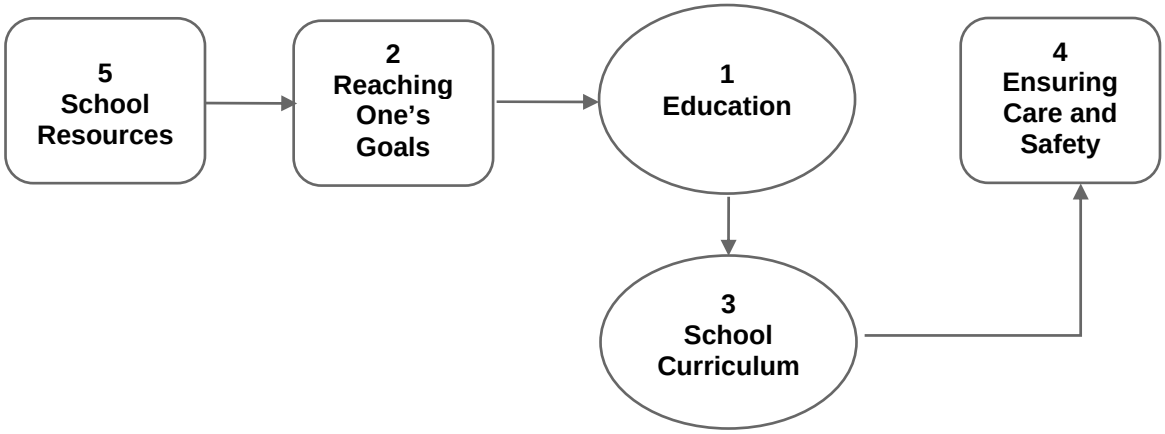

Figure 4.10: Uncluttered System Influence Diagram, RG2

In response to the questions, 'How does the school contribute to who you are?' and 'What is it that the school does that makes you who you are?', the resilient participants from School 2 perceived the affinity *School Resources* as the Primary Driver and *Ensuring Care and Safety* as the Primary Outcome. The SID gives a visual representation of what in the school environment contributes to 'who they are'. The SID looks complicated and the logic of the causal relationships among the affinities is not clear at a glance. However, I have proceeded to make sense of the representation of the resilient group from School 2, guided by their definition of the affinities in Figure 4.2.

The resilient middle-adolescents from School 2 stated that 'I am who I am primarily because of the resources my school provides me with, which lead to the particular goals that I reach (or do not reach) in enabling me to learn the subjects provided by the curriculum in my education. My school consequently contributes to the degree of care and safety I experience (or don't experience) in the rules and social principles I am taught.

In their perception, access to school resources directly influences the adolescent's ability to plan successfully and to reach their goals. The resilient middle-adolescents of School 2 explicitly perceived lack of access to school resources as detrimental to their goals. They positioned both *Education* and *School curriculum* as pivots or circulators in the SID. A circulator has an equal amount of *Ins* and *Outs,* positioning it in the middle (Northcutt & McCoy 2004:173) and it is therefore neither a driver nor an outcome. Ideally, a pivot is an important position in the SID because other affinities depend or revolve around it. In this way, it connotes the context or condition within which the drivers operate to effect the outcomes.

The SID of the resilient middle-adolescents from School 2 illustrates that in as much as education and school curriculum are influenced by school resources and the reaching of goals, they are 'affected' by the drivers and thus represent some 'effect' of school resources and the reaching of goals. According to Northcutt and McCoy (2004:29,197), the relationships between affinities are defined as cause and effect and one of the strengths of IQA is the ability to represent relationships in terms of cause and effect. In this study, I am cautious in using 'cause' and 'effect' when defining the influences and prefer to think multi-factorially in terms of 'contribution' or 'influence', i.e. an influencing affinity affects the other. The two pivots occupy a position that is capable of spinning and turning things around depending on the influence of the driver. Thus it can be assumed that access to school resources will enable the learners to benefit effectively from teaching and learning in the 'right' subjects that will enable them to gain more knowledge, and that influences the school's role of providing care and safety for its learners. However, lack of access to school resources also influences the quality of education and the curriculum of the school, thus affecting the school's role of ensuring care and safety for its learners negatively.

The SID indicates that the two affinities education and school curriculum occupy a similar position as pivots, but the learners perceived education to influence the school curriculum and not the other way around. 'Education' is defined as teaching and learning and getting more knowledge, an opportunity to be someone in life, while 'school curriculum' is defined as subjects taught at school, which are part of teaching and learning. It is not surprising that the learners perceived that the education the school provides has an influence on the 'quality' of the subjects offered. The two pivots are the 'effects' of the drivers and influence the outcome, i.e. access to good educational resources influences the quality of education and subjects provided and ultimately influences the school's role of ensuring care and safety. Simply, the middle-adolescent learners in School 2 were saying, 'a school that makes educational resources available to its learners thus supporting the reaching of goals, is able to provide good education and present the curricular subjects adequately, thereby providing a safe and caring learning environment'.

According to the resilient adolescents of School 2, lack of access to available school resources frustrated their educational goals. Their experiences can best be explained by the following statement: *We have computers at school but we are not allowed to use them, only teachers and Grade 11-12 are allowed to use computers, it is frustrating because we want to learn so much about the things that we do not understand and new things but here at school we are denied the chance to do that'*. The outcome perceived by the learners was that of a school that ultimately failed to provide them with care and safety.

In conclusion, the primary outcome of the SID, ensuring care and safety, is influenced by all the affinities while it influences none. The RG2 stated that the role of the school is to ensure care and safety for its learners, i.e. enforcing discipline, the school rules and maintaining order are driven by school resources (primary driver), which influences the way and degree in which goals are achieved, the quality of education and the presentation of the school curriculum. The affinity in the primary outcome position represents the result of the relationships of all the affinities in the SID, its position reports on what happens in the system. In answer to the question 'What is it that the school does (or fails to do) that makes (or affects) who you are?' the RG2 with their SID said, 'The school can ensure that they provide us with care and safety' or, based on the negative statements in their definition of affinities (Figure 4.2), 'The school does not ensure that we are provided with care and safety'.

4.7 REFLECTION ON THE RG1 AND RG2 SIDs

The RGI and RG2 participants from the two schools identified future goals as one of the affinities that contributed to who they are, but its influence operated in different ways.

The RG1 participants saw achieving positive future goals as the outcome of what the school does to make them who they are. The group's perception of self, 'who they are', and what the school does to make them who they are, was motivated by the rewards they foresaw, their focus on their future, with the school environment and their life phase of adolescence as the primary drivers. In their view, the structured environment that directs and models required behaviour essential for one's development equipped them with essential skills to manage challenges they encountered and thus prepare them for their positive future. The participants clearly stated that the school supports who they are, by enforcing rules and thus ensuring that their environment is able to provide them with the required teaching and learning and necessary skills to handle their developmental challenges and to have successful careers. The focus was on their positive future.

The RG2 participants saw reaching goals as the secondary driver in how the school contributes to who they are. The position of influence occupied by the affinity, reaching one's goals, is important because of its 'effect' on the other affinities on the SID, i.e. the two pivots and the primary outcome. The affinity is influenced by the primary driver, school resources. It can be assumed therefore, that when School 2 denies its learners access to essential resources it limits their opportunity to reach their goals. Mentioning goal attainment so early in the SID, and as a driver, signals a different scale of goals targeted, i.e. school-based rather than future-based. It is important to note that the RG2 defined school resources as available school resources **for one to use.** The definition in my understanding emphasises

access. To RG2 participants, access to school resources was essential for providing the necessary tools to enable them to reach their goals, 'like success', or effective execution of tasks.

The two groups viewed the supportive role of the school as essential, but approached it using different drivers and outcomes. The RG1 viewed structure, enforcing discipline and guidance to be the driver of how the school contributes to who they are. Management and leadership are essential for them to maintain who they are, and for them the goal or outcome of what the school can do for them, is to ensure they achieve positive future goals. The group thinks adolescents could struggle or even fail in an environment where the rules are lax and fail to accommodate their developmental state. The RG2 viewed school resources as a driver to how the school can contribute to who they are and ensuring care and safety as the outcome, thereby emphasising a more utilitarian perspective. To them a school which denies them access to resources will negatively affect their education. A good education to them is defined in terms of access to available resources, which enables them to gain knowledge and learn better in the subjects they enjoy.

The two groups show the dynamic role of context in influencing perceptions and behaviour and the focus of the resilient participants. The results thus suggest that the two schools, because of their uniqueness had a different influence and effect on their learners. The negative formulation of affinities appears strong from RG2 compared to RG1 (Figure 4.2), especially bearing in mind that they both represent the resilient groups. In comparison to the RG1 participants, the resilience scores of RG2 participants are lower (Table 4.1) and this might be related to their more demanding attitude in respect of their school environment or it might indicate an awareness of what the school is not able to provide for them to function effectively. Another explanation could be the interactions among the role players as a school or teacher influence, i.e. an environmental or systemic effect. However, it cannot be denied that the two groups clearly focused on different drivers and outcomes in answer to the research question.

4.8 AFFINITY ANALYSIS: LRG1

The Pareto Cumulative Frequency Chart presented in Table 4.10 gives a representation of the affinity relationship table with the frequency of the agreement of the focus group members. The affinities are sorted in the descending order of frequency. The Pareto Protocol for LRG1, Table 4.10, shows that the cutoff reflected all the relationships up to 89.7%.

Table 4.10: The Pareto Protocol: LRG1

Affinity Pair Relationship	Frequency Sorted (Descending)	Cumulative Frequency	Cumulative Percent (Relation)	Cumulative Percent (Frequency)	Power
1 < 3	4	4	5.0	13.8	8.8
1 > 5	4	8	10.0	27.6	17.6
2 < 3	4	12	15.0	41.4	26.4
2 > 5	4	16	20.0	55.2	35.2
3 > 5	4	20	25.0	69.0	44.0
1 > 4	3	23	30.0	79.3	49.3
4 > 5	3	26	35.0	89.7	54.7
2 < 4	2	28	40.0	96.6	56.6
1 < 4	1	29	45.0	100.0	55.0
1 > 2	0	29	50.0	100.0	50.0
1 < 2	0	29	55.0	100.0	45.0
1 > 3	0	29	60.0	100.0	40.0
1 < 5	0	29	65.0	100.0	35.0
2 > 3	0	29	70.0	100.0	30.0
2 > 4	0	29	75.0	100.0	25.0
2 < 5	0	29	80.0	100.0	20.0
3 > 4	0	29	85.0	100.0	15.0
3 < 4	0	29	90.0	100.0	10.0
3 < 5	0	29	95.0	100.0	5.0
4 < 5	0	29	100.0	100.0	0.0
Total Frequency	**29**	Equals Total Frequency	Equals 100%	Equals 100%	Power = E-D

Using the Pareto Cumulative Frequency Chart, a summary of all the relationships is represented through the IRD to determine the system's drivers and outcomes. The IRD for the LRG1 is illustrated in Table 4.11 and Table 4.12.

Table 4.11: Interrelationship diagram: LRG1

Affinity Names: LRG1
1. Being Friendly
2. Bullying
3. Socialisation
4. Challenges
5. Future Goals

Tabular IRD LRG1								
	1	**2**	**3**	**4**	**5**	**OUT**	**IN**	**Δ**
1			←	↑	↑	2	1	1
2			←		↑	1	1	0
3	↑	↑			↑	3	0	3
4	←				↑	1	1	0
5	←	←	←	←		0	4	-4

Count the number of up arrows (↑) or *Outs*
Count the number of left arrows (←) or *Ins*
Subtract the number of *Ins* from the *Outs* to determine the (Δ) *Deltas* Δ = Out - In

Table 4.12: IRD sorted in descending Order of delta with tentative SID Assignment: LRG1

Tabular IRD – Sorted in descending Order of Δ								
	1	**2**	**3**	**4**	**5**	**OUT**	**IN**	**Δ**
3	↑	↑			↑	3	0	3
1			←	↑	↑	2	1	1
2			←		↑	1	1	0
4	←				↑	1	1	0
5	←	←	←	←		0	4	-4

Tentative SID Assignments		
3	Primary Driver	Socialisation
1	Secondary Driver	Being friendly
2	Circulator/ Pivot	Bullying
4	Circulator / Pivot	Challenges
5	Primary Outcome	Future goals

The SID provides a visual picture of the relationships among the affinities and represents the mindmap of the perceptions of the participants in LRG1 in response to the questions, 'How does the school contribute to who you are?' and 'What is it that the school does that affects

who you are?' Figure 4.11 represents a cluttered SID of LRG1. The dotted lines illustrate redundant links which were removed to present a clean SID in Figure 4.12.

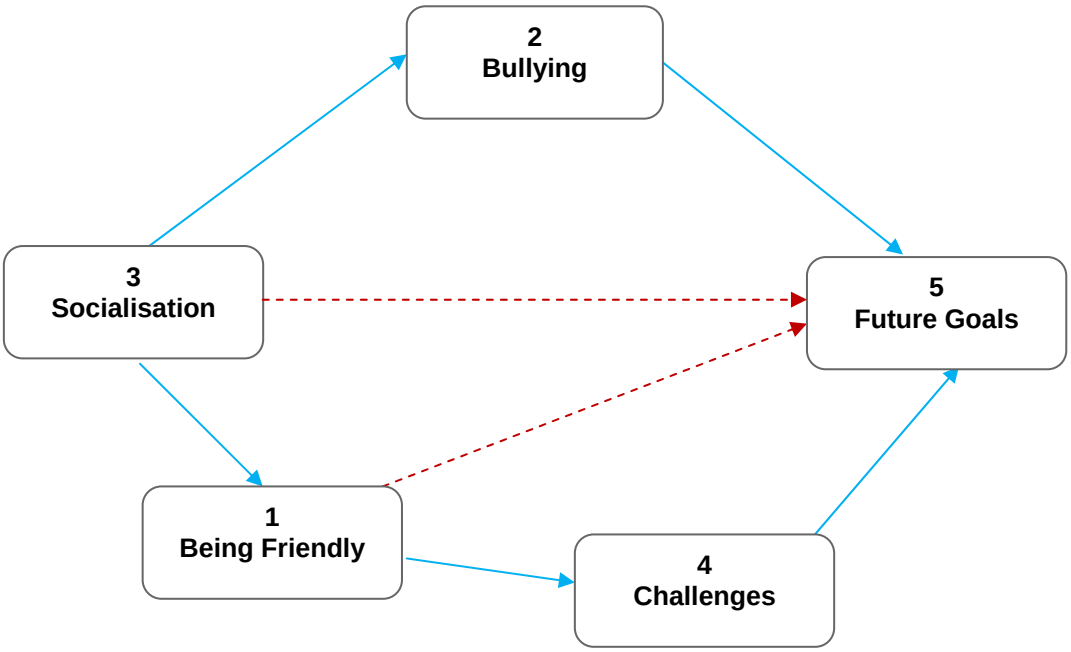

Figure 4.11: The Cluttered SID, LRG1

The direct route 3-5 can be removed, there is a path 3-2-5 or 3-1-4-5; and 1-5 can be removed, an intermediary path exists 1-4-5. Figure 4.12 represents the clean SID with all the redundant links removed.

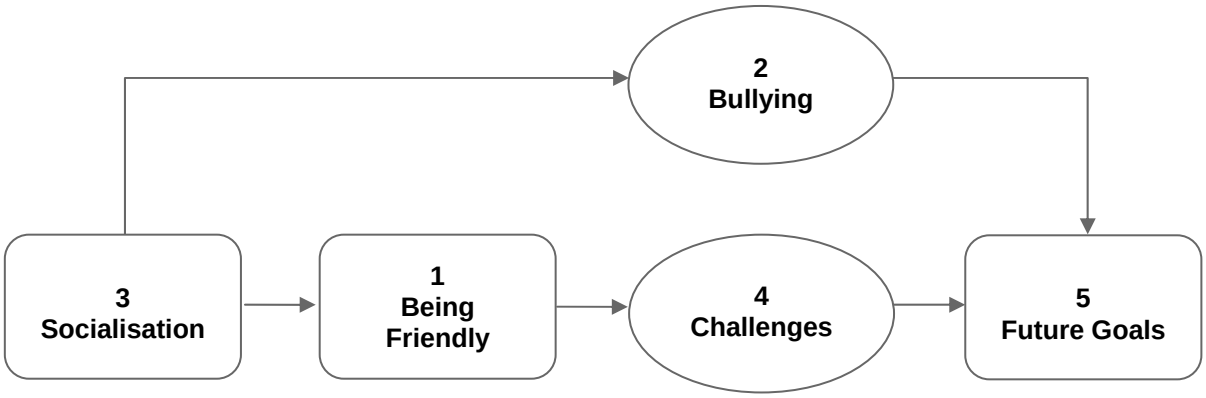

Figure 4.12: The Clean SID, LRG1

In answer to the questions 'How does the school contribute to who you are?' and 'What is it that the school does that makes you who you are?' the less-resilient participants from School 1 perceived the affinity, *Socialisation* as the primary driver and *Future goals* as the primary outcome. Looking at the description of the affinities by LRG1 in Figure 4.2, the less-resilient middle-adolescents of School 1 simply stated that socialisation influences who they are, i.e. a bully or a friendly person. The group defined socialisation as 'how one was raised, one's values and culture', whereby family then plays a significant role in this affinity. It cannot be

ignored that the school, just like the home, then is a socialisation agent and contributes to the socialisation of the learner (Louw & Louw 2007:8, 138-139, Parson, Bales, Olds, Zelditch & Slater 1956:17-18, 38, 125), but the less-resilient participants of School 1 emphasised the role of parents above that of the school in the socialisation of the child. They argued that by the time a learner starts school, he/she has developed morally to differentiate between right and wrong behaviour and to respect others. The less-resilient learners of School 1 accepted that not all children are socialised the same. Thus, depending on how one was socialised, the behaviour demonstrated at school indicates that some learners are friendly and others are bullies. The affinity bullying is constructed as a verb but the definition (Figure 4.2) was given as a noun and I will thus discuss it as a noun.

The affinity *Being friendly* is positioned as a secondary driver while *Bullying* and *Challenges* are pivots, connoting conditions within which the drivers operate to effect the outcome. The LRG1 simply indicated that 'bad' socialisation influences one to be a bully, and because of its negative construction and pivot position, the influence of the negative frame of perspective and behaviour on the future goals of the learner might not be desirable. LRG1 in Figure 4.2 defined bullying as a bad person, 'not a good or a friendly person, but a naughty and delinquent person'. By contrast, being friendly, as a driver, influences or even determines how the individual engages with challenging circumstances and emerges from these to attain the goals set for the future.

According to Figure 4.2, the less-resilient learners of School 1 perceived that being friendly includes 'having the right attitude and respect for others'. Challenges are defined as problems one experiences in one's environment, e.g. poverty, lack of parental support and difficulty in identifying and utilising teacher support. According to Figure 4.2, the LSG1 perceived that, in dealing with some of the challenges, the friendly individual can for instance decide to share lunch with other deprived learners, portraying an altruistic attitude, or approach a teacher for assistance, portraying a trustful attitude. The SID indicates future goals as the primary outcome. Future goals are defined as what learners want to be when they grow up, it is about reaching goals and doing the job one wants. Being friendly influences how they deal with the challenges. The challenges, according to the group, are accepted as part of growing up. The school only features in being the context containing the challenges. Challenging conditions then influence the attainment of future goals, by sharpening and 'challenging' them to seek solutions to problems. Challenges are positively constructed (they include active participation in finding solutions to problems) and recognised and in this way influence how the desired future goals are attained. The group indicated that dealing with challenges constructively helps in growth and development and since a bully does not engage positively with challenges, he/she loses on the experiences which the

friendly learner gains when exposed to challenges. The attainment of future goals by the two individuals will thus be different in the degree of attainment and perhaps even in terms of range.

According to Figure 4.2, the less-resilient participants of School 1 thought that, once future goals are achieved, the family shares in the joy of reaching one's dreams and allowing significant others to benefit from one's success and making them happy and proud. It thus makes sense that the less-resilient participants of School 1 indicated socialisation primarily in the home as the strongest driver in how the school contributes to who they are, and future goals as the ultimate outcome of family influence and personal endeavour. The socialisation agents share in the joy and outcome of what the learners perceived the school could only provide a context for, for them to achieve, their future goals. According to the group, as described in Figure 4.2, future goals are connected with education and learning (the school provides the opportunity), but the personality (being friendly) required for one to achieve future goals is not easy, it leads one through personal challenges.

4.9 AFFINITY ANALYSIS: LRG2

4.9.1 ORIENTATION

The Pareto Cumulative Frequency Chart presented in Table 4.13 gives a representation of the affinity relationship table with the frequency arrangement of the focus group members and shows that the cutoff reflected all the relationships up to 95.7%. Table 4.15 indicates the conflicting relationships the LRG2 produced, 1→2 and 2→1, (discussed in 4.5.3).

Table 4.13: The Pareto Protocol: LRG2

Affinity Pair Relationship	Frequency Sorted (Descending)	Cumulative Frequency	Cumulative Percent (Relation)	Cumulative Percent (Frequency)	Power
1 > 3	4	4	5.0	17.4	12.4
1 < 5	4	8	10.0	34.8	24.8
2 > 3	4	12	15.0	52.2	37.2
3 < 4	4	16	20.0	69.6	49.6
1 > 2	2	18	25.0	78.3	53.3
1 < 2	2	20	30.0	87.0	57.0
3 < 5	2	22	35.0	95.7	60.7
1 < 4	1	23	40.0	100.0	60.0
1 < 3	0	23	45.0	100.0	55.0
1 > 4	0	23	50.0	100.0	50.0

Affinity Pair Relationship	Frequency Sorted (Descending)	Cumulative Frequency	Cumulative Percent (Relation)	Cumulative Percent (Frequency)	Power
1 > 5	0	23	55.0	100.0	45.0
2 < 3	0	23	60.0	100.0	40.0
2 > 4	0	23	65.0	100.0	35.0
2 < 4	0	23	70.0	100.0	30.0
2 > 5	0	23	75.0	100.0	25.0
2 < 5	0	23	80.0	100.0	20.0
3 > 4	0	23	85.0	100.0	15.0
3 > 5	0	23	90.0	100.0	10.0
4 > 5	0	23	95.0	100.0	5.0
4 < 5	0	23	100.0	100.0	0.0
Total Frequency	**23**	Equal Total Frequency	Equals 100%	Equals 100%	Power = E-D

Table 4.14: Conflicting relationships, LRG2

Affinity Pair Relationship	Frequency Sorted (Descending)	Conflict?
1 > 2	2	?
1 < 2	2	?
3 < 5	2	
1 > 3	4	
1 < 5	4	
2 > 3	4	
3 < 4	4	

According to Northcutt and McCoy (2004:163), the conflicting relationship with the highest frequency is included in the IRD, while the remaining one is later reconciled when constructing the SID. In this case, both had the same frequency (2). As a result, the first relationship in order of appearance was used and the remaining one will be reconciled later, when constructing a clean SID. Table 4.15 and 4.16 present the IRD of the LRG2.

Table 4.15: Interrelationship diagram: LRG2

Affinity Names: LRG2
1. Self-development
2. Self-identity
3. Reaching Goals
4. School Curriculum
5. School Resources

Tabular IRD LRG2								
	1	**2**	**3**	**4**	**5**	**OUT**	**IN**	**Δ**
1		↑	↑		←	2	1	1
2	←		↑			1	1	0
3	←	←		←	←	0	4	-4
4			↑			1	0	1
5	↑		↑			2	0	2

Count the number of up arrows (↑) or *Outs*
Count the number of left arrows (←) or *Ins*
Subtract the number of *Ins* from the *Outs* to determine the (Δ) *Deltas* Δ = Out- In

Table 4.16: IRD sorted in descending order of delta with tentative SID Assignment: LRG2

Tabular IRD – Sorted in descending Order of Δ								
	1	**2**	**3**	**4**	**5**	**OUT**	**IN**	**Δ**
5	↑		↑			2	0	2
4			↑			1	0	1
1		↑	↑		←	2	1	1
2	←		↑			1	1	0
3	←	←		←	←	0	4	-4

Tentative SID Assignments		
5	Primary Driver	School resources
4	Primary Driver	School curriculum
1	Secondary Driver	Self-development
2	Circulator/ Pivot	Self-identity
3	Primary Outcome	Reaching goals

4.9.2 GENERATING THE SYSTEM INFLUENCE DIAGRAM (SID) LRG2

The cluttered SID, Figure 4.13 generated by the LRG2 illustrates all the relationships between affinities as they appear in Table 4.16.

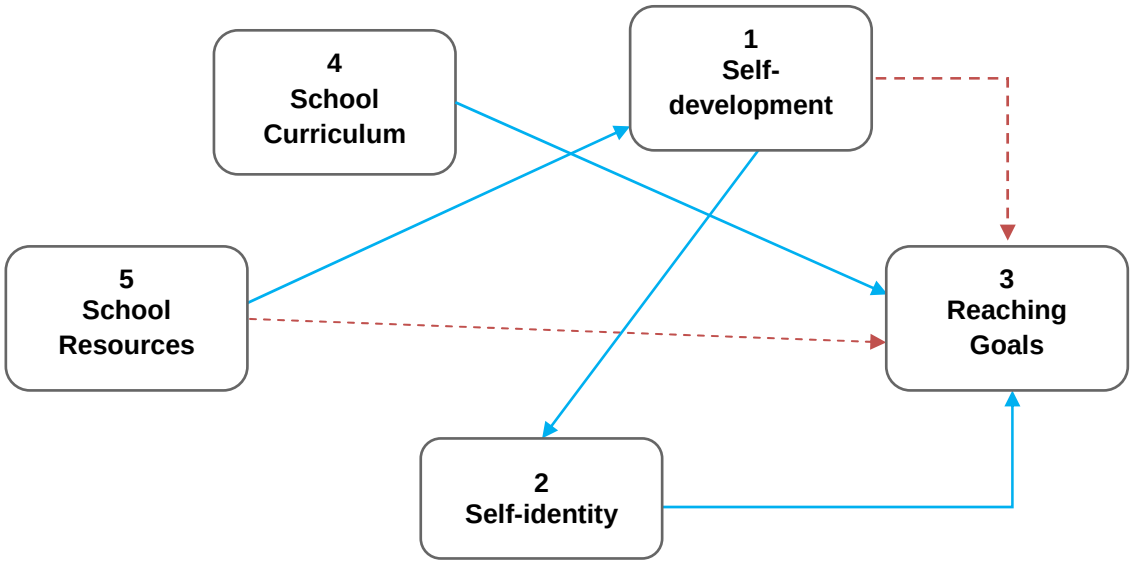

Figure 4.13: Cluttered SID, LRG2

The clutter in Figure 4.13 was cleaned by removing the direct route 5-3, an intermediary path exists 5-1-2-3 and 1-3 could be removed, an intermediary path exists 1-2-3. The conflicting links indicated in Table 4.14, 1→2 and 1←2, were reconciled to the clean SID, Figure 4.14. The reconciled link does not cause clutter to the SID, since there is no intermediary path from 2-1, the link was retained. The conflicting link indicates that the two affinities were perceived as both an influence and an effect of the relationship resulting in a feedback loop.

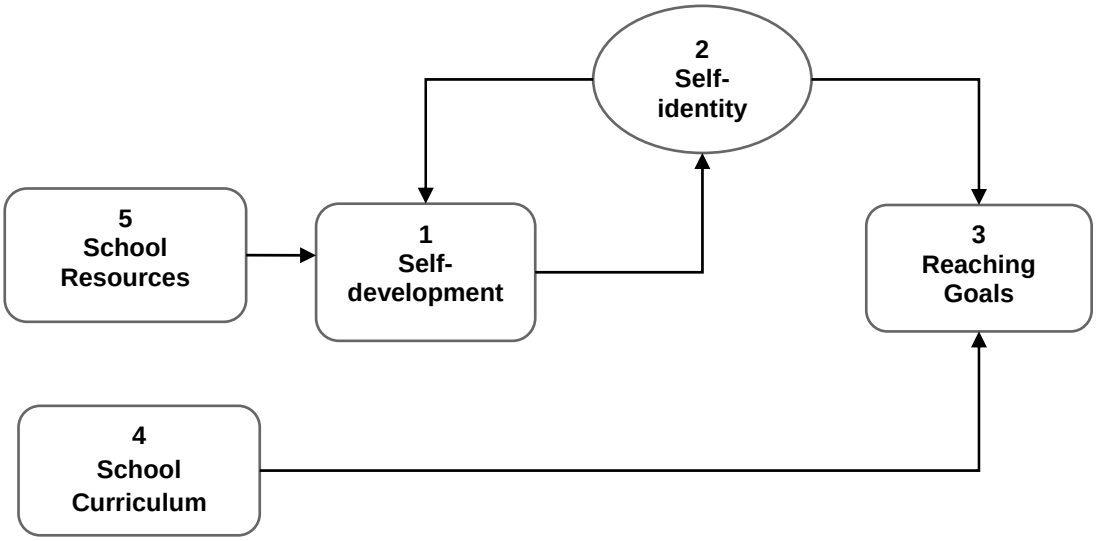

Figure 4.14: Clean SID, LRG2

Figure 4.14 provides a visual representation of what the LRG2 perceived as an answer to the questions, 'How does the school contribute to who you are?' and 'What is it that the school does that makes you who you are?'

The less-resilient middle-adolescents from School 2 perceived *School Resources* and *School Curriculum* as the primary drivers and *Reaching goals* as the primary outcome. School resources which are defined as access to school facilities, according to Figure 4.2, influences self-development which relates to what one can achieve at school, positive development, being a better person and having respect for others. Self-development influences the development of identity, which the group related to growth and development into the kind of person one wants to be, including self-discovery and self-knowledge. Ultimately, less-resilient School 2 learners perceived that self-identity influences the reaching of goals, which is defined as reaching what one wants to be and knowing the rewards of realising one's goals.

The SID indicates another primary driver, the school curriculum. School curriculum has only one relationship, it influences the primary outcome, future goals. This is an unusual occurrence in the SID. School curriculum is in Figure 4.2 defined as subjects offered at school. The importance of offering the right subjects is highlighted by how the school curriculum leads straight to influencing how one reaches goals. What the SID indicates, is that reaching goals is directly influenced by the school curriculum and indirectly influenced by access and availability to school resources. The two primary drivers were defined by the LRG2 to represent nearly similar things. School resources concentrated on lack of access to available school resources e.g. library and computer laboratory, while school curriculum referred to subjects the school does not offer but that were viewed essential for their future. The SID thus portrays that subjects the school is not providing (the affinity is constructed negatively) affect the less-resilient learners in reaching their goals. This makes sense of LRG2's frustration at the school's failure to provide them with the 'right' curriculum, e.g. *The school does not offer all the subjects that we want, not having subjects you want (singing, computer lessons) is frustrating'. 'It sometimes makes going to school useless because you do not learn all the things you want to learn'*. '*What is the use of going to school all your life and still not have the choice to learn what you want'*? What the participants were saying is that there are two ways towards the outcome, i.e. what the school can do to make them who they are, firstly, to make school resources available and secondly to provide them with the 'right' curriculum.

The LRG2 further highlights the close relationship between the two affinities, self-development and self-identity, causing a feedback loop. The feedback loop is illustrated in Figure 4.15, representing a start at one affinity that leads back to the affinity.

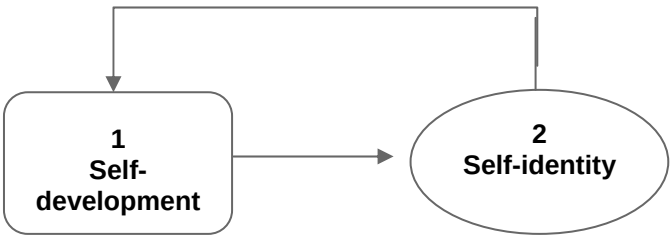

Figure 4.15: Knowing Who I Am

The two affinities are perceived as the influence and effect of each other, i.e. self-development influences self-identity and vice versa. The two affinities however, have a different effect-status in the SID. Self-development is the secondary driver and self-identity is a pivot, representing the context within which the drivers effect the outcome.

It can be assumed that healthy development could lead to a positive self-identity, which is a healthy sense of self which influences reaching goals and again, an unhealthy sense of self could deny an individual the prospect of reaching planned goals. To reach goals, which is the outcome of the relationship one has with the school, is influenced by access to school resources and the school curriculum. Self-development, growth, development and a 'better me' influence and are affected by self-identity, self-discovery, 'getting to know more about me'. The middle-adolescents stated that self-development, growth, becoming a better person and acknowledging the important role others play in one's life leads to a clear perception of self, it makes one aware of 'who you are'. It is not surprising that the two affinities created a feedback loop, they both represent a better perception of self, that growth and development lead to a healthy state of self, a clear definition of who you are. However, in life unhealthy development, the lack of growth, improvement and progress lead to role confusion, and poor future prospects, as it is clearly indicated in Erikson's adolescence developmental stage of identity vs. identity confusion (Erikson 1980:94, Louw & Louw 2007:309). The learners perceived that positive development and knowledge of self, 'who you are', are essential for one to reach one's goals. However, learners who show poor self-development are much prone to having poor self-identity and their prospect of reaching desired goals could be questioned.

4.10 REFLECTION ON THE LRG1 AND LRG2 SIDs

LRG1 and LRG2 both perceived goals as their primary outcomes (future goals and reaching goals), but outlined how the goals could be achieved quite differently. According to Figure 4.2, to LRG1 and LRG2 future goals and reaching goals have similar intentions in doing the job one wants and enjoying the rewards of one's success.

The pathways represented by the LRG1 and LRG2 middle-adolescent learners' SIDs connote both positive and negative ways contributing to and influencing the outcome. For LRG1, the two intermediary paths from the primary driver socialisation to the primary outcome future goals, run via affinities that define personality (being friendly and being a bully). For LRG2, the primary driver school resources influences the primary outcome reaching goals via growth and development and better understanding of self. It is noteworthy that the less-resilient participants in both schools were more aware of person skills and attributes than their resilient counterparts, implying some awareness of their need for further growth.

4.11 REFLECTION ON THE SIDs PER SCHOOL

The SIDs generated by School 1 middle-adolescents positioned the affinities *Challenges in life* (a secondary outcome) and *Challenges* (a pivot) to directly influence the primary outcomes, *Positive future goals* and *Future goals*. According to the RG1 SID, the developmental phase of adolescence exposes learners to specific challenges in life, and how the individual processes the challenges will then impact on his/her future goals. The LRG1 SID connotes that the personality of an individual, being friendly, influences how one will engage with the challenges in life, which strengthens one, and thus influences the attainment of one's future goals. The middle-adolescents from School 1 affirmed the influence of challenges on their future goals and the importance of resolving challenges positively to ensure positive future goals. It can be concluded that the direct influence of the affinity of challenges on the future goals of the adolescent, according to these SIDs, affirms the importance of providing life skills to middle-adolescents in School 1 to assist them in dealing with the challenges they perceived in their school environment and within themselves.

What differed in the SIDs of School 1 was the relevance accorded to the influence of the school. RG1 acknowledged *School environment* and *School rules* as primary and secondary drivers respectively, thereby elevating them to the ultimate causal sphere, whereas LRG1 relegated the contribution of the school to merely forming the context within which challenging experiences are dealt with. The less-resilient participants of School 1 expressly

stated that their development of socialisation skills within their homes was decisive in who they become.

The SIDs presented by School 2 middle-adolescents contain three similar affinities, *School resources*, *Reaching goals* / *Reaching one's goals* and *School curriculum* but with different positions of influence. RG2 and LRG2 SIDs both positioned the affinity *School resources* as the primary driver. In both SIDs, the school curriculum occupied an important position of direct influence on the primary outcomes. Their emphasis on resources and curriculum suggest a utilitarian view which might actually have been formed by perceived inadequacies. The two groups were concerned and frustrated about what they perceived as the school's inability to provide access to existing school resources, e.g. library and computer laboratory, and a relevant curriculum. RG2 viewed the availability or not of school resources as a direct influence on reaching one's goals or not, and LRG2 thought that the availability of school resources actually influenced their very development, and indirectly also their sense of identity. RG2 perceived that the school curriculum, which is positioned as a pivot, influences the school's role of providing them with care and safety (also a somewhat utilitarian outcome), while LRG2 positioned the school curriculum as a primary driver which influenced their prospects of reaching goals. It can be concluded that School 2 middle-adolescents perceived that by making resources available and presenting a good school curriculum the school would be able to provide them with their stated outcome in answer to the question 'What is it that the school does that makes you who you are?'

The similarity among the focus group SIDs is the importance accorded to the affinity goals, because it features in the SIDs of all the focus groups. It can be concluded that middle-adolescent learners in this study were all 'concerned' about their future goals, but they looked upon their schools differently as helping them to reach and realise their future goals. LRG1's acknowledgement of the school was scanty, implying that they did not see the school as purposefully and constructively contributing to their goal attainment, playing no more than a contextual role. LRG2 appeared to view the school as a provider, including some criticism concerning both resources and subjects on offer.

The difference between School 1 and School 2 SIDs appears to be the school context. The RG1 acknowledged the school's contribution in influencing their positive future goals, and the LRG1 even though they did not acknowledge the school more, they 'blamed' the family system for 'bad' socialisation, and the school was presented as a context where the interactions influenced by socialisation (good or bad) took place. In the challenges they experienced, the LRG1 acknowledged teacher assistance in problem solving, portraying a trustful attitude. Thus, School 1 appeared to have a positive contribution to its learners.

School 2 on the other hand received less (RG2) and no (LRG2) acknowledgement from its learners. Poor school resources and school curriculum were perceived as influences to the school's failure and inability to positively contribute to its learners' sense of self (who they are) and to influence their outcomes negatively.

Enthoven (2007) conducted a related study, sponsored by the SANPAD project in the Netherlands and her research question was, more broadly, '*How does the school environment contribute to the resilience of middle-adolescent students?'* According to Enthoven (2007:111), the resilient and 'not-resilient' middle-adolescents from a low socio-economic background in her study indicated above all that they required safety and good education from their schools. But the adolescents' perception of the school's role in providing safety and good education differed, based on their resilience status. The resilient adolescents provided examples of their experiences of safety and good education provided by the school, whereas the 'not resilient' adolescents from the same school environment provided negative examples, i.e. of their experiences of 'less' safety and good education (Enthoven 2007:123-136). The 'not-resilient' expected more and experienced less from the school, while the resilient middle-adolescents were able to recognise and utilise the safety and good education the school provided. Thus, the resilient middle-adolescents were positive about the school's contribution to their resilience and actively accessed its assets, while the 'not-resilient' students were negative.

In this study, all participants, according to their SIDs, perceived future goals to be important in their relationship with the school and, according to Figure 4.2, future goals encompass their dreams, thus they have expectations and plans about their lives. Furthermore, even though all the groups did not include the affinity education in their SIDs, the importance of teaching and learning was mentioned by all groups in their affinities especially in ensuring their future goals, as explained in Figure 4.2. The resilient learners were reflective, they acknowledged the important role the school played in their lives and criticised what they perceived as unfulfilled roles, e.g. girls from RG1 referred to the inconsistent enforcement of some school rules and RG2 complained about denial of access to available school resources. The less-resilient learners from School 1 in defining their affinities were less acknowledging of the school, which was to them a context of development and experiences. The home was according to them influential in contributing to who they will become through socialisation. According to LRG1, the school provided a context of experience and growth, a place where various personalities (being friendly and bullying) met, which exposed them to life's challenges and growth. The less-resilient learners from School 2 were also less acknowledging of the school which, they perceived, had failed to provide them with the necessary school resources and good subjects influencing negatively their ability to reach

their goals. The learners further perceived lack of school resources influence their self-development and self-identity negatively, thus like LRG1, the expectation of growth and development into a better self is highly accentuated by the learners.

In this study, the less-resilient learners can be assumed to aspire for the opportunity to grow and 'change' into the best they could be, they recognise deficiencies and barriers around them and within them and since they aimed for a better future, they criticised the school for failing to help them be what they wanted to be. RG1 were positive in their affinities and they acknowledged the school for not only delivering on its mandate of teaching and learning but also for being sensitive to their developmental phase of adolescence, thus they saw their outcome as not just reaching goals but positive future goals. RG2 challenged the school, they were critical of the school, and because they viewed school resources (primary driver) to be scanty, they doubted the education and the school curriculum provided by the school, as a result, the school failed to provide them with their outcome, care and safety.

The two studies conducted in the Netherlands and South Africa obviously had contextual differences. In the Dutch study, the 'not resilient' students struggled with accessing available resources, which the resilient students benefited from, whereas in this study, the resilient learners challenged the school to remain consistent and deliver on its role. The less-resilient learners concentrated on external control, they required 'change and growth' which they lacked in their environment. Like the Dutch 'not-resilient' students, they identified more risks and barriers which denied them the opportunity to view their environment in a more positive perspective.

4.12 IQA INDIVIDUAL INTERVIEWS

According to Northcutt and McCoy (2004:197), the primary purpose of IQA is to represent the meaning of a phenomenon in terms of elements (affinities) and the relationships among them. The authors further state that the content of IQA interviews is determined by affinities developed during focus groups. IQA interviews require the researcher to share the focus group's definitions of affinities by asking interviewees open ended questions such as 'what does the affinity mean to you? Tell me about your experience with the affinity' to encourage the participant to reflect on meanings and experiences relevant to the affinities (Northcutt & McCoy 2004:197, 201).

Affinities produced during IQA focus groups, according to Northcutt and McCoy (2004:200), are used to create an interview protocol. The purpose of the interview protocol is to

> *... use the affinities identified through focus group data collection and analysis to inform and shape questions for the second round of data gathering: the interview',*

thus '*the focus group serves as a pilot study to guide further research by providing a tentative snapshot of the group mindmap.*

As a result, IQA focus groups are essential for gathering data which are further analysed and interpreted during individual interviews when participants can elaborate on the generated SID.

I structured the research to conduct IQA interviews after the focus groups. I identified two participants per focus group, based on their level of participation (as eloquent and highly active learners). I conducted the interviews guided by generated affinities and the constructed Affinity Relationship Tables, before the Pareto analysis and the creation of Interrelationship Diagrams and the relevant SIDs, and this, according to IQA process, is too early in the process. According to Northcutt and McCoy (2004:167) a quick SID is required to conduct interviews to gain a full picture and final picture of the perceived relationships between the generated affinities. Northcutt and McCoy (2004:167) indicate that without the benefit of a focus group SID, interviews are conducted before the structural flow is recognised. As a result, the process I followed cannot be credited as IQA interviews. The conducted interviews indeed produced similar IRTs as the focus groups.

Northcutt and McCoy (2004:167-168) state that IQA follow-up interviews are encouraged, but they acknowledge that useful studies can also be conducted without interviews. The authors indicate that the affinity production phase is important (with or without interviews), which is the strength of this study. During the focus groups the affinities generated were discussed at length to clarify them and operationalise them according to the participants' perceptions. Most of the reasons Northcutt and McCoy (2004:167-168) give to encourage follow-up interviewing, were dealt with during the focus groups, e.g. affinity naming, which took several sessions and used more than just generated cards from nominal coding (see section 4.4.4). The focus group session examples provided by Northcutt and McCoy (2004) mostly lasted a day and were used to generate affinities for further analysis during individual interviews. The possible limitation of a focus group-only study was overcome by using the focus groups to provide 'thick descriptions' as used by Henning *et al.* (2004:6, 37) to refer to 'an account of the phenomenon that is coherent and that gives more facts and empirical content but that also interprets the information in light of the empirical information in the same study..' In my stipulation of the IQA research process and flow, I provided what Henning *et al.* (2004:37) refers to as 'thick explanations' of the methodology itself.

Because I required more from the participants I spent more time conducting the focus groups to gather 'rich affinities' in terms of definitions and descriptions. In my discussion of the SIDs,

I continually referred to Figure 4.2 which gives descriptions and definitions of the affinities generated during the focus groups. Further follow-up interviews would have helped though, to understand what the generated SIDs meant to the participants. This can be a question for further study and a process to follow in future research as a contribution to the IQA research process.

The authors (Northcutt & McCoy 2004:168) further indicate that the SID from the focus group-only study should be as fully detailed as possible including a detailed ART and the Pareto Composite SID, which has been accomplished in this study. As a result, I am confident that I followed the correct IQA focus group procedure to overcome the focus group challenges encountered.

Thus, the only question remaining is how would the participants have made sense of the SIDs they constructed during focus groups in follow-up interviews. The interpretations I made of the SIDs using the definitions of affinities they generated might be different from how they might have defined the SIDs.

4.13 CONCLUSION

The IQA research process followed in this chapter proved to be rigorous and highly interactive. The participants were able to individually and as a group direct and prescribe the pace of the proceedings. They were allowed the opportunity to generate, analyse and clarify data through affinity generation, affinity grouping and naming and definition of affinities. The IQA focus groups allowed the participants to reflect on what they said and they had the opportunity to clarify their ideas further as the process took up many sessions (most focus groups used four sessions of two hours), which allowed them the opportunity to go home, come back, and work on the same affinities over and over again until they reached saturation in terms of definitions. I was able to guide and direct their thoughts by asking questions and challenging them to clarify further when necessary.

The disadvantage of using a fairly new research method and a highly structured method like IQA, is that it has very limited or no room for mistakes. If the procedure is not followed as suggested it disadvantages the whole study.

According to Northcutt and McCoy (2004:167), the focus group SID is useful in sharpening and clarifying the meaning of the affinities. The authors (Northcutt & McCoy 2004:167) further state that vaguely defined affinities frequently create irregularities or paradoxes in the ensuing SID, e.g. an affinity may have no relationship to any other affinity and therefore sit outside the system. This did not happen in this study, i.e. all affinities were related.

The complexity of IQA lies in the 'authority' the participants have in the analysis of data. The SID provided by the group represents their representation of their perceived relationship with their environment. My role was to guide them in generating affinities, defining them and making sense of their meanings and finally to make sense of their representations in my analysis.

---oOo---

CHAPTER 5
Summary, Discussion, Limitations, Recommendations and Conclusion

5.1 SUMMARY

This study aimed to explore the relationship between middle-adolescent learners' degree of resilience and the township school context, guided by the main research question, '*How does the school influence the resilience of middle-adolescent learners in a black-only township school?*' The research required first to reliably identify resilient and less-resilient middle-adolescent learners in township schools who would then participate in the main study to answer the research question. Following a mixed method design, the study was divided into Phase 1 (a quantitative research method) and Phase 2 (a qualitative research method). In each Phase of the study, I fully discussed the research process and the findings of the research.

Phase 1 aimed to inform the construct resilience by developing a resilience questionnaire, the Resilience Questionnaire for Middle-adolescents in a Township School (R-MATS). In Chapter 3 of this study, I discussed how the R-MATS was constructed, piloted, reworked and ultimately administered to 291 Grade 9 middle-adolescent learners from School 1 and School 2 in a black township, Mamelodi. To determine the item-scale correlations and to establish the reliability of the scale, item analysis was conducted on all the questionnaires (the pilot questionnaires and in the main study, the questionnaires with 28 and 24 items), resulting in the reworking, discarding and retention of items. The final questionnaire, the R-MATS, had a 'good' item-scale correlation of ≥0.3 on the 24 selected items. An exploratory factor analysis was conducted to determine and explore the underlying factors that could explain the relationships among the R-MATS items, and to assess the construct validity. Four factors were identified. The factors, which were fully explored in Chapter 3 (3.5.8), were essential in understanding the perceived relationships among the variables.

The underlying principle of Phase 1 was to ground the construct resilience as manifested by middle-adolescents in the township schools through the construction of the R-MATS, to identify resilient and less-resilient participants for Phase 2 of the study and finally to develop and validate the R-MATS for future use in township schools. As a result, the 16 resilient and less-resilient middle-adolescents from the two township schools (8 per school) who participated in Phase 2 of the study were selected based on their RMATS scores.

Phase 2 aimed to answer the main research question, '*How does the school influence the resilience of middle-adolescent learners in a black-only township school?'* by means of Interactive Qualitative Analysis focus groups. I used an issue statement to ensure that the participants understood what was required of them when generating affinities or themes during focus groups, by asking the following questions:

(1) How does the school contribute to who you are?
(2) How does the school fail to contribute to who you are?
(3) What is it that the school does that makes you who you are?
(4) What is it that the school fails to do that affects who you are?

The construct resilience was never used in the issue statement, instead 'who you are' was used. Instead of 'influence', the terms 'contribute' and 'affect' were used.

The resilient and less-resilient participants generated affinities which they perceived were essential in defining how the school contributed or failed to contribute to their resilience, i.e. 'who they are' and what the school did or failed to do to make them 'who they are'.

This chapter aims to consolidate the discussions and to interpret the findings of Phase 1 and Phase 2 of the study using the research frameworks adopted for the study that were fully discussed in Chapter 2, i.e. the Resiliency Wheel (Henderson & Milstein 2004) and the Bioecological Theory of Human Development, using the Person-Process-Context-Time (PPCT) Model (Tudge 2008). To avoid repetition, the figures illustrating the research frameworks will not be repeated in this chapter. The reader is referred to Chapter 1, Figure 1.1 (The Resiliency Wheel) and Chapter 2, Figure 2.3 (The PPCT Model).

In conclusion, this chapter will draw some conclusions based on the results of Phase 1 and Phase 2 of the study using the adopted theoretical frameworks, the Resiliency Wheel and the PPCT Model. In my previous discussions of the research framework, various literatures were referred to. I will refer back to most of the literature but also including new references. The limitations of the study will be discussed and finally recommendations for educational policy and practices will be made.

5.2 DISCUSSION OF PHASE 1 AND 2 RESULTS USING THE BIOECOLOGICAL MODEL

5.2.1 ORIENTATION

To ascertain if all questionnaire data could be pooled together in conducting item and factor analysis, a comparison between the variables was done (School 1 and School 2 and male and

female respondents), which showed no statistically significant differences. As a result, all data were pooled together.

To ground the construct resilience as it features in middle-adolescents in township schools, factor analysis was conducted on the R-MATS. Various individual and environmental protective and risk factors perceived present and influential to the resilience of the respondents were identified. The understanding and acknowledgement of the presence of risk and protective factors in life are essential, especially in resilience research because of its interactive and process nature. Blum *et al.* (2002:29) indicate that resilience is developmental in nature and interactive with adversity. This is collaborated by Schoon and Parsons (2002:261) who state that resilience is a dynamic process and not a static phase, indicating continuous interactions of the individual with the environment. The township school environment must be viewed as a particular context, therefore the Phase 1 results could be expected to contribute freshly to the knowledge base on resilience.

To determine the type and quantity of risk the respondents were exposed to, in township schools, Section A of the R-MATS proved essential, while Section B addressed the resilience characteristics. The nature of the correlation between the total scores of the two sections of the R-MATS (Section A- risk items and Section B-resilience characteristics) indicated that individuals who were exposed to more risks were less-resilient and resilient individuals experienced less risk in their development. This fact emphasises the importance of protective factors to help modify the impact of risk and adversity (Schoon & Parson 2002:261, Henderson & Milstein 2003:11-13). However, it emerged that all learners in the two township schools were exposed to some measure of risk in their environment. This finding confirms the results of my Masters research (Mampane 2004:96-98).

Resilience, according to Seccombe (2002:385), is multifaceted and produces the ability to thrive despite adversity. A resilient individual is thus not overcome by adversity, but instead aims to emerge stronger from such adversities because of their innate abilities to endure and heal from wounds and take charge of their lives (Seccombe 2002:385). The duration and intensity of exposure to adversity is important when endeavouring to understand the impact of risk on the resilience of an individual also from a township school as a particular context. The definition of 'bouncing back' alludes to individual change, growth and adaptation (Richardson 2002:313). Thus, resilience is a developmental process characterised by growth and adaptation, which is inferred from 'bouncing back' behaviour observed. Less-resilience, on the other hand, alludes to a process of poor adaptation and stunted or delayed growth.

Analysis of the R-MATS suggested that participants were inclined to over-evaluate themselves and that the results were overly positive, a tendency also observed in other studies conducted in township schools (Du Plessis 2005:109). This of course impacts on the interpretation of the results of the R-MATS, calling to question the real degree of resilience these young people can demonstrate in their township environment.

Throughout this study, in my discussions of the theoretical frameworks, I consistently discussed the Resiliency Wheel first, followed by the Bioecological framework, the PPCT Model. In this chapter, I will detract from this structure. The two frameworks differ in their engagement with results and the level of approach. The Resiliency Wheel framework is a programme which functions at the applied level and the PPCT Model engages with results at the fundamental and conceptual level. It is thus more relevant to engage with the results at the fundamental level of knowledge contribution by explanation first, before mapping the results onto the Resiliency Wheel to identify and contemplate specific application implications. In the following sections, I will discuss the results using the PPCT Model (Tudge 2008), i.e. Phase 1 results, the item and factor analysis, followed by Phase 2 results, the focus group SIDs, after which I will use the Resiliency Wheel of Henderson and Milstein (2003) to discuss the results of Phase 1 and 2.

5.2.2 DISCUSSION OF PHASE 1 RESULTS USING THE BIOECOLOGICAL MODEL

The Bioecological model is characterised by four defining properties, namely the developmental process, person, context and time (Bronfenbrenner 2005:7, Lerner 2005:xv, Bronfenbrenner & Ceci 1994:570, Bronfenbrenner & Evans 2000:117). The PPCT Model of Tudge (2008) discussed in Chapter 2 Figure 2.3, gives a visual representation of the Bioecological model properties. Some of the transactional processes of the person in his/her microsystem with other people, objects and symbols are (or should be) proximal processes. According to Bronfenbrenner (2005:6), the proximal process consists of regular, progressive and more complex reciprocal interactions between a living organism (sic) and the immediate environment over an extended period of time. Tudge (2008:68) defines the proximal process as everyday activities and interactions in which the individual participates as a way of understanding and interpreting their world.

The item analysis results give a reflection of the respondents' conscious evaluation and expression of themselves when presented with R-MATS items. The participants' percentage of item endorsement showed high and low frequency levels in respect of related matters which I labelled protective and risk factors based on what the items address. Because of the participants' tendency to over-evaluate themselves, the R-MATS results should not be taken as fully reliable, but they are certainly informative in indicating trends.

Section A of the R-MATS addressed the background information concerning the participants which is essential if we are to understand the environmental stressors each respondent was exposed to. Figure 5.1 provides a summary of the perceived protective and risk factors presented in descending order of frequency as deduced from Table 3.8 and discussed in section 3.5.5. Risk factors with high frequencies indicate a large percentage of the respondents responded with a *Yes* as to the presence of the risk item in their microsystem, and protective factors with high frequencies indicate a large percentage of the respondents said *No* as to the presence of the stressor in their microsystem.

RISK FACTORS	PROTECTIVE FACTORS
Fight a lot at school	Good life experiences
Abuse at home	Parents alive
Bad treatment at home	Living with parents
Many stressors	Sufficient food at home
Repeated a grade	Employment at home
No formal house structure	Formal housing (brick house)
Unemployment	Passed a Grade
Insufficient food	Few stressors
Not living with parents	Good treatment at home
Orphan	No abuse at home
Bad life experiences	Not involved in fights

Figure 5.1: R-MATS Section A risk and protective factors

Figure 5.1 indicates that in their family microsystem the respondents were experiencing various risk and protective factors. Considerable numbers of the respondents were involved in fights at school, came from homes where they experienced abuse and bad treatment, where no member of the family was employed and there was insufficient food, some were orphans, had bad life experiences, some were just not living with their parents, were experiencing many stressors and living in informal settlements, or had failed a grade. These risk factors were mostly beyond their control and a result of their exposure to the stressors in their immediate microsystem and indirectly at the exosystem level. The inverse correlation found between risk factors and resilience (Section A, Section B) indicates the ripple effect of stressors in the township environment.

How then does the school support such a learner? What does the learner expect and utilise from the township school environment? It is evident that, based on their life experiences and the types of stressors they experience, learners might have different expectations and needs from the school. Interventions and/or programmes within the microsystem of the school could

perhaps, especially if these achieved the consistency, duration and frequency of proximal processes, provide sufficient support to become protective factors themselves in the resilience of such needy learners. Township schools that provide assistance with school fees (the no-fee paying schools) provide relief to learners from unemployed families. Feeding scheme programmes although they are only provided in primary schools are essential in alleviation of risk and the referral of learners to district support services helps with identification of learner needs and provision of the necessary support. Utilising community policing forums for cases that require attention of the police e.g. abuse and violence to help mitigate the impact of risk and to provide solutions to problems. Thus, I would argue that a school can protect its learners by forming collaborative relationships with other organisations, multi-sectoral interactions to access specialised services that exist in the community to benefit the learner.

At the mesosystem level of interaction between the two microsystems of family and school, I have frequently found a complete breakdown in the township environment. It is possible that, due to the nature of the risk factors in the family microsystem, little or no communication is initiated by the caregivers and collaboration is limited. The severity of the family-related risk factors of the learners also possibly contributes to reluctance or helplessness in educators and the school overall regarding supportive initiatives at the mesosystem level.

Figure 5.1 also indicates the protective factors that some learners responded to. Figure 5.2 now gives a visual representation of the perceived proximal processes (represented by arrows), of the learners at their microsystem, mesosystem and exosystem level in their developmental process. The individual learner (P) who experiences abuse, poverty or other bad experiences at home as represented by the arrows which signify interactions, depending on the nature of their resilience will respond differently to such risk factors. In the home microsystem the learner can challenge the parents to seek help, or can identify other resources that can help alleviate the stressors. The relationship between the parent or significant carers and the P is affected by the stressors and protection experienced and also the results of the interactions. Such a learner can either engage the school for support, or disengage from the interactions and thus suffer in silence. A learner who has no alternatives for dealing with problems will thus present as a less-resilient learner.

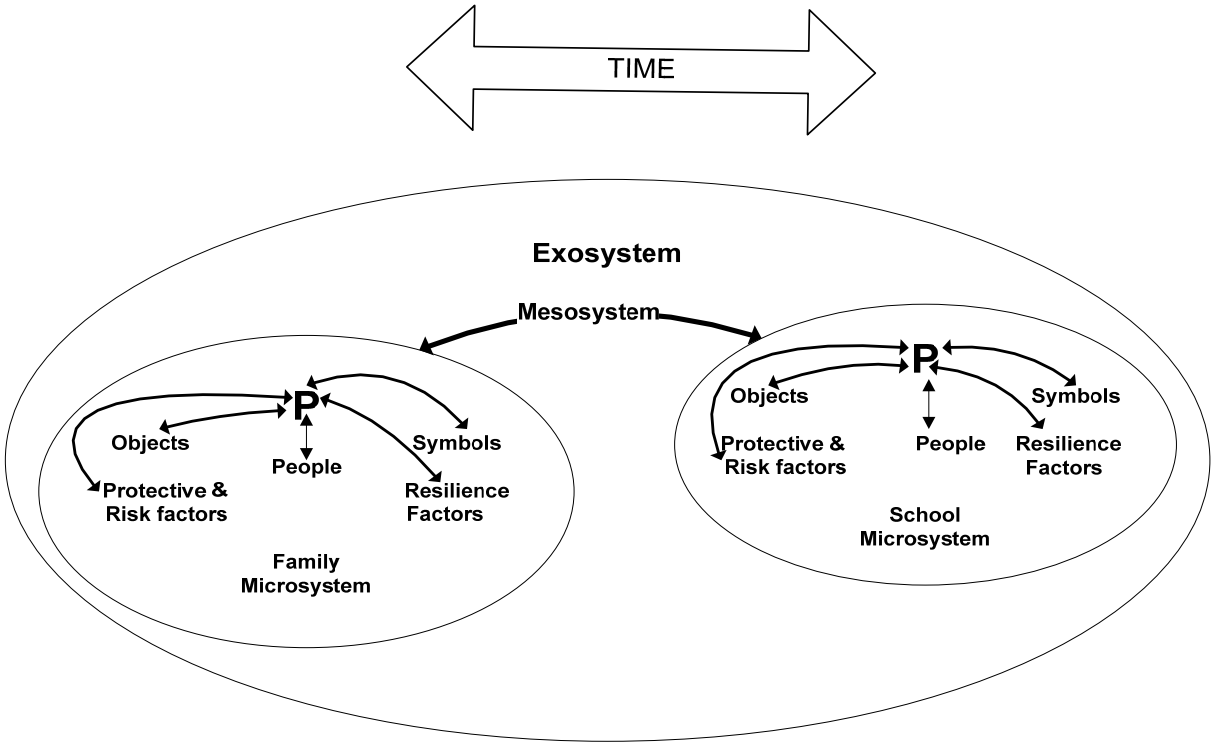

Figure 5.2: Perceived Proximal Processes in the microsystems

A learner who experiences much risk at home would normally not experience special treatment at school, since the school normally sets similar curricular and grade demands and expectations to all learners irrespective of stressors, especially if teachers are not aware of the stressors the learner is experiencing. The influence of home stressors can have a negative influence on the education and social relations of a learner, for instance if that learner is the hungry learner from unemployed parents or an orphan who lives in an informal settlement with unemployed carers, or an abused learner. The proximal processes of development influenced by the individual's everyday interactions highlight the relevance and importance of understanding that what happens at home affects the individual at school and vice versa, and a school that disregards the important influence of especially risk factors would essentially be failing in its role.

Admittedly, it could be difficult for teachers to comprehend the home stressors each learner is exposed to. The role of the school in ensuring that learners are able to benefit effectively from teaching and learning in spite of their daily stresses is what the learners in Phase 2 explored in answering the questions, 'How does the school contribute to who you are?' and 'What is it that the school does that makes you who you are?'. The participants of Phase 2 were learners who indicated that they experience risk and protection in their microsystem. In their proximal processes in the school environment they needed to access the available support they required to mitigate the risks in their lives, but the ability to access and utilise support is a resilience characteristic which not every learner possesses.

Factor analysis helped in identifying resilience factors that the respondents, middle-adolescents in township schools, perceived as essential and specific to the R-MATS. According to Gorsuch (1983:2), the aim of factor analysis is to 'summarise the interrelationship among the variables in a concise but accurate manner as an aid in conceptualization'. Four factors were identified onto which the R-MATS items loaded strongly (≥.30), which best defined the resilient characteristics of the specific participants in the study. The resilience factors depicted in Figure 5.3 are a summary of the resilience characteristics depicted from the R-MATS items that grouped under each factor as discussed in 3.5.8, and presented in Figures 3.5-3.8.

FACTOR 1: CONFIDENCE IN SELF, INTERNAL LOCUS OF CONTROL

Confidence, internal locus of control, sense of awareness
Taking charge/ taking ownership, taking responsibility
Goal driven/ goal focused/ goal oriented, achievement oriented, future perspective
Awareness/ belief in own talents, strengths & abilities

FACTOR 2: SOCIAL SUPPORT

Adult support and appeal, knowledge & awareness of support
Awareness of self-worth, feeling / sense of importance
Flexibility, solution focus, problem solutions, motivation

FACTOR 3: TOUGHNESS AND COMMITMENT

Toughness, commitment, perseverance, courage, problem solutions
Goal oriented, responsible for own future, focused on achievement and solution
Utilising own ability, proud of own ability, motivation, strengths and potential

FACTOR 4: ACHIEVEMENT ORIENTATION

Achievement oriented, taking responsibility,
Goal driven/ goal orientated, result oriented/ focused, future focused
Taking ownership, sense of control, success, coping, setting high expectations
Awareness of self-worth

Figure 5.3: The four resilience factors identified in the R-MATS

According to the respondents, those who were resilient middle-adolescent learners from a township school were confident of themselves with internal locus of control, could identify and utilise social support, were tough and committed and were achievement-oriented. The demand characteristics so demonstrated, would influence the proximal processes in all systems. A learner with internal locus of control who, for instance, experienced poverty, abuse or bad treatment from home, would then probably engage with the problem in his/her family microsystem, such a learner could even escalate or cause further conflict in the home environment, especially if the antagonist was a powerful person. He/she would probably

identify adults at school or in other microsystems successfully to mitigate the risk they were exposed to at home, would persevere and not let go of personal goals.

In contrast, the less-resilient learner would then demonstrate less-confidence of self and an external locus of control in an abusive or poor family, yet would probably fail to identify and utilise the support of other adults and would utilise ineffective strategies of mere coping instead of striving for goal attainment. The challenges and demands less-resilient learners present in their microsystems might therefore be different from those of resilient learners who demonstrate perseverance in dealing with tasks. It can be concluded that a resilient middle-adolescent from a township school, as perceived by the respondents, has the ability to strive for and achieve healthy development within the various microsystems in which he/she functions.

5.2.3 DISCUSSION OF PHASE 2 RESULTS USING THE BIOECOLOGICAL MODEL

The resilient and less-resilient participants of each school in the IQA phase of the study generated affinities in answer to the issue statement questions and arranged them in terms of influence and effect, which, according to the IQA research method, explains the 'cause' and 'effect' of the relationships (Northcutt & McCoy 2004:29). A summary of the generated affinities appears in Figure 5.4. In my discussion of the results I will focus on the position of the affinity as a driver, pivot or outcome to explain how the participants perceived its function in their relationships within the school as a microsystem.

SCHOOL	Affinities of resilient groups	Position*	Affinities of less-resilient groups	Position
SCHOOL 1	School environment	PD	Socialisation	PD
	Adolescence	PD	Being friendly	SD
	School Rules	SD	Bullying	P
	Challenges in life	SO	Challenges	P
	Positive future goals	PO	Future goals	PO
SCHOOL 2	School resources	PD	School resources	PD
	Reaching one's goals	SD	School curriculum	PD
	Education	P	Self-development	SD
	School curriculum	P	Self-identity	P
	Ensuring care and safety	PO	Reaching goals	PO

*PD (Primary Driver), SD (Secondary Driver), P (Pivot), PO (Primary Outcome), SO (Secondary Outcome)

Figure 5.4: Focus group affinities

Figure 5.4 gives a visual representation of the perceptions of the middle-adolescent learners from township schools 1 and 2 in answer to the questions contained in the issue statement. The SIDs (Figures 4.7, 4.10, 4.12, and 4.14) and the definition of affinities (Figure 4.2) help finally in answering the research questions. Affinities in Figure 4.2 that were positively defined can be perceived to acknowledge the schools' contribution to the resilience of learners and those that were negatively constructed should be taken to indicate critical matters that require attending to, to improve the school's contribution, and that might even be detrimental to the resilience of their learners. Thus in explaining contributions in the perceived interactions with reference to the Bioecological model, I will be directed by the SIDs and how the affinities were defined.

The resilient and less-resilient learners, as expected, had different expectations from the school and this influenced what they judged the contribution of the school to be. The resilient learners of School 1, RG1, acknowledged the role of the school in their resilience most strongly and directly of all the focus groups and their drivers and outcomes reflected the factors of commitment, toughness and confidence in achieving their goals as these were indicated in the R-MATS factor analysis. RG1 was clear in their views and their SID was not complex. LRG1 was considerably less acknowledging of the school, with a strong shift towards the family microsystem. Both focus groups of School 2 were less acknowledging of the school, expressly considering a lack of school resources to impact on their resilience.

In their school microsystem, RG1 viewed the school environment to be supportive and accommodating especially of their demand characteristics in their developmental phase of adolescence, thereby mapping fully onto Bioecological theory. They acknowledged the importance of school rules which engaged them effectively, even though some were not strictly enforced. However, they actually wanted the school to strictly enforce the rules and to be consistent in how these structured the demands and interactions and thereby the proximal processes in which they were involved. They were aware of their own growth from the challenges that they met in life, including those specifically posed by the school and adolescence as drivers, and perceived their goals to be positive. The resilience characteristics of confidence in self and internal locus of control, commitment and accessing of social support are evident in how they defined their affinities and structured their SID. Achievement orientation, the last of the resilience factors emerging from the R-MATS, is indeed the primary outcome of the school's contribution to the RG1.

LRG1 were not aware of what RG1 learners identified in the self-same school microsystem. They perceived the school so differently that it was virtually unrecognisable as the same context and definitely, through an apparent lack of much proximal processing, constituted a

different microsystem. In their perceptions, the less resilient learners of School 1 identified the home microsystem to be of central importance in who they were, because it was the process of socialisation that was to them the primary driver. They viewed themselves as having developed their personalities on the grounds of socialisation, in the proximal processes engaged in the home, hereby showing a somewhat external locus of control, and appeared fairly unaware of their own role and demand characteristics in becoming a friendly person or a bully. However, their understanding of how being friendly influenced how they dealt with challenges and how being a bully might directly influence their goal attainment, does imply some measure of an internal locus of control. Because of their lack of deep engagement with their school environment at the level of proximal processing, they perceived some challenges that they addressed by being friendly as actually unmanageable. The learners lacked confidence in their abilities. Their future goals, which were the outcome of their relationship with the school, depended on their ability to manage their challenges, but because of some lack of commitment and resolve, attainment of their future goals was sometimes doubtful.

In their school microsystem, RG2 viewed the school environment to be less supportive of their needs in reaching goals and experiencing success. They challenged the school policies and rules which, they perceived, unfairly denied them access to that which they regarded as the primary driver of a condition of care and safety, i.e. the school resources. Because the affinity is negatively defined in Figure 4.2, it casts doubt on the content and quality of their goal attainment and the education and curriculum the school provides are not acknowledged to be drivers. The demand imposed expressly was for the school to make good on the meagre resources it provided so that they could realise their goals, within a context of good education that could inform them to learn in the ‘right’ curriculum. The fact that goal attainment was to them a secondary driver instead of an outcome as to all the other focus groups, underscores their consumer or utilitarian attitude. Their proximal processes with the school environment were primarily informative and educational, for the school to enforce policy and thus provide care and safety. No mention was made of involvement with educators at a more personal level, leading me to infer that the proximal processes were of a formal and perhaps distanced nature, and were not focused on learners’ growth as much as on an ordered, safe environment. RG2 learners through their R-MATS results demonstrated confidence, internal locus of control, commitment and resolution and in the focus group suggested solutions on how the school should provide a good education and a safe learning environment, i.e. through good implementation of school policies. The inaccessibility of resources in their school, e.g. library and computer laboratories, was unacceptable to them and thus they identified the school’s weakness as poor engagement with their needs. Indirectly, RG2 learners were acknowledging the school’s resources as adequate but criticising the management for not having an

accommodating policy and that to them was directly detrimental to their learning and goal attainment.

LRG2 learners identified school resources and school curriculum as primary drivers that influenced who they were. LRG2 was less acknowledging of the school's role as contributing positively to who they were. The two affinities were negatively constructed and ultimately thus negatively influencing their goal attainment. The nature of the two primary drivers does not permit much to occur in the line of proximal processes. The irony of their perceived self-development and self-identity in their school microsystem lies in the relationships shown by the SID, whereby self-development as a secondary driver and self-identity as a pivot (and with circular effect) appear somewhat isolated from, if not even opposed to, that which the school by and large fail to deliver. Again, the consistent and enduring interaction of a proximal process seems to be lacking, and the effect on development and identity turned out to be negative with failed or disappointing goals. However, because self-identity is a pivot, it could swing things around for them should self-development be positive, like a friendly learner who engages with the school effectively and thus develops a healthy sense of self, which could then feed into more successful goal attainment.

Like LRG1, the growth and development of LRG2 learners were presumed to be outside their control. Their perception of self-identity influencing the reaching of goals makes sense, since knowing who you are (identity) helps one to know what one wants in life. Another resemblance between the two less-resilient focus groups, the focus on self and personal attributes, suggests inadequate interaction with the school and therefore a sense of lack of support and access to resources, which cast them back onto their own personal skills and strengths instead of developing through the educational input of the school. The less-resilient learners from township schools thus regarded the skills learned from socialisation and self-development important in shaping their sense of self in a school microsystem with which they did not interact richly, ceding control without actively engaging in proximal processes with their environment, an external locus of control. The less-resilient learners in township schools were more passive about what such microsystems offered without questioning.

The resilient and less-resilient learners from School 1 and School 2 perceived the role of the school differently and similarly had different goals. This underscores the relevance of the Bioecological model with its emphasis on context and development as primary elements. The learners' perceptions of the schools might not be accurate or might not reflect the intentions of the school management teams, but in differing for the resilient and less-resilient group of each school, illustrate how personal characteristics are integral to interaction and perception. What was consistent with all the groups was their focus on future goals, although those were also

perceived differently. The resilient groups wanted structure, discipline and good implementation of policies in their school environment, because they actively interacted with their environment, by questioning and suggesting solutions, they demonstrated growth, power, and directed their proximal processes towards finding solutions. They questioned wastage of unused resources in their school context and motivated for change, thus their resilient-person characteristics directed the proximal processes to benefit them. The less-resilient learners lacked the ability to engage and question in their proximal processes, they learned to cope with what they got, which negatively affected their developmental outcomes. It appeared to feel they lacked influence and the motivational power to drive the proximal processes, and merely took what was offered with less questioning. In their interactions, they did not invite exploration, manipulation and imagination like the resilient learners, thus according to Bronfenbrenner 2005 (2005:6-7), they were actually not engaged in proximal processes because they lacked the drive, motivation and disposition characteristics that the resilient learners demonstrated.

In conclusion, the less-resilient learners required assistance from their microsystems of home and school to empower them with a sense of autonomy and control and growth in order to engage with challenges effectively, yet ironically were not engaging sufficiently to benefit from available support services.

5.3 DISCUSSION OF PHASE 1 AND 2 RESULTS USING THE RESILIENCY WHEEL

The design and function of the R-MATS falls within the phenomenological wave, which forms the first wave of resilience research, which aimed to identify the resilience of respondents, using resilience characteristics (Richardson 2002:302). Richardson (2002:313) argues that it is not enough to identify the resilience characteristics of individuals since that negates the process nature of resilience. The second wave of resilience research aimed to understand the process nature of resilience in answer to the questions ‘How does resilience manifest?’ and ‘What are the individual forces that make one resilient?’ Masten (2007:923) relates the third wave interventions to the provision of ‘cushion’ or protective factors to help children in distress through provision of supportive programmes.

Preventative programmes were designed as one way of helping to answer the ‘what’ question of resilience, because ethically it was not possible for researchers to watch and observe how resilience manifests in children exposed to adversity, without offering the required support to mitigate the risks. The Resiliency Wheel (Henderson & Milstein 2003), as a third wave programme, aims to mitigate risk and build resilience in individuals.

But could the exposure to resilience building programmes in a black-only township school help to mitigate the learner’s response to risk factors in their development? To compare and

contrast a programme (the Resiliency Wheel) which functions at the application level to prevent risk and empower individuals, with the results of an instrument to assess an individual's resilience characteristics (the R-MATS) could be implausible because they serve different purposes. However, both instruments share the foundation principles of the first wave of resilience, which aims to identify what makes individuals resilient. Since the R-MATS measures the resilience of a particular group, middle-adolescents from township schools, it serves to test the Resiliency Wheel as to its representavity. The identified resilience factors of the R-MATS, which emerged as the building blocks of resilience for the particular participants in this study, are essential to identify and contrast with what the Resiliency Wheel aims to empower students, and to deduce possibly additional components for effective use of the Resiliency Wheel in the unique context of a township.

The Resiliency Wheel of Henderson and Milstein (2003:11) consists of six segments divided into three resilience building components and three risk mitigating components (refer to Chapter 1 Figure 1.1).

Figure 5.5 represents R-MATS Section A risk factors, and the background information for the less-resilient middle-adolescent learners in township schools. Using the Resiliency Wheel (Henderson & Milstein 2003) preventative and supportive strategies could be suggested to help learners in their developmental environment. Furthermore, it is assumed that the complexity of the adversity the learners in township schools are exposed to might not be addressed by the Resiliency Wheel, it is thus important to understand whether the Resiliency Wheel is a relevant programme to use in a township environment or with further suggestions, how to implement the wheel to benefit learners from the two township schools.

R-MATS Section A Risk Factors	Resiliency Wheel* Mitigating risk factors	Resiliency Wheel* Building resilience
Fight a lot at school	2, 3	4, 5,6
Abuse at home	3	4,5,6
Bad treatment at home	1, 3	4,5,6
Many stressors	1,2,3	4,5,6
Repeated a grade	2,3	4,5,6
No formal house structure		4,5,6
Unemployment		4,5,6
Insufficient food		4,5,6

R-MATS Section A Risk Factors	Resiliency Wheel* Mitigating risk factors	Resiliency Wheel* Building resilience
Not living with parents	1,3	4,5,6
Orphan	1,3	4,5,6
Bad life experiences	1,3	4,5,6

*1 Increase prosocial bonding
2 Set clear consistent boundaries
3 Teach life skills
4 Provide caring and support
5 Set and communicate high expectations
6 Provide opportunities for meaningful participation

Figure 5.5: Mapping R-MATS Section A risk factors with Resiliency Wheel components

The Resiliency Wheel components of mitigating risk factors aim to mitigate the impact of risk in the school environment to set the impetus for resilience to occur. For eight of the eleven risk factors included in Section A, the three components appear relevant. The components were not developed to mitigate risk factors which result directly from circumstances in the exosystem, such as no formal housing structure, unemployment of family members and insufficient food. These three risk factors require immediate and consistent material intervention like nutrition or a feeding scheme from the school with monthly contribution of food parcels from the Department of Social Services, a social grant to parents to ensure regular and reliable monthly access to funding to sustain the family and a proper housing structure from the Department of Housing.

All the resilience building components of the Resiliency Wheel map well with all the risk factors. The Resiliency Wheel holds greater potential for empowering learners by means of resilience supporting characteristics to build their resilience, because every learner requires resilience characteristics to help them succeed in their environment to lead healthy lives. Therefore, I expected the factor analysis results to map closely onto the Resiliency Wheel's resilience building components. In a township school environment, if multi-sectorial collaborations are not actively sought and implemented to support the learner experiencing severe adverse circumstances, the Resiliency Wheel cannot be applied effectively as is, to help mitigate the impact of risk on the learner.

Figure 5.6 then presents the four resilience factors that were identified in the factor analysis of Section B of the R-MATS, inverted to characteristics of less-resilience.

R-MATS factors inverted to characteristics of less-resilience	Resiliency Wheel* Mitigating risk factors	Resiliency Wheel* Building resilience
Lack of or less confidence in self, external locus of control	3	4,5,6
Lack of or less social support	1,3	4, 6
Lack of or less perseverance and commitment	3	4,5,6
Lack of or weak achievement orientation	2,3	4,5,6

*1 Increase prosocial bonding
2 Set clear consistent boundaries
3 Teach life skills
4 Provide caring and support
5 Set and communicate high expectations
6 Provide opportunities for meaningful participation

Figure 5.6: Mapping less-resilience factors and the Resiliency Wheel components

Figure 5.6 indicates that, to mitigate the impact of risk on the less-resilient middle-adolescent learner in a township school, teaching life-skills is important in respect of all four resilience factors, but increasing prosocial bonding and setting clear consistent boundaries apparently less so.

The two township schools that participated in the research indeed both offer a life skill programme, Life Orientation, as a curricular subject which could be regarded as a strength in terms of the Resiliency Wheel. But the question is, has the learners' exposure to the Life Orientation subject helped to mitigate the impact of the risk factors they were exposed to in their home environment? Is the curricular content appropriate for learners specifically in a township school?

The resiliency building segment of providing care and support, which according to Henderson and Milstein (3003:13) is most critical and fundamental in overcoming adversity is, according to Figure 5.6, relevant for all factors in building resilience for middle-adolescents in a township school. The Resiliency Wheel segment of providing opportunities for meaningful participation appears equally essential for actively involving learners in the activities of the school. However, the component of setting and communicating high expectations appears difficult to map with less-resilient learners' lack or less social support because such learners perceived 'no adult' or person was there to encourage them in order to achieve their goals and full potential.

While the Resiliency Wheel programme purposes to build resilience in the environment, the affinities were generated in Phase 2 in answer to the questions *'How does the school contribute to who you are?'* and *'What is it that the school fails to do that affects who you are?* thus they answered the questions about the township school's contribution to their resilience.

In mapping the Resiliency Wheel to the affinities I will then ask the following question, 'What is there in the school that is operating more or less as the Resiliency Wheel would want?' Of the two resilient focus groups, RG1 had higher resilience scores than RG2 (Table 4.1), and according to their affinities were more receptive of their school environment. As a result I will use their affinities to map on the Resiliency Wheel and if their affinities map well, one could agree that the components of the Resiliency Wheel should be made explicit for application in the township school environment. It is my assumption that by mapping RG1 affinities to the Resiliency Wheel it could give some direction on the following question, 'What should happen to make less-resilient learners aware of and utilise available school resources?' Figure 5.7 presents the affinities generated by the RG1 mapped with Resiliency Wheel segments.

School	Focus groups affinities	Resiliency Wheel Risk mitigating	Resiliency Wheel Building resilience
RG1	School environment	1, 2, 3	4, 5, 6
	Adolescence	1,3	4, 6
	School rules	2	5,
	Challenges in life	1, 3	5
	Positive future goals	1, 2, 3	4, 5, 6

*1 Increase prosocial bonding
2 Set clear consistent boundaries
3 Teach life skills
4 Provide caring and support
5 Set and communicate high expectations
6 Provide opportunities for meaningful participation

Figure 5.7: Mapping RG1 affinities with Resiliency Wheel segments

The segment of mitigating risk in the environment, increasing prosocial bonding, which encompasses positive bonding, features in all the affinities of RG1 excepting school rules, which indicates the emphasis on positive relationships laid by this focus group. Teaching of life skills also features in all the affinities and relates to the perceived importance of life skills to RG1. The segment of setting clear and consistent boundaries which relates to consistency of policy implementation, does not feature as much. This is further emphasising the group's need for clear and consistent rules in their township school environment. Thus, in mitigating risk in the township school environment it is important for the school to set and communicate clear and consistent boundaries.

The segment on building resilience in the environment that features most in the affinities of RG1 is, setting and communicating high expectations, which includes motivation, encouragement and setting high but realistic goals for learners. Providing care and support does not feature with school rules and challenges in life, considering that some of the RG1 learners according to affinities in Figure 4.2 considered rules to be inconsistently enforced and

their challenges in life allude to conflicts in life and sometimes with significant others. At least three out of five affinities of RG1 mapped with the Resiliency Wheel segments. Another focus group of learners with the optimal resilience score on the R-MATS could generate different affinities, but RG1 indicated that the Resiliency Wheel programme can be applied in township schools.

5.4 FINALLY ANSWERING MY RESEARCH QUESTIONS

The main question that directed the focus of this study is:
How does the school influence the resilience of middle-adolescent learners in a black-only township school?

The research question was clarified by the two sub-questions:

a. What are middle-adolescent resilient learners' experiences of their black-only township school system?
b. What are middle-adolescent less-resilient learners' experiences of their black-only township school system?

The resilient middle-adolescent learners from the two black-only township schools participating in the study, differed in their acknowledgement of the contribution of their school on their resilience and development. The learners of School 1 were aware of the school policies e.g. discipline policy and engaged with them to benefit from their environment and grow despite their adversities. RG1 perceived the school environment to be accommodating and sensitive of their adolescent stage. As a result, they accepted and embraced the challenges of their developmental phase because the school was supportive. The clearly defined and articulated school rules helped in providing them with clear and consistent boundaries. They were confident that because of their supportive school environment they would achieve their perceived positive goals. RG2 experienced their school environment as less-supportive and although they acknowledged it had educational resources, access was in their view not provided. They were critical of the school. The inaccessibility of the resources from the school was perceived to negatively influence their ability to reach their goals, and so they were not benefiting from the 'good' education and the 'good' school curriculum they felt they deserved. Thus, the outcome for these learners was only care and safety from their school instead of future success. School 2 seems to strive for implementation of policy and clearly defined rules, structure and consistency, but was not yet purposefully supporting the personal growth and learning of their learners.

The less-resilient learners from the black-only township schools experienced their school environment as less supportive of them. They struggled in different ways to access school

resources actually available to them. LRG1 experienced School 1 as merely an environment where they could use their personalities to grow and develop, or could just exist. They perceived the socialisation from the home environment to be the primary driver of their resilience and failed to notice any directly constructive value in the school. The less-resilient friendly learners experienced some challenges as a result of their socialised selves which, when not well resolved, might affect their future goals negatively, but which the setting of the school could sometimes support them in resolving. The bully learners on the other hand interacted minimally with their school environment. The learners of LRG2 were dissatisfied with meagre school resources and a 'poor' school curriculum. They felt the denied access to available school resources actually affected their development negatively and thus their sense of self (self-identity). The less-resilient learners actually accused their school for their less-resilience because in their view it stunted their growth and their prospects of reaching goals.

The answer to the main research question, '*How does the school influence the resilience of middle-adolescent learners in a black-only township school?'* then cannot but depend on both the school and the learner. The influence of the school varies depending on the degree of resilience of the learner and the school environment.

The two township schools differed. School 1 appeared to be a warm and supportive environment because the resilient learners acknowledged the school's role as positively influencing their resilience and the less-resilient learners did not blame the school for their less-resilience, but merely failed to recognise much support coming from there. School 1 influenced the resilience of the resilient learners positively by providing a supportive teaching and learning environment that particularly accommodated the adolescent stage of development and thus made the challenges encountered by them manageable and created an impetus for realising positive future goals. Again, the school environment influenced the future goals of learners by exposing them to various experiences as presented by their peers, e.g. poverty. By virtue of accommodating learners with different personalities from different family backgrounds and exposing them to various challenges and opportunity to coexist and interact, the less-resilient learners realised their need for growth and development in order to experience perceived future goals.

School 2 influenced the resilience of all the learners negatively by perceivably denying them access to school resources and thus even providing a 'poor' school curriculum. The school was consequently accused of impacting negatively on the prospect of learners reaching their goals. Resilient learners perceived the degree of care and safety experienced, both positive and negative, as the primary outcome of their relationship with the school.

The needs of learners within the same school environment also differed. The learners placed much emphasis on reaching goals and the school as a context of development was perceived to influence reaching goals positively or negatively. School curriculum and education were important in all the focus groups. Learners required a supportive school environment with clearly defined and implemented rules and policies. Because future goals were important to them, 'good' education and a 'good' curriculum were essential to the middle-adolescent learners in township schools.

5.5 LIMITATIONS OF THE STUDY

In the limitations of the study I will look at myself as the researcher, the research process and the learners as the participants.

5.5.1 PHASE 1

In Phase 1, time allocated for the administration of the R-MATS was not sufficient and might have created pressure for learners to work quickly in preparation for the next class. It is understandable that schools cannot afford to make any concessions for research activities during curricular hours.

The R-MATS is an English instrument and language could furthermore have limited the ability of learners to engage effectively with items in addition to requiring more time to read and comprehend each item.

The Likert-scale nature of the questionnaire was finally a challenge in terms of their ability or readiness to choose the degree that best described their perceptions, which possibly contributed to an inflation of their scores and thus impacted negatively on assessment reliability in spite of the favourable statistics.

5.5.2 PHASE 2

In Phase 2, the time allocated for focus groups was after school hours and required extra commitment of the learners. As a result, focus groups lasted a maximum of only 2 hours, to ensure their safety, especially those who walked home in groups.

The sample size is a further limitation of the study. Four learners in each focus group is a small number, especially if group dynamics are not well managed, which could have led to the ideas of dominant learners overriding other members' participation. This limitation was overcome

through silent nominal coding, which provided the opportunity for each participant to generate affinities silently and thus participate effectively.

My role as a researcher especially in defining, grouping and naming the affinities to not influence the direction, thoughts and ideas of the groups, was guided by consistently confirming the descriptions and definition of concepts with the group, to ensure that I captured their ideas and thoughts in explaining the affinities. In School 2, the affinities of RG2 and LRG2 which were similar (school resources, school curriculum and reaching goals) could perhaps be partly due to my role or to discussions that might have occurred among the participants outside of the focus groups.

A further limitation is the use of a relatively new research method, IQA, because of the limited literature available, making the authors Northcutt and McCoy (2004) the only authority in the method. IQA is highly structured and requires the researcher to closely follow suggested steps to implement the process effectively to ensure the results will be reliable. The limitation of the IQA method is that, it limits the involvement of the researcher, leaving little room to improvise and requiring her to follow the suggested procedures precisely. If the researcher is not highly knowledgeable in the method it becomes a problem because she is strictly guided by the process and steps to follow. The process I followed when conducting interviews is not how Northcutt and McCoy (2004) is not IQA suggests.

5.6 RECOMMENDATIONS OF THE STUDY

I would like to make recommendations for further research only. I am convinced that as a researcher I am not able to make recommendations for practice nor assume control over how the findings of this study could be implemented or interpreted.

Regarding further research, I recommend that this study be replicated using multiple black-only township schools in other parts of the country, to further explore and understand the perceived relationship between middle-adolescent learners and their township school environment. This study was conducted in one township, Mamelodi.

Furthermore, it would be interesting to understand the perceptions of resilient and less-resilient learners in higher grades from the same township school context, e.g. Grade 10, 11 and 12 learners.

A further recommendation includes conducting applied research using the Resiliency Wheel to determine the relevance of all the segments for less-resilient township school learners and its value in mitigating risk and building resilience in learners.

I further recommend that the validity of the R-MATS be further tested especially since township learners have the inclination to over-evaluate themselves. This is a problem that can be further explored and must if possible be prevented in further research.

5.7 A FINAL REMARK

It is evident that township learners are exposed to numerous adversities and support is needed to help them make it in their environment. The school is one of the contexts that can help them reach their future goals. The school managers have the responsibility to ensure that the township school context will cater effectively for the needs of learners in township schools. Inclusive education makes it possible for every school to have support structures for identification and referral of learners with stressors and problems in their environment. Such structures are important for learners in township schools. Thus, the school needs to act to support learners.

---oooOooo---

REFERENCES

Ahern, N.R. 2006. Adolescent resilience: An evolutionary concept analysis. *Journal of Pediatric Nursing,* 21(3):175-185.

Antonovsky, A. 1982. *Health, stress and coping: New perspectives on mental and physical well-being.* San Francisco: Jossey-Bass Publishers.

Antonovsky, A. 1987. *Unraveling the mystery of health: How people manage stress and stay well.* San Francisco: Jossey-Bass Publishers.

Aronowitz, T. 2005. The role of 'envisioning the future' in the development of resilience among at-risk youth. *Public Health Nursing*, 22(3):200-208.

Assor, A., Kaplan, H. & Roth, G. 2002. Choice is good, but relevance is excellent: Autonomy-enhancing and suppressing teacher behaviours predicting student's engagement in schoolwork. *British Journal of Educational Psychology*, 72:261-278.

Babbie, E. & Mouton, J. 2002. *The practice of social research.* New York: Oxford University Press.

Bandura, A., Pastorelli, C., Barbaranelli, C. & Caprara, G.V. 1999. Self-efficacy pathways to childhood depression. *Journal of Personality and Social Psychology*, 76(2):258-269.

Barnes, G.G. 1999. Operationalizing the uncertain: Some clinical reflections. Commentaries. *Journal of Family Therapy*, 21:145-153.

Benard, B. 1991. Fostering Resiliency in Kids: Protective Factors in the Family, School and Community. *National Resilience Resource Centre*, University of Minnesota, College of Continuing Education, pp. 1-26. www.cce.unm.edu/nrrc

Benard, B. 1995. Fostering Resilience in children. *ERIC Digest* (Online). Eric Clearinghouse on Elementary and Early Childhood Education Urbana IL (ED386327), pp. 1-6 www.eric.ed.gov

Benard, B. 1997. Turning It All Around: From Risk to Resilience. *ERIC Digest* (Online). Available: http://resilnet.uiuc.edu/library/dig126.html

Benard, B. 2000. From risk to resiliency: What schools can do. In: Hansen, W.B., Giles, S.M. & Fearnow-Kenney. M.D. (Eds.), *Improving prevention effectiveness* (pp. 23-36). Greensboro, NC: Tanglewood Research. http://www.tanglewood.net/projects/teachertraining/Book_of_Readings/

Benard, B. 2004. *Resiliency: What we have learned.* USA: WestEd.

Bengtsson-Tops, A. & Hansson, L. 2001. The validity of Antonovsky's sense of coherence measure in a sample of schizophrenic patients living in the community. *Journal of Advanced Nursing,* 33(4):432-438.

Bland, J.M. & Altman, D.G. 1997. Statistics notes: Cronbach's alpha. *British Medical Journal*, 314:572.

Blum, R.W., McNeely, C. & Nonnemaker, J. 2002. Vulnerability, risk and protection. *Journal of Adolescent Health*, 31 S: 28-39

Borkan, J.M. 2004. Mixed methods studies: A foundation for primary care research. *Annals of Family Medicine*, 2(1):4-6.

Bosworth, K. & Earthman, E. 2002. From theory to practice: School leaders' perspectives on resiliency. *Journal of Clinical. Psychology*, 58:299-306.

Bouwer, C. 2005. Identification and assessment of barriers to learning. In: Landsberg, E., Kruger, D. & Nel, N. (Eds.). *Addressing Barriers to Learning: A South African Perspective.* Pretoria: Van Schaik. (45-77)

Bremmer, L. 2000. Reinventing the Johannesburg inner city. *Cities*, 17(3):185-193.

Bronfenbrenner, U. 1974. Developmental research, public policy and the ecology of childhood. *Child Development*, 44:1-5.

Bronfenbrenner, U. 1979. *The ecology of human development: Experiments by nature and design.* Cambridge: Harvard University Press.

Bronfenbrenner, U. 1994. Ecological models of human development. In: *International Encyclopedia of Education*, Vol. 3, 2nd ed. Oxford: Elsevier. Reprinted in: Gauvain, M. & Cole, M. (Eds.), *Readings on the development of children*, 2nd ed. New York: Freeman. (37-43).

Bronfenbrenner, U. & Ceci, S. 1994. Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, 101(4):568-586.

Bronfenbrenner, U. & Morris, P.A. 1998. The ecology of developmental processes. In: Damon, W & Lerner, R.M. (Ed.), *Handbook of child psychology. Volume 1: Theoretical models of human development.* 5th Edition. New York: John Wiley & Sons. (993-1028).

Bronfenbrenner, U. & Evans, G.W. 2000. Developmental Science in the 21st Century: Emerging Questions, Theoretical Models, Research Designs and Empirical Findings. *Social Development*, 9(1):115-125.

Bronfenbrenner, U. 2005. The Bioecological theory of human development, In: *Making Human Beings Human: Bioecological Perspectives on Human Development.* California: Sage Publications, Inc. (3-15)

Brooks, R. & Goldstein S. 2001. *Raising Resilient children: Fostering Strength, hope and optimism in your child.* New York: McGraw-Hill. New York.

Brown, J.H., D'Emidio-Caston, M. & Benard, B. 2001. *Resilience education.* California: Corwin Press, Inc.

Brown, W.K. 2004. Resiliency and the mentoring factor. *Reclaiming Children and Youth*, 13(2):75-79.

Burgess, T.F. 2001 *Guide to the design of Questionnaire: A general introduction to the design of questionnaires for survey research.* London: University of Leeds.

Burton, P. 2007. *Someone Stole My Smile: An Exploration into the Causes of Youth Violence in South Africa.* Cape Town: Centre for Justice and Crime Prevention.

Burton, P. 2008a. *Merchants, Skollies and Stones: Experiences of School Violence in South Africa.* Cape Town: Centre for Justice and Crime Prevention.

Burton, P. 2008b. Snapshot results of the CJCP National Schools Violence Study. *Centre for Justice and Crime Prevention Research Bulletin,* 2:1-4.

Bush, T. & Heystek, J. 2003. School governance in the new South Africa. *Compare,* 3(2):127-138.

Carr-Gregg, M. & Shale, E. 2002. *Adolescence: A guide for parents.* Sydney: Finch Publishing.

Carver, R.P. 1978. The case against statistical significant testing 1978. *Harvard Educational Review*, 48(3):378-399.

Catalano, R.F., Berglund, M.L, Ryan, J.A.M, Lonczak, H.S. & Hawkins, J.D. 2004. Positive youth development in the United States. Research findings on evaluation of positive youth development programs: *Annals of the American Academy of Political and Social Science,* 591-598.

Catterall J.S. 1998. Risk and resilience in student transition to High School. *American Journal of Education*, 106(2):302-333.

Cicchetti, D. 1990. An historical perspective on the discipline of developmental psychopathology. In: J. Rolf, A. Masten, D. Cicchetti, K. Nuechterlein & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* . New York: Cambridge University Press. (2-28).

Cilliers, F. & Kossuth, S.P. 2004. The reliability and factor structure of three measures of salutogenic functioning. *South African Journal of Labour Relations*, Winter: 67-84.

Clark, L.A. & Watson, D. 1995. Constructing Validity: Basic issues in objective scale development. *Psychological Assessment*, 7(3):309-319.

Cohen, L. Manion, L. & Morrison, K. 2000. *Research methods in education,* 5th ed. London: Routledge Falmer.

Compas, B.E., Hinden, B.R. & Gerhardt, C.A. 1995. Adolescent development: Pathways and process of risk and resilience. *Annual Review of Psychology*, 46:265-293.

Confrey, J. 1990. What constructivism implies for teaching. *Journal for Research in Mathematics Education*, pp. 107-122 and *Monograph*, pp. 195-210.

Cowley, S. & Billings, J.R. 1999. Resources revisited: Salutogenesis from a lay perspective. *Journal of Advanced Nursing,* 29(4):994-1004.

Craft, R.C. & Leake, C. 2002. The Pareto principle in organisational decision making. *Management Decision,* 40(8):729-733.

Creswell, J.W. 1994. Research Design: *Qualitative & quantitative approaches.* Thousand Oaks, California: Sage Publications.

Creswell, J.W. 1998. *Qualitative enquiry and research design choosing among five traditions*. Thousand oaks, California: Sage Publications.

Creswell, J.W. 2003. *Research design: Qualitative, quantitative, mixed methods approaches*. Thousand Oaks California: Sage Publications.

Crocker, J. & Park, L. 2004. The costly pursuit of self-esteem. *Psychological Bulletin*, 130(3):392-414.

Crockett, L.J. & Crouter, A.C. 1995. *Pathways through Adolescence: Individual Development in relation to social context.* In: L.J. Crockett, L.J. & A.C. Crouter (Eds.) *Pathways through Adolescence: An Overview.* Faculty Publications, Department of Psychology, University of Nebraska, Lincoln, New Jersey: Lawrence Erlbaum Associates.

Damon, W., Menon, J. & Bronk, K.C. 2003. The development of purpose during adolescence. *Applied Developmental Science*, 7(3):119-128.

Dawis, R.V. 1987. Scale construction. *Journal of Counselling Psychology,* 34(4):481-489.

Del Siegle, 2003. *A Pre-Type III assessment survey*. USA: University of Connecticut. http://www.delsiegle.com/

Denzin, N.K. & Lincoln, Y.S. 2000. *Handbook of Qualitative Research,* 2nd ed. London: Thousand Oaks. Sage Publication.

Denzin, N.K. & Lincoln, Y.S. 2005. *The SAGE Handbook of Qualitative Research,* 3rd ed. London: Sage Publications Inc.

Department of Education. 1996. *South African Schools Act (Act No. 84 of 1996) and National Education Policy Act 1996 (No. 27 of 1996).* Pretoria: Government Printers.

Department of Education. 2000. Norms and Standards for Educators. *Government Gazette,* No: 20844, February 2000. Pretoria: Government Printers.

Department of Education. 2001. *Education White Paper 6, Special Need Education: Building an Inclusive Education and training system*. Department of Education, Pretoria: Triple CCC Advertising and Research.

Department of Education. 2002. Revised National Curriculum Statement Grade R-9 (Schools): Life Orientation. *Government Gazette,* No: 23406 Vol. 443, May 2000. Pretoria: Government Printers.

Department of Environmental Affairs and Tourism. 2000. Mamelodi heritage route launched. Ministry for Environmental Affairs and Tourism media release, 22 September 2000. http://www.deat.gov.za/

Dictionary. Com, LLC. Copyright. http://dictionary.reference.com/

Dillman, D.A. 1991. The design and administration of mail surveys. *Annual Reviews of Sociology*, 17:225-249.

Donald D, Lazarus S & Lolwana P 1997. *Educational Psychology in Social Context: Challenges of development, social issues and special need in southern Africa*. Cape Town: Oxford University Press.

Dransfield, R. 2003. *Understanding business statistics made easy.* London: Nelson Thornes Ltd.

Du Plessis, A-B, 2005. The academic self-concept of learners with learning impairment in two South African public school context: Special and full-service inclusive schools. (Unpublished Doctoral Thesis). Pretoria: University of Pretoria.

Dubaw, E.F., Tisak, J., Causey, D., Hryshko, A. & Reid. G. 1991. A two-year longitudinal study of stressful life events, social support, and social problem-solving skills: Contributions to children's behavioural and academic adjustment. *Child Development*, 62(3):583-599.

Dunn, W., Brown, C. & McGuigan, A. 1994. The ecology of human performance: A Framework for considering the effect of context. *The American Journal of Occupational Therapy*, 595-607.

Dyer, J.G. & McGuiness, T.M. 1996. Resilience: Analysis of the concept. *Archives of Psychiatric Nursing,* (5):276-282.

Eccles, J.S. & Wigfield, A. 2002. Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53:109-132.

Elliot, J. & Tudge, J. 2007. The impact of the west on post-Soviet Russian education: change and resistance to change. *Comparative Education,* 43(1):93-112.

Emden, C. & Sandelowski, M. 1998. The good, the bad and the relative, part one: Conceptions of goodness in qualitative research. *International Journal of Nursing Practice,* 4:206-212.

Encarta World English Dictionary, Microsoft. http://www.languagecourse.net/online-dictionary/out.php3?site=1062254417

Engle, P.L., Castle, S. & Menon, P. 1996. Child development: Vulnerability and resilience *Social Science and Medicine,* 43(5):621-635.

Enthoven, M. 2007. *The ability to Bounce Beyond: The contribution of the school environment to the resilience of Dutch urban middle-adolescents from a low socio-economic background*. Amsterdam: Boekservice Amsterdam.

Erikson, E.H. 1980. *Identity and the life cycle*. USA: W.W. Norton & Company.

Eriksson, L. 2005. The relationship between school environment and participation for students with disabilities. *Pediatric Rehabilitation,* 8(2):130-139.

Eriksson, M. & Lindström, B. 2005. Validity of Antonovsky's sense of coherence scale: A systemic review. *J. Epidemiol. Community Health*, 59:460-466.

Evans, A.E., Sanderson, M., Griffin, S.F., Reininger, B., Vincent, M.L., Parra-Medina, D., Valois, R.F. & Taylor, D. 2004. An exploration of the relationship between youth assets and engagement in risky sexual behaviours. *Journal of Adolescent Health*, 35:424.e21-424.e30.

Falconer, D.J. & Mackay, D.R. 1999. The key to the mixed method dilemma. *Proc. 10th Australasian Conference on Information Systems*, 286-297.

Fergusson, D.M. & Horwood, L.J. 2003. Resilience to adversity: Results of a 21-year study. In Luthar, S.S. 2003 (Ed.). *Resilience and vulnerability: Adaptation in the context of childhood adversities.* Cape Town: Cambridge University Press

Foss. C. & Ellefsen, B. 2002. The value of combining qualitative and quantitative approaches in nursing research by means of triangulation. *Journal of Advanced Nursing,* 40(2):242-248.

Fowler, H.W. & Fowler, F.G. 1991. (Eds.) The Concise Oxford Dictionary of English. London: Clays Ltd.

Frechtling, J. & Sharp, L. 1997. *User-Friendly Handbook for mixed method evaluations*. Division of Research Evaluation and Communication National Science Foundation. Arlington VA: Westat, Inc.

Freiberg, H.J. 1993. A school that fosters resilience in inner-city youth. *The Journal of Negro Education*, 62(3):364-376.

Freiberg, H.J. 1994. Understanding resilience: Implications for Inner-City schools and their near and far communities. In: Wang, M.C. & Gordon, E.W. (Eds.). *Educational resilience in*

Inner-City America: Challenges and prospects. New Jersey: Lawrence Earlbaum Associates, Publishers.

Frescura, F. 2001 *Spatial geography of urban apartheid*. In: Zegeye, A. (Ed.). *Social identity in the new South Africa after apartheid.* Cape Town: Kwela Books.

Garbers, J.G. 1996. *Effective research in the human sciences: Research management for researchers, supervisors and master's and doctoral candidates* . Pretoria: Van Schaik

Garmezy, N. 1979. Vulnerable and invulnerable children: Theory, research and intervention. Master lecture on developmental psychology. *JSAS Catalogue of Selected Documents in Psychology,* 6(4)1-23.

Garmezy, N. 1996. Reflections and commentary on risk, resilience, and development. In: Haggerty, R.J., Sherrod, L.R., Garmezy, N. & Rutter, M. 1996. *Stress, risk, and resilience in children and adolescents: Process, mechanisms, and interventions.* New York: Cambridge University Press.

Garmezy, N., Masten, A.S. & Tellegen, A. 1984. The study of stress and competence in children: A building block for developmental psychology. *Child Development*, 55(1):97-111.

Gauteng Provincial Government. 15 April 2008. Gauteng Department of Education, http://www.gpg.gov.za, http://www.info.gov.za/speeches/2008/08041609151003.htm

Gauteng Provincial Government. 20 February 2008. Gauteng Department of Education, http://www.education.gpg.gov.za/HlayisekaSchool.htm

Gauteng Provincial Government, Gauteng Online, http://www.gautengonline.gov.za/web/guest/home

Gay, L.R. & Airasian, P. 2003. *Educational Research: Competencies for analysis and applications.* New Jersey: Pearson Education Inc.

Gilligan, R. 1997. Beyond permanence? The importance of resilience in child placement practice and planning. *Adoption and Fostering*, 21:12-20.

Gilligan, R. 2000. Adversity, resilience and young people: The protective value of positive school and spare time experiences, *Children & Society*, 14:37-47.

Gillis, H. 1996. *Counselling young people*. Pretoria: Kagiso Publishers.

Golafshani, N. 2003. Understanding reliability and validity in qualitative research. *The Qualitative Report,* 8(4): 597-607

Gore, S. & Eckenrode, J. 1996. Context and process in research on risk and resilience. In: Haggerty, R.J., Sherrod, L.R., Garmezy, N. & Rutter, M. 1996. *Stress, risk, and resilience in children and adolescents: Process, mechanisms, and interventions.* New York: Cambridge University Press.

Gorsuch, L.R. 1983. *Factor Analysis*, 2nd ed. New York: Hillsdale Erlbaum Associates

Haase, J.E. 2004. The adolescent resilience model as a guide to interventions. *Journal of Pediatric Oncology Nursing,* 21(5):289-299.

Hackman, J.R. & Wageman, R. 1995. Total Quality Management: Empirical, Conceptual, and Practical Issues. *Administrative Science Quarterly,* 20(2):309-342.

Haggerty, R.J., Sherrod, L.R., Garmezy, N. & Rutter, M. 1996. *Stress, risk and resilience in children and adolescents: Processes, mechanisms and interventions.* United Kingdom: Cambridge University Press.

Hammett, D. 2008. Disrespecting teacher: The decline in social standing of teachers in Cape Town, South Africa. *International Journal of Educational Development,* 28: 340-347

Hanson, W.E., Creswell, J.W., Clark, V.L., Petska, K.S. & Creswell, J.D. 2005. Mixed Methods Research Design in Counselling Psychology. *Journal of Counselling Psychology,* 52(2):224-235.

Harber, C. & Muthukrishna, N. 2000. School effectiveness and school improvement in context: The case of South Africa. *School Effectiveness and School Improvement,* 11(4):421-434.

Harber, C. 2001a. *State of transition: Post-apartheid education reform in South Africa.* United Kingdom: Symposium Books.

Harber, C. 2001b. Schooling and violence in South Africa: Creating a safer school. *Intercultural Education,* 12(3):261-271.

Harris, K.R. & Graham, S. 1994. Constructivism, principles, paradigms, and integration. *Journal of Special Education*, 28(3):233-247.

Harvey, J. & Delfabbro, P.H. 2004. Psychological resilience in disadvantaged youth: A critical overview. *Australian Psychologist*, 39(1):3-13.

Hauser, S.T. 1999. Understanding resilient outcomes: Adolescent lives across time and generations. *Journal of Research in Adolescence*, 9(1):1-24.

Hawley, D.R. 2000. Clinical Implications of family resilience. *American Journal of Family Therapy*, 28:101-116.

Heiman, T. 2006. Social support networks, stress, sense of coherence and academic success of university students with learning disabilities. *Social Psychology of Education*, 9:461-478.

Henderson, N. 1999. Fostering resiliency in children and youth: Four basic steps for families, educators, and other caring adults. Reprint from: Henderson, N., Benard, B. & Sharp-Light, N. 1999. *Resiliency In Action: Practical Ideas for Overcoming Risks and Building Strengths in Youth, Families & Communities.* San Diego, CA: Resiliency in Action Inc.

Henderson, N. & Milstein, M.M. 2003. Updated Edition. *Resiliency in schools: Making it happen for students and educators.* California: Corwin Press Inc.

Henderson-Grotberg, E. 2001. Resilience programs for children in disaster. *Ambulatory Child Health,* 7:75-83.

Henning, E., Van Rensburg, W. & Smit, B. 2004. *Finding your way in qualitative research.* Hatfield Pretoria: Van Schaik Publishers.

Hippe, J. 2004. Self-awareness: A precursor to resiliency. *Reclaiming Children and Youth,* 12(4):240-242.

Horsburgh, D. 2003. Evaluation of qualitative research. *Methodological Issues,* 12(2):307-312.

Howard, S., Dryden, J. & Johnson, B. 1999. Childhood resilience: review and critique of literature. *Oxford Review of Education,* 25(3):307-323.

Huchzermeyer, M. 2002. Upgrading through the project-linked capital subsidy: Implications for the strategies of informal settlement residents and their community organisations. *Urban Forum*, 13(2):67-85.

Jaccard, J., Dodge, T. & Dittus, P. 2002. Parent-adolescent communication about sex and birth control: A conceptual framework. *New Directions for Child and Adolescent*, *Development*, 97:9-41.

Jackson, S., Goosen, L. 2006. *Handbook of Adolescent Development* New York: Psychology Press.

Jackson, Y. & Warren, J.S. 2000. Appraisal, social support, and life events: Predicting outcome behaviour in school-age children. *Child Development*, 71(5):1441-1457.

Jansen, J. 2004. Changes and continuities in South Africa's higher education system, 1994 to 2004. In: Chisholm, L. (Ed). *Changing class. Education and social change in post-apartheid South Africa.* (p293-314). Cape Town: HSRC Press

Johnson, J.L. & Wiechelt, S.A. 2004. Introduction to the special issue on resilience. *Substance Use & Misuse,* 39(5):657-670.

Johnson, R.B. & Onwuegbuzie, A.J. 2004. Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher,* 33(7):14-26.

Joseph, J.M. 1994. *The resilient child.* New York: Plenum Press.

Kao, G. & Tienda. M. 1998. Educational aspirations of minority youths. *American Journal of Education*, 106(3):349-384.

Kerka, S. 2003. Alternatives for at-risk and out-of-school youth. Clearinghouse on Adult, Career, and Vocational Education. *ERIC Digest*, 248:1-2.

Keyes, C.L.M. & Lopez, S.J. Toward a Science of mental health: Positive directions in diagnosis and intervention. In: Snyder, C.R. & Lopez, S.J. (Eds.). 2005. *Handbook of Positive Psychology*. New York: Oxford University Press.

Kinard, E.M. 1998. Methodological issues in assessing resilience in maltreated children. *Child Abuse & Neglect,* 22(7):669-680.

Kline, P. 1994. *An easy guide to factor analysis.* London: TJ Press (Padstow) Ltd.

Koch, T. 2006. Establishing rigour in qualitative research: the decision trail. *Journal of Advanced Nursing*; 30th Anniversary Issue. 53(1):91-103.

Kotze, N.J. & Donaldson, S.E. 1998. Residential desegregation in two South African cities: A comparative study of Bloemfontein and Pietersburg. *Urban Studies*, 35(3):467-477.

Krovetz, M.L. 1999. *Fostering resiliency: Expecting all students to use their minds and hearts well.* California: Corwin Press.

Kumpfer, K. 1999. Factors and processes contributing to resilience: The resilience framework. In: Glantz, M.D. & Johnson, J. (Eds.). *Resilience and development: Positive Life Adaptations.* New York: Plenum Press.

Kumpfer, K.L. & Bluth, M.S. 2004. Parent/child transactional process predictive of resilience or vulnerability to 'substance abuse disorders'. *Substance Use & Misuse*, 39(5):671-698.

Kynoch, G. 2003. Personal security concerns in South African townships: Apartheid nostalgia. *Electronic Publishing,* 5:7-10.

Leoschut, L. 2006. The influence of family and community violence exposure on the victimisation rates of South African youth. *Centre for Justice and Crime Prevention,* Issue Paper No. 3:1-11.

Lemerle, K. & Stewart, D.E. 2005. Building resilience through supportive school environments: Towards a model for promoting resilience in culturally diverse students. Paper presented at *The 15th National Health Promotion Association*. National Convention Centre, Canberra, Australia, 13-16 March 2005.

Lerner, R.M. 2005. Career, contributions of the consummate developmental scientist. In: Bronfenbrenner U. (Ed.). 2005. *Making Human Beings Human: Bioecological Perspectives on Human Development* California: Thousand Oaks. (ix-xxv)

Lerner, R.M. & Galambos, N.L. 1998. Adolescent development: Challenges and opportunities for research, programs, and policies. *Annual Review Psychology,* 49:413-416.

Leshner, A.I. 1999. Introduction. In: Glantz, M.D. & Johnson, J.L. (Eds.). 1999. *Resilience and Development: A positive life adaptations.* New York: Kluwer Academic/Plenum Publishers

Logsdon, M.C. & Gennaro, S. 2005. Bioecological Model for guiding social support research and interventions with pregnant adolescents. *Issues in Mental Health Nursing,* 26:327-339.

Louw, D. & Louw. A. 2007. *Child and adolescent development.* Free State: ABC Printers.

Lubbe, C. & Mampane, R. 2008. Voicing children's perceptions of safety and unsafety in their Life-worlds. In: Ebersöhn, L. (Ed.), *From Microscope to Kaleidoscope: Reconsidering Educational Aspects Related to Children in the HIV&AIDS Pandemic.* Rotterdam: Sense Publishers.

Luszczynska, A., Gutiẻrrez-Dona, B. & Schwarzer, R. 2005. General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal of Psychology,* 40(2):8-89.

Luthar, S.S. 1991. Vulnerability and resilience: A study of high-risk adolescents. *Child Development,* 62(3):600-616.

Luthar, S.S. & Cicchetti. D. 2000. The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology,* 12(4):851-885.

Luthar, S.S., Cicchetti, D. & Becker, B. 2000a. Resilience: Response to commentaries. *Child Development,* 71(3):573-575.

Luthar, S.S., Cicchetti, D. & Becker, B. 2000b. The construct resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3):543-562.

Mackay, R. 2003. Family resilience and good child outcomes: An overview of the research literature. *Ministry of Social Development Report on the topic of Family resilience and child outcomes.* Ariel Kalis of the University of Otago.

Magnusson, D. & Törestad, B. 1993. A holistic view of personality: A model revisited. *Annual Review of Psychology,* 44:427-452.

Mampane, M.R. 2004. The identification of resilient and non-resilient middle-adolescent learners in a South African township school. (Unpublished Masters dissertation). Pretoria: University of Pretoria.

Mampane, R. & Bouwer, C. 2006. Identifying resilient and non-resilient middle-adolescents in a formerly black-only urban school. *South African Journal of Education,* 26(3):443-456.

Margalit, M. 2003. Resilience model among individuals with learning disabilities: Proximal and distal influences. *Learning Disability Research and Practice,* 18(2):82-86.

Marshall, K. & Benard. B. 2003. Exploring the black box of resilience: Unravelling mysteries. National Resilience Resource Centre, College of Continuing Education, Regents of the University of Minesota 1-4.

Mashabela, H. 1988. *Townships of the PWV* Johannesburg: South African Institute of Race Relations.

Masten, A.S. 1994. *Educational Resilience in Inner-City America: Challenges and Prospects* New Jersey: Lawrence Erlbaum Associate Publishers.

Masten, A.S. 1999(a). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology,* 11:143-169.

Masten, A.S. 1999(b). Resilience comes of age: Reflections on the past and outlook for the next generation research. In: Glantz, M.D. & Johnson, J.L. (Eds.). 1999. *Resilience and Development: A positive life adaptations.* New York: Kluwer Academic/Plenum Publishers. (281-296).

Masten, A.S. 2004. Regulatory processes, risk, and resilience in adolescent development. *Annals New York Academy of Sciences,* 1021:310-319.

Masten, A.S. 2006. Developmental psychopathology: Pathways to the future. *International Journal of Behavioural Development,* 30(1):47-54.16(4): 1071-1094

Masten, A.S. 2007. Resilience in developing systems: Progress and promise as the fourth wave rises *Development and Psychopathology* 19:921-930

Masten, A.S., Burt, K.B., Roisman, G.I., Obradović, J., Long, J.D. & Tellegen, A. 2004. Resources and resilience in the transition to adulthood: Continuity and change. *Development and Psychopathology*

Masten, A.S. & Gewirtz, A.H. 2006. Resilience in Development: The importance of early childhood. In: Tremblay, R.E., Barr, R.G., Peters, R.DeV, (Eds.), *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development. (1-6). http://www.excellence-earlychildhood.ca/documents/Masten-GewirtzANGxp.pdf. (Accessed 19 March 2008).

Masten, A.S., Hubbard, J.J., Gest, S.D., Tellegen, A., Garmezy, N. & Ramirex, M. 1999. Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology,* 11:143-169.

Masten, A.S., Morison, P., Pellegrini, D. & Tellegen, A. 1990. Competence under stress: risk and protective factors. In: Rolf, J., Masten, A.S., Cicchetti, D., Nuechterlein, K.H. & Weintraub, S. (Eds.). 1990. *Risk and protective factors in the development of psychopathology.* New York: Cambridge University Press.

Masten A.S. & Obradović, J. 2006. Competence and Resilience in development. *Annals New York Academy of Sciences,* 1094:13-27

Masten, A.S. & Reed, M.G.J. 2005. Resilience in development. In: Snyder, C.R. & Lopez, S.J. (Eds.). *Handbook of positive psychology*. New York: Oxford University Press.

Mathers, N., Fox, N. & Hunn, A. 1998. *Trent focus for research and development in Primary Health Care: Surveys and questionnaires.* Sheffield: Trent Focus Group.

Maurer, T.J. & Andrews, K.M. 2000. Traditional, Likert and simplified measures of self-efficacy. *Educational and Psychological Measurement,* 60(6):965-973.

McKnight, L.R. & Loper, A.B. 2002. The effect of risk and resilience factors on the prediction of delinquency in adolescent girls. *School Psychology International,* 33(2):186-198.

Mears, R. 1997. Rural-Urban migration or urbanisation in South Africa. *South African Journal of Education,* 65(4):596-615.

Minnard, C.V. 2001. A strong building: Foundation of protective factors in schools. *Children and Schools,* 24(4):233-246.

Morse, J.M., Barrett, M., Mayan, M., Olson, K. & Spiers, J. 2002. Verification strategies for establishing reliability and validity in qualitative research. Int*ernational Journal of Qualitative Methods,* 1(2):1-19.

MSN Encarta, 2007. World English Dictionary (North American Edition). Microsoft Corporation: Bloomsbury Publishing Plc (online) http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?lextype=3&search=system

Mwamwenda, T.S. 1996. *Educational psychology: An African perspective,* 2nd ed. South Africa: Heinemann Publishers (Pty) Ltd.

Napier, M. & Mothwa, M. 2001. Push and pull factors in the initiation and maintenance of homework in two Pretoria settlements, *Urban Forum,* 12(3-4):336-351.

Northcutt, N. & McCoy, D. 2004. *Interactive Qualitative Analysis: A systems method for qualitative research.* California: Thousand Oaks.

Olivier, K., Collin, P., Burns, J. & Nicholas, J. 2006. Building resilience in young people through meaningful participation. *Australian e-Journal for the Advancement of Mental Health,* 5(1): 1-7

Olsson, G.A., Bond, L., Burns, J.M., Vella-Brodrick, D.A. & Sawyer, S.M. 2003. Adolescent resilience: a concept analysis. *Journal of Adolescence,* 26:1-11.

Onwu, G. & Stoffels, N. 2005. Instructional functions in large, under-resourced science classes: Perspectives of South African teachers. *Perspectives in Education,* 23(3):79-91.

Osterlind, S.J. 1998. *Constructing Test Items: Multiple-choice, constructed-response, performance and other formats,* 2nd ed. New York: Klauwer Academic Publishers.

Oswald, M., Johnson, B. & Howard, S. 2003. Qualifying and evaluating resilience-promoting factors. *Research in Education,* 70:50-64.

Owens, T.J. 1994. Two dimensions of self-esteem: Reciprocal effects of positive self-worth and self-deprecation on adolescent problems. *American Sociological Review,* 59(3):391-407.

Pajares, F. 1996. Self-efficacy beliefs in academic settings. *Review of Educational Research,* 66(4):543-579.

Park, N. 2004. Character strengths and positive development. *American Academy of Political and Social Science,* 519:40-54.

Park, N., Peterson, C. & Seligman, M.E.P. 2004. Strength of character and well-being. *Journal of Social and Clinical Psychology,* 23(5):603-619.

Parsons, T., Bales., R.F., Olds, J., Zelditch. M. & Slater, P.E. 1956. *Family socialization and interaction process.* Glencoe, Illinois: The Free Press.

Pelser, E. 2008. Learning to be Lost: Youth crime in South Africa: Discussion Paper for the HSRC Youth Policy Initiative. Pretoria, Reserve Bank, 13 May 2008. *Centre for Justice and Crime Prevention,* pp. 1-13.

Penner, L.A., Dovidio, J.F., Piliavin, J.A. & Schroeder, D.A. 2005. Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology,* 56: 365-392

Percival, V. & Hormer-Dixon, T. 1998. Environmental scarcity and violent conflict: The case of South Africa. *Journal of Peace Research,* 35(3):279-298.

Peterson, R.A. 2000. *Constructing effective questionnaires.* London: Sage Publications Inc.

Pett, M.A, Lackey, N.R. & Sullivan, J.J. 2003. *Making sense of factor analysis: The use of factor analysis for instrument development in Health care research.* USA: Sage Publication, Inc.

Phillips, G. 2008. Resilience in Practice interventions. *Child Care in Practice,* 14(1): 45-54.

Place, M., Reynolds, J., Cousins, A. & O'Neill, S. 2002. Developing a resilience package for vulnerable children. *Child and Adolescent Mental Health,* 7(4):162-167.

Potgieter, G. 2002*. City of Tshwane: A pictorial journey.* Pretoria: Tshwane Metropolitan Municipality.

Powell, R.A. & Single. H.M. 1996. Methodology Matters-V. *International Journal for Quality Health Care,* 8(5):499-504.

Prinsloo, E. 2005. Socio-economic barriers to learning in contemporary society. In: Landsberg, E. (Ed). *Addressing barriers to learning: A South African perspective*. Pretoria: Van Schaik Publishers. (27-42)

Prinsloo, E. 2007. Implementation of life orientation programmes in the new curriculum in South African schools: Perceptions of principals and life orientation teachers. *South African Journal of Education,* 27(1):155-170.

Reed, J. & Payton, V.R. 1997. Focus groups: Issues of analysis and interpretation. *Journal of Advanced Nursing,* 26(5): 765-771

Reference. Com, LLC. Copyright. http://www.reference.com/

Rew, L. & Horner, S. 2003. Youth resilience framework for reducing health-risk behaviours in adolescents. *Journal of Paediatric Nursing,* 18(6):379-388.

Richardson, G.E. 2002. The Metatheory of Resilience and Resiliency. *Journal of Clinical Psychology*, 58(3):307-321.

Rigby, K. 2000. Effects of peer victimization in schools and perceived social support on adolescent well-being. *Journal of Adolescence,* 23:57-68.

Ritchie, J. & Lewis, J. 2004. (Eds.). *Qualitative research practice: A guide for social science students and researchers.* London: SAGE Publications Ltd.

Robinson, J.L. 2000. Are there implications for prevention research from studies on resilience? *Child Development,* 71:570-572

Rolfe, G. 2006. Validity, trustworthiness and rigour: Quality and the idea of qualitative research. *Methodological Issues in Nursing Research,* 53(3):304-310.

Roosa, M.W. 2000. Some thoughts about resilience versus positive development, main effect versus interactions and the value of resilience. *Child Development*, 71(3):567-569.

Ross, C.E. & Broh, B.A. 2000. The roles of self-esteem and the sense of personal control in the academic achievement process. *Sociology of Education,* 73(4):270-284.

Roux. D.P. 1997. An Educational Psychology Perspective on adolescents' concerns. Unpublished Masters dissertation. Pretoria: University of Pretoria.

Rutter, M. 1985. Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *British Journal of Psychiatry* 147:598-611.

Rutter, M. 1990. Psychosocial resilience and protective mechanisms. In: Haggerty, R.J., Sherrod, L.R., Garmezy, N. & Rutter, M. 1996. *Stress, risk, and resilience in children and adolescents: Process, mechanisms, and interventions.* New York: Cambridge University Press.

Rutter, M. 1993. Resilience: Some conceptual considerations. *Journal of Adolescent Health.* 14:626-631.

Rutter, M. 1999. Resilience concepts and findings: implications for family therapy. *The Association for Family Therapy and Systematic Practice,* 21:119-144.

Rutter, M. 2000. Children in substitute care: Some conceptual considerations and research implications. *Children and Youth Services Review,* 22(9/10):685-703.

Rutter, M. 2005. How the environment affects mental health: Editorial. *British Journal of Psychiatry,* 186:4-6.

Rybak, C.J., Leary, A. & Marui, A. 2001. The resiliency wheel: A training model for enhancing the effectiveness of cross-cultural interviews. *International Journal for Advancement of Counselling,* 23:7-19.

Sale, J.E.M., Lohfeld, L.H. & Brazil, K. 2002. Revisiting the quantitative-qualitative debate: Implications for mixed-method research. *Quality & Quantity,* 36:43-53.

Sameroff, A.J. & Seifer, R. 1983. Familial risk and child competence. *Child Development,* 54:1254-1268.

Sameroff, A.J. & Seifer, R. 1990. Early contributors to developmental risk. In: Rolf, J., Masten, A.S., Cicchetti, D., Neuchterlein, K.H. & Weintraub, S. 1990. *Risk and protective factors in the development of psychopathology*. New York: Cambridge University Press.

Sameroff, A.J. 1998. Environmental risk factors in infancy. *American Academy of Pediatrics,* 102:1287-1292.

Sanders, R. 1987. The Pareto Principle: Its use and abuse, Commentary. *The Journal of Services Marketing,* 1(2):37-40.

Sands, D.J., Kozleski, E.B. & French, N.K. 2000. *Inclusive Education for the 21st Century* United States: Wadsworth.

Santrock, J.W. 2001. *Adolescence,* 8th ed. New York: McGraw-Hill Higher Education.

Sapire, H. 1992. Politics and protest in shack settlements of the Pretoria-Witwatersrand-Vereeniging Region, South Africa 1980-1990. *Journal of Southern African Studies,* 18(3):670-697.

Saunders, C. C. 1994. *An Illustrated Dictionary of South African History*. Sandton, South Africa: Ibis Books and Editorial Services

Sax, G. 1997. *Principles of Educational and Psychological measurement and evaluation,* 4th ed. Belmont CA: Wadsworth Publishing Company.

Scales, P.C. 1999. Reducing risks and building developmental assets: Essential actions for promoting adolescent health. *Journal of School Health,* 69(3):113-119.

Schoon, I. & Parsons, S. 2002. Competence in the face of adversity: The influence of early family environment and long term consequence. *Children & Society Volume,* 16:260-272.

SCOREPAK@ 2005. Office of Educational Assessment, University of Washington Item Analysis. Accessed 4 February 2009 at http://www.washington.edu/oea/score1.htm

Seale, C. & Silverman, D. 1997. Ensuring rigour in qualitative research. *European Journal of Public Health,* 7:379-384.

Seccombe, K. 2002. 'Beating the odds' Versus 'Changing the odds': Poverty, resilience and family policy. *Journal of Marriage and Family,* 64:384-394.

Seifer, R. Sameroff, A.J., Dickstein, S., Keitner, G.I., Miller, I., Rasmussen, S. & Hayden, L.C. 1996. Parental psychopathology, multiple contextual risks and one-year outcomes in children. Journal of Child Clinical Psychology 25, 423-435.

Seifer, R., Sameroff, A.J., Dickstein, S., Keitner, G., Miller, I., Rasmussen, S. & Hayden, L.C. 1996. Parental Psychopathology, multiple contextual risk, and one-year outcomes in children. *Journal of Clinical Child Psychology,* 25(4):423-435.

Seligman, M.E.P. 1998. Building human strengths: Psychology's forgotten mission. *APA Monitor,* 29(1):2.

Seligman, M.E.P. 2005. Positive psychology, positive prevention and positive therapy. In: Snyder, C.R. & Lopez, S.J. (Eds.). *Handbook of positive psychology*. New York: Oxford University Press.

Shanahan, M.J. & Flaherty, B.P. 2001. Dynamic patterns of time use in adolescence. *Child Development,* 72(2):385-401.

Shields, A.M., Cicchetti, D. & Ryan, R.M. 1994. The development of emotional and behavioural self-regulation and social competence among maltreated school-age children. *Development and Psychopathology,* 6:57-75.

Silverman, D. 1993. Int*erpreting qualitative data: Methods for analyzing talk, text and interaction.* London: SAGE Publications Inc.

Smith, G. 1999. Resilience concepts and findings: implications for family therapy. *Journal of Family Therapy,* 21:154-158.

Smokowski, P.R., Reynolds, A.J. & Bezruczko, N. 1999. Resilience and protective factors in adolescence: An autobiographical perspective from disadvantaged youth. *Journal of School Psychology,* 37(4):425-448.

Somchit, S. & Sriyaporn, P. 2004. The relationships among resilience factors, perception of adversities, negative behaviour, and academic achievement of 4th - to -6th grade children in Thad-Thong, Chonburi, Thailand. *Journal of Pediatrics,* 19(4):294-303.

Soudien, C. 2004. 'Constituting the class': an analysis of the process of integration in South African schools. In: Chisholm, L. 2004. *Changing class: Education and social change in post-apartheid South Africa.* Cape Town: HSRC.

Spear, H.J. & Kulbok, P. 2004. Autonomy and adolescence: A concept analysis. *Public Health Nursing,* 21(2):144-152.

Spector, P.E. & O'Connell, B.J. 1994. The contribution of personality traits, negative affectivity, locus of control and type A to the subsequent reports of job stressor and job strain. *Journal of Occupational and Organizational Psychology,* 67(1):1-11.

Strommen, E.F. & Lincoln, B. 1992. Constructivism, Technology, and the future of classroom learning. *Education and Urban Society,* 24(4):466-476.

Strong, T. 2005. Constructivist ethics? Let's talk about them: An introduction to the special issue on ethics and constructivist psychology. *Journal of Constructivist Psychology,* 18:89-102.

Suedfeld, P. 1997. Reaction to societal trauma: Distress and/or eustress. *Political Psychology,* 18(4):849-861.

Swart, E. & Pettipher, R. 2005. A framework for understanding inclusion. In: Landsberg, E., Kruger, D. & Nel, N. (Eds.). *Addressing Barriers to Learning: A South African Perspective.* Pretoria: Van Schaik. (3-23)

Swick, K.L. & Williams, R.D. 2006. An Analysis of Bronfenbrenner's Bio-Ecological Perspective for Early Childhood Educators: Implications for Working with Families Experiencing Stress. *Early Childhood Education Journal,* 33(5):371-378.

Tarter, R.E. & Vanyukov, M. 1999. Re-visiting the validity of the construct of resilience. In: Glantz, M.D. & Johnson, J.L. (Eds.). 1999. *Resilience and Development: A positive life adaptations.* New York: Kluwer Academic/ Plenum Publishers.

Taylor, J.S. 2004. Salutogenesis as a framework for child protection: Literature review. *Journal of Advanced Nursing*, 45(6):633-643.

Taylor, T.K., Eddy, J.M. & Biglan, A. 1999. Interpersonal skills training to reduce aggressive and delinquent behaviour: Limited evidence and the need for evidence-based system of care. *Clinical Child and Family Psychology Review,* 293:169-182.

Thomsen, K. 2002*. Building resilient students: Integrating resiliency into what you already know and do.* California: Corwin Press Inc.

Thurmond, V.A. 2001. The point of triangulation. *Journal of Nursing Scholarship,* 33(3):253-258.

Tihanyi, K.Z. & Du Toit S.F. 2005. Reconciliation through integration? An examination of South Africa's Reconciliation Process in racially integration High Schools. *Conflict Resolution Quarterly,* 23(1):25-41.

Tihanyi, K. 2007. Racial integration in the USA and South Africa: Lessons in a comparative perspective. *International Journal of Inclusive Education,* 11(2):177-197.

Ttofa, J. 2006. Reigniting the Beacon: A resilience-based approach to helping young people 'at risk' in schools. *The British Psychological Society Debate*, 117:32-36.

Tudge, J. 2008. *The Everyday Lives of Young Children: Culture, Class and Child Rearing in Diverse Societies*. London: Cambridge Press.

Tudge, J., Hayes, S., Doucet, F., Odero, D., Kulakova, N., Tammeveski, P., Meltsas, M. & Lee, S. 2000. Parents' participation in cultural practices with their preschoolers. *Psicologia: Teoria e Pesquisa,* 16(1):001-011.

Tusaie, K. & Dyer, J. 2004. Resilience: A historic review of the construct. *Holistic Nursing Practice,* 18(1):3-8.

Ungar, M. 2004. A constructionist discourse on resilience: Multiple contexts, multiple realities among at-risk children and youth. *Youth & Society,* 35:341-365.

Ungar, M. 2006a. Nurturing hidden resilience in at-risk youth in different cultures. *J Can Acad Adoles Psychiatry*, 15(2):53-58.

Ungar, M. 2006b. Resilience across cultures. *British Journal of Social Work,* 1-18.

Vanderzee, K.I., Buunk, B.P. & Sanderman, R. 1997. Social support, locus of control and psychological well-being. *Journal of Applied Social Psychology*, 27(20):1842-1859

Van Zyl Slabbert, F., Malan, C., Marais, H., Olivier, J. & Riordan, R. eds. 1994. *Youth in the New South Africa: Toward Policy Formulation*. Main Report of the Co-Operative Research Programme: South African Youth. Pretoria: HSRC

Verster, C. Residents fed-up. 1 May 2009. *OOS/EAST Record* 23(49) www.record.co.za

Wang, M.C., Haertel, G.D. & Walberg, H.J. 1994. Educational resilience in Inner Cities. In: Wang, M.C. & Gordon, E.W. (Eds.), *Educational Resilience in Inner-City America: Challenges and prospects.* New Jersey: Lawrence Erlbaum Associates, Publishers

Ward, C.L. 2007. Young people's violent behaviour: Social learning in context. In: P. Burton (Ed.), *Someone Stole My Smile: An Exploration into the causes of Youth Violence in South Africa.* Monograph Series, No.3 Cape Town: Centre for Justice and Crime Prevention.

Waxman, H.C., Gray, J.P. & Padrön, Y.N. 2004. Promoting educational resilience for students at-risk of failure. In: Waxman, H.C., Padrön, Y.N & Gray, J.P. (Eds.), 2004. *Educational Resiliency: Students, teacher, and school perspectives*. United States of America: Information Age Publishing.(37-62).

Weintraub, S. (Eds.). 1990. *Risk and protective factors in the development of psychopathology.* New York: Cambridge University Press.

Welsh, M.F., Thompson, T.E. & Jacobs, J. 2001. Kids Killing Kids in School: Comparing cases in the United States and South Africa. *Safundi Journal of South African and American Studies*, 2(3):1-9.

Werner, E.E. & Smith, R.S. 1982. *Vulnerable but invincible: A longitudinal study of resilient children and youth.* New York: McGraw-Hill Book Company.

Werner, E.E. & Smith, R.S. 1992. *Overcoming the odds: High risk children from birth to adulthood.* London: Cornell University Press.

Werner, E.E. 1995. Resilience in development. *Current Directions in Psychological Science,* 4(3):81-85.

Wikipedia (nd). The free encyclopaedia. http://en.wikipedia.org/wiki/Township

Wilkes, G. 2002. Introduction: A second generation of resilience research. *Journal of Clinical Psychology,* 58(3):229-232.

Wissing, M.P. 2000. *Wellness: Construct clarification and a framework for future research and practice.* First South African National Wellness Conference, (p. 1-33). Port Elizabeth. 2-5 May 2000.

Wolin, S. 2003. What is a Strength? *Reclaiming Children and Youth*, 12(1):18-21.

Wolin, S.J. & Wolin, S. 1993. *The resilient self: How survivors of troubled families rise above adversity,* 1st ed. New York: Random House Inc.

Wright, B.A. & Lopez, S.J. 2005. Widening the diagnostic focus: A case for including human strengths and environmental resources. In: Snyder, C.R. & Lopez, S.J. (Eds). *Handbook of positive psychology*. New York: Oxford University Press. (26-44)

Wyatt, T.J. 2006. Pre-service educators' confidence and efficacy in dealing with child and adolescent risk behaviour in diverse classroom settings. *Journal of Health Promotions,* 4(3):165-176.

Xaba, M. 2006. An investigation into the basic safety and security status of schools' physical environment. *South African Journal of Education*, 26(4):565-580.

Yates, D.S., Starnes, D.S. & Moore, D.S. 2005. *Statistics through applications*. New York: W.H. Freeman and Co.

Zegeye, A. 2004. Of struggles and whistles: Mamelodi's black youth culture. *Current Sociology,* 52:850-877.

Zika, S. & Chamberlain, K. 1992. On the relation between meaning in life and psychological well-being. *British Journal of Psychology,* 83:33-145.

---ooOoo---

APPENDIX A

PILOT QUESTIONNAIRES

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

V1	1			

1. Identification Particulars

Surname					
Names					
Gender	**Male**		**Female**		**V2**
Grade	**Grade 8**		**Grade 9**		**V3**
Age					
School					

2. Questions

Please answer all of the questions below, place a **X in only one column for each** question. **There is no right or wrong answer**. All answers should give an indication of your experiences and views. Please be honest with your answers.
Look at the example below to show how you should answer the questions.

2.1 Example Questions

	Question	*YES*	*SOME TIMES*	*NO*
1	*I don't sleep well at night*		*X*	
2	*My boyfriend or girlfriend abuses me*			
3	*I have too much work to do at home after school*			

2.2 Now answer ALL the questions below.

	Question	YES	SOME TIMES	NO	
1	At least one member of my family has a job				V4
2	I live in a brick house				V5
3	My parent / s are still alive				V6
4	I fight a lot with other children at school				V7
5	I have enough food to eat at home				V8
6	I have many problems				V9
7	There is someone at home who abuses me				V10
8	I stay with at least one of my parents				V11
9	I feel I am treated badly at home				V12
10	My life is very good				V13
11	I have repeated a grade at high school				V14

Please answer all the questions, do not skip any question. Make a cross in only one box for every question. Please do not allow your response to one question to influence the position of the next cross that you make.

	QUESTIONS	TRUE ALL THE TIME	TRUE MOST OF THE TIMES	HALF TRUE	A LITTLE BIT TRUE	TOTALLY UNTRUE		
1	My family is happy with my behaviour						V15	
2	I have an adult to talk to at home, who listens to me						V16	
3	I make sure that I do my classwork and homework						V17	
4	I do my best to find the right answer to a problem, even when it is very hard I do not give up						V18	
5	I know someone that I can trust and talk to when I am not feeling OK.						V19	
6	My teacher works hard to help me understand my work better						V20	
7	I am in control of what happens to me						V21	
8	I feel safe and loved at home, they want to know if I am OK						V22	
9	Doing well at school is very important to me						V23	
10	Other children make fun of me and hurt my feelings						V24	
11	My friends get into trouble at school						V25	
12	I do not listen to any adult person at home, I do my own thing						V26	
13	My future and success depend on my hard work						V27	
14	I believe that I have good talents						V28	
15	I do not allow people to stop me from trying to do my best in my work						V29	
16	My friends want me to improve my unacceptable behaviour.						V30	
17	I believe that I am able to do better and to pass at school						V31	

Please answer all the questions, do not skip any question. Make a cross in only one box for every question. Please do not allow your response to one question to influence the position of the next cross that you make.

	QUESTIONS	TRUE ALL THE TIME	TRUE MOST OF THE TIMES	HALF TRUE	A LITTLE BIT TRUE	TOTALLY UNTRUE		
18	Even when my problems are just too much, I do not give up trying to make it work						V32	
19	I know someone at school who cares about me and I can talk to						V33	
20	I use different ways to work out a difficult problem.						V34	
21	There is at least one teacher I can talk to who listens to me and encourages me to do my best						V35	
22	I believe that one day things will be better for me						V36	
23	I do not like to be absent from school, I hate to miss the teaching						V37	
24	I know if I work hard I will be able to do better in class						V38	
25	I know a good person whose behaviour is an example to me						V39	
26	Even when I do not understand in class I don't give up trying						V40	
27	My teachers made me see that I am good with my work and can do well in class						V41	
28	I know that if I work hard I will be successful one day						V42	
29	My school is boring						V43	
30	My teachers support me to aim high and to think of my bright future						V44	
31	My friends force me to do bad things						V45	
32	Teachers explain more in class, they give extra examples.						V46	
33	My future is in my hands, nobody can take that away from me						V47	
34	I am a tough person						V48	

END OF QUESTIONNAIRE THANK YOU VERY MUCH

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

V1	2			

1. Identification Particulars

Surname					V2
Names					V3
Gender	**Male**		**Female**		
Grade	**Grade 8**		**Grade 9**		
Age					
School					

2. Questions

Please answer all of the questions below, place a **X in only one column for each** question. **There is no right or wrong answer**. All answers should give an indication of your experiences and views. Please be honest with your answers.
Look at the example below to show how you should answer the questions.

2.1 Example Questions

	Question	*YES*	*SOME TIMES*	*NO*
1	*I don't sleep well at night*		*X*	
2	*My boyfriend or girlfriend abuses me*			
3	*I have too much work to do at home after school*			

2.2 Now answer ALL the questions below.

	Question	YES	SOME TIMES	NO	
1	At least one member of my family has a job				V4
2	I live in a brick house				V5
3	My parent / s are still alive				V6
4	I fight a lot with other children at school				V7
5	I have enough food to eat at home				V8
6	I have many problems				V9
7	There is someone at home who abuses me				V10
8	I stay with at least one of my parents				V11
9	I feel I am treated badly at home				V12
10	My life is very good				V13
11	I have repeated a grade at high school				V14

Please answer all the questions, do not skip any question. Make a cross in only one box for every question. Please do not allow your response to one question to influence the position of the next cross that you make.

	QUESTIONS	TRUE ALL THE TIME	TRUE MOST OF THE TIMES	HALF TRUE	A LITTLE BIT TRUE	TOTALLY UNTRUE		
1	At home there is no one to talk to about my problems						V15	
2	My family like my behaviour						V16	
3	My family want to know if I am OK						V17	
4	I have the energy to do anything that I believe in						V18	
5	I have respect for my teachers						V19	
6	My problems are caused by my school						V20	
7	In my life I have been through a lot of problems						V21	
8	I know what I want to be when I finish school						V22	
9	I believe that I have good talents						V23	
10	If I make up my mind to do something I will find a way to do it.						V24	
11	I am able to do almost everything that I concentrate on doing						V25	
12	With the help of those who like me, I can manage my problems						V26	
13	When I can't cope with my problems I look for help						V27	
14	My future and success depends on my hard work						V28	
15	I work hard in class when I don't understand I ask the teacher						V29	
16	Even if I try to work hard I do not stand any chance of passing						V30	
17	My teacher blames me when things go wrong in class						V31	

Please answer all the questions, do not skip any question. Make a cross in only one box for every question. Please do not allow your response to one question to influence the position of the next cross that you make.

	QUESTIONS	TRUE ALL THE TIME	TRUE MOST OF THE TIMES	HALF TRUE	A LITTLE BIT TRUE	TOTALLY UNTRUE		
18	I am tired of my bad luck and my problems						V32	
19	I do not know anybody who likes me						V33	
20	There is no teacher who can help me with my school work						V34	
21	I keep my problems to myself, I do not tell anybody						V35	
22	I know I will be successful one day						V36	
23	When I need help I ask someone						V37	
24	I have too much work to do, I have no time to do my schoolwork						V38	
25	I do not have any future plans						V39	
26	I know how to find help when I need it						V40	
27	I am responsible for doing well at school						V41	
28	I do not know who can help me to study better						V42	
29	I am afraid to ask the teachers for help with my school work						V43	
30	I am afraid to ask other children to help me with my classwork						V44	
31	I am afraid to say no when my friends force me to do bad things						V45	
32	I do not do my homework because there is nobody to help me						V46	
33	I cannot leave my friends even when they make fun of me						V47	
34	I don't ask anybody to help me with my problems						V48	

END OF QUESTIONNAIRE THANK YOU VERY MUCH

APPENDIX B

24-ITEM QUESTIONNAIRE

FINAL R-MATS

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

V1

1. Identification Particulars

Surname						
Names						
Gender	**Male**		**Female**			
Grade						
Date of birth	**Day**		**Month**		**Year**	
School						

V2
V3
V4
V5

2. Questions

Please answer all of the questions below. Place a **X in only one column for each question**. **There is no right or wrong answer**.

All answers should give an indication of your experiences and views. Please be honest with your answers.

Look at the example below to see how you should answer the questions.

2.1 Example Questions

	Question	*YES*	*NO*
1	*I don't sleep well at night*		
2	*My boyfriend or girlfriend abuses me*		
3	*I have too much work to do at home after school*		

2.2 Now answer ALL the questions below.

	Question	YES	NO
1	One or more members of my family have a job		
2	I live in a brick house		
3	One or both my parents are still alive		
4	I fight a lot with other children at school		
5	I have enough food to eat at home		
6	I have many problems		
7	There is someone at home who abuses me		
8	I stay with one or both of my parents		
9	I feel I am treated badly at home		
10	My life is very good		
11	I have repeated a grade at high school		

V6
V7
V8
V9
V10
V11
V12
V13
V14
V15
V16

RESILIENCE QUESTIONNAIRE FOR MIDDLE-ADOLESCENTS IN A TOWNSHIP SCHOOL (R-MATS)

Please answer all the questions, do not skip any question.
Make a cross in only one box for every question.
Please do not allow your response to one question to influence the position of the next cross that you make.
First, let us do the example together before starting with the questions.

	EXAMPLE	TRUE ALL THE TIME	TRUE MOST OF THE TIME	UNTRUE ALL THE TIME	UNTRUE MOST OF THE TIME
A	*I do not have any future plans*				
B	*I know I will be successful one day*				

Remember the following instructions.
1. Answer all the questions and do not skip any question.
2. Make a cross in only one box for every question.
3. Do not allow the cross you make for one question to influence the position of the next cross that you make.

	QUESTIONS	TRUE ALL THE TIME	TRUE MOST OF THE TIME	UNTRUE ALL THE TIME	UNTRUE MOST OF THE TIME	
1	I have an adult to talk to at home, who listens to me					V17
2	I make sure that I do my classwork and homework					V18
3	I do my best to find the right answer to a problem					V19
4	My teacher works hard to help me understand my work better					V20
5	I am in control of what happens to me					V21
6	I feel safe and loved at home, they want to know if I am OK					V22
7	Doing well at school is very important to me					V23
8	My future and success depend on my hard work					V27
9	I believe that I have good talents					V28
10	I do not allow people to stop me from trying to do my best in my work					V29

RESILIENCE QUESTIONNAIRE FOR MIDDLE-ADOLESCENTS IN A TOWNSHIP SCHOOL (R-MATS)

Remember the following instructions.
1. Answer all the questions and do not skip any question.
2. Make a cross in only one box for every question.
3. Do not allow the cross you make for one question to influence the position of the next cross that you make.

	QUESTIONS	TRUE ALL THE TIME	TRUE MOST OF THE TIME	UNTRUE ALL THE TIME	UNTRUE MOST OF THE TIME	
11	I believe that I am able to do better					V30
12	Even when my problems are just too much, I do not give up trying to make it work					V31
13	I know someone at school who cares about me and I can talk to					V32
14	I use different ways to work out a difficult problem.					V33
15	There is at least one teacher I can talk to who listens to me and encourages me to do my best					V34
16	I believe that one day things will be better for me					V35
17	I do not like to be absent from school, I hate to miss the teaching					V36
18	I know a good person whose behaviour is an example to me					V37
19	Even when I don't understand in class I don't give up trying					V38
20	My teachers made me see that I am good with my work and can do well in class					V39
21	My teachers support me to aim high and to think of my bright future					V40
22	Teachers explain a lot in class, they give extra examples.					V42
23	My future is in my hands, nobody can take that away from me					V43
24	I am a tough person					V44

END OF QUESTIONNAIRE THANK YOU VERY MUCH

APPENDIX C

APPLICATION FOR RESEARCH

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

GAUTENG PROVINCIAL GOVERNMENT

UMnyango WezeMfundo
Department of Education

Lefapha la Thuto
Departement van Onderwys

Date:	03 July 2007
Name of Researcher:	Mampane Motlalepule Ruth
Address of Researcher:	422 Vista Drive
	Faerie Glen
	0043
Telephone Number:	0124206272
Fax Number:	0124204395
Research Topic:	The Influence of the School System on Resilience: Perspective of Grade 8 & 9 Middle-Adolescent Learners in a Black only High School
Number and type of schools:	4 Secondary & 1 Technical Schools
District/s/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/Head Office 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 any of these conditions be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office 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 that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*

4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted 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 district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her 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.*
11. *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.*
12. *On completion of the study the researcher must supply the Senior Manager: Strategic Policy Development, Management & Research Coordination with one Hard Cover bound and one Ring bound copy of the final, approved research report. The researcher would also provide the said manager with an electronic copy of the research abstract/summary and/or annotation.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Senior Manager concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

ALBERT CHANEE
ACTING DIVISIONAL MANAGER: OFSTED

The contents of this letter has been read and understood by the researcher.	
Signature of Researcher:	
Date:	

APPENDIX D

CONSENT FORMS

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

University of Pretoria
Pretoria 0002 Republic of South Africa
http://www.up.ac.za
Department of Educational Psychology

Dear Learner

Re: Participation in questionnaires and perhaps focus group discussions and interviews

My name is Ruth Mampane and I am a student at the University of Pretoria. I am busy with my doctoral thesis. I am here to ask you to take part in this study to help me understand better the toughness and the ability to jump back or bounce back from hard situations of middle-adolescent learners like yourselves.

This study also aims to better understand the role that the school plays in supporting your ability to bounce back from difficult situations and times. The study is looking at learners in Grade 9 to answer questionnaires, some learners, not all of you will be asked to participate in group discussions and interviews.

Before I start, I am going to explain to you your rights after which you have permission to refuse if you feel you are not comfortable or happy with the study.

There are no right or wrong answers to the questionnaires that you will be completing. The study asks you to share your experiences as middle-adolescent learners who attend a township school. Some of you will be asked to take part in group discussions and interviews and should they feel that they do not wish to answer any of the questions asked they are free to refuse and to stop their participation at any time. Please understand that any information that you share with me when you answer the questionnaires, during group discussions and interviews will be treated confidentially.

Since more learners will take part in group discussions at the same time, they will also be asked to keep all that is discussed in the group confidential. When you have completed your participation in the study, I will write about the work you have done but I will never use your names and I will not write in a way that the information can be traced back to you. Your teachers are not part of the study and they will not have access to anything you say.

The study is not planned in a way that can harm you but it is possible that during the discussions you can feel that you are not coping, especially when you relive your experiences. As a result, I will end every task you do with a relaxation activity to help you calm down. I have arranged with Life Orientation teachers who have knowledge of counselling to help anyone of you who might require additional psychological help. I as the researcher will ensure that I refer you to such services, please talk to me if you feel that you are not coping and you need help.

Please sign the slip to indicate that you understand what I have just explained about the aim of the study and to indicate that you agree to do the questionnaire and to participate in group discussions and interviews if am selected.

Thank you very much for your interest in the study and the support that you are giving me.

Motlalepule Ruth Mampane
Researcher
0824213323

Prof. A. C. Bouwer
Supervisor

Tear-off

I _____(name of learner), agree to

take part in the study at my school _____(name

of the school).Grade: _____ Date: _____

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

University of Pretoria
Pretoria 0002 Republic of South Africa
http://www.up.ac.za
Department of Educational Psychology
13 July 2007

Dear parent / guardian

Re: Permission for your child to participate in a research project

My name is Ruth Mampane and I am a student at the University of Pretoria. I am busy with my doctoral studies to help me better understand the toughness of learners in Grade 8 and 9 and how the school helps them to bounce back from hard situations. I ask for your permission to allow your child to take part in this study.

The study includes a questionnaire which will take about 45 minutes at school. Some, not all, learners will later be selected to take part in group discussions and interviews. All the activities will take place at school during their class periods.

The national department of education as well as Tshwane district office and the school gave me permission to come for my study.

I do not foresee that the learners will experience any harm and risk as a result of participating in the study. The study asks them to think of their life experiences and how they managed to cope and recover from their difficult experiences. Furthermore, there is an educational psychologist and a Life Orientation teacher who are willing to help those learners who will need someone to talk to when they feel that they have some concerns regarding their lives.

Your child's participation is voluntary. He/she may withdraw from the study at any time during the study and their decision to withdraw will not have any negative effect on the study. The information that they will share with me will be totally confidential. The results of the study will be published but the name of your child will never be mentioned, it will remain anonymous. My supervisor will be the only person who can have access to the information but even she will not know the names of the learners.

I would appreciate your consent and assent as the parent / guardian of the learner to allow him/ her to participate in the study by signing the form on the next page. I will explain the research process to your child beforehand and will ensure that your child gives his/her assent.

Ruth Mampane
(0824213323)

Prof. A.C. Bouwer
Supervisor

I…….parent of ……in Grade…….. ..hereby **give** consent and assent for **him/ her** to participate in the study (circle the relevant option). I also give permission for my child to participate in focus groups and interviews should the researcher select him/ her to do so.

…… …….

Signature of Parent Date