

**CRITICAL THINKING OF ADOLESCENTS WITH REGARD  
TO POLITICAL ISSUES**

by

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submitted in accordance with the requirements  
for the degree of

**DOCTOR OF EDUCATION**

in the subject

**PSYCHOLOGY OF EDUCATION**

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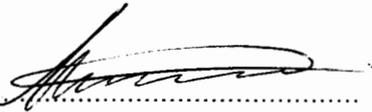
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**NOVEMBER 1998**

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I declare that **CRITICAL THINKING OF ADOLESCENTS WITH REGARD TO POLITICAL ISSUES** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.



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For:

my wife Stephanie who remains my lover, best friend, and soul mate;

my children Robyn and Michael for their patience;

and my Mother and late Father for inspiring me to achieve.

## ACKNOWLEDGEMENTS

Without the following people this study would not have been possible and my heartfelt thanks goes out to them:

- Prof Garfield Bester for his untiring enthusiasm and expert guidance throughout both the M Ed and D Ed.
- Dr Marietha Nieman for her help and guidance with all academic matters, and specifically for her translation of the Critical Thinking Test into Afrikaans.
- Ms S Osner for the language editing.
- Mrs Esta de Jager for her assistance with the formatting and layout of the work.
- Dr Sanet Burger for the proofreading.

November 1998

*If there is light in the soul,  
There will be beauty in the person.  
If there is beauty in the person,  
There will be harmony in the house.  
If there is harmony in the house,  
There will be order in the nation.  
If there is order in the nation,  
There will be peace in the world.*

**Chinese Proverb**

# CRITICAL THINKING OF ADOLESCENTS WITH REGARD TO POLITICAL ISSUES

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DEGREE: Doctor of Education  
SUBJECT: Psychology of Education  
UNIVERSITY: University of South Africa  
PROMOTER: Professor G Bester

## SUMMARY

The second fully democratic election in South Africa is scheduled to take place in May 1999. In the five years since the first election, it appears that very little attention has been paid to the political literacy of the electorate in general, and the youth in particular. The purpose of this study was to establish adolescents' level of political knowledge and whether they are able to think critically about political issues or not.

The first part of the literature study which was concerned with critical thinking revealed that the major aspects of critical thinking are: deductive reasoning, inductive inference, recognition of assumptions, credibility, and problem solving. The second part of the literature study was an analysis of which factors may play a role in the development of critical thinking of an adolescent, with particular reference to a political context. The third part was an examination of important current political and social issues. These were: the new Constitution, Truth and Reconciliation Commission, housing, land redistribution, education, labour, health, crime, political violence, environment, and the next election.

A reliable measuring instrument was developed in order to measure adolescents' knowledge of political issues, and their ability to think critically about these issues. The results of the empirical study revealed that intellectual potential and academic achievement were significantly related to critical thinking ability, while gender, environment, and personality appeared not to play a role. There was a significant correlation between political knowledge and critical thinking in a political context, implying that critical thinking is subject-specific. Cultural background also played a significant role in critical thinking in a political context.

In terms of political knowledge, boys were found to be at a significantly higher level than girls. The subjects from urban areas were also at a significantly higher level than those from rural areas. There was also a positive correlation between intellectual potential, academic achievement, and political knowledge.

Finally, some recommendations for improving the levels of political knowledge and critical thinking abilities with regard to political issues of South African adolescents were given.

## KEY TERMS

- CRITICAL THINKING
- ADOLESCENCE
- POLITICAL ISSUES
- POLITICAL KNOWLEDGE
- CULTURAL BACKGROUND
- ACADEMIC ACHIEVEMENT
- INTELLECTUAL POTENTIAL
- GENDER
- ENVIRONMENT
- EDUCATION

# KRITIESE DENKE VAN ADOLESSENTE MET BETREKKING TOT POLITIEKE KWESSIES

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GRAAD: Doctor Educationis  
VAK: Sielkundige Opvoedkunde  
UNIVERSITEIT: Universiteit van Suid Afrika  
PROMOTOR: Professor G Bester

## OPSOMMING

Die tweede ten volle demokratiese verkiesing in Suid-Afrika is geskeduleer om in Mei 1999 plaas te vind. In die vyf jaar sedert die vorige verkiesing is baie min aandag gegee aan die politieke geletterdheid van die verkiesingspubliek in die algemeen en die jeug in besonder. Die doel van hierdie studie was om adolessente se vlak van politieke kennis te bepaal en om vas te stel of hulle in staat is om krities oor politieke kwessies na te dink.

Die eerste deel van die literatuurstudie wat verband hou met kritiese denke het uitgewys dat die hoofaspekte van kritiese denke die volgende is: deduktiewe redenering, induktiewe inferensies, herkenning van aannames, geloofwaardigheid en probleemoplossing. Die tweede deel van die literatuurstudie behels 'n analise van die faktore wat 'n rol kan speel in die ontwikkeling van die kritiese denke van die adolessent, met spesifieke verwysing na 'n politieke konteks. Die derde deel is 'n ondersoek na belangrike teenswoordige politieke en sosiale kwessies. Hierdie kwessies sluit in: die nuwe Grondwet, die Waarheids- en Versoeningskommissie, behuising, herverdeling van grond, opvoeding, arbeid, gesondheid, misdaad, politieke geweld, die omgewing en die volgende verkiesing.

'n Betroubare meetinstrument om adolessente se kennis van politieke kwessies asook hul vermoë om krities daaroor na te dink, is ontwikkel. Die resultate van die empiriese ondersoek het aangetoon dat intellektuele potensiaal en akademiese prestasie betekenisvol verband hou met kritiese denkvermoë, terwyl geslag, omgewing en persoonlikheid klaarblyklik nie 'n rol speel nie. Daar is ook 'n betekenisvolle korrelasie tussen politieke kennis en kritiese denke in 'n politieke konteks wat impliseer dat kritiese denke vakspesifiek is. Kulturele agtergrond speel ook 'n betekenisvolle rol in kritiese denke in 'n politieke konteks.

Ten opsigte van politieke kennis is daar bevind dat seuns op 'n betekenisvolle hoër vlak is as dogters. Respondente uit stedelike gebiede is ook op 'n betekenisvolle hoër vlak as diegene uit plattelandse gebiede. Daar is ook 'n betekenisvolle korrelasie tussen intellektuele potensiaal, akademiese prestasie en politieke kennis.

Ten slotte is aanbevelings gemaak om die vlakke van politieke kennis en kritiese denkvermoëns met betrekking tot politieke aangeleenthede by Suid-Afrikaanse adolessente te verbeter.

## SLEUTELTERME

- KRITIESE DENKE
- ADOLESSENSIE
- POLITIEKE KWESSIES
- POLITIEKE KENNIS
- KULTURELE AGTERGROND
- AKADEMIESE PRESTASIE
- INTELLEKTUELE POTENSIAAL
- GESLAG
- OMGEWING
- OPVOEDKUNDE

# CHAPTER ONE

## INTRODUCTORY ORIENTATION, PROBLEM ANALYSIS, CONCEPT DEFINITION AND AIM

1.1	AWARENESS OF THE PROBLEM .....	1
1.2	EXPLORATION OF THE PROBLEM .....	2
1.3	STATEMENT OF THE RESEARCH PROBLEM .....	7
1.4	THE AIM OF THE RESEARCH .....	8
1.4.1	LITERATURE STUDY .....	8
1.4.2	EMPIRICAL INVESTIGATION .....	8
1.5	DEFINITION OF CONCEPTS .....	9
1.5.1	THINKING .....	9
1.5.2	CRITICAL THINKING .....	9
1.5.3	ADOLESCENT .....	9
1.5.4	POLITICAL .....	10
1.5.5	ISSUES .....	10
1.6	RESEARCH PROGRAMME .....	11

# CHAPTER TWO

## CRITICAL THINKING

2.1	INTRODUCTION .....	12
2.2	THINKING .....	13
2.2.1	EARLY PHILOSOPHICAL IDEAS ON THINKING .....	14
2.2.2	INTROSPECTIONISM .....	14
2.2.3	BEHAVIOURISM .....	15
2.2.4	GESTALT PSYCHOLOGY .....	16
2.2.5	NEOBHAVIOURISM .....	16
2.2.6	THE INFORMATION-PROCESSING APPROACH .....	16
2.2.7	HIGHER ORDER THINKING .....	17
2.2.8	THE VIEWS OF EDUCATIONALISTS AND PSYCHOLOGISTS .....	18
2.2.8.1	Piaget .....	18
2.2.8.2	Vygotsky .....	22
2.2.8.3	Feuerstein .....	23
2.2.8.4	De Bono .....	24
2.2.8.5	Sternberg .....	25
2.2.8.6	Summary .....	27
2.3	CRITICAL THINKING .....	28
2.3.1	DEFINITIONS .....	29
2.3.2	THEORIES OF CRITICAL THINKING .....	31
2.3.2.1	The General Reasoning Approach .....	31
2.3.2.2	The Subject Specific Approach .....	32
2.3.2.3	The Mixed Approach .....	34

2.3.3	CRITICAL THINKING SKILLS .....	34
2.3.3.1	Analysing arguments .....	34
2.3.3.2	Decision making .....	36
2.3.3.3	Problem solving .....	37
2.3.3.4	Credibility .....	39
2.2.3.5	Recognition of assumptions .....	40
2.3.4	DEVELOPMENT OF CRITICAL THINKING .....	40
2.3.5	FACTORS INFLUENCING THE DEVELOPMENT OF CRITICAL THINKING .....	42
2.3.5.1	Disposition and Attitude .....	42
2.3.5.2	Personality variables .....	43
2.3.5.3	Verbal ability .....	44
2.3.5.4	Cultural and environmental influences .....	44
2.3.5.5	Gender .....	45
2.3.5.6	Age .....	45
2.3.5.7	Technology .....	46
2.3.5.8	Conclusion .....	46
2.3.6	MEASUREMENT OF CRITICAL THINKING .....	47
2.3.6.1	Types of information-gathering techniques .....	47
2.3.6.2	Currently available tests .....	51
2.3.6.2.1	Comprehensive Critical Thinking Tests .....	51
2.3.6.2.2	Aspect-specific Critical Thinking Tests .....	55
2.3.6.3	Summary .....	56

2.3.7	METHODS OF IMPROVING CRITICAL THINKING IN THE CLASSROOM . .	57
2.3.7.1	CoRT Thinking Lessons . . . . .	57
2.3.7.2	Productive Thinking Program . . . . .	58
2.3.7.3	Philosophy for Children . . . . .	58
2.3.7.4	Odyssey . . . . .	59
2.3.7.5	Instrumental Enrichment . . . . .	59
2.3.7.6	Intelligence Applied . . . . .	60
2.3.7.7	Summary . . . . .	60
2.4	CONCLUSION . . . . .	61

# CHAPTER THREE

## ADOLESCENT DEVELOPMENT

3.1	INTRODUCTION .....	63
3.2	THEORIES OF ADOLESCENT DEVELOPMENT .....	64
3.2.1	G. STANLEY HALL .....	64
3.2.2	SIGMUND FREUD .....	65
3.2.3	ROBERT HAVIGHURST .....	66
3.2.4	ALBERT BANDURA .....	68
3.2.5	SUMMARY .....	69
3.3	PHYSICAL DEVELOPMENT .....	69
3.3.1	PHYSIOLOGICAL NEEDS .....	69
3.3.2	PUBERTY .....	70
3.3.3	TEENAGE PREGNANCY .....	71
3.3.4	ABORTION .....	72
3.3.5	AIDS .....	74
3.3.6	RIGHTS OF THE PHYSICALLY AND MENTALLY HANDICAPPED .....	76
3.3.7	SUMMARY .....	78
3.4	COGNITIVE DEVELOPMENT .....	79
3.4.1	INTEGRATIVE THEORY OF INTELLECTUAL DEVELOPMENT .....	79
3.4.2	SOCIAL COGNITION .....	81
3.4.3	COGNITION AND THE GROWTH OF POLITICAL UNDERSTANDING .....	82
3.4.4	SUMMARY .....	84

3.5	AFFECTIVE DEVELOPMENT .....	85
3.5.1	ANXIETY .....	85
3.5.2	AGGRESSION .....	86
3.5.3	DEPRESSION .....	87
3.5.4	SUMMARY .....	88
3.6	SOCIAL DEVELOPMENT .....	89
3.6.1	RELATIONSHIPS WITH PARENTS .....	89
3.6.2	RELATIONSHIPS WITH SIBLINGS .....	90
3.6.3	RELATIONSHIPS WITH PEER GROUP .....	91
3.6.4	SUMMARY .....	93
3.7	MORAL DEVELOPMENT .....	93
3.7.1	THEORIES OF MORAL DEVELOPMENT .....	93
3.7.2	FACTORS AFFECTING MORAL DEVELOPMENT .....	95
3.8	RELIGIOUS DEVELOPMENT .....	97
3.9	PERSONALITY DEVELOPMENT .....	99
3.9.1	THE CONFLICT MODEL .....	99
3.9.2	THE FULFILMENT MODEL .....	103
3.9.3	THE CONSISTENCY MODEL .....	104
3.9.4	SUMMARY .....	105
3.10	THE DEVELOPMENT OF POLITICAL UNDERSTANDING .....	106
3.10.1	COGNITIVE DEVELOPMENT .....	106
3.10.2	SOCIAL COGNITION .....	108
3.10.3	KNOWLEDGE OF POLITICAL ISSUES .....	108
3.10.4	POLITICAL ATTITUDES .....	109

3.10.5	INVOLVEMENT IN POLITICS .....	110
3.10.6	FACTORS AFFECTING THE DEVELOPMENT OF POLITICAL UNDER- STANDING, ATTITUDES AND INVOLVEMENT .....	111
3.11	CONCLUSION .....	112

# CHAPTER FOUR

## THE POLITICAL SITUATION IN SOUTH AFRICA

4.1	INTRODUCTION .....	114
4.2	HISTORICAL SURVEY OF SOUTH AFRICAN POLITICS .....	115
4.2.1	BEFORE 1910 .....	115
4.2.2	1910 - 1948 .....	118
4.2.3	1948 - 1989 .....	120
4.2.4	1989 - 1994 .....	124
4.3	Current political issues .....	125
4.3.1	NEW CONSTITUTION .....	125
4.3.2	TRUTH AND RECONCILIATION COMMISSION .....	126
4.3.3	SOCIAL ISSUES .....	128
4.3.3.1	Housing .....	128
4.3.3.2	Redistribution .....	129
4.3.3.3	Education .....	130
4.3.3.4	Labour .....	132
4.3.3.5	Health .....	135
4.3.3.6	Crime .....	136
4.3.3.7	Political violence .....	138
4.3.3.8	Environment .....	138
4.3.4	NEXT ELECTION 1999 .....	139
4.4	CONCLUSION .....	140

# CHAPTER FIVE

## THE METHOD OF THE EMPIRICAL INVESTIGATION

5.1	INTRODUCTION .....	141
5.2	HYPOTHESES .....	141
5.2.1	HYPOTHESIS 1 .....	142
5.2.2	HYPOTHESIS 2 .....	142
5.2.3	HYPOTHESIS 3 .....	143
5.2.4	HYPOTHESIS 4 .....	143
5.2.5	HYPOTHESIS 5 .....	144
5.2.6	HYPOTHESIS 6 .....	144
5.2.7	HYPOTHESIS 7 .....	145
5.2.8	HYPOTHESIS 8 .....	145
5.2.9	HYPOTHESIS 9 .....	146
5.2.10	HYPOTHESIS 10 .....	146
5.2.11	HYPOTHESIS 11 .....	146
5.2.12	HYPOTHESIS 12 .....	147
5.2.13	HYPOTHESIS 13 .....	147
5.2.14	HYPOTHESIS 14 .....	148
5.3	SELECTION OF THE SAMPLE .....	148
5.4	MEASURING INSTRUMENTS USED IN THE INVESTIGATION .....	150

5.4.1	CRITICAL THINKING ABILITY .....	150
5.4.1.1	The structure of the critical thinking test .....	151
5.4.1.2	The development of items for the measuring instrument .....	153
5.4.2	POLITICAL KNOWLEDGE .....	154
5.4.3	PERSONALITY .....	155
5.4.4	INTELLECTUAL POTENTIAL .....	155
5.4.5	ACADEMIC ACHIEVEMENT .....	156
5.4.6	PROCEDURE FOLLOWED DURING THE TESTING PHASE .....	156

# CHAPTER SIX

## RESULTS OF THE INVESTIGATION

6.1	INTRODUCTION .....	158
6.2	ITEM ANALYSIS OF THE PKQ AND THE CTT .....	158
6.3	RELIABILITY .....	168
6.3.1	PKQ .....	169
6.3.2	CTT .....	169
6.4	VALIDITY OF THE PKQ AND THE CTT .....	170
6.5	DETERMINING THE NORMS OF THE PKQ AND THE CTT .....	170
6.6	TESTING OF THE HYPOTHESES .....	179
6.6.1	HYPOTHESIS 1 .....	179
6.6.1.1	Comparison between the three groups with regard to deduction .....	179
6.6.1.2	Comparison between the three groups with regard to credibility .....	181
6.6.1.3	Comparison between the three groups with regard to inductive inference ...	182
6.6.1.4	Comparison between the three groups with regard to recognition of assumptions .....	183
6.6.1.5	Comparison between the three groups with regard to problem solving .....	184
6.6.1.6	Comparison between the three groups with regard to the total of the CTT ..	185
6.6.1.7	Discussion of the results with regard to hypothesis 1 .....	186
6.6.2	HYPOTHESIS 2 .....	188
6.6.3	HYPOTHESIS 3 .....	190

6.6.4	HYPOTHESIS 4 .....	191
6.6.5	HYPOTHESIS 5 .....	193
6.6.6	HYPOTHESIS 6 .....	194
6.6.6.1	Mathematics .....	194
6.6.6.2	Geography .....	195
6.6.6.3	History .....	196
6.6.7	HYPOTHESIS 7 .....	198
6.6.8	HYPOTHESIS 8 .....	199
6.6.9	HYPOTHESIS 9 .....	201
6.6.10	HYPOTHESIS 10 .....	202
6.6.11	HYPOTHESIS 11 .....	203
6.6.12	HYPOTHESIS 12 .....	204
6.6.13	HYPOTHESIS 13 .....	205
6.6.14	HYPOTHESIS 14 .....	206
6.7	CONCLUSION .....	206

# CHAPTER SEVEN

## EDUCATIONAL IMPLICATIONS OF THE RESEARCH AND SUGGESTIONS FOR FURTHER RESEARCH

7.1	INTRODUCTION .....	209
7.2	EDUCATIONAL IMPLICATIONS AND RECOMMENDATIONS .....	211
7.2.1	THE CURRICULUM .....	211
7.2.1.1	Political knowledge .....	211
7.2.1.2	Critical thinking .....	212
7.2.2	THE CLASSROOM .....	214
7.2.2.1	Political knowledge .....	214
7.2.2.2	Critical thinking .....	216
7.2.3	THE COMMUNITY .....	222
7.2.4	THE HOME .....	223
7.3	CONTRIBUTIONS OF THE STUDY .....	223
7.4	LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH .....	224

BIBLIOGRAPHY .....	225
APPENDIX A .....	251
APPENDIX B .....	256
APPENDIX C .....	262
APPENDIX D .....	264
APPENDIX E .....	279
APPENDIX F .....	284
APPENDIX G .....	290
APPENDIX H .....	292
APPENDIX I .....	308

## LIST OF TABLES

TABLE 5.1	TABLE OF AREA BY GENDER .....	150
TABLE 6.1	ITEM ANALYSIS OF THE PKQ .....	159
TABLE 6.2	ITEM ANALYSIS OF THE CTT: DEDUCTION .....	160
TABLE 6.3	ITEM ANALYSIS OF THE CTT: CREDIBILITY .....	161
TABLE 6.4	ITEM ANALYSIS OF THE CTT: INDUCTIVE INFERENCE .....	162
TABLE 6.5	ITEM ANALYSIS OF THE CTT: RECOGNITION OF ASSUMPTIONS .	163
TABLE 6.6	ITEM ANALYSIS OF THE CTT: PROBLEM SOLVING .....	164
TABLE 6.7	ITEM ANALYSIS OF THE TOTAL CTT .....	165
TABLE 6.8	RELIABILITY .....	169
TABLE 6.9	LIMITS AND AREAS OF STANINES .....	170
TABLE 6.10	TRANSFORMATION OF RAW SCORES INTO STANINES: PKQ ....	171
TABLE 6.11	TRANSFORMATION OF RAW SCORES INTO STANINES: CTT Section: Deduction .....	172
TABLE 6.12	TRANSFORMATION OF RAW SCORES INTO STANINES: CTT Section: Credibility .....	173
TABLE 6.13	TRANSFORMATION OF RAW SCORES INTO STANINES: CTT Section: Inductive inference .....	174

TABLE 6.14	TRANSFORMATION OF RAW SCORES INTO STANINES: CTT Section: Recognition of assumptions .....	175
TABLE 6.15	TRANSFORMATION OF RAW SCORES INTO STANINES: CTT Section: Problem solving .....	176
TABLE 6.16	TRANSFORMATION OF RAW SCORES INTO STANINES: TOTAL CTT .....	176
TABLE 6.17	CLASSIFICATION OF SCORES OF THE PKQ AND THE CTT .....	178
TABLE 6.18	RESULTS OF THE ANALYSIS OF VARIANCE: DEDUCTION .....	180
TABLE 6.19	T TEST ANALYSIS OF THE VARIABLE DEDUCTION .....	180
TABLE 6.20	RESULTS OF THE ANALYSIS OF VARIANCE: CREDIBILITY .....	181
TABLE 6.21	T TEST ANALYSIS OF THE VARIABLE CREDIBILITY .....	181
TABLE 6.22	RESULTS OF THE ANALYSIS OF VARIANCE: INDUCTIVE INFERENCE .....	182
TABLE 6.23	T TEST ANALYSIS OF THE VARIABLE INDUCTIVE INFERENCE .....	182
TABLE 6.24	RESULTS OF THE ANALYSIS OF VARIANCE: RECOGNITION OF ASSUMPTIONS .....	183
TABLE 6.25	T TEST ANALYSIS OF THE VARIABLE RECOGNITION OF ASSUMPTIONS .....	183
TABLE 6.26	RESULTS OF THE ANALYSIS OF VARIANCE: PROBLEM SOLVING .....	184
TABLE 6.27	T TEST ANALYSIS OF THE VARIABLE PROBLEM SOLVING .....	185

TABLE 6.28	RESULTS OF THE ANALYSIS OF VARIANCE: CTT TOTAL .....	185
TABLE 6.29	T TEST ANALYSIS OF THE CTT TOTAL .....	186
TABLE 6.30	DIFFERENCE BETWEEN THE AVERAGE CTT SCORES FOR MALES AND FEMALES .....	188
TABLE 6.31	DIFFERENCE BETWEEN THE AVERAGE CTT SCORES FOR SUBJECTS FROM RURAL AND URBAN ENVIRONMENTS .....	190
TABLE 6.32	CORRELATION BETWEEN CTT SCORES AND INTELLECTUAL POTENTIAL .....	192
TABLE 6.33	CORRELATION BETWEEN CTT SCORE AND ACADEMIC ACHIEVEMENT .....	193
TABLE 6.34	DIFFERENCE BETWEEN THE AVERAGE CTT SCORES FOR ADOLESCENTS WHO STUDY MATHEMATICS AND THOSE WHO DO NOT .....	195
TABLE 6.35	DIFFERENCE BETWEEN THE AVERAGE CTT SCORES FOR ADOLESCENTS WHO STUDY GEOGRAPHY AND THOSE WHO DO NOT .....	196
TABLE 6.36	DIFFERENCE BETWEEN THE AVERAGE CTT SCORES FOR ADOLESCENTS WHO STUDY HISTORY AND THOSE WHO DO NOT .....	197
TABLE 6.37	CORRELATION BETWEEN CTT SCORE AND PERSONALITY FACTORS .....	198
TABLE 6.38	RESULTS OF THE ANALYSIS OF VARIANCE: POLITICAL KNOWLEDGE .....	200

TABLE 6.39	T TEST ANALYSIS OF THE VARIABLE POLITICAL KNOWLEDGE . . .	200
TABLE 6.40	CORRELATION BETWEEN THE CTT AND POLITICAL KNOWLEDGE	201
TABLE 6.41	DIFFERENCE BETWEEN THE AVERAGE PKQ SCORES FOR ADOLESCENTS WHO STUDY HISTORY AND THOSE WHO DO NOT . . . . .	202
TABLE 6.42	DIFFERENCE BETWEEN THE AVERAGE PKQ SCORES FOR MALES AND FEMALES . . . . .	203
TABLE 6.43	DIFFERENCE BETWEEN THE AVERAGE POLITICAL KNOWLEDGE SCORES FOR SUBJECTS FROM RURAL AND URBAN ENVIRONMENTS . . . . .	204
TABLE 6.44	CORRELATION BETWEEN POLITICAL KNOWLEDGE AND INTELLECTUAL POTENTIAL . . . . .	205
TABLE 6.45	CORRELATION BETWEEN POLITICAL KNOWLEDGE AND ACADEMIC ACHIEVEMENT . . . . .	206

# CHAPTER ONE

## INTRODUCTORY ORIENTATION, PROBLEM ANALYSIS, CONCEPT DEFINITION AND AIM

### 1.1 AWARENESS OF THE PROBLEM

The first fully democratic election in South Africa took place in April 1994. For the black people of the country, this election was the culmination of a long struggle to be represented in parliament. For them voting was an entirely new experience, and it was a simple matter. It wasn't about the Constitution. It wasn't about the personalities. It wasn't about the issues. It was simply about freedom. The specific political party which one would vote for was irrelevant. The opportunity to vote was everything. The emphasis was clearly on the process rather than the content. There were choices for the black voter: the African National Congress (ANC); the late participants the Inkatha Freedom Party (IFP); and smaller parties such as the Christian Democrats and the radicals the Pan African Congress (PAC), but that wasn't the focus. The political analysts all predicted the landslide victory for the ANC as they knew that it was simply about freedom, and Nelson Mandela and his party were the symbols of that freedom. Most of the other votes went to the IFP as tribal allegiance also played a role in the election.

For the white people of South Africa, the situation was a little different. Whites had always had the vote. The difference was that in 1994 they were not sure of a victory, in fact they were sure of defeat. The traditional choices were still in place: the National Party (NP) - representative of the majority of the Afrikaans speaking whites; the Freedom Front (FF) - representative of the more conservative elements of the Afrikaner nation; and the Democratic Party (DP) - representative of the more liberal whites in the country. In the past casting a vote for the white person simply meant choosing between the right, or conservatives, who upheld the policy of Apartheid, or the left, or liberals, who fought relatively mildly against Apartheid. In the 1994 election it was different, as the definitions of conservatism and liberalism were dramatically different. The political spectrum was broadened to the extent where the right now meant the FF (or non-participating Afrikaner Weerstandsbeweging (AWB)) and the left meant the radical PAC (or the non-participating Communist Party). Although the white voter was not as entirely politically unschooled as the black voter, he was nonetheless not very au-fait with this new broad political spectrum. For the white voter in the 1994 election, the focus was not on his vote, but rather on surviving the election.

In terms of the Constitution of South Africa the President must set a date for an election within 90 days of the end of the Parliament's five-year term. This election is set to take place in early May 1999. For this election, the focus has shifted. The issues are now more clear-cut and definite. The political parties all now have a curriculum vitae which can be scrutinized by the voter. This time the emphasis could rather be on the content, not simply the process.

As the current legal age for voting in South Africa is 18 years and older, an entirely new generation of voters has qualified over the past five years to vote in this election. This, in itself would not appear to be a problem, but the fact that many of these potential young voters have had inadequate formal education and little or no specific political education, gives rise to a situation where the future of the country rests in the hands of a singularly underqualified group of people.

This researcher has become aware of the fact that very little has been done over the past five years to educate the voting public. Attempts have been made by the ANC government to educate the public with regard to the new Constitution which was officially adopted on the 11th of October 1996, but these attempts have been very limited. It unfortunately still appears to be the case that the majority of the youth, and adults, of South Africa are still poorly educated, and specific political education is non-existent.

## **1.2 EXPLORATION OF THE PROBLEM**

It is not enough to have a basic knowledge of politics, but it is also of vital importance to be able to think critically about political issues. Rouyer (1995:34) is of the opinion that mere knowledge of political concepts and issues is not enough "Only when students begin to think critically about the political world around them have we done our job as political scientists".

Costello (1995:105) states that in order for a democracy to function effectively, we need to have a thinking population. He asserts that the teaching of the skills of critical thinking and argument is an essential aspect of education for citizenship. Benesch (1993:546) is in agreement with this and states that there is a strong link between critical thinking and political and social issues, "Those who think critically focus on social inequities and probe the disparities between democratic principles and undemocratic realities." She goes on to state

that she feels that critical thinking is not simply higher order thinking, rather it is "a search for the social, historical, and political roots of conventional knowledge and an orientation to transform learning and society" (1993:546).

Romanish (1986:47) also stresses the necessity for critical thinking with regard to political issues: "It has long been a tenet of our democratic faith that the populace must be enlightened. Clearly that must translate into more than mere literacy and, when the meaning of education for democracy is explored, critical thinking becomes a necessity."

Parker, Mueller and Wendling (1989:7) conducted research into high school students' use of critical reasoning with regard to political issues and found the following:

- high school students are capable of thinking critically with regard to political issues;
- minimal metacognitive guidance can help students be successful at this task;
- supportive conditions provided over the long term should help students acquire the habit of dialectical reasoning.

Zevin (1994:21) highlights a contradiction which he feels is a problem in the American education system. He states that education and schooling is nearly always seen as a key instrument of government and community in fostering a sense of belonging and nationhood, and in building values of participation and community (these ideas were originally put forward by Dewey in 1906). In seeming opposition to this is the idea that we must inculcate a critical and thinking disposition in our students which may well lead to a rejection of the ideas and policies of the government which another part of the curriculum attempts to teach. He states "Between the demands of those who seek to foster patriotic attitudes and those who foster critical-mindedness and protest, the educational system of the nation as a whole must walk a tightrope in an effort to balance both viewpoints".

The situation in South Africa is a little more complex. South African educationalists will have to bear the educational backlogs in mind when attempting to draw up a curriculum which will eventually produce citizens who are both politically well-informed and critical thinkers. It is unfortunately very difficult to draw up a new curriculum or even a specific programme if one cannot draw on research findings. In South Africa very little research in this area has been done. However, a number of studies have been conducted over the years in order to establish

the levels of political literacy of the South African youth. Unfortunately, these studies (Trümpelman in 1986, and Kotze in 1990) were conducted before the major political changes of 1991, and focused mainly on the white youth. Frederick Van Zyl Slabbert's SAY programme (Van Zyl Slabbert, Malan, Marais, Olivier & Riordan, 1994:145) remains the latest research undertaken into political literacy in South Africa. All of these programmes focused on knowledge of politics and political concepts such as democracy. None of the studies have considered how adolescents think about political concepts. No studies have focused on thinking critically about political issues.

As a result of the unique situation in South Africa where concepts such as democracy, voting, political parties, and human rights are new to the majority of South Africans, research conducted into political literacy in the United States or other developed countries is of little use to us. The same applies to the wealth of research into critical thinking in the United States. The basic education levels of South African adolescents are much lower than that of the United States and as a result the standardised tests are completely inapplicable, and new tests specific to the South African situation will have to be developed.

Another important aspect of the political literacy question is at what age should people be accepted as being politically literate and therefore able to cast an informed vote. In South Africa a number of the major political role players are urging changes to the Constitution where 16 year olds would be allowed to vote.

It is generally accepted that in order for a person to cast an informed vote in a democratic election, he needs to meet certain requirements:

- he needs to have a sound knowledge of the political parties and participants;
- he needs to have a firm grasp on the major issues of the day;
- he needs to be able to think critically about the issues and participants;
- he needs to be able to make a choice;
- he needs to accept the responsibility of casting a vote possibly as a representative of his family.

Unfortunately, these abilities and requirements are not innate. One has to have some type of training or education in these fields in order to meet these requirements. A number of questions are raised in this regard:

- What format should this training and education have?
- On which areas should political education focus?
- Should the political history of the country and/or the rest of the world be included?
- Should the ability to think critically in a political context be placed on the priority list?

It would seem that the only way to answer these questions would be to conduct research into the various areas listed above.

Although the above refers to training and education in a classroom environment, children's learning absorbs influences from many other areas. Firstly, the influence of their parents is of paramount importance. Many children follow the example of their parents blindly, and it is often the task of the formal educator to counteract or neutralize this influence, as it may not come from a very critical base. Secondly, children are often influenced by their peers, who are often not as informed or critical about political matters. In the light of the aforementioned, the formal classroom environment cannot, and should not, be underestimated in the formation of an informed, critical voting public.

In South Africa, the situation is being severely hampered by the current education crisis. The current government inherited an education system which had focused almost entirely on white people for almost fifty years. When the ANC took over the reins of the government, their goal in education was to redress the wrongs of the past and eventually provide a sound, equal education for all the people of South Africa. Unfortunately, the resources and funds available were very limited, and although the portion of the available national finances allocated to education was increased, it still falls well below the needs. Another factor is that the privileges accorded to white learners have become so entrenched that the only way to bring about some form of equality would be to take away from the whites. The government is not prepared to do this, and as a result the vast differences between the white and black schools with regard to facilities and basic provision of education remain largely in place. The implication of this is that if the provision of basic education is being hampered, then the provision of political education in conjunction with the teaching of critical thinking skills is currently non-existent.

However, as part of the government's initiatives on education, the importance of critical thinking and political participation have received renewed attention. The ANC's "Policy Framework for Education" contained the following statements:

- "Education shall be based upon the principles of co-operation, critical thinking and civic responsibility" (1995:5).
- "The national core curriculum will prepare individuals for the world of work and social and political participation" (1995:10).

The White Paper "Education and Training in a Democratic South Africa" also stated:

- "The curriculum, teaching methods and textbooks at all levels and in all programmes of education and training, should encourage independent and critical thought" (1995:17).

These aims of the government with regard to education appear to be both noble and essential. However, the implementation of these aims is problematic. Firstly, it is not clear as to what the current levels of political knowledge are. Secondly, the differences between the provision of education to various cultural groups compounds the problem in that the critical thinking abilities of the various groups are also likely to differ radically. Thirdly, as there are no specific models to refer to, the solutions are not clear-cut. Fourthly, the factors which have an influence on the political development of South African adolescents are not immediately apparent. Factors such as environment, culture, gender, and education may play important roles, but this would have to be established by means of research.

One possible solution to the problems with the implementation of the government's educational aims, could lie in the experience of other countries. Unfortunately South Africa's political situation is unique, and as a result only limited guidance can be gained from the literature. Most of the literature refers to the development of political understanding and knowledge in first-world countries such as the United States and Britain.

Joseph Adelson conducted extensive research in the 1970s and 1980s on the political thinking of American adolescents. Various other research projects have followed in the USA

with the current project the "1998 Civics Consensus Project" (Torney-Purta, 1996b:1) attempting to establish the levels of knowledge and understanding of various political institutions and issues. As stated above, these studies are of limited use to South African researchers.

As indicated in the paragraphs above, there is a great dearth of literature and research relating to political matters in South Africa. This is probably as a result of the policies of the previous government where much of their power revolved around keeping the opposition uninformed and uneducated. This policy was also aimed at the white people as the foundation of many of the laws and ideologies were relatively tenuous and they did not want the general population to become aware of their true nature. Most of the research was aimed at the white population, which is of little use in the South Africa of today. However, even less research into the political knowledge and understanding of adolescents has been conducted in the post-apartheid and government of national unity era in South Africa.

### **1.3 STATEMENT OF THE RESEARCH PROBLEM**

It appears that the problem of this proposed investigation revolves around the following questions :

- What are the thinking skills which need to be considered when attempting to measure the critical thinking of adolescents in a political context?
- What are the factors which may play a role in the critical thinking of an adolescent, in a political context?
- What are the contents which need to be included when measuring critical thinking in a South African political context?

## **1.4 THE AIM OF THE RESEARCH**

The principal aim of this research is to come to an understanding of the nature of political knowledge of South African adolescents, and their ability to think critically with regard to political issues. A secondary aim would be to make recommendations with regard to improving the political knowledge and critical thinking abilities of South African adolescents. These aims will be realised by means of a literature study and an empirical investigation.

### **1.4.1 LITERATURE STUDY**

A literature study will be undertaken in three parts, with the focus of the first part being on establishing which thinking skills should be included in critical thinking measurement and possible critical thinking programmes. In order to arrive at valid conclusions, the various concepts and theories of critical thinking will have to be considered. An examination of the currently available methods of measurement of critical thinking, and commercially available programmes of improving critical thinking in the classroom, will also be conducted.

The second part will attempt to establish which factors may play a role in the critical thinking of an adolescent, with particular reference to a political context. In order to do this, the general development of the adolescent will have to be investigated.

The third part will be an examination of important current political and social issues. These issues will then form the core of the content of a measuring instrument.

### **1.4.2 EMPIRICAL INVESTIGATION**

The aims of the empirical investigation are as follows:

- to develop measuring instruments which will measure the level of political knowledge of adolescents as well as their critical thinking abilities in a political context;
- to establish which factors have an effect on the critical thinking abilities and political knowledge of adolescents.

## 1.5 DEFINITION OF CONCEPTS

### 1.5.1 THINKING

Thinking has been said to be "the quest for meaning" (Arendt, 1977:121). A more comprehensive definition could be that it is "a sequence of internal symbolic activities that leads to novel, productive ideas or conclusion": (Ericsson & Hastie, 1994:38).

Beyer's definition (1988:46) of thinking as being "the mental manipulation of sensory input and recalled perceptions to formulate thoughts, reason about, or judge," appears to be the most concise yet broadly inclusive definition of thinking.

### 1.5.2 CRITICAL THINKING

There are various definitions of critical thinking, a number of which are listed in paragraph 2.3.1. However, it is the "critical" aspect of the term which is of particular relevance. The word "critical" appears to signify a higher or meta-level of thinking.

Norris and Ennis' definition of critical thinking as being "...reasonable and reflective thinking that is focused upon deciding what to believe or do," (1989:3) appears to be accurate.

### 1.5.3 ADOLESCENT

The traditional definition of adolescence is that it is a period of development beginning with the onset of puberty (normally between the ages of 10 and 14) and ending sometime between 18 and 21. This is, however, Western society's definition and it should be noted that certain cultures view this phase merely as early adulthood.

For the purposes of this study the traditional definition of adolescence as described above will be used.

### 1.5.4 POLITICAL

The roots of the word politics can be traced to the Greek words "polis" meaning city, and "politeia" meaning citizenship. Our modern understanding of the word political is that it refers to a state or its government, or public affairs (Concise Oxford Dictionary, 1980:855). Chilton (1988:3) defines political as being the way in which people relate to one another through governmental, economic and social institutions. Bhavnani (1991: 52) feels that politics has to do with power and states "Politics can be defined as being the means by which human beings regulate, attempt to regulate and challenge with a view to changing unequal power relationships." Haste and Torney-Purta (1992:10) define political understanding as merely being an extension of social and moral understanding.

### 1.5.5 ISSUES

For the purposes of this study, political issues will include problems or situations which are of current political importance. This would include all matters which have national significance including social issues. Examples of such issues will be:

- the Constitution;
- the Truth and Reconciliation Commission;
- housing;
- redistribution;
- education;
- labour;
- health;
- crime;
- political violence;
- the environment;
- the next election in 1999.

## 1.6 RESEARCH PROGRAMME

Chapter two will be a study of the literature pertaining to thinking in general, and critical thinking in particular. Various definitions and theories relating to critical thinking will be discussed in an attempt to decide on which skills should be included in a critical thinking test. The various commercially available methods of measurement of critical thinking will be analyzed in order to assist in the decision on which format and type of test would be most suitable for South African adolescents. Finally the commercially available methods of improving critical thinking in the classroom will also be discussed, as they may be of use in the South African educational context.

Chapter three will examine the general development of the adolescent in an attempt to establish which factors may affect the development of an adolescent's critical thinking skills and political knowledge. These factors will then form part of the empirical investigation.

Chapter four will be the final literature study and will focus on the political situation in South Africa. Current political and social issues will be examined. These issues will then form the core of the content of the measuring instrument.

Chapter five will look at the research design used in measuring the critical thinking of adolescents with reference to political issues. The level of political knowledge of adolescents will also be addressed. The relationship between critical thinking and variables such as intellectual potential, gender, subject choices, personality, environment, and cultural background will also be investigated. Finally, the measuring instruments developed specifically for this investigation will be discussed.

Chapter six will contain the results of the investigation.

Chapter seven will consist of a summary of the findings, the educational implications of the results of the research will be addressed, and practical guidelines for the improvement of critical thinking in a political context will be given. The contributions and limitations of the study will be discussed, and finally, suggestions for further research will be given.

# CHAPTER TWO

## CRITICAL THINKING

### 2.1 INTRODUCTION

For hundreds of years man has been concerned about what distinguishes him from animals and other living organisms. The possession of a soul and the ability to think have come to be recognised as major characteristics of humanity. During the last century many psychologists and researchers in the field of cognitive development have sought to understand the concept of thinking and the cognitive processes of the brain. Although their research has revealed a great deal about how the mind works, there is little consensus concerning a definition of the thinking process or its components.

Arendt (1977:121) stated simply that "Thinking is the quest for meaning," and although this is both accurate and succinct, the nature of this "quest" is complex. Ericsson and Hastie's definition of thinking (1994:38) is "a sequence of internal symbolic activities that leads to novel, productive ideas or conclusions". Beyer (1988:46) defines thinking as being "the mental manipulation of sensory input and recalled perceptions to formulate thoughts, reason about, or judge". He is of the opinion that thinking has at least three major components: a number of mental operations, certain kinds of knowledge, and certain attitudes. With regard to the mental operations, there seem to be two general types: ordinary thinking and higher order thinking.

As both higher order thinking and critical thinking cannot be separated entirely from ordinary or lower order thinking, it is necessary to analyze thinking in general. The first section of this chapter will thus consist of an analysis of thinking from both historical and modern perspectives.

The second section of this chapter will focus specifically on critical thinking. The various theories of critical thinking will be discussed as there are major differences in the approaches of some of the leading researchers in the field, and as the methods of measurement and programmes of improvement are all based on the basic approach, it is of vital importance to

be aware of all the approaches. As the measuring instrument will be based on the major components of critical thinking, this chapter will contain an analysis of these components. The development of, and factors influencing critical thinking will also be covered as some of these factors will form the variables of the empirical research. The various methods of measuring critical thinking skills will be discussed, and finally, methods of improving these skills will also be addressed.

## 2.2 THINKING

Holyoak and Spellman (1993:313) reviewed various definitions and theories of thinking and distinguished between a general definition of thinking that includes all intelligent cognitive activities and a more specific definition that includes only complex forms of cognitive activities, such as reasoning, decision making and problem solving (Ericsson & Hastie, 1994:37). In contrast to this is the view of Jordaan, Jordaan and Nieuwoudt (1983:547) who feel that the process of thinking is merely an aspect of the entire system of cognitive processes. Their model entails the following:

- *the perceptual processes* - the ability to perceive what is physically present in such a way that it acquires meaning;
- *the thinking process* - the ability to manipulate, reorganise and sometimes combine the symbolic representations of physical stimuli and abstract ideas into new forms;
- *the learning process* - the ability to learn simple and complex relationships between all forms of formal training and life experiences;
- *the memory processes* - the ability to store what has been learnt and to reproduce it in various ways.

Jordaan et al. (1983:547) do, however, concede that these cognitive processes have an inherently unitary character and can hardly be separated from one another.

Morton Hunt (In Meyers, 1986:1) stresses the human brain's innate abilities in the following way: "Research suggests that our minds come equipped with highly efficient neural arrangements built into us by evolution. These predispose us to make certain kinds of sense of our experiences and to use them in that distinctly human activity we call thinking."

In order to arrive at a better understanding of how such diverse views on the process of thinking have come to exist, a brief historical overview of the theoretical approaches to the topic of thinking appears to be necessary.

### **2.2.1 EARLY PHILOSOPHICAL IDEAS ON THINKING**

Aristotle is generally recognised as being the first person to undertake a systematic analysis of thinking (his own). His method of introspection consisted of extensive self-observation which led to certain hypotheses, which were then evaluated by further self-observation (Ericsson & Hastie, 1994:38). Aristotle's early definition of thinking excluded perceptions and reproductive memories of past experiences. He also distinguished between contemplation - thought directed at the attainment of new knowledge, and deliberation - thought directed toward practical action. Aristotle's ideas and methods of observation ultimately led to the development of the introspectionists of the late nineteenth century.

### **2.2.2 INTROSPECTIONISM**

In the late nineteenth and early twentieth century, Wilhelm Wundt's research focused on trying to understand the structure and processes of the mind. He used the method of introspection whereby he attempted to analyze conscious experience as reported by trained introspectionists (Dominowski & Bourne, 1994:5). This "classical" introspectionism required the subject to adopt a special attitude, such that meaning was ignored in favour of the component sensations. An example of this would be where an introspectionist would report that he "experienced a red-coloured slightly trapezoidal shape" instead of saying that he saw "a large red book" (Gilhooly, 1996:5). Wundt hoped that by beginning with a study of the sensory processes, he would be able to reveal a variety of mental elements including sensation - the primary data of consciousness, images - the purely mental counterparts of sense data, and feelings - a kind of affective constituent of the mind (Dominowski & Bourne, 1994:6).

Most of Wundt's work concentrated on the sensory and perceptual processes, the more complex mental processes such as memory and thinking were neglected, as Wundt felt that they were inaccessible to introspection. This deficiency in Wundt's work was one of the reasons that classical introspectionism fell into disuse. Another reason was the conflict between Wundt and the introspectionists of the Wurzburg laboratory. They reported imageless thought under certain circumstances, which was disputed by Wundt who felt that thinking was always accompanied by imagery even though it might be very faint. Another limitation of the introspectionists was the fact that all their research was limited to adult human subjects. In contrast to the introspectionists, the early behaviourists offered radical alternatives to psychologists as they attempted to work with many different types of subjects.

### **2.2.3 BEHAVIOURISM**

Early behaviourists such as Thorndike and Watson changed the focus of psychology from conscious to observable behaviour or performance. They claimed that there is no point in trying to understand the inaccessible and possibly nonexistent consciousness when behaviour and performance are both observable and open to measurement. Their dominant theoretical notion was the "stimulus-response link" (Gillhooly, 1996:5). Watson's theory was that much of what we consider to be mentalistic or cognitive, is actually implicit or miniaturised motor activity, normally in the voice mechanism (Dominowski & Bourne, 1994:14). His idea that much of what we call thinking is in fact subaudible speech, was to some extent confirmed by researchers such as Freeman and Jacobson (In Dominowski & Bourne, 1994:16), who found that specific patterns of muscular activity accompany and correlate with the content of thought processes. These early research results have, however, not been substantiated by modern researchers. They believe that as thinking occurs, its neurological or central correlates send out weak signals to the muscles and glands, but although these peripheral organs are activated during thinking, they comprise no essential part of the thought process (Dominowski & Bourne, 1994:16).

## **2.2.4 GESTALT PSYCHOLOGY**

The Gestalt psychologists objected to the different forms of "elementarism" represented by the classical introspectionists and early behaviourists (Gilhooly, 1996:6). Their theory focused on perception rather than on thinking or learning, and the importance of perceptual organisation was stressed. They argued that psychological experience is not composed of static, discrete representational elements, but rather of an organised, dynamic field of events that interact with one another (Dominowski & Bourne, 1994:17). The Gestalt school felt that properties of the whole psychological field are different from the sum of its individual parts, and therefore no analysis of individual parts can be entirely successful. They stated that to understand psychological phenomena such as learning, thinking and motivation, one must consider a system where an alteration to any part could affect the other parts.

## **2.2.5 NEOBEHAVIOURISM**

Behaviourists such as Hull, Maltzman and Berlyne introduced the notion of a "mediating response". These mediating responses were seen as implicit covert responses that generate "mediating stimuli" which can elicit further mediating responses or overt behaviour (Gilhooly 1996:8). Chains of mediating stimuli and responses are taken to represent thought sequences. Many of these neobehaviourist ideas were overshadowed by the information-processing approach which began in the early 1960s.

## **2.2.6 THE INFORMATION-PROCESSING APPROACH**

The main stimulus for the development of the information-processing approach to thinking was the arrival of the computer and computer-programming (Gilhooly, 1996:10). The central idea of the information-processing approach is that as regards cognitive aspects, the human can be regarded as a computer-like system that codes, stores, retrieves and transforms information. This comparison between the computer and human cognition stretches from the basic idea that both are able to manipulate symbols to the point where working computer programmes are intended to simulate the entire human thought process.

The three fundamental assumptions of the information-processing approach are firstly, that thinking can be described as a sequence of identifiable knowledge states or thoughts separated by some processing activity that determines the transition from one state to the next (Ericsson & Hastie, 1994:48). Secondly, each state can be described by a limited number of activated working memory structures and thoughts that represent the primary input to the processes that produce the next state. Thirdly, the basic processes operating to transform one knowledge state into another and the basic processing capacity limits are fixed and constant.

This information-processing approach is currently the dominant approach regarding basic thinking. Most researchers make a clear distinction between this idea of a basic thinking model and higher order thinking which includes critical thinking.

## 2.2.7 HIGHER ORDER THINKING

Bloom's (1974:18) taxonomy distinguishes between higher and lower order thinking as follows:

Lower order	Higher order
Knowledge	Analysis
Understanding	Synthesis
Application	Evaluation

As will be seen in paragraph 2.3 critical thinking is traditionally associated with higher order thinking and therefore with analysis, synthesis and evaluation from Bloom's taxonomy.

Metacognitive knowledge is knowledge about cognition. Knowledge about thought processes in general and about one's own cognitive strengths and weaknesses in particular (Nickerson, 1994:419). According to Zechmeister and Johnson (1992:169) metacognition comprises the following skills:

- effective planning;
- monitoring;
- evaluation of cognitive processes.

Although metacognition is an executive or higher order thinking process and necessary for critical thinking, it is not the same as formal-operational or critical thought.

## 2.2.8 THE VIEWS OF EDUCATIONALISTS AND PSYCHOLOGISTS

### 2.2.8.1 Piaget

Jean Piaget defined his genetic epistemological approach as being an attempt to "explain knowledge and in particular scientific knowledge, on the basis of its history, its sociogenesis, and especially the psychological origins of the notions and operations upon which it is based" (Piaget, 1970:1). Piaget's approach assumes that cognitions are transformed through an interaction between biological mechanisms and environmental experiences as the individual matures (Adams, Gullotta, Markstrom-Adams, 1994:197). He believed that the roots of cognition are found in the biological capacities of the young infant (Newman & Newman, 1986:55), and proposed the idea that cognitive growth takes place in developmental stages.

Piaget and Inhelder (1969:4) defined schemes (sometimes called schemata) as being "the structure or organization of actions as they are transferred or generalized by repetition in similar or analogous circumstances". These schemes form the basis of Piaget's theory. In essence schemes are hypothetical cognitive structures or mental frameworks for storing information. These schemes change and increase in size and number as an individual interacts with his physical and social environment (Cummings, 1995:117). When the information the person receives matches the information in his existing schemes exactly, the person is in cognitive equilibrium. However, most interactions with the environment result in the person receiving new information which will not match the information in the existing schemes. This leads to cognitive disequilibrium, and in order to reach equilibrium again, the person must engage in a cognitive process called equilibration. Piaget proposes two processes by which the individual reaches equilibrium again, namely, assimilation and accommodation.

Assimilation is the cognitive process by which a person integrates new perceptual motor, or conceptual matter into existing schemes or patterns of behaviour (Wadsworth, 1996:17). A

new idea or object is therefore interpreted in terms of actions or ideas that the child has already acquired (Mussen, Conger, Kagan & Huston, 1984:224). Assimilation occurs all the time. Human beings continually process an increasing number of stimuli (Wadsworth, 1996:17).

When confronted with a new stimulus, a child tries to assimilate it into existing schemes. Sometimes this is not possible as there are no schemes into which it readily fits. At this point one of two things can happen: either a new scheme has to be created, or an existing scheme can be modified so that the stimulus fits into it. Both are forms of accommodation and result in change in the configuration of one or more schemes (Wadsworth, 1996:17). Accommodation is the individual's tendency to change in response to environmental demands (Mussen et al, 1984:224).

The child will attempt to regain a state of equilibrium when confronted by new information, by initially attempting to assimilate the information, and then if it cannot simply be added to an existing scheme, by accommodation. In order to adapt to the ever-changing environment, the person continuously adjusts his existing cognitive schemes in a never-ending pursuit of cognitive equilibrium (Cummings, 1995:118).

Piaget identified four distinct stages of cognitive development. These stages are invariable in that the sequence of the stages is always the same, and a child cannot bypass any of the stages. The reason for this is that each stage builds on the accomplishments of the previous one. There are, however, large variations in the ages associated with each stage.

The sensorimotor stage is the earliest phase of cognitive development, beginning at birth and lasting until approximately two years of age. During this stage the child thinks by manipulating and interacting with physical objects, which provide feedback about their physical properties to the child. The following important developments take place during this stage:

- the child becomes less dependent on the manipulation of physical objects;
- the child learns that objects exist even when they are out of sight;

- the child develops a sense of being able to make things happen (Newman & Newman, 1986:56; Cummings, 1995:120).

The pre-operational stage lasts from two to about six or seven years of age. During this period, children develop various methods of symbolic representation so that their sensorimotor schemes can be expressed or explained to others. Some of the forms of representation developed during this stage are:

- mental imagery;
- imitation in the absence of the model;
- symbolic play and drawing;
- language (Newman & Newman, 1986:57).

By the end of this stage the child has also developed the ability to conserve matter - he realises that even though the form of something may change, the quantity remains the same, as long as nothing is added or taken away.

An important phase in terms of adolescent development is the stage of concrete operational thought. This normally lasts until the age of 11 or 12 years. Although adolescence is said to only develop after the age of 12, many adolescents remain in this phase of development and do not advance to the formal operational stage. This stage is a transitional period between the prelogical thought of younger children and the logical thought of adolescents. The term concrete refers to the child's continued dependence on the ability to observe and manipulate elements to solve problems (Newman & Newman, 1986:57). Children in this stage can use logical thought processes to solve concrete problems that exist in the present. They cannot solve abstract problems that are hypothetical, purely verbal, or that involve multiple variables (Cummings, 1995:120). Children in this stage develop the following skills during this phase:

- They begin to appreciate the logical necessity of causal relationships, such as understanding that if you add objects to a sack it will get heavier, and if you take objects out, it will get lighter.
- They can understand and create categories and systems, such as sorting objects systematically into groups using labels such as insects, birds, reptiles, and mammals;

- They can use information about the laws of nature to solve problems even when their direct perceptual experience contradicts these laws, for example they can tell you that even though the moon appears to be following you at night, it actually revolves around the earth and its path is not affected by a single person's movements.
- Children in this phase also tend to think of one or two solutions to a problem and if neither solution works, they are likely to think that the problem is impossible to solve (Newman & Newman, 1986:57).

The final stage of cognitive development is called formal-operational thought and begins in adolescence and continues into adulthood.

Piaget identified the major characteristics of the formal-operational phase as being abstract thought, propositional thought, and hypothetical-deductive thought (Inhelder & Piaget, 1958:335; Du Plessis, 1992:42; Gerdes, 1988:284).

- ***Abstract thought***  
The adolescent who has progressed to the formal-operational phase is capable of abstract thought, dealing with abstract concepts, and understanding abstract relationships. He thinks and reasons about concepts such as love and hate, justice and injustice. He also demonstrates a sensitivity to the rationales and intentions of other people (Gouws & Kruger, 1994:49). The adolescent is now capable of questioning and examining social and political systems (Gerdes, 1988:285).

Adolescents capable of abstract thought are also much more critical about themselves. They constantly measure themselves against ideal models or against their peer group (Gouws & Kruger, 1994:49).

- ***Propositional thought***  
Piaget sees the relationship between reality and possibility as the pivotal characteristic of the formal-operational phase of cognitive development (Inhelder & Piaget, 1958:1). The adolescent's focus is now on the possibilities of the future as well as the realities of the present. As the adolescent's personal future is dependent on the world around him, he becomes concerned with general social and political issues.

- ***Hypothetical-deductive thought***

The difference between the thinking involved in hypothetical-deductive thought and that of thinking at the concrete level, is that it involves arriving at conclusions from premises which are hypotheses rather than from facts which the subject has verified (Brainerd, 1978:205). Adolescents who have reached this phase are capable of formulating and testing hypotheses, and then comparing results. By testing one hypothesis after another the adolescent is able to reason deductively and systematically. Another feature of this phase is that the adolescent now has the ability to reason about hypotheses believed to be untrue and still come to logical conclusions that can be inferred from the hypotheses (Wadsworth, 1996:113).

In terms of the study at hand, it is important to note that according to Piaget not all adolescents or adults reach the formal-operational stage of cognitive development. This has implications for critical thinking in general, as well as for critical thinking with reference to political issues. If an adolescent or adult is still at the concrete level of thinking, then he will be unlikely to be able to make informed political decisions. He would be unlikely to be able to contribute to a debate on whether the human rights of the mother outweigh the rights of the unborn foetus with regard to abortion.

### **2.2.8.2 Vygotsky**

Vygotsky's research focused on the process of learning in children. He placed particular emphasis on concept formation and the relationship between concept formation and language. He was also concerned with the question of how social and cultural factors influence intellectual development (Wadsworth, 1996:10).

Vygotsky's theory emphasises the transmission of knowledge from the culture to the child. In essence it is about how individuals, interacting with more knowledgeable social agents such as teachers or peers, construct and internalize knowledge the agents possess (Wadsworth, 1996:10). Vygotsky believed that all individual construction of knowledge was mediated by social factors. For example, the teacher and an instructional programme have to model or explain knowledge, and the child then constructs his own internal knowledge from what is modelled. The child does not invent, but rather copies what is socially available. This is seen as a process of transmission from the culture (teacher) to the child (Wadsworth, 1996:11).

Another facet of Vygotsky's theory was his differentiation between the zone of actual development and the zone of proximal development (Vygotsky, 1978:86). The former refers to the level at which students are capable of solving problems independently, while the latter refers to the level at which students can solve problems with support. This implies that with modelling of knowledge and social interaction, students can learn things they could not learn on their own.

According to Vygotsky (In Stones, 1979:163) the direct teaching of concepts is not effective. He states that to simply tell the child about a new concept is not enough and leads to the mere repetition of words and so-called "parrot fashion" learning. He advocates the teaching and use of new concepts in familiar contexts as this will lead to gradual development of accurate concepts.

Vygotsky's theory relates to critical thinking in the sense that it also decries the "parrot fashion" method of teaching and learning, and aims at the child's potential rather than his current level development.

### 2.2.8.3 Feuerstein

Reuven Feuerstein bases his approach to cognitive development and thinking on the idea that human beings are open systems with receptiveness as their central characteristic. He states that the development of the cognitive structure is influenced by two types of interaction between the individual and the environment:

- Direct exposure to stimuli emanating from the environment.
- Mediated learning experience (MLE).

A mediated learning experience occurs when a knowledgeable person, usually an adult or educator, intervenes between the child and reality and acts as a human mediator, interpreter, and facilitator of the learning experience (Wiechers, 1993:6). The mediator "transforms, reorders, organizes, groups and frames the stimuli in the direction of some specifically intended goal and purpose" (Feuerstein & Jensen, 1980:409). Feuerstein found that the initial poor performance of many young children was actually the result of intellectual

impoverishment - he called it a lack of mediated learning experiences. He also said that too few mediated learning experiences results in poor thinking skills, which in turn reduces the individual's ability to profit from everyday learning opportunities resulting in a number of "cognitive deficiencies" (Chance, 1986:74).

Feuerstein developed his Instrumental Enrichment Programme primarily in an attempt to assist children with learning disabilities, but it has been used throughout the world to assist people (adults included) with improving their thinking (see paragraph 2.3.7.5).

#### 2.2.8.4 De Bono

De Bono is of the opinion that education has concentrated exclusively on vertical or logical thinking for too long. De Bono's (1984:4) definition of vertical thinking is that it follows specific vertical steps from one level of information to the next. This has led to a situation where we subconsciously form rigid patterns when we handle information, leading to long term stereotypical patterns of thought. For de Bono the teaching of information is not enough, he states that "The creative, constructive, design and operating aspects of thinking are just as important as knowledge" (de Bono, 1994:14).

De Bono invented the term "lateral thinking" which he defined as "the ability to look at things in different ways" (de Bono, 1994:55). He states that lateral thinking is both an attitude of mind and a number of defined methods that involve the following:

- a willingness to try to look at things in different ways;
- an appreciation that any way of looking at things is only one amongst many possible ways;
- an understanding of how the mind uses patterns;
- the need to escape from an established pattern in order to switch into a better one (de Bono, 1994:56).

De Bono made it clear that lateral thinking was not a replacement for ordinary vertical thinking, it should rather be seen as an important component of logical thinking (de Bono, 1986:258).

De Bono views the major differences between vertical and lateral thinking as being:

- In logical thinking it is of the utmost importance to be successful at every stage of solving a problem, while with lateral thinking this is not necessary.
- In logical thinking judgements have to be made immediately, while in lateral thinking judgements may be reserved in order for further exchange of information and new ideas to take place (de Bono, 1986:258).

The main goal of lateral thinking appears to be the restructuring of patterns of thought. This is necessary in order to make provision for new information as well for the better utilisation of existing information.

Although lateral and critical thinking appear to have much in common, de Bono argues that critical thinking consists only of analysis, judgement and argument components, and therefore lacks the most important thinking components. He states that the generative, productive, creative and design aspects of thinking are vital (de Bono, 1994:15). His CoRT programme which aims at improving perceptual and lateral thinking in the classroom will be discussed in paragraph 2.3.7.1.

#### **2.2.8.5 Sternberg**

Sternberg's triarchic theory of human intelligence seeks to "specify the loci of human intelligence and to specify how these loci operate in generating intelligent behaviour" (Sternberg, 1993:317). It is an attempt to explain the disparity between scores obtained in traditional intelligence tests and intelligence displayed in the everyday world. His theory is known as the triarchic theory as it comprises three subtheories: contextual, experiential, and componential.

- *Contextual subtheory*

The contextual subtheory defines intelligent behaviour in terms of the sociocultural context in which it occurs. Sternberg defines intelligence within the contextual subtheory as being "mental activity directed toward purposive adaptation to, and selection and shaping of, real-world environments relevant to one's life". These concepts of adaptation, selection and shaping are hierarchical in nature. An individual will attempt to adapt in order to achieve a good fit between himself and his environment. When adaptation is not possible or desirable, the individual may attempt to select an alternative environment with which he is able to attain a better contextual fit. The third concept of environmental shaping takes place when the individual is unable to adapt himself any further or select a new environment.

This view implies that intelligence is not quite the same thing from one person to another and that it is not the same thing across environments. Nor is intelligence likely to be the same thing at different points in the life span (Sternberg, 1996:46).

- *Experiential subtheory*

The experiential subtheory refers to the connection between intelligence and experience. Sternberg (1996:68) states that the experiential subtheory proposes that "a task measures intelligence as a function of the extent to which it requires either or both of two skills: the ability to deal with novel kinds of task and situational demands and the ability to automatize the processing of information". In essence this means that a person's intelligence could be based on his ability to deal with extraordinary situations. Alternatively, the person's raised ability to perform complex tasks as a result of his automatization of many of the operations involved in the performance, could be the measure of his intelligence.

- *Componential subtheory*

The componential subtheory seeks to explain the structures and mechanisms underlying intelligent behaviour. Three kinds of information-processing components are proposed by Sternberg (1996:332):

- metacomponents, which are used to plan, monitor, and evaluate performance;

- performance components, which are used to execute the plans formulated by the metacomponents;
- knowledge-acquisition components, which are used to learn new information.

The value of Sternberg's theory appears to lie firstly in the fact that it highlights the deficiencies in the currently available measures of intelligence. Secondly, he states that it is possible to train people to perform intelligently. Sternberg's ideas in this regard will be discussed in paragraph 2.3.7.6.

#### 2.2.8.6 Summary

In the preceding paragraphs various views of, and approaches to the thinking process were discussed. The views of Piaget and Vygotsky were included as they could be said to be representative of the more popular early twentieth century views on thinking and its development. Although Piaget and Vygotsky differed fundamentally in that Piaget did not recognize the significance of social and cultural factors in intellectual development, while Vygotsky focused specifically on that area, there are many similarities between them. Firstly, both saw knowledge as adaptation and as being individually constructed. Secondly, they believed that learning and development were self-regulated and not automatic.

Although Feuerstein's theory of cognitive development is more modern than those of Piaget and Vygotsky, it is also fundamental in approach. His theory has much in common with Vygotsky's. Firstly, he also believed that cognitive structure and development is influenced by the environment. Secondly, his conception of a mediated learning experience has much in common with Vygotsky's idea that all individual construction of knowledge is mediated by social factors.

The theories of de Bono and Sternberg are more modern theories developed in response to what they perceived as being deficiencies in existing theories of intelligence and thinking. Both de Bono and Sternberg isolate the problems inherent in current theories and propose models with which to improve thinking and intelligent behaviour.

In terms of the link between thinking and critical thinking, Piaget's theory is important as it refers to the formal operations stage of cognitive development as being the stage at which critical thinking skills develop. Vygotsky's theory emphasises the fact that rote learning methods should be replaced with more interactive teaching and learning methods, which is one of the facets of critical thinking which will be discussed in the paragraphs which follow. Although de Bono, Sternberg, and Feuerstein do not refer to critical thinking specifically in their theories, their proposed methods of improving the thinking skills of adolescents all have links with critical thinking.

## 2.3 CRITICAL THINKING

In 1885 Herbert Spencer expressed his concern about methods of learning and thinking stating: "The once universal practice of learning by rote, is daily falling more into discredit" (Schrag, 1988:1). The literature on critical thinking confirms that much progress has been made over the last hundred years or so, concerning conceptions and definitions of critical thinking. Although there is definite consensus concerning the need for the teaching and learning of critical thinking skills, there is, however, still great dispute as to the specifics. Much of the on-going debate revolves around the underlying theories on which the definitions are based.

In South Africa educationalists are striving to find and develop a system of education and teaching which will:

- be beneficial to all the learners in the country by maintaining the high standards of certain schools and raising the standards of others;
- assist in redressing the imbalances in education of the past;
- raise the literacy level of all the people in the country.

Critical thinking has been identified as one of the skills which is vital in any educational system and will be of particular value in the South African context.

The paragraphs which follow will address the considerable range of definitions of critical thinking, the different basic theories, the development of critical thinking, the measurement of critical thinking and finally methods of improving critical thinking in the classroom.

### 2.3.1 DEFINITIONS

John Dewey's definition of "reflective thinking" (1933:12), is very clearly one of the forerunners of what has come to be known as critical thinking: "Reflective thinking, in distinction from other operations to which we apply the name of thought, involves (1) a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and (2) an act of searching, hunting, inquiring to find material that will resolve the doubt, settle and dispose of the perplexity."

Robert Ennis' 1962 article in the Harvard Educational Review seemed to spark off the "modern" debate concerning critical thinking. In his article he identified twelve specific aspects of critical thinking. However, his early definition of critical thinking as being, "the correct assessing of statements" (Ennis, 1962:83), seems to be simplistic out of context. Ennis later refined this definition in collaboration with Stephen Norris, stating: "Critical thinking is reasonable and reflective thinking that is focused upon deciding what to believe or do" (Norris & Ennis, 1989:3).

Richard Paul, one of the current leaders in the field, sees critical thinking as "learning how to ask and answer questions of analysis, synthesis, and evaluation" (1985:37), and "the ability to reach sound conclusions based on observations and information" (1988:50).

Matthew Lipman's definition (1988:39) is as follows: "Critical thinking is skilful, responsible thinking that facilitates good judgement because it (1) relies upon criteria, (2) is self-correcting, and (3) is sensitive to context."

George Cabrera's definition (1994:423) has much in common with Lipman's: "Critical thinking is an evaluative activity that reaches conclusions based on reasoned judgements and acceptable standards."

Siegel (In Stahl & Stahl, 1991:81) adds a philosophical dimension with his definition of critical thinking as "A willingness to question one's deepest beliefs and prejudices."

Glaser's definition incorporates three principle elements (Glaser, 1985:25):

- An attitude of being disposed to consider in a thoughtful, perceptive manner the problems and subjects that come range of one's experience.
- Knowledge of the methods of logical inquiry and reasoning.
- Skill in applying these methods.

Joanne Kurfiss (1988:2) defines critical thinking as being: "An investigation whose purpose is to explore a situation, phenomenon, question, or problem to arrive at a hypothesis or conclusion about it that integrates all available information and that can therefore be convincingly justified. All assumptions are open to question, divergent views are aggressively sought, and the inquiry is not biased in favour of a particular outcome."

Barry Beyer (1985:276) states that critical thinking is "The process of determining the authenticity, accuracy and worth of information or knowledge claims."

Presseisen (In Stahl & Stahl, 1991:80) states that critical thinking is "developing cohesive, logical reasoning patterns and understanding assumptions and biases underlying particular positions".

Pascarella and Terenzini (1991:118) focus on the process aspect of critical thinking in their definition: "Critical thinking typically involves the individual's ability to do some or all of the following: identify central issues and assumptions in an argument, recognize important relationships, make correct inferences from data, deduce conclusions from information or data provided, interpret whether conclusions are warranted on the basis of the data given, and evaluate evidence or authority."

The range of definitions listed above gives an indication of some of the aspects related to the general term of critical thinking. The conclusion can be made that a concise definition of critical thinking should make reference to the following aspects:

- Reflective thought and a sceptical attitude.
- Ability to make sound decisions and judgements.
- Ability to justify the decisions.

As stated earlier, there are many divergent theories of critical thinking which underpin the above definitions.

## **2.3.2 THEORIES OF CRITICAL THINKING**

The literature reveals that a major debate has arisen over the past decade regarding the approach to the teaching of critical thinking. Many approaches have been developed over the years, but it appears that the controversy revolves around whether critical thinking is subject-specific or a general reasoning transferable skill.

### **2.3.2.1 The General Reasoning Approach**

This approach attempts to teach critical thinking abilities separately from specific subject content. In the school environment, instruction in general critical thinking normally takes place in separate courses or study units. The primary purpose is to teach students to think critically in nonschool contexts. Students are encouraged to apply what they learn to their other school subjects, but this is not considered essential to the success of this approach. Examples of the general approach usually do involve content, although the concept of the general approach does not require that there be school related content. An example of this is formal logic where an example could be formulated in terms of variables only:

"All As are Bs" implies that if something is not a B, then it is not an A.

(Ennis, 1989:4).

Proponents of this approach include, amongst others, Edward de Bono with his CoRT (Cognitive Research Trust) Thinking lessons, and Reuven Feuerstein's Instrumental Enrichment. Robert Ennis (1996) recently developed a critical thinking programme called FRISCO (Focus, Reasons, Inference, Situation, Clarity, and Overview) which provides a general approach to critical thinking. He claims that the ideas contained in his programme are widely applicable in all subject matter areas (1996:xxii).

The Watson-Glaser Critical Thinking Appraisal Test (see paragraph 2.3.6.2.1) is based on the assumption that critical thinking is a general ability and that it can be measured independently of context and subject matter.

John McPeck has been highly critical of this approach and bases his objections on two points. Firstly, he says that many of the instructional courses in critical thinking are not clear in stating whether critical thinking is a general ability or a specific skill (McPeck, 1990a:22). If it is a content-free general ability then it is very similar in essence to general scholastic ability or what is commonly accepted as being intelligence. The implication of this is that the methods of measurement of "general ability critical thinking" and intelligence will be very similar in nature, as will the results. McPeck feels that we should be wary of programmes which teach critical thinking directly, as research has shown that attempts to improve IQ (intelligence) by direct teaching methods have been relatively unsuccessful.

Secondly, the "specific skills" conception of critical thinking in the literature holds that it is a small set of specific skills which once they are learned can be applied to other areas requiring critical thought (McPeck 1990a:24). This conception of critical thinking is central to the informal logic programmes of critical thinking. This implies that those who have had specific training will be much more capable of critical thought than those who have not. There is, however, evidence that many people who have not had any specific skills training in critical thinking, can and do display critical thinking ability (McPeck, 1990a:25).

### **2.3.2.2 The Subject Specific Approach**

Powers and Enright (1987:669) conducted research into the reasoning skills which are essential to success in six different academic disciplines. They found only a partial overlap between the skills identified in each of the six disciplines. For the chemists the following abilities were the most important:

- to draw sound inferences from observations;
- critically analyze and evaluate previous research, and
- generate new questions or experiments.

The English professors in the study valued the following abilities most highly:

- to elaborate an argument and develop its implications;
- understand, analyze and evaluate arguments;
- support general assertions with details, and
- recognize the central thesis in a work.

The study appeared to strengthen the argument that although certain critical thinking skills were common to various disciplines, many of the skills were specific to the subject.

John McPeck is a strong supporter of the subject-specific approach. His subject-specific approach has the following three major features:

- it does not presuppose any abstract or general reasoning skills;
- it employs the power of the disciplines as the chief means for understanding complex concepts and information, and
- it depends upon the philosophy of these disciplines to provide the required critical dimension to one's understanding (McPeck, 1990a:17).

The proponents of this approach believe that critical thinking ability varies directly with the amount of knowledge of the subject required by the problem, and also that the content of various subjects and problems determines the appropriate process of reasoning (McPeck, 1990a:35).

### 2.3.2.3 The Mixed Approach

The mixed approach consists of a combination of the general approach with the subject-specific approach. Students are involved in subject-specific critical thinking instruction as well as a separate course aimed at teaching general principles of critical thinking. An example of this approach is the programme called ADAPT developed by the University of Nebraska in 1972, which involved several courses organized around a general set of reasoning skills (Kurfiss, 1988:10). Students participating in the programme enrolled in at least three ADAPT courses so that they learned to use the same reasoning skill in many disciplines, while gaining knowledge and learning the terminology of each subject. At the end of the programme, the students were found to have enhanced their formal reasoning skills as opposed to the control group of students who had expressed interest in the course but had not enrolled.

This approach would appear to solve many of the problems inherent in the other two approaches, but the implementation and practicalities of this approach in terms of the time and general resources required are problematic.

## 2.3.3 CRITICAL THINKING SKILLS

Research in the field of critical thinking has generated many diverse definitions and lists of essential critical thinking skills. There is very little consensus regarding what should be included under the generic term critical thinking. The following critical thinking skills appear to be the most referred to in frameworks or guidelines for improving critical thinking.

### 2.3.3.1 Analysing arguments

One of the major aspects of critical thinking is the ability to evaluate statements or arguments put forward by others, or to present one's own point of view in a convincing and logical manner.

A good argument consists of statements or reasons that support a final conclusive statement. These supporting statements or reasons are called premises (major and minor), while the

statement that is supported is called the conclusion. A deductive argument is an argument in which a person reasons from premises that he holds to be true to a conclusion that is logically demanded by those premises. This means that if one follows the principles of formal logic to reach a conclusion based on premises that are true, then the conclusion is a logically necessary consequence of the premises - the conclusion has to be true (Zechmeister & Johnson, 1992:249). Over 2000 years ago Aristotle gave the following classic example of deduction:

All men are mortal. (Major premise)

Socrates is a man. (Minor premise)

Therefore, Socrates is mortal. (Conclusion) (Diestler, 1994:66).

An inductive argument is an argument in which the premises provide support for the conclusion, but the conclusion is not a logically necessary consequence of the premises. In other words, with an inductive argument, we can never say with certainty that a conclusion is supported. The following is an example of inductive reasoning:

Researchers claim that most women who have a family history of breast cancer will develop breast cancer.

Susan's mother developed breast cancer. Susan's sister developed breast cancer.  
Susan's two aunts died of breast cancer.

Therefore it is likely that Susan will develop breast cancer.

Sound or good arguments should meet the following three criteria:

- The premises must be acceptable and consistent.
- The premises must provide support for the conclusion by being relevant to the conclusion and sufficiently strong.
- Missing components of the argument (assumptions, counterarguments, qualifiers, premises and rival conclusions) must have been considered (Halpern, 1996:207).

It should be clear from the above that the ability to evaluate and analyze the strength of arguments is an essential component of the general skills of a critical thinker, and also contributes to confident decision making and problem solving.

### 2.3.3.2 Decision making

In life we are constantly faced with many decisions. Making the correct choice from a set of alternatives provides us with the ultimate test of our ability to think critically.

Zechmeister and Johnson (1992:217) propose a systematic model for managing the information needed to make good decisions. They acknowledge that their model incorporates all of the best features which researchers into critical thinking techniques have developed over the years. Their model comprises the following steps:

- Acknowledge that a problem exists.
- Refine and elaborate your definition of the problem.
- Clarify your goals.
- Generate alternative solutions.
- Narrow your alternatives.
- Evaluate your alternatives.
- Decide on an alternative.
- Give your chosen alternative a chance.

Both Zechmeister and Johnson (1992:244) and Halpern (1996:314) stress the following regarding decisions that have failed:

- One should avoid hindsight bias.
- Try to improve future decisions by identifying and avoiding particular errors that consistently appear in poorly made decisions.

Decisions are often complex because there are no clear-cut right or wrong answers to them and they involve the processing of a great deal of information. Possessing the ability to make good decisions is often seen to be the hallmark of a critical thinker.

### 2.3.3.3 Problem solving

The difference between decision making and problem solving is said to be that when the task requires the person to select the best alternative from among several possibilities then it is decision making, as opposed to when the person has to generate alternatives which is problem solving.

Glass and Holyoak (1986:366) state that a problem can be seen to consist of four basic components:

- a goal or description of what would be accepted as a solution to the problem;
- objects, tools, materials or other resources available to help achieve the goal;
- a set of operations or actions that can be taken;
- a set of constraints or rules that cannot be violated during problem solving.

A distinction needs to be made between a well and an ill-defined problem. The former has an explicit goal and a clearly identified path to that goal, while the latter has many possible solutions and the actual goal is often vague.

Halpern (1996:320) summarizes the stages of the problem solving process as follows:

- Preparation or familiarization - this includes the time spent in understanding the nature of the problem, the desired goal, and the givens.
- Production - the possible solutions are devised during this stage.
- Judgement or evaluation - the possible solutions are evaluated in order to select the best one.
- Incubation - this stage may not always occur, it is when one stops working actively on a problem and the solution just seems to "occur" to one.

In order to become a better problem solver and therefore a better critical thinker, the individual needs to be aware of the components of a problem as well as the stages of the problem solving process, but he also needs certain specific strategies:

- Restating an ill-defined problem or goal.
- Trial-and-error approach if there are very few possible solutions.
- Simplification, means-end analysis and specialization may help with a complex problem.
- Working backward from the goal if there are fewer paths leading away from the goal than from the start.
- Brainstorming, by which is meant generating a number of possible solutions in a group context, which although incomplete may generate further ideas and solutions.
- Use of analogies and metaphors from related or even unrelated fields. An example of this could be a corporate management structure using a rugby or soccer team as an analogy to explain the dynamics of team work and how it could relate to their own situation.
- Consultation of experts.

There are clearly many strategies for problem solving but the above strategies seem to be common to much of the literature.

Problem solvers also encounter common obstacles:

- "Functional fixedness" or "mental set" cause the problem solver to respond to a situation in a fixed way or to fail to utilize items in novel ways;
- Becoming trapped in the analysis of misleading or irrelevant information;
- A narrow frame of reference or worldview can also lead to poor problem solving;
- Mechanization, which refers to the rote, unthinking application of previous solutions without stopping to think about improving the strategy, is also a common obstacle to successful problem solving (Halpern, 1996:360).

Finally, although persistence is not a stage in problem solving or even a part of a specific strategy, it is widely recognised as being the most important variable in determining success in problem solving and therefore in critical thinking.

#### 2.3.3.4 Credibility

The ability to judge the credibility of a source is another important critical thinking skill. Ennis (1996:58) identifies four basic criteria for judging the credibility of a source:

- Background and knowledge: the person should have background training and experience appropriate for making the statement.
- Lack of apparent conflict of interest: the person should have no apparent conflict of interest.
- Agreement with others equally qualified: the person should be in agreement with other people who satisfy the other criteria as well or better.
- Reputation: the person should have a good reputation for being right and telling the truth in general, and especially in the area of concern.

Ennis (1996:62) identifies four further criteria which should be taken into consideration if possible:

- Established procedures: the person should have used established procedures, if any exist.
- Known risk to reputation: the person should know that his reputation will be affected by the statement being discovered to be correct or incorrect.
- Ability to give reasons: the person should be able to give understandable reasons in support of the statement.

- Careful habits: the person should have careful habits in areas similar to the area of the statement.

Ennis (1996:62) states that good judgement is required in deciding whether each criterion is satisfied, and for deciding on the relative importance of each criterion in a given situation. Powers and Enright (1987:669) concur with Ennis' views in stating that the evaluation of the credibility or reliability of a source is of critical importance in educational research.

### 2.2.3.5 Recognition of assumptions

Assumptions are ideas we take for granted. As such they are often left out of a written or spoken argument. Diestler (1994:19) states that a critical thinker must understand the assumptions underlying arguments.

Ennis (1996:165) states that there are at least three reasons for identifying assumptions:

- to complete an argument by filling in the missing parts;
- to understand the thinking of the person who has offered an argument or explanation;
- to show that someone is committed for or against some position.

The Watson-Glaser Critical thinking Appraisal, the Cornell Critical thinking Test and the New Jersey Test of Reasoning Skills, all have the identification of assumptions as one of their subtests.

## 2.3.4 DEVELOPMENT OF CRITICAL THINKING

It has long been the belief of researchers in the field of cognitive development that the development of the cognitive processes follows an orderly pattern. Jean Piaget's original (1970:25) belief was that this development could be divided into distinct phases with accompanying specific characteristics, culminating in the highest level during adolescence, known as the formal-operational phase.

According to Piaget, it is during this phase that the adolescent develops the capability of carrying out formal operations and can think abstractly and logically. The adolescent can also

handle possibilities and hypotheses and his thought processes are more scientific. Critical thinking, as defined above, has been associated with this phase of development of the adolescent (Keating, 1988:1).

Beyer (1984:559), concurs with this idea and states that the junior and middle high school phases are the best time for the introduction of additional analytical skills and decision making. According to him, critical thinking skills and concept formation can be acquired from about grade eight. Hunter (1991:73) also believes that the secondary school phase is the best time to begin with "traditional thinking instruction" which includes all the traditional aspects of critical thinking.

It should, however, be clear that formal-operational thought is not the same as critical thought. The formal-operational thinker uses information and assumptions to solve problems and to reason, whereas the critical thinker questions the accuracy and validity of the information and assumptions before proceeding to make use of them (de Bono, 1983:705).

Piaget's theory has dominated the research in the field for the last quarter of a century, but there has been recent research which suggests that there are no fundamental limitations on the ability of early adolescents to engage in critical thinking. Although researchers in the field have noticed that performance on certain types of thinking tasks seems to increase with age, there is evidence to suggest that performance is often the result of a person's experience, education and formal training in specific content areas (Keating, 1988:i). Keating also states that brain growth and physiological maturation have not been isolated to substantiate clear connections to cognitive performance in early adolescence. Another point raised by Keating is that neither research on individual differences nor that on cognitive processing has established the influence of general underlying and untrainable capacities on cognitive performance in specific domains. In fact, what has been found is that highly motivated adolescents and even younger children in supportive environments show impressive cognitive performance in specific domains (Keating, 1988:ii).

## 2.3.5 FACTORS INFLUENCING THE DEVELOPMENT OF CRITICAL THINKING

As with any human aspect, there are many factors which may have an effect on the development of critical thinking skills.

### 2.3.5.1 Disposition and Attitude

In 1933 John Dewey emphasized the importance of attitude or habits of mind stating: "If we were compelled to make a choice between these personal attributes and knowledge about the principles of logical reasoning together with some degree of technical skill in manipulating special logical processes, we should decide for the former" (Facione, Sanchez, Facione & Gainen, 1995:1).

The California Critical Thinking Disposition Inventory (CCTDI) was developed by Facione and Facione in 1992. It consists of 75 items and yields a score on each of seven scales (Facione et al, 1995:6):

- ***Inquisitiveness*** - measures one's intellectual curiosity and one's desire for learning even when the application of the knowledge is not readily apparent.
- ***Open-mindedness***- being tolerant of divergent views and sensitive to the possibility of one's own bias.
- ***Systematicity***- being organised, orderly, focused and diligent in inquiry.
- ***Analyticity*** - measures the level of the application of reasoning and the use of evidence to resolve problems, anticipating potential conceptual or practical difficulties, and consistently being alert to the need to intervene.
- ***Truth-seeking*** - being eager to seek the best knowledge in a given context, courageous about asking questions, and honest and objective about pursuing inquiry even if the findings do not support one's self-interests or one's preconceived opinions.

- *Critical thinking self-confidence* - measures the trust one places in one's own reasoning processes.
- *Maturity* - measures the disposition to be judicious in one's decision making.

The CCTDI was found to be a valid measure of the above dispositions and correlated well with the California Critical Thinking Skills Test 0,66 and 0,67.

Another basic attitude or disposition which most researchers agree is vital for the development of critical thinking in an individual is doubt. When an attitude of doubt is present, the individual is unlikely to take anything for granted and gullibility is reduced (DeNitto & Strickland, 1987:202). Critical thinkers want to be convinced with facts, valid arguments and justifiable conclusions.

Carefulness is another important attitude, as a student who is careful in his thoughts, observations and activities is less likely to make errors. If he is thorough then important data will not be overlooked.

Objectivity is another attitude which is fundamental to critical thinking. An objective attitude allows one to approach ideas or data with less bias (DeNitto & Strickland, 1987:202).

It appears that there are many attitudes and dispositions which may be conducive to critical thinking, and that these attitudes may even be more important than the acquisition of certain skills.

### 2.3.5.2 Personality variables

There is a fine line between attitudes, disposition and personality. Attitudes and disposition may contribute to the formulation of personality and personality may influence attitudes. Therefore much of the previous section (2.3.5.1) applies here as well.

Perkins (1993:106) studied the cognitive flexibility among students identified as perceptually group-dependent and group-independent. The group-dependent students showed a relatively high need for nurturance, deference, order and control. The independent students showed a comparatively high need for achievement, autonomy, aggression and creativity.

Perkins concluded that her results suggested that group-dependent individuals may be less cognitively flexible, as they view their world in an outer directed manner. Their personality profile implies that as students they may find critical thinking, the questioning of existing schemata, both an emotional and cognitive challenge.

### **2.3.5.3 Verbal ability**

Numerous studies have shown that there is a strong relationship between critical thinking and verbal ability (Follman, 1993:74). Follman reports that studies by Kitchener and King (1981), Wilson and Wagner (1988) and Whimbey (1986) show that critical thinking probably does not exist as a psychometrically established, unique construct separate from verbal ability (Follman, 1993:74).

Finally, it is concluded that a possible way to improve critical thinking is to enhance verbal ability in general and vocabulary in particular (Follman, 1993:75).

### **2.3.5.4 Cultural and environmental influences**

Rice (1996:157) states "Adolescents from various cultural backgrounds show considerable variability in abstract reasoning abilities." Some cultures offer more opportunities to adolescents to develop abstract thinking than others, by providing a rich verbal environment and experiences which facilitate growth by exposure to problem-solving situations (Rice, 1996:157).

Youniss and Dean (1974:1030) found a strong correlation between the degree of urbanisation of the child and the level of development of formal thought.

Perkins, Jay, and Tishman (1993:16) emphasize the fact that many modern developmental psychologists including Vygotsky acknowledge the role of social and cultural influence on development. They state that thinking is a social activity, initially shared between people but gradually internalized in the individual.

Serpell and Boykin (1994:371) state "Cultural factors impinge on several aspects of the cognitive processes that an individual deploys in thinking and problem solving: knowledge base, structural organisation, hierarchy of values, and pragmatic focus."

Terenzini, Springer, Pascarella and Nora (1995:36) found that "out-of-class experiences" had a statistically significant effect on gains in critical thinking in first year university students. These out-of-class experiences referred to good relationships with other students, including involvement with student groups, and recreational time spent reading non-assigned books.

#### **2.3.5.5 Gender**

Cobb (1992:159) states that differences in verbal reasoning and fluency between males and females appear as early as infancy or as soon as children learn to speak. This difference disappears by about the age of three, but reappears in early adolescence and persists throughout adulthood.

Anastasi (1982:125) states that females perform better in verbal facility, perception of detail and memory than males. Males perform better than females in gross motor skills, spatial orientation, mechanical aptitude and numerical reasoning. Many of these tasks are related to critical thinking skills and it therefore appears that there will be differences in the critical thinking abilities of males and females.

#### **2.3.5.6 Age**

As discussed in paragraph 2.3.4 above, critical thinking appears to be linked to formal-operational thought, and therefore also linked to age in that formal-operational thought normally develops during early adolescence from age of approximately 11 or 12.

Keating (1988:1) states that although there is no persuasive evidence of fundamental constraints on the ability of early adolescents to engage in critical thinking, researchers have noted that performance on certain types of thinking tasks seems to increase with age.

Frisby (1991:169) found that there is a definite link between the development of critical thinking ability and grade level. This implies that the critical thinking ability of older adolescents is at a higher level than that of younger adolescents.

### **2.3.5.7 Technology**

Pellegrino (1995:11) states that technology is playing an increasingly vital role in the development of the ability to think clearly and critically about complex issues. He states that "It is safe to say that technology now makes it possible for individuals of all ages to engage in far more complex problem solving than was previously possible and to be better assisted in thinking critically about their own thinking and problem solving."

Pellegrino believes that technology such as multimedia computers and the Internet provide an individual with unprecedented access to information, and therefore assist him tremendously in his attempts at problem solving. While electronic-mail and desktop video conferencing assist him in communication which again will lead to more efficient problem solving.

Pellegrino concludes by saying that one of the new thinking skills that we have to teach students is how to select carefully from among the range of information possibilities so that they do not get bogged down in the selection stage of problem solving.

### **2.3.5.8 Conclusion**

It would appear from the above that there are many factors which may play a role in the development of critical thinking in the individual. In 1933 Dewey already placed emphasis on the role which the attitude of the individual may play on his critical thinking ability. Modern researchers have also found this to be true and the combination of attitude, disposition and personality have received much attention.

Many researchers have found a strong link between verbal ability and critical thinking skills, but they also found that it is very difficult to differentiate between verbal ability and critical

thinking in general, especially in a testing situation. Technology is playing an ever-increasing role in assisting us with problem solving but the responsibility for manipulating and utilizing these advanced methods still rests with the individual.

Age has traditionally been linked with critical thinking ability and although there is not consensus, many theorists believe that it is only during adolescence that critical thinking ability develops. As regards gender, there is evidence that females are superior to males in verbal reasoning which as stated earlier is closely linked to critical thinking ability.

Cultural and environmental influences appear to play a major role in the development of critical thinking abilities, and as this study is based in a culturally diverse country, this area of influence on critical thinking will be explored. The other factors such as personality, gender, age, verbal ability as measured by intellectual potential tests, academic performance, and classroom experiences in terms of the subjects taken by the individual, will also be measured.

## **2.3.6 MEASUREMENT OF CRITICAL THINKING**

This section presents an overview of the various methods of testing or information-gathering with respect to critical thinking, followed by a review of the various tests currently available.

### **2.3.6.1 Types of information-gathering techniques**

The various information-gathering techniques are diverse in nature, each with specific advantages and disadvantages. Numerous researchers which include Norris and Ennis (1989), Sormunen and Chalupa (1994), Norris and King (1984), and Quellmalz (1985), have reviewed the various measuring instruments and provided guidelines for the construction of new tests:

- ***Multiple-choice tests***

The use of multiple-choice tests is a very common method of gathering information on critical thinking. The major advantage of the multiple-choice format is the ease and speed with which the results can be processed. Also, the person scoring the test requires only minimal training. Computers are also in wide use for scoring - increasing the speed and reproducibility of scoring even more.

Another advantage is that many specific probes can be made of students' critical thinking abilities and dispositions. This is as a result of the fact that as each item only takes a short time to answer, they have time to answer many items on different aspects of critical thinking. This also leads to the situation where a quick diagnosis of students' critical thinking deficiencies can be made.

A further advantage of multiple-choice tests is that they can be constructed to provide consistent results, and the reliability can be increased simply by increasing the number of items in the test.

The criticisms of multiple-choice tests are as follows: Firstly, the fact that items only have one correct or best response, makes many researchers question the suitability of the technique. They feel that issues requiring critical thinking often do not have a single correct or best answer. A second criticism is that multiple-choice tests do not provide any indication of the thinking processes which students use to arrive at their answers.

- ***Constructed-response tests***

Constructed-response tests come in a number of forms. Certain tests require several short, written pieces in response to relatively specific questions or directives, while others require more extended essays in response to relatively general questions or directives.

The major disadvantage of constructed-response tests is that they are far more difficult and time-consuming to score than multiple-choice tests. The scorer also needs to have training in critical thinking and should be able to make wise decisions about responses that do not fit the typical mould.

Consistency in scoring is also a problem as the grading of constructed responses cannot cater for all the possible answers. Subjectivity also presents a problem as scorers may grade the same essay differently on different occasions, or different scorers may grade the same essay differently.

The advantages are as follows:

- Firstly, they allow the testee more leeway in answering and also allow for more than one approach to a problem.
- Secondly, constructed-response tests of the essay variety provide a means for establishing whether students can coordinate a number of critical thinking abilities in working on a complex problem. An example of this would be whether students are able to judge the credibility of the information they have at their disposal and then use the information to make sound inferences to a decision.
- Thirdly, constructed-response tests, especially essay tests provide a means of gathering information on students' critical thinking dispositions. An example of this would be when a student is presented with the task of evaluating a position taken by somebody else, their essays could show whether they sought reasons for the person's position and whether they were open-minded about the person's position. If the student did these things without being instructed to do so, then this is evidence that they have the related critical thinking dispositions.
- A fourth advantage of constructed-response tests is that testees could be asked to provide reasons for their judgements. With this information, more trustworthy inferences about students' ability to correctly judge the credibility of sources could be made than if just the answer was provided.

- ***Direct classroom observation***

This method attempts to record some aspects of an ongoing classroom situation while disturbing the normal course of events in that classroom as little as possible. The most important criterion of successful direct observation is ecological validity - the observation must be representative of what normally happens in the classroom.

An important advantage of this method is that it gives an indication of normal critical thinking performance as opposed to optimal performance when tested using a formalised information-gathering technique.

Direct classroom observation can either be open-ended where the observer simply views the students' critical thinking without looking for anything in particular, or the observer can focus on particular aspects of critical thinking.

The direct observer can either focus on a whole classroom of students at one time or on students one at a time. Clearly this will present problems in terms of time and resources with either method.

A disadvantage is that the observer will require high levels of expertise and training in critical thinking, in order to be successful in his task.

- ***Individual interviews***

Individual interviewing is another technique for gathering information on students' critical thinking that makes heavy demands on resources, but that can serve very useful purposes. This technique when used properly, is better than most others for acquiring information on the thinking processes that students follow when working on a problem. Therefore, more trustworthy inferences regarding students' performance to their critical thinking abilities and dispositions can be made.

The major source of invalidity arises from the nature of the interaction between the interviewer and the student. The level of the interviewer's intrusiveness will have an effect on the overall results. Even one probe that is too direct may lead to unreliable results.

- ***Student and teacher journals***

Student and teacher journals contain records of and reflections on what has occurred in school. Under certain circumstances journals can be useful sources of information in evaluating students' critical thinking. A major flaw of this method is that the journal is usually undirected which leads to a lot of irrelevant information. Journals can be directed if the students are asked to make specific observations on specific events or situations. These journals would be particularly useful in determining specific dispositions of students.

Another problem with journals is that the reliability and validity are very limited. Journal keeping and the interpretation of them lies more towards the art end than the science end of the evaluation spectrum.

Each of the above methods has certain inherent advantages and disadvantages, but may suit the needs of a particular researcher or research design. The evaluator will have to identify his specific needs before deciding on a specific method.

### 2.3.6.2 Currently available tests

#### 2.3.6.2.1 Comprehensive Critical Thinking Tests

The tests discussed in this section are based on general knowledge, which implies that prior subject-specific knowledge or training is required in order to answer these tests.

- ***Watson-Glaser Critical Thinking Appraisal (1980)***

This multiple-choice test was first developed in the late 1930s. It has been revised many times and is probably the most extensively used critical thinking test. It is aimed at high school and university level students, but it can be used at the junior high level. The two parallel forms each contain 80 multiple-choice items divided into five subtests as follows:

- Inference
- Recognition of assumptions
- Deduction
- Interpretation
- Evaluation of arguments

Reliability estimates for this test range from 0,70 to 0,82. Studies have also shown that test performance improves following instruction in critical thinking. The test also correlates well with measures of general intelligence: 0,55 to 0,75 with a median of 0,68; academic achievement: 0,56; and reading ability: 0,60 to 0,64 (Watson & Glaser, 1964:11).

- *Cornell Critical Thinking Tests (1985)*

There are two Cornell critical thinking tests, Level X and Level Z, sharing a common manual. Level Z is intended primarily for junior and senior high school and first year university, but it has been used in grades four to six. Level X is intended for undergraduates, graduate students and adults.

Like all multiple-choice critical thinking tests, these tests focus primarily on the evaluative aspects of critical thinking rather than productive aspects. They examine whether students can judge the reliability of reports of observations which other people have made, but they do not examine whether the students themselves make reliable observations.

Level X consists of 71 multiple-choice items which are divided into four sections:

- Inductive Inference
- Credibility of Sources and Observation
- Deduction
- Assumption Identification

Level Z consists of 52 multiple-choice items divided into seven sections:

- Deduction
- Meaning
- Credibility
- Inductive Inference (direction of support, if any)
- Inductive Inference (prediction and hypothesis testing)
- Definition and Unstated Reasons
- Assumption Identification

The reliability estimates for Level X range from 0,67 to 0,90 and from 0,50 to 0,77 for Level Z.

- ***Ross Test of Higher Cognitive Processes (1976)***

The Ross test is aimed at students in grades four through six and is designed to test students' ability to analyze, synthesize and evaluate. The test consists of 105 multiple-choice items divided into eight sections:

- Analogies
- Deductive reasoning
- Missing premises
- Abstract Relations
- Sequential Synthesis
- Questioning Strategies
- Analysis of Relevant and Irrelevant Information
- Analysis of Attributes

The reliability estimates are reported as being 0,92 for split-half and 0,94 for test-retest. A correlation score of 0,67 between the score on the test and chronological age was offered in support of validity of the test as critical thinking ought to increase with age.

- ***New Jersey Test of Reasoning Skills (1983)***

This test was designed specifically for use with the Philosophy for Children programme. It could, however, be used as a general measure of the reasoning skill aspect of critical thinking. The manual recommends that the test can be used with students from the fifth grade level up to and including high school and university level students. Although the test is designed to test reasoning in language, it covers enough critical thinking content to be included as a test of critical thinking.

The test contains 50 multiple-choice items which are divided into two major classes:

- Reasoning Skills
- Inquiry Skills

An inspection of the items reveals that there is a large emphasis on deduction. The reliability indexes range from 0,85 for fifth grade students to 0,91 for seventh grade.

- ***Judgment: Deductive Logic and Assumption Recognition (1971)***

This test contains 48 items based on general knowledge. It covers three aspects of critical thinking:

- Deductive logic
- Assumption Recognition
- Credibility of sources and observations

The test can be given in 40 minutes and is aimed at students in grades 7-12. Very little information regarding the reliability and validity of the test is available and as a result it appears to be neglected.

- ***Test of Enquiry Skills (1979)***

This test was developed for students in grades 7-10 in Australia. It contains 87 items divided into three sections:

- Part A - Using reference materials
- Part B - Interpreting and Processing Information
- Part C - Critical thinking in Science

Parts A and B focus on the school subjects of science and social science. Part C could be called subject-specific as it focus entirely on Science. The test-retest reliability estimates vary for the different sections in the test, from 0,65 to as high as 0,82.

- ***The Ennis-Weir Critical Thinking Essay Test (1985)***

This is the only commercially available comprehensive critical thinking test in essay format. It is aimed at high school and university students, but it has been used with some success with students in the sixth grade. The test covers areas such as:

- Getting the point
- Seeing the reasons and assumptions
- Stating one's point
- Offering good reasons

- Seeing other possibilities
- Responding appropriately to and/or avoiding inter alia:  
Equivocation, Irrelevance, Circularity.

The estimates for reliability (correlating performance on different parts) are given as 0,82 and 0,86, but it should be noted that there is an element of subjectivity in the scoring of the test. This test's major drawback is that it takes much longer to score than a multiple-choice test.

- ***The California Critical Thinking Skills Test (1990)***

This test is aimed at university students but it may be used with advanced and gifted high school students. It incorporates the following aspects of critical thinking:

- Argument analysis and appraisal
- Deduction
- Induction (including rudimentary statistical inference)

The test contains 34 multiple-choice items in Form A and an equivalent Form B. The estimated reliability for Form A is 0,70.

### **2.3.6.2.2 Aspect-specific Critical Thinking Tests**

The tests discussed in this section test critical thinking in certain specific areas only.

- ***Cornell Class Reasoning and Conditional Reasoning Tests (1964)***

These tests were designed for use with students in grades 4 to 12. They contain 72 multiple-choice items which examine twelve principles of class logic. The reliability of the tests was estimated by correlating the scores on two administrations of the tests approximately ten weeks apart. The values ranged from 0,66 to 0,88 for Class Reasoning and 0,65 to 0,80 for Conditional Reasoning.

- *Logical Reasoning (1955)*

This deduction test consists of class reasoning items, often called syllogisms. The test consists of 40 items and is aimed at high school and university students. Reliability is reported to be 0,89 for university students and 0,91 for high school students.

- *Test on Appraising Observations (1983)*

This observation test deals with one of the credibility aspects of critical thinking. It was designed primarily for use with high school and university students. Students have to decide which of two statements (based on a given story) is more believable. Reliability estimates ranged from 0,58 to 0,76.

### 2.3.6.3 Summary

The majority of the commercially available critical thinking tests are multiple choice type tests. The reason for this is that this type of test is easy to administer, score and interpret. Most of these tests are also comprehensive tests in that they test various aspects of critical thinking, normally by means of various subtests within the overall test. The aspects of critical thinking which are common to the more well-known tests are inductive inference, deduction, recognition of assumptions, and credibility. It therefore follows that if a new critical thinking test was to be developed, it should include at least these four aspects of critical thinking. None of the tests include a specific problem solving component.

Of all the commercially available tests, only the Test of Enquiry Skills is subject-specific in that it focuses on the school subjects of Science and Social Science. However, only part C of the test is focused on Science alone. Therefore it can only be described as being partly subject-specific. All the other tests cover general content without any specific focus.

For the purposes of the study at hand, it appears that a multiple choice format would be the most efficient method of measuring critical thinking skills. The reason for this is that South Africa's population is extremely diverse, and if one is to arrive at a comprehensive picture of the critical thinking skills of adolescents, then a large number of adolescents will have to be tested. Individual interviews or the essay type format would be far too time consuming and

expensive. Another unique feature of the study at hand is that the test will have to be subject-specific. The test will be focusing on political and social issues. Only a multiple choice type test would be suitable in this context, in that it can combine critical thinking and political issues. The fact that multiple choice tests are marked completely objectively is another advantage in this instance in that the marker may be influenced by his own views if a more subjective method of marking was used.

### **2.3.7 METHODS OF IMPROVING CRITICAL THINKING IN THE CLASSROOM**

Chance (1986:6) sums up the ideas of most of the prominent educators of today when he states "We must find ways of teaching students how to analyze facts, generate and organize ideas, defend opinions, make comparisons, draw inferences, evaluate arguments and solve problems." Finding ways of teaching students how to think appears to be of paramount importance. What follows is a discussion of some of the more well-known programmes already in use in many classrooms and lecture halls.

#### **2.3.7.1 CoRT Thinking Lessons**

Edward de Bono (1984) was the creator of the programme Cognitive Research Trust from which CoRT takes its name. The programme is based on the idea that there are two stages in thinking - perception and analysis. De Bono feels that poor thinking is often due to errors in perception rather than analysis. He also says that schools often neglect perceptual skills and that deficiency has to be addressed in thinking programmes.

Although de Bono's emphasis is on improving perceptual thinking, analytical thinking is also covered. Methods such as PMI - where an idea or proposal is discussed and its good points (plus), bad points (minus) and interesting points are listed instead of just saying that it is a bad or good idea. Another tool is the C&S where the possible consequences and sequels of implementing a new idea are discussed - the short (one to five years), medium (five to twenty years) and long-term consequences are considered. Group and class discussions are used where real-life problems are discussed. The programme consists of one lesson per week for two years.

The programme is aimed at children between the ages of nine and twelve and all ability levels are accommodated.

The benefits of the programme appear to be that students become more flexible and are likely to see more sides to an issue or explore more alternatives to a problem (Chance, 1986:11).

### **2.3.7.2 Productive Thinking Program**

The Productive Thinking Program was published in 1974 and was the culmination of work done by Martin Covington (the principal developer) and other psychologists at the University of California at Berkeley. The major assumption of the programme is that productive thinking involves five kinds of thinking skills: discovering and formulating problems, organizing and using information, generating ideas, evaluating and improving ideas, and creating new perspectives.

The programme is aimed at fifth and sixth grade students and is suitable for all but the slowest learners. Students read fifteen booklets with comic book format, and practice thinking guides by answering questions confronting story characters. There is normally a class discussion of booklet exercises. The programme is normally taught in one semester (a six month block).

The benefits appear to be that students use more original ideas, become more curious and also more persistent at problem solving (Chance, 1986:27).

### **2.3.7.3 Philosophy for Children**

Matthew Lipman's programme is based on the idea that thinking well requires the ability to perform numerous reasoning skills, and that these skills are best learned through the use of language and in particular dialogue.

Materials for the programme are available for grades three to twelve. The students meet three times a week for forty minutes to read, do exercises and talk for most of the school year. The class focuses on a novel where the characters discover and model principles of reasoning in the process of exploring philosophical issues.

It is claimed that students' reasoning is improved after completing a year of the programme. Further benefits are that students take a more thoughtful approach to problems, including schoolwork.

#### **2.3.7.4 Odyssey**

This programme was developed by an international team (mostly Americans and Venezuelans) of psychologists, educators and government officials, and published in 1983.

The programme is based on the assumptions that intellectual performance depends on abilities, methods, knowledge, and attitudes, and that these are best improved through dialogue and discovery learning. The goal of the programme is to teach target abilities needed for a variety of intellectual tasks which include creative-thinking skills, but the emphasis is on reasoning. Students have three or four forty-five minute lessons per week over a period of two years (99 in total). Students from fourth to sixth grade are included in the programme.

The developers state that improved performance on tasks requiring target abilities and improvement on academic aptitude tests are some of the benefits of the programme.

#### **2.3.7.5 Instrumental Enrichment**

This programme was developed by Reuven Feuerstein in Israel in 1978. It is based on the assumptions that students learn to think by means of mediated learning experiences, and that a lack of such experiences may result in cognitive deficiencies.

The programme comprises fifteen units consisting of pencil and paper exercises designed to correct cognitive deficiencies. The classes are one hour long and are held three to five times a week for two to three years. A teacher leads the discussion of exercises. The programme is suitable for people aged eleven to adult. There are many well-documented cases of people's thinking abilities improving dramatically after following the programme.

### 2.3.7.6 Intelligence Applied

Sternberg's "Intelligence Applied" programme (1985:278) consists of a one year course, whose goal it is to improve specific general and critical thinking skills. It is aimed at high school pupils or students, and although pupils from any socio-economic background would benefit from the programme, learners need to have at least average intellectual potential.

The programme consists of five parts:

- Discussion of theories of cognitive development and attempts to improve cognitive development. Sternberg's triarchic theory is also discussed.
- The material in this section of the programme focuses on the following information-processing components: metacomponents, performance components, knowledge-acquisition components.
- In the third section the focus is on problem solving and the handling of new problems and situations.
- The emphasis in this section is on real-world problem solving and not just within an academic environment. Problems such as the handling of conflict and decision making with regard to inter-personal relationships are dealt with.
- The last section deals with emotional and motivational blockages which may be hampering the individual in his daily life.

### 2.3.7.7 Summary

Although all of the above programmes have different approaches and methods, they have one thing in common - they are all taught separately from the ordinary curriculum. The other approach to improving critical thinking, that of subject-specific instruction was not discussed here as there are many different programmes, each tailored specifically for the relevant subject. This approach relies very much on the creativity and ingenuity of the teacher, teaching a specific subject.

In South Africa where there is great need for improving standards in general and critical thinking skills in particular, there is lack of both funds and resources, and as a result the implementation of external programmes is unlikely. However, the implementation of one of the above programmes as a part of the standard curriculum could be considered.

## 2.4 CONCLUSION

Although Aristotle is recognized as being the first person to undertake a systematic analysis of thinking, it was only in the late nineteenth century that man began to focus on the structure and processes of the mind. The introspectionists under the leadership of Wilhelm Wundt concentrated on the sensory and perceptual processes. The behaviourists changed the focus of the research to observable behaviour or performance and used animals as well as humans in their research. The next major change in approach came with the advent of computers. The information-processing approach regards human cognition as being similar to a computer in that it codes, stores, retrieves and transforms information. Bloom distinguished between lower and higher order thinking which led to the idea of metacognition which could be defined as being knowledge of and insight into one's own thinking processes.

Piaget's major contribution to the ideas regarding thinking, was that cognitive development takes place in sequential developmental stages. Vygotsky stressed the fact that social and cultural factors played a role in cognitive development. Feuerstein's work also focused on the fact that the development of the cognitive structure is influenced by interaction between the individual and the environment. His "mediated learning experience" referred to the intervention of a knowledgeable person between an individual and his environment. De Bono focused on the deficiencies of ordinary, vertical thinking and introduced the concept of lateral thinking, which he defined as "the ability to look at things in different ways". In his triarchic theory Sternberg concentrated on human intelligence and how it operates. Sternberg believed that intelligent behaviour could be taught.

The range of definitions of critical thinking covers many aspects of thinking, but it was concluded that a concise definition should make reference to: reflective thought and a sceptical attitude; ability to make sound decisions and judgements; and the ability to justify the decisions. Part of the debate surrounding critical thinking is whether it is a general reasoning

skill and should therefore be taught separately from curriculum, or whether it is subject-specific and as such should be infused into subject matter and taught as part of the ordinary curriculum. A third approach is that students should be involved in subject-specific instruction as well as separate courses aimed at teaching general principles of critical thinking. The most important aspects of critical thinking were identified as being: argument analysis, decision making, problem solving, credibility, and recognition of assumptions. Disposition and attitude, personality, verbal ability, gender, age, classroom experiences, cultural factors, and technology were all found to be factors which could have an influence on critical thinking.

There are two approaches to the measurement of critical thinking. Multiple choice-type tests are in the majority as they are both easy to administer and interpret. Essay-type tests are in the minority as they are both time-consuming to score and not as objective as multiple choice-type tests. Most of the commercially available tests are comprehensive-type tests in that they cover a number of aspects of critical thinking. All of these tests have no specific subject focus, with the exception of the Test of Enquiry skills which is partially subject-specific, in that it focuses on school science.

A number of researchers have developed programmes which assist in improving critical thinking skills in the classroom. The most well-known of these are de Bono's "CoRT Thinking Course" and Lipman's "Philosophy for Children". Both of these programmes, as well as the others discussed in this chapter, are extra-curricular programmes.

Finally, in terms of the study at hand, the literature discussed in this chapter will provide the framework for research into the critical thinking of South African adolescents. The research will also include the construction of a unique subject-specific critical thinking measuring instrument.

The following chapter will focus on the development of the adolescent.

# CHAPTER THREE

## ADOLESCENT DEVELOPMENT

### 3.1 INTRODUCTION

It is well known that the word "adolescence" comes from the Latin verb *adolescere* which means "to grow up", but the exact period of this growth varies according to the society or even the specific perspective within that society. Western society has traditionally considered the period of adolescence as beginning with the onset of puberty (normally between the ages of 10 and 14) and ending sometime between 18 and 21, depending on whether the individual takes on the adult responsibilities of work, marriage and parenthood. Other cultures view adolescence as a period of transformation rather than transition, and the child becomes transformed (usually through ceremonial rites of passage) into an adult who embodies all the physical and spiritual characteristics of the other adult members of the society (Cummings, 1995:4).

The difficulty in arriving at a specific definition of adolescence is made more complex by the fact that there are many perspectives from which to view this period of development. For example, the developmental psychologist may define adolescence as a time during which young people begin to seek separation from their parents in order to achieve independence. Anthropologists view adolescence as a period of transformation between childhood and adulthood, usually marked by rites of passage ending in full inclusion into adult society (Cummings, 1995:5). Educationalists may define adolescence as the period of time that young people are enrolled in secondary schools, and even the legal definition of adulthood has an influence on our conception of adolescence. If the law allows a person to drive a car and have full voting rights then he can hardly be described as being a child or even an adolescent.

As the focus of this study is on the adolescent's ability to think critically about political issues, it is necessary, firstly, to consider the various theories of adolescent development, from Hall's original theory of 1904 to the more modern theories of Havighurst and Bandura's updated 1989 theory. Secondly, the impact of the different areas of development on political thinking will be referred to, and finally the development of political understanding in the adolescent will be explored.

## 3.2 THEORIES OF ADOLESCENT DEVELOPMENT

In the sections that follow, the ideas and definitions of the more prominent theorists over the last century will be considered in order to arrive at a clearer picture of adolescence.

### 3.2.1 G. STANLEY HALL

Hall is considered to be one of the founders of developmental psychology and also of the psychology of adolescence. His theory which was published in 1904, revealed that he was committed to an evolutionary approach to human development. He believed that the life experiences of the human species, from the most primitive beginnings until modern times, were part of each person's genetic structure, where the process of individual growth and development mimicked the evolution of the species (Newman & Newman, 1986:38).

Hall's view of development included the following four stages:

- ***infancy*** - emphasis is on sensory and motor experience which reflects the primitive beginnings of human experience (first four years);
- ***childhood*** - emphasis is on game-playing and fantasy adventures, reflecting the hunting and gathering period of human evolution (five to seven years of age);
- ***youth*** - the focus here is on skill building, routine and discipline, reflecting the years of serfdom and agrarian life (eight to twelve years of age);
- ***adolescence*** - this is the period from puberty to adulthood where turbulence and conflict accompany the transition to greater self-awareness and idealism, corresponding with human transition to a more complex, technological and modern civilization (thirteen to twenty-four years of age).

Hall's theory was eventually discredited for the following reasons:

- His biological, genetic explanation of behaviour allows no room for the role of the environment.

- He felt that behaviour at each stage is universal, unchangeable and predisposed by biological drives (Rice, 1996:29).
- He felt parents must be permissive and tolerate socially unacceptable behaviour during the various stages of development.
- His research focused on the American adolescent, excluding other cultures where the period of adolescence is not characterised by rebellion and conflict.
- Hall's belief that changes can be passed on from one generation to the next through the genes is seen as scientifically false (Dacey & Kenny, 1994:42).

In spite of all the criticisms of his theory it has remained influential for the following reasons:

- He brought objectivity to adolescent psychology through his use of empiricism (Dacey & Kenny, 1994:43).
- His emphasis on the significance of biological factors that influence maturation is preserved in many current theories of human development (Newman & Newman, 1986:40).

### 3.2.2 SIGMUND FREUD

Freud's theory of psychosexual development is similar to Hall's in that it also describes human personality as developing from birth to adolescence through a series of stages. In Freud's theory there are five psychosexual stages:

- the oral stage (birth to 18 months)
- the anal stage (18 months to 3 years)
- the phallic stage (3 years to 5/6 years)
- the latency stage (5/6 years to 12/13 years)
- the genital stage (adolescence)

Depending on the particular stage of development, sexual energy is concentrated in a sensitive area of the body. These areas or erogenous zones are the mouth, the anus, and the genital organs. When sexual energy is focused in a particular zone, the child derives sensual pleasure from stimulation of the zone, and the child's relationships with other people are influenced by their responses (Cummings, 1995:49). Freud's belief was that adult neuroses developed as a result of inappropriate parental responses to childhood psychosexual experiences such as toilet training or masturbation.

According to Freud, the genital stage is especially relevant to adolescent behaviour. It is during this stage that the genitals become a source of sexual pleasure and the satisfaction of sexual impulses results from sexual intercourse and orgasm. Freud believed that the conflicts normally associated with the transition to adolescence were difficult for people living in Western cultures because of moral restrictions against the overt pursuit of sexual satisfaction (Cummings, 1995:50). Freud also referred to the individuation of the adolescent, which is the formation of a personal identity by the development of the self as a unique person separate from parents and others (Rice, 1996:33).

Although the influence of Freud's work has been immense, there have been many objections to and criticisms of his work. Firstly, it is felt that his empirical research was weak as he based his opinions and theory on a very limited number of individuals and his observations were not subjected to objective analysis. Secondly, his emphasis on the sexual nature of man is also thought to be excessive. Finally as his theory was developed in the rigid social environment of the Victorian era, it may not be relevant to today's society.

### **3.2.3 ROBERT HAVIGHURST**

Havighurst's theory suggests that there are specific developmental tasks at each stage of life which lie midway between the needs of the individual and the goals of Western society (Dacey & Kenney, 1994:50). He defined these tasks as skills, knowledge, functions, and attitudes that are needed by the individual in order to succeed in life. His theory is similar to Freud's in that the inability to successfully deal with any stage interferes with the possible success of all the succeeding stages.

In 1972 Havighurst described his eight developmental tasks as follows:

- Accepting one's physique and using the body effectively.
- Accepting a masculine or feminine social role.
- Forming new and more mature relationships with age-mates of both sexes.
- Achieving emotional independence from parents and other adults.
- Preparing for an economic career.
- Preparing for marriage and family life.
- Acquiring a set of values and an ethical system as a guide to behaviour (developing an ideology).
- Desiring and achieving socially responsible behaviour (Rice, 1996:46; Newman & Newman, 1986:51).

Havighurst stated that there is a correct time for teaching any task - a teachable moment (Rice, 1996:46). He was of the opinion that these tasks arise out of biological changes, societal expectations at a given age, or the individual's motivation at certain times to do particular things. He also stated that the developmental tasks differ from culture to culture, depending on the relative importance of biological, psychological and cultural elements in determining the tasks.

Havighurst states that the reason that many adolescents and modern youths suffer from aimlessness and uncertainty, is that they have been unable to achieve identity. He says that in the earlier part of the twentieth century most youths (particularly boys) achieved identity through selecting and preparing for an occupation. The latter part of the century has brought an emphasis on expressive values and nothing has replaced occupational choice as a sure means of identity formation (Rice, 1996:47).

In terms of political development and awareness, it is interesting to note that Havighurst lists socially responsible behaviour as one of the developmental tasks of adolescence. In essence political awareness is just that - awareness of social responsibilities.

### 3.2.4 ALBERT BANDURA

Bandura's social learning theory stresses the potent influence of modelling on personality development. He refers to observational learning which means that the information we get from observing other people, things, and events greatly influences the way we act (Dacey & Kenny, 1994:49). Implicit in Bandura's theory is the idea that adults and parents can be a strong force in shaping the behaviour of adolescents because of what they do, rather than what they say. Bandura states that modelling has a major impact on behaviour:

- The observer may acquire new responses, including socially appropriate behaviours.
- Observation of models may strengthen or weaken existing responses.
- Observation of a model may cause the reappearance of responses that were apparently forgotten.
- If children witness undesirable behaviour that is either rewarded or goes unpunished, undesirable behaviour may result.

In 1989, Bandura expanded his social learning theory to include the role of cognition (Rice, 1996:45). He believed that rather than describing individuals as being strictly determined by environmental influences, they also determine their own destinies by choosing their future environments as well as goals they wish to pursue.

In summary, whether one is considering either Bandura's social learning theory or his social cognitive theory, it appears that he believes that adolescent development does not happen in predictable stages, but rather as a result of stimuli from the environment. He sees development as continuous, something that happens in small steps every day (Dacey & Kenny, 1994:50).

### 3.2.5 SUMMARY

With respect to the four theorists discussed in the above paragraphs, only Havighurst makes any specific reference to the development of political thinking in adolescence. His final two developmental tasks which refer to the developing of an ideology and desiring socially responsible behaviour are in essence a description of the development of political understanding. In terms of political development, Bandura's emphasis on modelling and environmental influence appear to endorse the idea that parents play the major role in forming the adolescent's early political ideas. Although Hall never made specific reference to a relationship between adolescence (which he described as a period of greater self-awareness and idealism), and political thinking, the link is evident. Freud also never made any specific reference to political thinking in adolescence, although he did state that it is during the genital stage that adolescents begin to loosen their emotional ties with their parents and form a personal identity, which would include their own ideas and political beliefs.

The theories of Erikson, Kohlberg and Maslow were not included here as they will be discussed in the sections on the personality, moral, and physical development of the adolescent respectively. Piaget's theory, which is mainly cognitive in nature, was discussed in Chapter 2.

## 3.3 PHYSICAL DEVELOPMENT

There are many aspects of the adolescent's physical development which may play a role in the development of his political understanding and awareness. Maslow's theory of self-actualization and its link to political development will be discussed, as well as aspects of physical development such as the timing of the onset of puberty, teenage pregnancy, AIDS, abortion, and the rights of the handicapped adolescent. All of these have the potential to either become political issues or lead to a greater political awareness in adolescence.

### 3.3.1 PHYSIOLOGICAL NEEDS

Abraham Maslow believed that humans have six basic instincts (Maslow, 1970:35-51). These instincts are manifested in the form of needs. They appear in overlapping stages, with the

basic needs present at birth and the higher-order needs developing as the person grows older. He also stated that the satisfaction of these needs is sequential - the basic needs must be met before the more complex needs can be fulfilled. This implies that if an individual's basic needs such as for food, clothing and shelter, are not met, he would be unlikely to concern himself with the general social or political issues of the greater community or culture (see paragraph 3.9.2 for a more complete discussion of Maslow's theory).

### 3.3.2 PUBERTY

Puberty which can begin as early as the age of 8 in girls and the age of 10 in boys, or as late as 13 in both boys and girls, is characterised by the following:

- a rapid acceleration in growth - dramatic increases in both height and weight;
- the further development of the gonads, or sex glands and primary sexual characteristics such as growth of the penis and scrotum in boys, and growth of the ovaries, uterus and vagina in girls;
- the development of secondary sex characteristics such as an increase in size of the breasts in girls, the growth of pubic and axillary hair in both boys and girls;
- changes in body composition - the quantity and distribution of fat and muscle;
- changes in the circulatory and respiratory systems (Seifert & Hoffnung, 1994:488).

These physical changes can be fairly traumatic for some adolescents and can even lead to psychological problems, while others accept and even relish the changes taking place in their bodies. Gouws and Kruger (1994:41) in their discussion of the implications of the adolescent's physical development, state "The adolescent years are primarily the period during which the child's perception of her body exerts a critical influence on her social and emotional development." Problems such as early or late development lead to feelings of inferiority and extreme self-awareness. It could be gathered from this that if the adolescent is pre-occupied with these types of feelings, he will find it difficult to focus on general social and political issues, and the development of his political understanding may be affected.

### 3.3.3 TEENAGE PREGNANCY

Adolescent pregnancy is becoming a major social problem throughout the world. In the United States of America 2700 teenage girls become pregnant every day, or over one million per year (Roosa, 1991:370; Ketterlinus, Lamb & Nitz, 1991:435). Approximately half of these will give birth, while the rest will either miscarry or have abortions. Most of these girls are unmarried and most of the pregnancies occur during the first three months after the girl becomes sexually active (McCullough & Scherman, 1991:813). It is further estimated that approximately 10 000 adolescents aged 13 or 14 have their first baby, while almost 5000 sixteen year-olds have their second child each year (Cummings, 1995:205). In South Africa, the figures are just as perturbing - more than 30% of all babies born each year are conceived by teenagers, and girls of 16 years and younger give birth to about 50 000 babies each year (Die Burger, 1990:6). Caldas (1993:18) proposes that these high figures may be partly as a result of the following:

- heightened sexuality and awareness following puberty;
- a lack of information about fertility and contraception;
- a tendency not to use contraceptives;
- having a baby may be viewed as a sign of maturity;
- pregnancy may be used as an escape from an unhappy home situation;
- lack of parental involvement or supervision.

Most researchers agree that the major problems experienced by adolescent parents are the following:

- curtailed opportunities for education and future careers;
- loss of freedom and independence;
- sudden increase in responsibilities;
- likelihood of entrenched poverty (Ketterlinus et al, 1991:435; Nath, Borkowski, Whitman & Schellenbach, 1991:411; Roosa 1991:370).

In the same way that the negative effects of adolescent pregnancy and parenthood for the individual should not be minimised, the social and political implications of adolescent pregnancy and parenthood should also be considered. Ketterlinus et al, (1991:435) state that

since the 1970s the problematic nature of adolescent childbearing has increasingly been defined in terms of its social and economic costs. They state that in 1985 the United States government expenditure in terms of welfare and medical costs totalled \$16.65 billion, while by 1989 this figure had grown to \$21 billion (Roosa, 1991:370).

Roosa (1991:371) states that there is a direct link between adolescent pregnancy and politics, "Perhaps more than any single topic area, adolescent pregnancy touches a large number of hot spots in the current political agenda regarding families." He states that issues such as sex education in the school environment, contraceptive education and the distribution of contraceptives to minors, parental rights and powers, parental notification, abortions for minors, out of wedlock childbearing, and welfare programmes have been placed high on most political agendas. Nath et al. (1991:412) raise another issue which has become politically significant, that of the relationship between social class and the availability of social support in the United States. They state that there is greater support available to higher socioeconomic status mothers than to those from poorer environments.

Finally, Ketterlinus et al. (1991:438) state that in spite of the general consensus that adolescent parents face double doses of stress - those derived from the concerns, responsibilities and consequences of parenthood, combined with the normal developmental tasks of adolescence, there are studies which indicate that many adolescents successfully overcome the adverse consequences of an early transition to parenthood. They refer to Stack's 1974 study that concluded that parenthood may pave the way for adolescents to become full-fledged members of the adult society and its social support networks.

### **3.3.4 ABORTION**

In 1973 the U.S Supreme Court's decision in the Roe v. Wade case led to the current situation in the United States where abortion is allowed on request before 12 weeks, stricter criteria are required between 12 and 24 weeks before the request is granted, and in the final trimester very strict criteria have to be met before the abortion is performed. The example of the U.S.A appears to have influenced the thinking of the government in South Africa, as the Termination of Pregnancy Bill which legalised abortion in S.A. from the 1st of February 1997 is very similar to that of the U.S.A. It is estimated that since 1973, approximately 40% of all teenage

pregnancies have ended in abortion in the U.S.A. Before the legalisation of abortion in South Africa, it is estimated that up to 200 000 illegal abortions were carried out every year (Die Burger, 1990:6), although other research (Benatar, 1994:469) indicates that the figure was as low as 43 000 in 1989.

Although the law has changed in South Africa, the issue remains a highly contentious and political one. Many pro-life groups exist, and although none are as militant in their protests as their American counterparts, (where doctors who have performed abortions have been murdered and clinics where abortions are performed have been burnt down), their presence is beginning to be felt. South African attitudes to abortion vary. Walker (1993:24) conducted a survey among nurses in Soweto and found that the large majority "unambiguously and unequivocally" rejected abortion on all levels. In contrast to that Nong (1993:25) found that many political groups such as the Black Sash, Inkatha, Azapo, and the ANC were in favour of abortion.

Joseph O'Brien (1996:32) is of the opinion that the abortion debate should be seen as part of the larger issue of bioethics. Bioethics includes issues such as genetic therapy on foetuses, artificial insemination, surrogate motherhood, cloning and in vitro fertilization. O'Brien believes that education systems cannot avoid these politicized issues any longer, and that adolescents need to "...recognize the relationship between ethics/morality and citizenship; to learn how to make informed, public decisions about controversial issues; and to prepare to engage in and encourage public debate on such issues" (1996:32).

Senderowitz (1992:211) raises the issue of adolescents' ability to make decisions about abortion. She states that research has yielded conflicting results. The Interdivisional Committee on Adolescent Abortion of the American Psychological Association published strong views that adolescents are as able to conceptualize and reason about treatment alternatives as adults. They concluded that "developmental differences operated primarily as differing social circumstances between adolescents and adults and not as a result of differences in psychological maturity" (Senderowitz, 1992:211). Senderowitz reasons that while there may not be a difference in psychological ability, there is a large difference in perceptions between adults and adolescents. Adolescent girls perceive their decisions as being more externally determined than older women. They experience pressure from parents and educators and often have to depend on others to carry out the decision for financial reasons. Senderowitz also believes that the ability to relate present actions to future goals changes from early to later adolescence and adulthood.

For the pregnant South African teenager, the question of whether to terminate the pregnancy has been simplified as it is now both legal and relatively available. However the moral and ethical debate continues and abortion remains a highly contentious and political issue.

### 3.3.5 AIDS

Acquired immune deficiency syndrome (AIDS) is caused by a virus that attacks the immune system and eventually causes death. At the end of 1992 there were 322 000 reported cases of HIV-infected persons in South Africa (Kotze, 1993:13). By 1998 this figure had risen to 3 million and it is estimated that two out of every ten employees could be HIV positive by the year 2000 (Paton, 1998:1). The social implications of the disease have also become major political issues. In South Africa and throughout the world, the basic human rights of AIDS sufferers are being compromised. AIDS sufferers are having to fight legal battles for the right to continued employment or schooling, proper health care, and even full medical and life insurance.

The South African Department of Health has drawn up a guide for employers and workers which highlights some of the key legal issues that must be considered when drawing up an AIDS policy for the workplace. The major points of the guide are as follows:

- People with HIV and AIDS may not be discriminated against or dismissed simply because they have the virus or the disease;
- Employees have the right to confidentiality and do not have to inform their employer if they are HIV-positive;
- Employers must work pro-actively in order to prevent the transmission of HIV by accident, and people infected at work may claim compensation (Paton, 1998:1).

Pre-employment and pre-benefit testing is still legal, although it is being challenged at the Constitutional Court.

With regard to schools, Anstey (1997:16) reports that there have been numerous incidents where pupils were either refused enrolment or suspended from school, as a result of either being HIV positive or even just rumoured to be. Although the New South African Constitution guards against all forms of discrimination, the political nature of the issue is being highlighted as schools have historically had a certain amount of autonomy regarding their admission policies. Although the government has placed the AIDS/HIV issue high on their agenda, they have to date still not formulated a policy regarding the admission of HIV positive learners to government schools.

Howe (1990:115,116) reports that there is discrimination against AIDS sufferers and HIV positive persons in housing, employment, health care and schooling in the USA. He also states that AIDS education has become a major political issue in the USA. Although there appears to be general consensus that AIDS education is a basic task of educators, the approach and extent of the education has become a controversial issue. Two basic approaches which purport to be morally neutral have been identified:

- *liberal neutrality* - students are presented with the facts about AIDS and warned to engage only in "safe sex" practices;
- *conservative neutrality* - advocates abstention, based on health considerations (Howe, 1990:116).

In South Africa, the educational approach to sex education in general has been morally based. Basic Christian values of no pre-marital sex are still being taught in government schools. AIDS is mentioned as being one of the dangers of sexual intercourse, but it is not elaborated on.

The Constitutional Court still faces many challenges in terms of human rights. It is unclear whose human rights are being infringed upon in situations such as when health care workers are obliged to work with HIV-positive patients, thereby putting themselves at risk. Social contact in the sporting sphere where physical contact with an HIV-positive player may have dire consequences, is another area where the human rights question is a problem.

The AIDS issue appears to have political implications for the individual in terms of human rights, employment, and schooling. While the government is responsible for the establishment of specific policies and legislation which will carry the approval of both its voter base and human rights activist groups.

### 3.3.6 RIGHTS OF THE PHYSICALLY AND MENTALLY HANDICAPPED

In 1971 the United Nations adopted a Declaration of the Rights of Mentally Retarded Persons (Stratford, 1991:10). This declaration begins with the statement that "the mentally retarded person has to the maximum degrees of feasibility, the same rights as other human beings."

These rights include the following:

- rights to medical care, physical therapy, education, training, rehabilitation, and guidance that will enable them to develop to the maximum potential;
- rights to economic security and to a decent standard of living;
- right to perform productive work;
- right to, wherever possible, live with their own family;
- right to have a qualified guardian; and
- right to protection from exploitation, abuse and degrading treatment.

This was followed by the adoption of the UN Standard Rules for the Equalisation of Opportunities for Disabled Persons in 1993 (Star, 1997d/11). This document provides governments with guidelines on how to redress discrimination against the disabled. Although the sentiments expressed in both documents are noble, just and accepted by everyone, in a world driven by economics, very few mentally or physically handicapped people have equal or reasonable employment. Stratford (1991:11) cites figures from Hong Kong in 1987, a city which he states has a good reputation in terms of employment of the handicapped: out of 374 school leavers, only 51 (13.6%) persons with mild or moderate mental retardation were able to find open employment; 150 received further training or sheltered employment, and 152 remained unemployed (21 could not be traced).

Wall and Dattilo (1995:276) state that individuals with disabilities become empowered in their communities when special education professionals entrust them with the responsibility of informed decision making and active participation during the course of their education. In the United States, the Individuals with Disabilities Education Act of 1990 mandated that each Individualised Education Program (IEP) for students 16 years of age and older include plans for transition from school to work. It is clear then that the emphasis should be on the future independence of the disabled person. Special educators urge society to include individuals with disabilities more fully, concentrating on self-determination as a critical school outcome.

Wall and Dattilo suggest that one way to achieve this is to create option-rich environments. They feel that when this is achieved, human rights are respected, educational outcomes are successful, and participants and professionals can become more self-determined (Wall & Dattilo, 1995:289).

In developed first world countries such as the USA and Canada, a free public education to the completion of secondary school is a fundamental right (McEwan, Wier & McBride, 1992:286). For exceptional children, this basic right has been extended to include appropriate special education programmes and services. McEwan et al. raise the issue of adults in Canada who do not appear to have the same rights - the secondary schools appear to be discriminating in terms of age.

Shulman and Rubinroit (1987:375) discuss the problems and coping mechanisms of handicapped adolescents in terms of separation and individuation. They cite the fact that learning disabled adolescents who due to a long history of personal failures and continuous educational lag, suffer from a low self-esteem and lack of vocational identity. Sensory disabled adolescents become relatively restricted in their movements, while same is true for adolescents with locomotor difficulties. They state that mentally retarded adolescents suffer from weaker ego defences, deficient social skills and poorer judgement. Mildly retarded adolescents become concerned with issues like autonomy, parental restriction, identity and relationships with the opposite sex (Shulman & Rubinroit, 1987:376). The mentally handicapped adolescent also experiences little or no peer support. They conclude that the various handicaps lead to unique developmental processes and difficulties for handicapped adolescents, from the point of view of the child's means of coping, parental attitudes, and society in general.

Doherty and Obani (1986:95) investigated non-handicapped adolescents knowledge of, and attitudes towards handicapped adolescents. They found that cultural differences played a role (they investigated the differences between British and Nigerian children), and that it was only at the senior high school level that the full implications of different handicaps were grasped. They also stated that it would be premature to integrate handicapped children into normal schools until it becomes known exactly how these handicapped children are perceived by young children and adolescents.

In 1994 at the World Congress on Special Needs in Education, the policy of inclusion was adopted as the official international policy for the education of learners with special educational needs (LSEN) (Du Toit, 1997:17). The policy of inclusion is based on the following points:

- every child has a fundamental right to education;
- every child has unique characteristics, interests, abilities and learning needs;
- education systems should be designed to take into account the wide diversity of these characteristics and needs;
- those with special educational needs must have access to ordinary schools which should accommodate them within a system capable of meeting those needs (Salamanca Statement, 1994:9-10).

In South Africa, the term "education for all" was introduced in 1996 and is based very closely on the policy of inclusion. At present the education authorities in South Africa are working out the details concerning the implementation of "education for all".

It appears that the handicapped adolescent's life is a struggle. From the normal difficulties of adolescent development, to the added problems of his handicap, to the struggle for basic human rights. The handicapped adolescent is likely to become aware of his rights in a political sense far sooner than his non-handicapped peers.

### **3.3.7 SUMMARY**

The above paragraphs have attempted to highlight the political nature of the various aspects related to the physical development of the adolescent. On the basis of Maslow's theory it could be said that unless the adolescent's basic needs and even some of his higher-order needs are met, the development of his level of political understanding will be severely hampered. Similarly, problems in puberty such as late or early development, may lead to feelings of inferiority or extreme self-awareness in the adolescent, which in turn may lead to

difficulties in focusing on political or social issues. Teenage pregnancy has become a major political issue with regard to the social and economic costs to the country, as well as in terms of sex education in schools and parental rights and powers. Abortion has become the most debated social issue in Western society and most adolescents whether personally involved or not, are aware of the issue. AIDS education in schools is an area which has personal implications for the adolescent, and is also a political issue. For the handicapped adolescent, the issue of human rights becomes important very early in his development.

### **3.4 COGNITIVE DEVELOPMENT**

As discussed in the section on thinking in chapter 2, there are two basic approaches to cognition and thinking. The first is the Piagetian approach (cf 2.2.8.1) which emphasises the qualitative changes in cognitive development which take place in stages. The second is the information-processing approach (cf 2.2.6) which describes the progressive steps, actions, and operations that take place when the adolescent receives, perceives, remembers, thinks about, and utilizes information (Rice, 1996:141).

In 1985 Robbie Case introduced a new theory of cognitive development that attempts to integrate Piaget's notion of stages with recent empirical findings of information-processing researchers.

#### **3.4.1 INTEGRATIVE THEORY OF INTELLECTUAL DEVELOPMENT**

Case agrees with Piaget's notion that qualitative changes in cognitive structures occur as children proceed through invariant stages of development (Cummings, 1995:133). Case adds the concept of executive processing space or memory capacity to Piaget's theory. He describes it as the maximum number of independent schemes (schemata) a child can activate at any time. Case believes that increased memory capacity, rather than disequilibrium is the mechanism that produces changes in schemes, or cognitive structures, which stimulates development. He feels that although the total amount of memory capacity does not increase as children develop, the amount of available capacity increases as the individual becomes more efficient in processing information. This additional available capacity can then be used for other cognitive activities.

Case differs from Piaget in that he uses constructs from the information-processing framework to explain children's and adolescents' problem-solving capabilities, instead of symbolic logic. He describes executive control structures that represent the following:

- the existing problem state (information that is input to be processed);
- the desired goal state (the solution to the problem or output of actions);
- the strategies to be used to solve the problem (activities that take place in the central processing mechanism).

Case's theory views development as resulting from changes in cognitive structures that occur in a series of stages where the lower-order schemes are consolidated into higher-order schemes as the individual progresses upward through the stages (Cummings, 1995:136). His four stages are as follows:

- ***Sensorimotor Stage (birth to 18 months)*** - Case agrees with Piaget that the term sensorimotor accurately reflects the development of cognitive structures that occurs during this period.
- ***Relational Stage (18 months to 5 years)*** - this is similar to Piaget's preoperational stage in that the cognitive structures which develop during this stage enable the child to deal with spatial, social, linguistic, and numerical relationships.
- ***Dimensional Stage (5 to 11 years)*** - in this stage the child gains the ability to understand multiple dimensional concepts of physical, social, and spatial events (this is similar to Piaget's concrete operations).
- ***Vectorial Stage (11+ years)*** - beyond the age of 11 young adolescents are able to deal with abstract material and are able to explain or predict what will result from the interaction of two or more dimensions. Young adolescents therefore no longer focus on either of the two dimensions separately, but instead they focus on the more abstract dimension of the vector that results from the interaction of the two dimensions. This ability becomes more refined in older adolescents. Case also states

that their social reasoning develops in that they begin to think about interpersonal situations in a more abstract manner than younger children, and their interpersonal skills improve with age so that most older adolescents are quite socially adept (Cummings, 1995:138).

Although Case's theory appears to be very similar in essence to Piaget's, it does appear to describe the differences in children's mental processes as they progress from infancy to late adolescence, a little more accurately.

In terms of the development of political understanding, it appears that it is during the Vectorial stage that young adolescents become capable of abstract thinking, and therefore social and political reasoning. This once again appears to be very similar to Piaget's theory.

### 3.4.2 SOCIAL COGNITION

Social reasoning or cognition is of particular interest when one considers the impact of general cognitive development on the adolescent's political understanding. Studies of social cognition during adolescence fall into three categories (Steinberg, 1993:80):

- ***impression formation*** - examines how individuals form and organize judgements about other people.
- ***role taking abilities*** - examines how adolescents develop the ability to view events from the perspective of others.
- ***conceptions of morality and social convention*** - examines how adolescents form their conceptions of justice, social norms, and guidelines for social interaction.

The study referred to most often in the literature is that of Robert Selman (Adams, Gullotta & Markstrom-Adams, 1994:215). He stated in 1980 that there is a developmental pattern in role taking or social-perspective-taking skills which has several levels:

- *Level 0 (ages 3-6)*- children of this age do not differentiate between the physical and psychological characteristics of other people.
- *Level 1 (ages 5-9)* - children of this age begin to understand and differentiate between intentional and unintentional behaviour.
- *Level 2 (ages 7-12)*- during this stage children begin to take a self-reflective view of themselves, and realize that other people reflect on them too.
- *Level 3 (ages 10-15)*- the ability to take a true third-person perspective develops during this stage where children are able to assess and reflect on the actions, intentions and psychological characteristics of themselves and others.
- *Level 4 (age 12 and older)*- at this stage (which may not be fully present until well into adulthood), actions, thoughts, motives, or feelings of the self and others are recognized to be psychologically determined, but are not necessarily understood by the child himself through reflection. This implies that as a result of the development of abstract thought, the adolescent can now understand social relationships and situations on multiple levels.

Selman's theory indicates that the adolescent's understanding of political issues begins during level 3 where the child is able to reflect on the actions and intentions of others, and develops fully during level 4 when abstract thought becomes fully developed. It seems that Selman believes that political thinking and understanding develops a little earlier than other theorists as level 3 begins at approximately 10 years of age.

### **3.4.3 COGNITION AND THE GROWTH OF POLITICAL UNDERSTANDING**

In terms of the general development of political understanding and its relationship with cognitive development, there appears to be general consensus that in order to understand and participate in the finer aspects of political matters, the person should have reached the formal operations (in Piaget's terms) level of thinking. This implies that they will be able to think at an abstract level and apply their knowledge to different situations. However, Flanagan and

Gallay's (1995:37) review of the literature which highlights the growth of political concepts from the pre-school level to late adolescence, indicates that it is a gradual process of development where only the finer points develop in late adolescence.

Flanagan and Gallay note the following:

- Pre-schoolers are aware of the relative status of various social roles and when playing "house" they all want the more important roles of mother or father, while no-one wants the role of the baby brother or sister. It is also striking how pre-school peer groups routinely manage to avoid adults' instructions such as "It's time to clean up" - this avoidance also seems to be a collective effort, a form of society and group negotiation.
- Third grade children from minority groups are more likely than those from majority groups to feel that the police discriminate against them and their people, and unfortunately this appears to be their earliest concept of civic or political authority figures.
- By the fourth grade children are able to understand that a leader does not deserve allegiance simply by virtue of his or her office.
- The fifth grade child believes that a legitimate authority is one who has earned his people's trust and is open to views other than his own. An appreciation of democratic principles begins to emerge.
- Finally, the gradual transformation that adolescents go through, from being told what to do by powerful others (the family, school, older children), to contesting that power, to finally sharing in the power of decision making, is considered to be the normal order of events in the development of the adolescent.

Niemi and Hepburn (1995:9) believe that political scientists and educators should be wary of studying certain political topics with children under fourteen years of age. They feel that for children in pre- or early adolescence many political concepts are either overly complicated or not in their realm of interest. Adelson and O'Neil's (1966:302) statement regarding the adult-

like capabilities that late adolescents have "...the capacity to reason consequentially, to trace out the long-range implications of various courses of action...a readiness to deduce specific choices from general principles" seems to bear out Niemi and Hepburn's idea that early adolescents may not be ready for complicated political rhetoric. They go a step further in saying that political scientists and educators interested in the development of political thinking, should focus their attention on the period from about the age of fourteen through to the mid-twenties. They are also of the belief that political learning does not stop at eighteen years of age.

These ideas have particular relevance in South Africa where there is a strong lobby for a reduction in the legal voting age to 16. During the run-up to the 1994 elections Nelson Mandela stated that he was of the opinion that the voting age should be reduced to 16. As recently as the 15th of April 1998, the ANC Youth League called for a reduction in the voting age. In chapter 5 the results of the empirical study will be discussed where the target group for the political knowledge and critical thinking tests is 16-year-olds.

#### **3.4.4 SUMMARY**

Case's integrative theory of intellectual development is an attempt to integrate Piaget's theory of cognitive development with the modern cognitive theory of information-processing. Although both Piaget's and Case's theories emphasise the idea of stages of cognitive development, it is important to note that not all adolescents develop at the same rate and as a result adolescents of a similar age may not be at the same cognitive level or stage. Selman's social-perspective-taking theory of social cognition development is of relevance to the development of political understanding in general. Flanagan and Gally's work offers evidence that the development of political understanding is a gradual process beginning in the pre-school phase of life. Niemi and Hepburn seem to feel that educators should not delve too deeply into complicated political matters as the early adolescent is either not interested in the topic or does not have the cognitive capabilities at that point.

"Cognitive development affects relationships, personal attributes, career plans, concern about social, political and personal values, and learning" Gouws & Kruger (1994:54). This sums up the pervasive influence of the cognitive development of the adolescent on all areas of his life.

The following section will concentrate on the affective development of the adolescent, while the development of political understanding is examined in greater detail in paragraph 3.10.

## 3.5 AFFECTIVE DEVELOPMENT

The term affective development is not merely a synonym for emotional development. Affective development includes aspects such as feelings, passions, moods, sentiments, as well as emotions. Although adolescence is not always a period of stress and rebellion, it is definitely a stage characterised by intense emotions such as anxiety, aggression, and depression.

### 3.5.1 ANXIETY

According to Freud (In Adams et al, 1994:51), feelings of anxiety are experienced in three ways. Reality anxiety is the realistic fear of something dangerous in the external world. Neurotic anxiety is the fear that the instincts will gain control and cause the individual to engage in a punishable act. Moral anxiety is a perceived experience of threat from the conscience. Freud's theory was that if the person cannot cope with the anxiety, he will resort to defence mechanisms in order to cope. These defence mechanisms are the way in which the personality deals with painful experiences, conflict, and inadequacy.

Harry Sullivan, a psychoanalyst (Newman & Newman, 1986:80), believed that anxiety results from problems in interpersonal relationships. He stated that anxiety leads to blocked communication, and communication blockage leads to more anxiety. He felt that developmental problems were sometimes caused by the tendency for the adolescent to escape the anxiety of adult maturity by engaging in daydreams and fantasies instead of facing reality. He also felt that periods of high anxiety and infrequent interpersonal exchange could lead to severe mental distress.

A 1993 study in Britain (Rice, 1996:17) identified the prevalent anxieties of adolescent children between 11 and 16 years of age. For both boys and girls, examinations and their own death were at the top of the list. This was followed by anxiety related to political issues such as the possibility of nuclear war in the future and the high levels of unemployment in Britain.

Kassinove and Sukhodolsky (1995:162-164) investigated the levels of optimism/ pessimism and worry in Russian and American adolescents. They found that American students were

more optimistic in general about their future than the Russian students, and that the Russian students had less faith that their leaders would be working to solve their problems as compared to the American students. The Russian students were also more worried about both global and personal issues than were American students.

It appears that major political issues such as nuclear war or global peace are a cause of anxiety in adolescents in countries such as Britain, the United States, and Russia. Unemployment is also another political issue which causes anxiety in adolescents.

### 3.5.2 AGGRESSION

Aggression is often a difficult emotion for adolescents to control. In certain contexts it is a positive emotion, such as in a sporting or competitive environment, while in ordinary interaction with people, uncontrolled aggression can be extremely harmful.

Griffin (In Cummings, 1995:382) states that certain family problems may be indicators of future aggressive behaviour in adolescence:

- parental alcohol/drug abuse;
- child abuse;
- physical violence in the family;
- child neglect;
- disintegration of the family through death or divorce;
- mental illness in the family.

Griffin also feels that early academic problems such as slower rates of learning, below average performance, retention in the first grade as well as other academic problems in the first grade, may also be predictors of aggression in adolescents.

Although there is no direct link between aggression and political participation in adolescents, it would seem that radical political beliefs often lead to aggressive behaviour. Over the past twenty years in South Africa, it has often been the youth who have been involved in protest action. In June 1976, the so-called "Soweto uprising" began as a protest action by high school

pupils against the government's introduction of a new educational language policy. The activities of the "Mandela United Football Club" as exposed during the Truth and Reconciliation Committee hearings, were also evidence of adolescent involvement in aggression and violence under the banner of political participation. The policy of "Youth Preparedness" in the curriculum of white South African schools was also an attempt by the government to train adolescents in potentially aggressive activities such as shooting and marching.

In essence all political participation could be seen as aggressive. A "peaceful" demonstration may not be violent, but by virtue of its existence it is an aggressive action. A group of adolescents protesting against pro-abortion laws is similar to a country fighting a war for their independence, in that standing up for one's beliefs and human rights, may ultimately lead to aggression and possibly violence, if other people's ideas of their rights are in conflict with one's own.

### 3.5.3 DEPRESSION

Feelings of sadness, loneliness, and even despair become common by mid-adolescence. Nearly half of all adolescents report experiencing some of the symptoms that characterize depression - sadness, crying spells, pessimism, and feelings of unworthiness (Cobb, 1992:508). Although that figure is relatively high, only three percent of adolescents would be diagnosed as severely depressed according to standard diagnostic criteria (Steinberg, 1993:445).

The symptoms of depression may become manifest in the following areas (Dacey & Kenney, 1994:365):

- *emotional manifestation* - dejected mood, negative self-attitudes, reduced experience of satisfaction, decreased involvement with people or activities, crying spells, loss of sense of humour;
- *cognitive manifestation* - low self-esteem, negative expectations of the future, self-punitive attitudes, indecisiveness, distorted body image;

- *motivational manifestation* - loss of motivation to perform tasks, escapist and withdrawal wishes, suicidal thoughts, increased dependency;
- *physical manifestation* - appetite loss, sleep disturbance, decreased sexual interest, loss of energy, insomnia.

There are various reasons for the increased incidence of depression during or just after puberty. Biologists feel that hormonal changes during puberty are the main cause, while cognitive theorists maintain that the beginning of hypothetical thought opens up new ways of seeing the world and this may lead to feelings of depression. This implies that there may be a close link between adolescent depression and political awareness, in the sense that depression may develop as a result of the adolescent becoming aware of negative political issues such as the threat of nuclear war. This may also lead to specific avoidance of political issues. Certain schools of psychological thought believe that the large number of demands imposed on the adolescent by society is a major cause of depression. The current belief is that the onset of depression is likely to be the result of interacting environmental conditions and individual predispositions.

Peck and Kaplan (1995:285) state that there is a direct link between negative self-attitudes in adolescents and adults which may include feelings of depression, and political non-participation.

Whatever the causes of depression, it appears that if it does not respond to treatment, the adolescent's entire life and further development may be debilitated. In terms of political awareness and participation, it seems that a depressed adolescent is unlikely to become involved in politics at any level.

### **3.5.4 SUMMARY**

It appears that major political issues such as the threat of nuclear war may lead to anxiety and depression in adolescents. This in turn may lead to non-participation in politics. There also seems to be a link between aggression in the adolescent and political participation, such as in demonstrations and protest actions.

## 3.6 SOCIAL DEVELOPMENT

As the adolescent's intellectual or cognitive processes grow, so does his awareness of relationships and people around him. His relationship with his parents changes and the peer group begins to play a more important role in his life. The section which follows will explore the positive and negative aspects of these changes, and how they affect the adolescent's general development.

### 3.6.1 RELATIONSHIPS WITH PARENTS

An important aspect of the adolescent's relationship with his parents is the fact that he is in the midst of a striving for self-reliance and autonomy. Although this phase is not a sudden development, it does reach its zenith during adolescence. This striving for autonomy mainly involves independence and being responsible for one's actions (Cobb, 1992:190). Adolescents also want greater involvement in decision making and want to be treated like adults. Clearly all these wants and needs can lead to conflict with parents. The extent of the conflict may be related to the various parenting styles. Steinberg (1993:142) describes the following four parenting styles:

- Authoritative parents set standards for child's conduct but base their expectations on the child's developing needs and capabilities. They place a high value on the development of autonomy but assume responsibility for their child's behaviour. These parents also discuss their methods of discipline with their children. In terms of political participation, authoritative parents would be likely to discuss political issues with their children, and to give them guidance, but ultimately decisions would be left to the children.
- Authoritarian parents emphasise obedience and conformity and discourage independent behaviour. There is also very little discussion of rules or reasons for rules or discipline. It would also be demanded of the child that he follow his father's example in terms of politics.

- Indulgent parents place few demands on the child's behaviour, and the child is given the freedom to act as he wishes. They believe that control infringes on the child's freedom and may interfere with the normal development. These parents are unlikely to be aware of their children's political leanings or participation, and if they were they would not object to, or interfere with their decisions.
- Indifferent parents structure the home life around their own needs and as a result the children are often left to their own devices. There is very little interaction with the child and they often know little about the child's ideas or activities. In terms of politics, these parents would probably be unaware of their children's political leanings.

Steinberg (1993:143) states that adolescents raised in authoritative households are more psychosocially competent than adolescents raised in authoritarian, indulgent or indifferent homes. They are more responsible, creative, socially skilled, and even more successful in the scholastic environment. In terms of political issues, these adolescents are likely to be more politically aware and involved than other adolescents. Adolescents raised in indulgent households are often less mature, more irresponsible and less able to assume positions of leadership. Adolescents raised in indifferent homes are more likely to become involved in delinquent behaviour, while adolescents from authoritarian homes are more dependent, passive and less socially adept.

### **3.6.2 RELATIONSHIPS WITH SIBLINGS**

The size of the family also appears to have an effect on adolescent development. Most adolescents form close bonds with siblings despite the conflicts which inevitably arise (Cicerelli, 1980:113). Older siblings are often models for younger ones, and their achievements influence younger siblings' aspirations and interests (Cobb, 1992:211). Older siblings are also likely to serve as caretakers for younger children and older sisters are usually more nurturing when interacting with younger siblings and are not as aggressive as older brothers (Gouws & Kruger, 1994:116).

In summary, it appears that siblings provide friendship and company for each other during adolescence and are often able to provide better advice to a younger sibling than a parent, probably as a result of being closer in age and more in touch with current problems. This would also imply that the younger sibling may be influenced by the older sibling in terms of political participation and leanings.

### 3.6.3 RELATIONSHIPS WITH PEER GROUP

"Understanding how adolescent peer groups form and what takes place within their boundaries is critical to understanding adolescent development in contemporary society" (Steinberg, 1993:154). The rise of adolescent peer groups and their importance in the development of adolescents has grown considerably in the last century, due to factors such as:

- compulsory secondary schooling;
- changes in the workplace where children and adolescents are no longer legally allowed to be part of the work force;
- growth of the teenage population throughout the world (Steinberg, 1993:186).

There appears to be four major reasons for the increase in the significance of peer groups in adolescent development. Firstly, there is an increase in the amount of time adolescents spend with peers as opposed to with adults. School, sport activities, hobbies and general leisure time all contribute to the situation where only 15% of their time is spent with adults (Brown, 1990:180). Secondly, adolescent peer groups function with less adult supervision than during childhood. Thirdly, adolescents increasingly seek contact with the opposite sex. Finally, the emergence of cliques, crowds and gangs in adolescence increases the influence of their peers (Steinberg, 1993:166).

Cliques are small groups of between two and approximately twelve individuals, although the average would be about five or six, normally of the same age and sex (Dunphy, 1990:177). Other membership factors could include common activities, similar interests, and possibly residential proximity. Members normally feel that they know each other well and appreciate each other more than people outside the clique do (Brown, 1990:189).

Crowds are larger than cliques, normally between 15 and 30 members and consist of members of both sexes. The main function of the crowd is to offer a framework for the forming of heterosexual relationships and to provide a situation in which heterosexual behaviour and skills can be learned and tested (Seifert & Hoffnung, 1994:562). The crowd's activities usually include parties and larger gatherings. Crowds are often a conglomeration of cliques and as a result membership of a clique is often a prerequisite for membership of the crowd. Membership is often based on reputation and stereotype, rather than on actual friendship or social interaction (Steinberg, 1993:167). The peer group which is often manifested in a crowd, also plays a large role in the moral development of the adolescent. Adolescents often conform to the standards and norms of the crowd in order to be accepted and end up assuming these moral values themselves. This is particularly so in the case where the parental influence and involvement is limited.

Gangs usually consist of members of the same sex, and although similar to cliques, they usually have more members and are better organised and structured. They are often formed on a geographical basis and have a clearly demarcated territory. In a gang the roles of the leader and individual members are well-defined and the gang usually has a name. Gangs are frequently characterised by illegal, antisocial or possibly criminal activities. Dunphy (1990:179), states that gangs are typically in revolt against family and other formal structures like school, church, the law or the political dispensation.

As a result of their strong need to belong to one of the above groups, adolescents are often guided by the beliefs and political ideology of the group as a whole, and may become automatically affiliated to a specific political grouping.

Quicke (1991:5) investigated the link between social class, education and political attitudes and beliefs. He found that for working class adolescents, their future social class based on their educational attainments, exerted more influence on their political views than their class of origin. These adolescents had a strong drive to improve their social standing, and as a result they wished to align themselves with the political views of the middle class, rather than the ideas and pre-occupations of the working class. For pupils from middle class backgrounds, educational success reinforced their generally conservative political orientation. He also found that students who perceived themselves as having improved their social status were careful not to allow themselves to remain close friends with people from their original backgrounds (Quicke, 1991:13).

### **3.6.4 SUMMARY**

In conclusion, it seems parents play an important role in the development of political thinking in adolescents. Their influence as a result of their parenting style, may lead to a situation where the adolescent blindly follows the political thinking of his parents, or, alternatively he may rebel and affiliate with a political grouping in direct contrast with his parents. The influence of an older sibling on an adolescent should also be taken into account when considering the development of political thinking. Finally, it seems that the peer group plays an extremely important part in the adolescent's social development. In terms of the development of political thinking, the need to belong to a group may result in the adolescent becoming affiliated to a specific political grouping purely as a result of his membership of the group.

## **3.7 MORAL DEVELOPMENT**

Morality refers to an understanding of right and wrong. Young children are capable of acting morally based on what they have been taught. It is only during adolescence that they become capable of thinking objectively and critically about moral issues. This link between cognitive development and moral development is explored in the section which follows. Factors influencing moral development will also be discussed.

### **3.7.1 THEORIES OF MORAL DEVELOPMENT**

Piaget was one of the first researchers to recognize the link between the development of moral judgement and the development of intellectual ability. He defined morality as understanding rules and following them through one's own choice. He studied morality by systematically observing children play the game of marbles. He suggested that we could look at the development of moral judgement in two ways: the way children practise the rules, and the degree of their awareness of the rules (Dacey & Kenny, 1994:131). He made the distinction because children are often able to follow rules without being able to understand the reasoning behind them. Piaget's theory consists of two stages of moral development: a

morality of constraint or obedience (six to nine years of age), and a morality of co-operation or reciprocity (nine to twelve years of age). Between these stages rules become internalized as the child moves from heteronomy to autonomy (Rice, 1996:328). Piaget's theory and research did not include a detailed analysis of moral development during adolescence. Lawrence Kohlberg who continued Piaget's work, focused on the development of morality from childhood into adulthood.

Kohlberg saw adolescence as a critical time in the development of moral reasoning because of the cognitive changes taking place. He studied moral reasoning by asking adolescents to solve hypothetical moral dilemmas, of which the Heinz dilemma is the most famous. Kohlberg classified adolescents' responses to the dilemmas on the basis of the reasons they gave for their solutions. He suggested that there are three basic levels of moral reasoning each consisting of two specific stages (Kohlberg, 1984:174-177):

- ***Preconventional Morality (4-10 years)***- the emphasis is on external control as others' standards are adopted in order to obtain rewards or avoid punishment. Stage 1 is where obedience is maintained as a means of avoiding punishment. At Stage 2 good behaviour is maintained in order to receive a reward.
- ***Conventional morality (10-13 years)*** - children want to please, they observe the standards maintained by others because they want to be seen in a good light by other people. At Stage 3 the child is eager for the approval of others - the "good boy" morality. At Stage 4 the child has rigid ideas about rules and therefore is dutiful and respects social order.
- ***Postconventional morality (13 years to adulthood, or never)***- Control over behaviour becomes internal and the level as a whole is characterised by the attainment of genuine morality. The Stage 5 person is law-abiding and has a sense of contractual obligation to work and family. His behaviour is calculated to promote the common good. The person at Stage six will obey social rules, except where they can be shown to contradict universal justice. The principles of pacifism and conscientious objection fall into this category.

Although Kohlberg's stages of moral development refer to development from approximately four years of age to adulthood, evidence of all the various stages can be seen in the moral and political behaviour of adults, and of adolescents in the school and home environment:

- **Stage 1** - adolescents will obey their parents and the rules of their environment such as the school, and adults will obey the laws of a country, even if they feel that they are unjust, purely to avoid punishment.
- **Stage 2** - adolescents will maintain good behaviour in order to receive a reward from their parents, while adults will support a particular political system in order to receive rewards such as job opportunities or other privileges.
- **Stage 3** - adolescents and adults may go along with the existing dispensation as they may gain the approval of most of their immediate peer group by doing so, even though they may have serious doubts about the system.
- **Stage 4** - adolescents will follow the rules of their school and their parents, while adults will follow the laws of the country or political system, even if they disagree with them.
- **Stage 5** - adolescents and adults at this stage will follow the rules and laws, notwithstanding their serious doubts as to their justness, out of a sense of obligation to their work or families.
- **Stage 6** - the adolescent or adult at this stage will obey the rules of the system until they reach a point where they feel that the system or rules contradict universal justice, in other words their own norms and convictions will dictate their behaviour.

### 3.7.2 FACTORS AFFECTING MORAL DEVELOPMENT

Many other factors have an influence on moral development. The link with cognitive development was established by Piaget and confirmed by Kohlberg. Without formal-operational thought, the adolescent will be unable to move from the concrete stage of rules and regulations to the abstract ideas of general standards, values and morals.

The adolescent's affective development will also influence his moral development. The emergence of empathy in the adolescent enables him to understand the motivations, behaviour and intentions of others better. This knowledge also leads to a better understanding of himself, and to the establishment of a personal moral system. Feelings of guilt may start to develop when the adolescent begins to assess his behaviour in terms of his newly established norms and finds that there is a conflict between his behaviour and his norms.

Various researchers have noted the role of parents in the moral development of adolescents:

- The social-group theorists state that people are essentially conformists and therefore in order to gain social approval, adolescents will accept the normative values their parents impose on them. This has direct implications for the adolescent's political involvement and views, in that if he readily accepts the normative values of his parents, then he is likely to also follow their political views in order to gain social approval.
- The psychoanalysts feel that adolescents do everything in their power to meet their parents expectations of right and wrong in order to avoid conflict. In terms of political views, these adolescents will also be more likely to echo their parents views in order to avoid conflict.
- The social learning theorists state that adolescents acquire social values through modelling and social discipline. In this case the example of the parents would not be as important to the adolescent's developing political views and involvement.
- The cognitive-structural model (Piaget and Kohlberg) emphasises inherent characteristics. They feel that as the adolescent's intellectual abilities increase, so does his ability to determine whether certain behaviour is morally acceptable or not. As their moral values are formed continuously from birth, the parents' influence is very important. The views and actions of all the important figures around him, the norms and values of his immediate community, and the norms and values of the leaders in his country, all play a role in the moral development of the child, but the example, practices, and guidance of his parents play a much larger role. In the same way the child's political development will be moulded and guided by his parents.

Seifert and Hoffnung (1994:538) state that it is not surprising that political thinking develops in similar ways to moral development, as politics involves many moral issues and vice versa.

### 3.8 RELIGIOUS DEVELOPMENT

The term religion refers to "human recognition of a superhuman controlling power, where such a God is entitled to obedience or worship" (Concise Oxford dictionary) or as Van den Aardweg and Van den Aardweg put it, religion refers to a spiritual bond or relationship that exists between people and a divine power (1993:202).

From an early age all parents educate (consciously or not) their children according to their own notions of right and wrong, good and evil, and according to their own religious beliefs. Younger children are very accepting and highly credulous with regard to religion (Hurlock, 1981:134). However, when adolescents develop the capacity for abstract thought, they are able to understand spiritual matters, and may also begin to question their parents' religious convictions.

Hurlock (1981:240) describes three stages of religious development in adolescents:

- ***Religious awakening*** - their interest in religion increases when they prepare themselves to become members of their parents' church. This interest may be so intense that it either prompts them to choose a career which allows them to pursue their religious interests or it drives them into scepticism about their religious convictions.
- ***Religious doubt*** - critical analysis of religious convictions often results in adolescents becoming sceptical about religious practices such as attending church and prayer, and as a result many adolescents may begin to lose interest and drift away from the church.
- ***Religious reconstruction*** - at some stage adolescents discover that they need religious commitment in their lives after all; sometimes this discovery may lead them to involvement with alternative religions or movements.

Wilson and Sherkat (1994:148) conducted a longitudinal study and found that many adolescents reject their parents' religion, only to return to it at a later stage in their lives. They normally return when they have families of their own and a significant number return to their original denomination or religion. They also stated that there seems little question that the family is a commitment mechanism for the church (Wilson & Sherkat, 1994:158).

Francis (1983:90-101) conducted research into the political and social views of church-going adolescents in Britain. He found that only 24% of the adolescents who attend church stated that politics was important to them. He also found that only 6% of the older (16-20 years of age) adolescent boys and 2% of the older adolescent girls who attend church took an active part in politics. Francis was of the belief that this apparent apathy was a result of ignorance of political matters, and cynicism with the regard to the value of party politics, with many adolescents feeling that it made no difference which political party was in power.

With regard to the world's future in general, Francis found that 65% of the adolescents who attended church were concerned about the risk of pollution to the environment, and 70% were concerned about the risk of nuclear war (1983:98). The problem of homelessness was a concern for 82% of the adolescent girls, and 70% of the boys, while 83% of the older adolescents were concerned about unemployment (1983:99). In summary, it appears that church-going adolescents of Francis' survey showed a lot of concern with regard to political issues, but very little interest in formal political parties.

The link between religion and politics on a national level is a strong one. Most countries throughout the world have a dominant religion, although most of them are also tolerant of other religions. The exceptions are the countries where the rulers are religious fundamentalists and are very often completely intolerant of other religions or ethnic groups. The violent conflict between the Hutus and Tutsis in Rwanda and Burundi are examples of ethnic intolerance. The struggle between Catholics and Protestants in Northern Ireland, and between the Jews and Palestinians in Israel are examples of political conflict based on religious ideologies. The Bosnian/Serbian conflict was another example of religious and ethnic conflict. For the adolescent, whose development often includes phases of extremism, the fanaticism of certain religious groupings is dangerous. In order to avoid this type of religious and ethnic fanaticism in South Africa, Pityana (1994:71) offers a solution. He states that we must develop a culture in our society of free and open debate about religion and its claims.

He is of the opinion that this is necessary for understanding and for building a culture of tolerance. He goes a step further in saying that we should declare South Africa a secular state, as this is the best way for a truly egalitarian state to achieve religious tolerance.

### **3.9 PERSONALITY DEVELOPMENT**

Salvatore Maddi defines personality as "... a stable set of tendencies and characteristics that determine those commonalities and differences in people's psychological behaviour (thoughts, feelings, and actions) that have continuity in time and that may not be easily understood as the sole result of the social and biological pressures of the moment" (1996:8). The comprehensiveness of the above definition is indicative of the complexity of personality and as a result there are various diverse definitions and theories of personality development. The following section will examine three of the most influential theories regarding the personality development of the adolescent.

In order to conduct a comparative analysis of the various theories of personality development, Maddi (1996:18) classified the individual theories into models. His three models are: the conflict, fulfilment, and consistency models.

#### **3.9.1 THE CONFLICT MODEL**

The conflict model assumes that each person is inevitably caught in the clash between two opposite forces which are unchangeable. The best lifestyle that can be accomplished in terms of the conflict model, is compromise. The ideal lifestyle is a dynamic balance of the two opposing forces, with both receiving equal expression.

The major theorists in the conflict model are Sigmund Freud, whose theory was discussed in section 3.2.2, Henry Murray, and Erik Erikson whose theory will be discussed here as an example of this model.

Although parts of Erikson's theory are very similar to Freud's, he places more emphasis on the social influences and less on the biological or genetic. Erikson also focuses on the development of the healthy personality, rather than on uncovering underlying causes of dysfunctional behaviours.

His position is that human development is made up of a series of stages which are determined by the maturation of certain abilities and interests, and by the demands of society. Erikson delineates eight stages of development, each characterised by a crisis, where the individual has to orient himself between two opposite poles and resolve the crisis. Successful resolution of the conflict or crisis results in a sense of accomplishment and confidence to resolve the next crisis. The first four stages are closely related to the Freudian oral, anal, phallic, and latency periods, although Erikson's emphasis is on the psychosocial. The phases can be summarised as follows (Maddi, 1996:60; Cummings, 1995:51; Dacey & Kenny, 1994:57; Hjelle & Ziegler, 1981:121-131), with their relevance to the adolescent and politics highlighted:

- ***Phase 1: Basic trust versus mistrust*** - this phase covers the first year and a half of the child's life. If the child receives food, love and attention, he will develop trust in himself and other human beings. The psychosocial strength gained from the successful resolution of this conflict is termed "hope" by Erikson. This "hope" also leads to the individual's belief in the meaning and trustworthiness of a common cultural world and faith in some form of institutionalised religion. Erikson also believed that when an individual loses faith in religion, he may commit his sense of trust and "hope" to scientific or artistic endeavours, or possibly social action or political programmes. Another aspect of this phase is that if the conflict is not successfully resolved, mistrust may develop, which may result in temporal confusion during adolescence and an inability to set long-term goals. Such an adolescent would be unlikely to be involved in politics as he would not trust the political system and would be unable to focus on the proposed long-term goals of the political process.
- ***Phase 2: Autonomy versus shame and doubt*** - this phase covers the period one and a half to three years of age. Normal anal muscular development leads to the situation where the child begins to experiment with retention and excretion. If he is able to control the bowel movements at will, then a sense of autonomy develops. If the child is unsuccessful, he may become shy and begin to doubt his abilities. This also

happens when the child is not given sufficient opportunities for experimentation and independent decision-making. Failure to resolve the basic conflict of this phase, may result in an adolescent who is afraid to participate in activities or make independent decisions. Such an adolescent would be unlikely to participate in any political structures or movements, and if he did he would follow the example of his parents or peers.

- ***Phase 3: Initiative versus guilt*** - this phase covers the period between three years of age to five years of age. Phase 3 is characterised by the child's increasing ability to be self-reliant. The child also begins to understand rules, with the accompanying guilt when the rules are not adhered to. Successful resolution of the crisis leads to role experimentation during adolescence and open-mindedness as an adult. This has implications for an individual's political leanings, as a more open-minded individual would be more likely to affiliate himself with a liberal political party.
- ***Phase 4: Industry versus inferiority*** - this phase corresponds to the primary school years - five to twelve years of age. It is during this time that the child learns to read and write and therefore develop a sense of competence. If the child is unsuccessful he may experience a sense of inferiority, which could last throughout his life. Alternatively, the successful development of the strength of competency underlies the basis for participation in the social-economic-political order, and the acceptance of the accompanying responsibilities.
- ***Phase 5: Identity versus role confusion*** - this phase corresponds with the period of adolescence - twelve to eighteen years of age. The major task of the adolescent is to achieve a sense of identity. This normally occurs when integration between earlier identifications, abilities, and future plans, and the opportunities offered by society, is achieved. Identity diffusion may arise when there are insufficient opportunities to experience social roles in order to gain self-knowledge. Erikson believes that it is as a result of the adolescent's search for personal identity that he becomes drawn to activities that challenge the established ways of a particular culture. These activities often take the form of political and social protest. Successful resolution of this crisis leads to eventual loyalty to the norms and ideologies of a particular society.

- ***Phase 6: Intimacy versus isolation*** - this phase occurs in early adulthood. A person who has not resolved the previous crisis will find it difficult to share his identity with another person and will therefore not be able to enter into intimate relationships. Such a person will tend to withdraw when a relationship becomes serious, and eventually social isolation may result. For Erikson, the successful resolution of this crisis also leads to the development of ethics where the individual recognizes the value of committing himself to social and political obligations.
- ***Phase 7: Generativity versus stagnation*** - this phase extends from the age of about 25 to 65 years. Generativity means the ability to be useful to ourselves and society. The aim in this phase of life is to generate something useful to others. Part of this generativity is to nurture and educate the next generation. If the person is not involved in the activities, he may stagnate, become bored and unable to contribute to society's welfare. A person who lacks generativity ceases to function as a productive member of society and as a result would be unlikely to be involved in politics, as political issues generally involve the welfare of others as well as the self.
- ***Phase 8: Integrity versus disgust and despair*** - the last phase of life according to Erikson begins at approximately 65 years of age. It is at this point that a person begins to look back on his life, and if he feels that he has failed in the sense that he has made the wrong decisions or possibly no decisions at all, he will feel despair and possibly disgust for himself. If he feels that his life has been well spent in that the previous seven crises have been successfully resolved, he will achieve a sense of personal integrity.

Erikson states that it is necessary to have experienced each crisis before proceeding to the next, and that inadequate resolution of the crisis at any stage will hinder development at the stages which follow (Dacey & Kenny, 1994:55). It should be noted that no one ever completes the stages perfectly, but the closer one comes to the ideal, the more progress will be made in life. In terms of the political implications of the various stages, it appears that the outcomes of the crises may play major roles in the political development and involvement of the adolescent and adult.

### 3.9.2 THE FULFILMENT MODEL

This model assumes, in contrast to the conflict model, that there is only one force and that it is located within the individual. Life is seen as working towards fuller expression of this force. In essence this model implies that ideally the individual will become what he can, and was meant to be in life.

The major theorist in this model is Abraham Maslow. Maslow's theory of self-actualization divides human needs into two categories - physiological or basic needs, and psychological or higher-order needs. He felt that the basic needs must be satisfied before any attempt at satisfying the higher-order needs such as self-actualization or the aesthetic needs can be made. Maslow's hierarchy of needs can be represented as follows (in ascending order):

- **Physiological needs** - food, water, warmth, air, sex;
- **Safety needs** - must feel free from threat to one's life, secure home;
- **Social needs** - love, acceptance and companionship;
- **Need for appreciation or esteem**;
- **Self-actualization needs** - the need to reach one's ultimate goals in life;
- **Aesthetic needs** - the need to make an important contribution to mankind.

Davies (1991:396) in relating the physical needs of Maslow's theory to political development, states that people who are chronically ill-fed, ill-clothed, ill-housed or physically ill tend not to concern themselves with politics. He also states that poor people vote less regularly than those who are well off. This may be as a result of the fact that people from a lower socio-economic level are likely to be at a lower intellectual level and possibly still at a concrete level of thinking. As a result general political issues which tend to be at an abstract level are beyond their level of thinking.

It would appear that unless the adolescent's basic needs are met, and even some of the higher-order needs such as the social needs and the need for esteem, the development of his political understanding will be severely hampered.

Finally, if we accept that self-actualization usually includes involvement in the social and political order, then it would appear that an individual would be unlikely to be able to reach his true potential in a political system which did not provide opportunities for full participation.

### 3.9.3 THE CONSISTENCY MODEL

This model does not place emphasis on forces within the person, rather the emphasis is on the formative influence of feedback from the external world on the person (Maddi, 1996:22). In this model the individual is seen to approach the world around him with certain inborn or learned expectations. If the feedback the individual receives from the world is inconsistent with his expectations, emotional discomfort is created as well as pressure to alleviate the problem. Life is then seen as an extended attempt to maintain consistency. George Kelly, one of the major theorists in this model, and his personal constructs theory will be discussed as an example of the consistency model.

Kelly saw the essence of personality as being the person's continual attempt to predict and control the events of experience (Maddi, 1996:175). It is this element of the individual's personal control of his life and experiences which permeates Kelly's theory. Kelly's underlying philosophy of constructive alternativism asserts that all current interpretations of the universe are subject to revision (Hjelle & Ziegler, 1981:324). This implies that nothing is ever unalterably right, everything depends on the individual's interpretation or perspective.

Kelly did not specifically describe the development of personality. He felt that development consists of the formation of personal constructs and construct systems. Kelly defined these constructs as the individual's cognitive representations of events in his environment. Once the individual constructs an event, he assumes that the construct will accurately predict a future event. Kelly also stated that the cognitive prediction of an event is not based on a single construct, but rather on a system of constructs which is continually refined by a process made possible by the following general properties of constructs:

- ***personal constructs are bipolar and dichotomous in nature*** - the individual tends to categorise people and events into two extreme classes or poles;

- *constructs are unique* - two persons may apply completely different constructs to the same event;
- *constructs link up in a hierarchical order* - the individual's choice of a particular construct influences his subsequent choice of appropriate constructs.

Kelly's belief was that personal constructs are established in the individual through continued exposure to and interaction with his changing environment. All new experiences lead to new constructs or the modification or rejection of existing constructs.

In terms of the development of social and political understanding, Kelly's theory implies that the adolescent's personal political constructs are established through his interaction with his environment, and only change when the adolescent is exposed to new experiences. In essence it seems that although the adolescent's views on social and political issues are uniquely constructed, they are very much the result of his environment and personal history. Therefore the views of the important people in his environment, such as parents, would have a great influence on the adolescent's own views.

In summary, Kelly's definition of personality is that it is the individual's unique construct system which he uses to interpret experience and predict future events. The idea that the adolescent has the potential to predict and control his own experiences is important in terms of his development in general, and the development of his political understanding and involvement. Kelly's emphasis on the future rather than the past is also important for the adolescent, as it implies that even if the adolescent has experienced problems in his development up to that point, he has the potential to change and look forward to a brighter future.

### 3.9.4 SUMMARY

Although the various models and theories concerning the development of the adolescent's personality are relatively diverse, they all appear to have merit. In terms of this particular study, it is of importance to be aware of the various possibilities regarding aspects of the adolescent's personality development, as it is the personality that plays an important role in the development of political understanding and political participation.

### 3.10 THE DEVELOPMENT OF POLITICAL UNDERSTANDING

In most countries the legal age for full voting rights is 18. As a result the political leaders of those countries are very interested in the answers to questions such as: How much do adolescents understand about government? How did this understanding develop? Are they predisposed to political participation? What role do parents' political values play in the development of political understanding in adolescents? Are the political educational programmes effective? Most of these questions are not new, philosophers and educationalists have been reflecting on them for centuries, but the recent democratisation of many states, including South Africa, has turned these questions into pressing issues. This section considers the development of political understanding in general, related issues such as political attitudes and involvement, and finally the factors affecting political development.

Most of the literature and research on the development of political understanding distinguishes between two theoretical frameworks - cognitive development and social cognition.

#### 3.10.1 COGNITIVE DEVELOPMENT

In this model the emphasis is on the cognitive development of the individual which affects the rate of development of political understanding. This model has very close links with Piaget's cognitive developmental theory, and Kohlberg's theory of moral development, which in turn was based on Piaget's theory. Haste and Torney-Purta (1992:1) state that in the cognitive developmental framework, people are seen as active agents in the construction of their own meaning systems (cf. Kelly's theory, paragraph 3.9.3), and the cognitive structures or schemata that they bring to a situation are of vital importance.

Torney-Purta (1992:13) proposes that a framework for understanding the content and structure of an adolescent's cognitive representations of politics should meet the following criteria: Firstly, it should be appropriate to political situations that are not clear-cut; secondly, it should take account of the role of discourse and dialogue about social representations; and thirdly, it should integrate attitudes with cognition. She also states that although the framework should provide an account of the individual's development of political understanding over time,

there need not be specific stages, rather it could make distinctions about political maturity along a continuum - from novice to expert. This continuum would cover the entire life span of the individual, where adolescents would be in the pre-novice and novice groups. Torney-Purta's model proposes the following levels (1992:16):

- *pre-novices*- they lack knowledge of the most basic political structures and beliefs;
- *novices* - knowledge-rich schemata of politics are present, although poor differentiation of the schemata hampers the organisation and retrieval of the information;
- *post-novices* - the schemata of politics are partially differentiated and therefore the early stages of the application of political knowledge are present;
- *pre-experts* - they have a wide range of representations of political actors and actions, and are able to grasp the complexities of political thought and the connections between the various role-players;
- *true-experts*- they have complex cognitive and attitudinal schemata, and they have well-developed strategies for defining and solving political problems.

Although the cognitive developmental approach to the development of political understanding has been criticized for not taking social influences into account, Jack Quarter's (1984:569) research with Israeli kibbutz youth ranging from seven to twenty years of age seemed to support the idea that political reasoning moves from the concrete to the abstract, from the specific to general, and from the absolute to the pragmatic. These changes also seemed to be related to age. Quarter does concede that the environment and conditions on the kibbutz are unique and that this may have had an influence on the results.

Moore, Lare and Wagner (1985:221) reported that their longitudinal research with children from the age of five to ten suggested that growth in political awareness occurs in discrete stages, characterised by qualitatively different ways of perceiving political phenomena. They concluded that both the cognitive developmental and the social cognition models are useful, and that they are complementary in explaining growth in political understanding.

### 3.10.2 SOCIAL COGNITION

This model of the development of political understanding emphasises the role of the social forces around the adolescent. Haste and Torney-Purta (1992:1) state that "We can understand individual cognition only by seeing how it develops in interaction with others, facilitated or limited by the constructions of reality available to the growing person in society."

Jankowski (1992:79) states that parents, schools, peers, and the media have a great impact on a child's development of political understanding. His research focused on the fact that ethnic identity plays a role in political consciousness in different social orders.

Dougherty, Eisenhart and Webley (1992:810) also emphasise the role of social context in the development of political ideas, attitudes, and values.

### 3.10.3 KNOWLEDGE OF POLITICAL ISSUES

In 1980 Judith Gallatin reported that the general perception that adolescents were ignorant when it came to knowledge of politics, was possibly not true (In Adelson, 1980:349). She stated that there was evidence that although adolescents were fairly hazy about details, a substantial proportion appeared to have acquired a fair comprehension of the political process.

Similarly, Cochrane and Billig (1982:292) reported that although 16-year-old British adolescents thought that politics was a "dirty business", and that "politicians don't care what the ordinary people think," and that "real decisions are not made by government, but by the powerful forces which control it," their comments implied a fairly good knowledge of the basics of politics.

In South Africa various studies on political literacy have indicated that the youth are not well informed about politics (Trümpelman, 1986:193; Kotze, 1990: 143). Many of these studies were conducted before 1991 and as a result were not inclusive of all the youth of the country, and much of the perceived current political awareness came with the unbanning of the ANC and the release of Nelson Mandela. The latest research undertaken, the SAY programme

(Van Zyl Slabbert, et al. 1994:145) suggests that black and white youth have different levels of political literacy, and that there is still confusion across the board about basic concepts such as democracy.

### 3.10.4 POLITICAL ATTITUDES

Gallatin (In Adelson, 1980:354) stated that the adolescent's knowledge of politics bears a close relationship to their attitudes and beliefs about politics. Similarly, Miller (1992:54) states that "The development of the ability to think through political issues is a precursor to political involvement." A number of researchers have concentrated on different factors related to adolescents' political attitudes.

Meeus (1988:426) states that the level of education of the adolescent correlated with certain political views. He states that adolescents with high-level education generally hold more liberal, progressive views than adolescents with low-level education.

Furnham and Gunter (1987:91) stated that studies on sex differences in political beliefs in adolescents revealed that males appear to be more interested and involved in politics than females. They also stated that when females are interested in politics it tends to be local rather than national politics.

Cohen, Adoni and Drori (1983:203) found that age and the degree of remoteness of social conflicts from one's life experiences accounted for the main differences in adolescents' different perceptions of social conflicts. Miller (1992:54) agreed with the above in that she found that how one thinks about political issues is influenced either by a perception that a particular issue has specific consequences for one's personal well-being, or by a socialized view of one's responsibility to the needs and concerns of others.

Avery (1992:40) feels that political problems and issues provide adolescents with opportunities to explore and test evolving personal belief systems. With regard to political tolerance, he makes the following points (1992:41):

- The more negative adolescents' perceptions of a group, the less likely they are to extend rights to the group.
- Young people who have been involved in formal political or semi-political experiences are likely to be more tolerant than those without this kind of experience.
- Political tolerance has been found to be positively associated with one's level of moral reasoning.
- Older adolescents tend to be more tolerant than younger adolescents.

Avery emphasises the importance of political tolerance in stating that "tolerance for diversity of belief is considered fundamental to the sustenance of a democratic society" (1992:39).

In the South African context, Kotze, Mouton, Greyling, Hackmann and Gouws (1994:332), found high levels of intolerance from all sectors (White, African, Coloured and Indian) of the sample with regard to three South African political organisations - the ANC, the IFP, and the AWB.

### 3.10.5 INVOLVEMENT IN POLITICS

Otto (1990:362) emphasises the importance of political participation when she states: "If citizens do not vote, they can have no say in the kind of leaders that are elected. If they do not monitor officials' performance, they have no legitimate complaint about graft, fraud and sleaze, and incompetence in the government."

Paulsen (1991:96) states that social class and educational factors are predictive of participation in non-institutionalised politics such as protest demonstrations and community problem solving. She states that the adolescent from a middle-class socio-economic background, who performs well academically, and is involved in school activities, will be more likely to be involved in political matters (1991:99).

Guyton (1988:42) states that critical thinking abilities promote the development of a democratic attitude, and a democratic attitude increases the likelihood of political participation.

The youth from the different racial communities in South Africa have experienced different levels of political involvement over the past forty years. Young black South Africans have played a vital role in the struggle for democracy in South Africa (Van Zyl Slabbert et al, 1994:146). In fact they became the most active participants in politics, through informal and formal means. The SAY survey showed that the vast majority (89%) of young South Africans (15 to 30 years of age) were not active members of political parties (Van Zyl Slabbert et al, 1994:147). Kotze et al, (1994:333) also found that the black youth in their survey tended to be far more involved in political activities - being members of organisations and debating political issues, than the white youth. Van Zyl Slabbert et al, (1994:148) also note the fact that political involvement is related to residential area, with the urban youth being far more politically involved than the rural youth. The relationship between residential area and political involvement is one of the factors which will be considered in the next section which focuses on the factors affecting the development of political understanding, attitudes and involvement.

### **3.10.6 FACTORS AFFECTING THE DEVELOPMENT OF POLITICAL UNDERSTANDING, ATTITUDES AND INVOLVEMENT**

In 1980 Gallatin (In Adelson, 1980:356) listed parents, the school, the media and the peer group as playing the largest roles in influencing political socialisation. Although most of the research she based her conclusions on is dated, the role-players she listed remain important when discussing the influences on political development.

Van Hoorn and LeVeck (1992:95) conducted research into the effect that the social environment may have on young adults' knowledge and understanding of political situations. They concluded that the individual's microsystems (immediate environment) orient him in particular ways to issues in the macrosystem (larger global issues).

Jennings and Niemi (1974:191) found that although there was a slight positive correlation between the high school civics curriculum (learning about political issues) and improved levels of political understanding and interest, the overall positive effect was of little significance.

Roker (1996:88) found that there was a significant difference between the political and social views of adolescents from a private school background as opposed to those from state

schools. She found that adolescents who attended private schools viewed the political system as more stable, had greater trust in politicians and were more likely to have views associated with conservative, right-wing thinking.

Sidelnick (1989:95) examined the effects of ability on political attitudes. He found that low-ability subjects are more dogmatic and consequently less likely to support fundamental freedoms embodied in the Bill of Rights.

Austin and Nelson (1993:430) investigated the influences of ethnicity, family communication, and media on adolescents' socialisation to U.S politics. They found that although the effects of the media are striking, they nevertheless take place in the context of the family and ethnic background, where adolescents first learn cultural values and problem-solving styles.

In South Africa, the apartheid system led to a situation where almost the entire youth became politically involved in one or other way. The white male youth were obliged to become involved as they were compelled to participate in a "youth preparedness programme" at school which included the initial training for future compulsory military service, where the main aim was to maintain the status quo of white domination. The black youth became involved as the apartheid system affected every aspect of their daily lives, and the only way to fight the system was to become involved in mass political action.

### **3.11 CONCLUSION**

The focus of this research is on whether the adolescent is able to think critically about the political issues which confront him on a daily basis. This chapter has considered all the aspects of the adolescent's development which may have an effect on his critical thinking regarding political issues.

With regard to the adolescent's physical development, it was found that issues such as AIDS, abortion and teenage pregnancies definitely led to increased political awareness and interest. Most of the literature also regards Maslow's theory of self-actualization as being accurate, in that the physical needs must first be satisfied before the higher-order needs including political involvement can be addressed.

The cognitive aspect of the adolescent's development clearly plays a vital role in his development of political understanding as well. Piaget's theory still appears to be relevant in that many modern researchers still believe that unless the adolescent has progressed to the formal-operations stage, he will be unable to deal with abstract matters such as political issues.

The affective development of the adolescent was also considered, and it was found that emotions such as anxiety about the future, depression, and aggression would have a negative effect on the adolescent's development in general, and as a result on the development of his political understanding as well.

The social development of the adolescent is also of importance with regard to his political development in that the peer group begins to play a larger role in his life and many of his ideas and actions are formed and regulated by his peers, whether in a group, clique or gang.

The link between moral, cognitive and political development has been referred to throughout this chapter. It would appear that Kohlberg's levels of moral development, correlate fairly closely with the development of political understanding in the adolescent.

The various theories of personality development of the adolescent also shed light on what may be affecting the development of political understanding of the adolescent.

Finally, aspects of political development and understanding, such as political knowledge, attitudes, and involvement were discussed. Some of the various factors which may have an effect of the development of political understanding were also considered. The South African adolescent's political development was also discussed throughout the chapter.

The following chapter is an attempt at a description of what constitutes current important political issues in the light of South Africa's political history. These are the issues which are used in the empirical study.

# CHAPTER FOUR

## THE POLITICAL SITUATION IN SOUTH AFRICA

### 4.1 INTRODUCTION

The Republic of South Africa in 1998 has been described as a model for the rest of Africa and even the rest of the world. Does South Africa deserve such a label, and if so, why? Is it because power changed hands from the minority to the majority relatively peacefully? Is it because the first fully democratic general election of 1994 was declared "substantially free and fair" by the Independent Electoral Commission (Thompson, 1995:254)? Is it because of the fact that we manage a system where we have 11 official languages? Is it because traditional tribal enemies are finally managing to live with each other? Is it because we manage to combine first and third-world social conditions? Or is it because the human spirit finally triumphed over extreme adversity?

Political commentators have said that South Africa's ultimately peaceful transition to a fully democratic state was nothing short of a miracle. When the first vote in the general election of 1994 was cast by a black person living in exile in New Zealand, the symbolism and irony of the act were not lost on political observers throughout the world. A new chapter in South Africa's unique political history which ultimately led to a situation where the majority of the people were marginalised and disenfranchised, and many of the leaders imprisoned or forced into exile, was being written. Concepts such as democracy, human rights, freedom of expression, and the constitution are becoming familiar phrases for the people of South Africa, but as Desmond Tutu, one of the architects of the new democracy stated, "If you don't know the past, you will never understand today's politics" (Krog, 1997:13). Leonard Thompson, also emphasises the importance of the past in trying to come to terms with current political issues, "People lack a sense of their location in time and fail to perceive that contemporary society is constrained by its cultural as well as its biological inheritance" (1995:1). It is for this reason that the first part of this chapter is a short survey of South Africa's political history, and the second part a discussion of current political and social issues.

## 4.2 HISTORICAL SURVEY OF SOUTH AFRICAN POLITICS

### 4.2.1 BEFORE 1910

Estimates of the presence of the first humans in South Africa vary from 125 000 years ago (Davenport, 1991:3) to more than 50 000 years ago (Thompson, 1995:6). These first South Africans were followed much later by the hand-tool makers of the Middle Stone Age of about 40 000 years ago, and the Late Stone Age of 20 000 years ago. These Late Stone Age people and their descendants gave rise to "breeding populations" out of which distinctive "gene pools" emerged under different environmental influences (Davenport, 1991:5).

Two groups of descendants of the Late Stone Age people were the San hunter-gatherers and the Khoikhoi. The San lived in small, highly mobile, loosely-knit patrilineal bands of between twenty and two hundred persons (Davenport, 1991:6). The total number of San probably never exceeded 20 000 and were widely dispersed territorially. The Khoikhoi numbered approximately 100 000 and lived mainly along the Orange River and on the coastal belt stretching from Namibia to the Kei River where they kept sheep and cattle.

By A.D. 300 the Bantu-speaking ancestors of modern tribes such as the Zulu, Xhosa, Pedi, Sotho and Tswana began to settle south of the Limpopo (Thompson, 1995:16). Between the fourth century A.D. and the late eighteenth century, the indigenous hunter-gatherers became more and more threatened as these farmers began to occupy all the areas suitable for agriculture. The four main original groups normally distinguished among the Bantu-speakers south of the Limpopo were the Venda, the Sotho-Tswana, the Nguni and the Tsonga. These tribes were all mixed farmers in that they owned cattle and sheep and grew cereal crops.

Although Portuguese sailors such as Dias and da Gama had rounded the Cape peninsula in 1487 and 1497 respectively, it was the Dutch under Jan van Riebeeck in 1652 who eventually founded a colony in the Cape and in so doing brought the first white or European settlers to Africa.

In the period which followed until 1795, several important events took place which would have significance for the future Republic of South Africa. Firstly, the Dutch East India Company began releasing men from their contracts and placing them on twenty-acre farms in order to

produce grain and vegetables, and sell them to the company at fixed prices. Secondly, in 1689 the Company brought 180 French Huguenots and settled them in the areas which were to become Stellenbosch and Franschoek. Also during the eighteenth century, more German than Dutch speakers arrived at the Cape, resulting in a community of diverse European settlers. This diversity soon became uniformity as Dutch became the language spoken by everyone, and the beliefs of the Dutch Reformed Church the dominant faith. This was the birth of the Afrikaner people, later called "Boers" by the British settlers, which although meaning "farmers", came to have derogatory overtones. Afrikaans, a simplified form of Dutch eventually became the dominant language in the colony. Thirdly, the Dutch began importing slaves into the Cape area from 1658, which led to the situation from 1711 onwards where slaves began to outnumber the free burghers. A number of slaves were freed over the years which followed, and these "free blacks" initially had the same rights as the white settlers, but the law began to discriminate against them, and by the 1790s they were obliged to carry passes if they wished to leave town (Thompson, 1995: 37). Fourthly, a combination of war with the Dutch, conflict with the Bantu people, and the Smallpox epidemic of 1713, led to the virtual annihilation of the indigenous Khoisan people during this period. The survivors became absorbed into the larger communities at a level equivalent to that of the slaves. Finally, many of the "boers" who were unsuccessful at agriculture, became "trekboers" in that they became pastoral farmers and hunters over very large areas.

When the British captured the Cape in 1795, the social and political order was portentous of the Apartheid years which would follow over 150 years later. The white colonists were conditioned to life as privileged people, distinguished from their slaves and servants by physical, cultural, legal and economic criteria (Thompson, 1995:51). Although the Dutch regained power at the Cape between 1803 and 1806, the British ruled South Africa until 1910 when the Union of South Africa was formed. During this period, a number of significant events took place.

Of major significance was the fact that there was continuous conflict between the whites and the Bantu tribes. In 1811 British forces expelled the Xhosa people from the territory west of the Fish River. This was followed by further conflict and war with the Xhosa in 1834-35 and 1846-47, and in 1879 British and colonial forces conquered the Zulu. The Afrikaners were also in constant conflict with Bantu tribes. In 1838 an Afrikaner commando defeated the Zulu army at the battle of Blood River. In 1858 and 1865-67 the Afrikaners were engaged in a war against the Sotho. In 1898 Afrikaner commandos conquered the Venda.

Another important development during this time was the growing conflict between the Afrikaners and the British. In 1815 the frontier Boers rebelled against the British forces, and although the rebellion was suppressed quickly, it was a sign of the conflict of the future.

In 1820 the British government sponsored the settlement of approximately four thousand people in the Cape. Another one thousand people joined them at their own expense. The original intention was that these settlers would be farmers, but their lack of experience combined with the fact that the soil of the area west of Fish River was ill-suited to intensive agriculture led to many of them abandoning their lots and seeking other forms of employment. A further problem was the fact that the British government placed them on land claimed by the Xhosa community (Thompson, 1995:55). As a result of having five thousand of their subjects in the area, the British began to take more interest in their colony and this led to the repealing of the pass laws and the eventual freeing of all remaining slaves in the Cape colony by 1838.

A small group of traders had settled at Port Natal in 1824 and by 1838 the Voortrekkers had taken control of a large area of land which later became Natal. In 1843 Britain annexed Natal. From 1860 large numbers of Indian indentured labourers were brought to Natal. By the end of the century there were approximately 100 000 Indians in Natal. Although both Natal and the Cape were directly under British rule, the policies of each were different. In Natal the vote was denied to both Africans and Indians in 1896, while all races had the vote in the Cape from 1853, although by the 1880s very few black people were registered to vote. In the Cape there was a uniform legal system, while in Natal two parallel systems of law existed.

In 1835-40 five thousand disgruntled Afrikaners (known as voortrekkers) left the Cape Colony in the Great Trek which eventually took them to the areas which would become known as the Transvaal and Orange Free State. Britain officially recognized the Transvaal and Orange Free State as independent Afrikaner Republics in 1852 and 1854. In 1877 Britain annexed the Transvaal, and only in 1881 did the Afrikaners regain their independence. The political trends set by the independent Afrikaner republics during this time, which were very similar in essence to those of the British in the Cape and Natal, were to be echoed many years later in the Apartheid regime of the National Party. Some of these were the following: non-white people could not be citizens of these republics, they could not carry firearms, they had to live in segregated parts of the town, and all Africans had to carry passes when travelling. Finally in 1899 the underlying conflict spilled over into full-scale war and in 1902 Britain finally conquered the Boer republics.

In 1907 Britain gave parliamentary government to the former republics, although only whites were enfranchised. Finally, in 1910, the Cape Colony, Natal, the Transvaal, and the Orange Free State joined to form the Union of South Africa.

#### 4.2.2 1910 - 1948

The South African Party led by Generals Louis Botha and Jan Smuts won the general election of 1910, and Botha was appointed prime minister. His cabinet contained only white members of English and Afrikaans language groups. JBM Hertzog a member of the initial cabinet, resigned in 1914 and formed the National Party which was supported mainly by Afrikaners (Thompson, 1995:158).

In 1919 Botha died and was succeeded by Jan Smuts. He struggled to retain power as he had lost much of his support during World War I by personally commanding troops in the takeover of the German protectorate of South West Africa. Most Afrikaners were against this action as many of them had a German heritage and there was a strong anti-British feeling. In 1922 he also lost the support of working class whites by crushing the White Mine workers' Strike.

In 1924 the Afrikaner Nationalists formed an electoral pact with the Labour Party and won the general election of 1924. Hertzog's party were in power until 1933 when they lost a lot of support as a result of the effects of the Great Depression and Hertzog's loyalty to the gold standard which caused the South African pound to be devalued.

In the 1933 election, Hertzog's party formed a coalition with Smuts' party, won the election, and became the United Party with Hertzog as prime minister. In 1934 DF Malan who had left Hertzog's party, formed the Purified National Party.

During the Botha, Smuts and Hertzog years, all government policies were dominated by the idea of segregation:

- In 1911 the Mines and Works Act reserved certain categories of work for white people and prohibited strikes by contract workers (Davenport, 1991:234).

- In 1912 the Defence Act of 1912 stipulated that in peace time all white male citizens of the Union had to register for military training in their seventeenth year, and citizens "not of European descent" were not liable for military service unless parliament decided otherwise (Spies, 1993:57).
- The most contentious act was the Natives Land Act of 1913. This Act stipulated that black people could only lease or purchase land in certain areas labelled "native reserves" (Thompson, 1995:163).
- In 1923, the Smuts government enacted the Natives (Urban Areas) Act, which empowered an urban authority to establish an African location - an area just outside the town or city where Africans were forced to live. The pass laws which were steadily extended over the years, to the point where in 1930, 42 000 Africans were convicted for pass law offences (Thompson, 1995:167), assisted the authorities in limiting the number of black people in the cities.
- In 1936 Hertzog's government placed all registered African parliamentary voters on a separate voter's roll, where they could elect whites to represent them.

During this time, three independent political organisations were founded with the goal of improving the lives of all people in South Africa. The African Political Organization (APO), a Coloured organization was founded in 1902, the South African Indian Congress (SAIC), an Indian organization was founded in 1923, and the South African Native National Congress, which later became known as the African National Congress (ANC) was founded in 1912. These organizations were relatively weak in that they tried to elicit white support to redress African, Coloured and Indian grievances by constitutional means (Thompson, 1995:175), and by 1939 they had almost died out. The South African Communist Party was also founded in 1921 but never gained a wide following, although many of its members had dual memberships with organizations like the ANC.

In 1939 the United Party split over the question of whether to join the Allies in the war against Germany. Hertzog resigned as prime minister and Smuts took over the reigns. During the war years Afrikaner solidarity grew to the extent where the National Party emerged as the official opposition to the United Party in the 1943 election. Afrikaner unity, combined with the

increasingly liberal views of the United Party, and Smuts' tired electioneering efforts due to advancing age, led to the National Party winning the 1948 election. DF Malan became the new prime minister and this ushered in a new era for Afrikaners and their fledgling policy of Apartheid. In 1948 the ANC still had no unified plan of action and had fewer than six thousand members (Thompson, 1995:182).

#### **4.2.3 1948 - 1989**

Soon after coming to power, the Nationalists began to implement various laws and policies which consolidated their power base and entrenched apartheid:

- The Prohibition of Mixed Marriages Act of 1949 and the amendment to the Immorality Act in 1950 made marriage and sexual contact between whites and people other than white illegal (Scher, 1993:322).
- The Group Areas Act of 1950 made residential separation between whites and all other people compulsory (Scher, 1993:323).
- The Population Registration Act of 1950 provided the mechanism to designate the racial category of every person (Thompson, 1995:190).
- The Separate Amenities Act of 1953 legalised the implementation of separate facilities for whites and non-whites, such as waiting rooms, public toilets, park benches, entrances to buildings, and many other similar examples (Scher, 1993:324).
- The Bantu Education Act of 1953 removed the control of black schooling and teacher training from the mission schools and placed it in the hands of the government. This brought about an immediate decline in the quality of black education as can be seen in the fact that the government per capita expenditure on black pupils dropped from R8,70 to R4,90 from 1954 to 1965, while the per capita expenditure on white pupils rose from R50 to R75 during the same period (Scher, 1993:327).
- The Senate Act of 1955 and the South Africa Amendment Act of 1956 and various legal manoeuvres had the combined effect of eventually removing the coloured

voters of the Cape from the common roll after 103 years and placing them on a separate roll where they could only elect white representatives until 1960 when they were finally denied any representation (Thompson, 1995:191; Scher, 1993:345).

- The Public Safety Act (1953) empowered the government to declare a state of emergency if the safety of the public was seriously threatened and if the ordinary law was inadequate to preserve it. This law in conjunction with the Riotous Assemblies Act (1956), the Unlawful Organizations Act (1960), the Sabotage Act (1962), the Bantu Laws Amendment Act (1964), the General Law Amendment Act (1966), the Terrorism Act (1967), and the Internal Security Act gave the police vast powers to arrest people without trial and hold them indefinitely in solitary confinement without revealing their identities and without giving them access to anyone other than government officials (Thompson, 1995:199).

In 1961 South Africa declared independence from Britain and became a republic, leaving the Commonwealth at the same time. This allowed the government the freedom to continue to implement further controversial laws. One of these was the Bantu Homelands Constitution Act of 1971 which empowered the government to grant independence to any Homeland. The Transkei was the first to gain independence in 1976, followed by Bophuthatswana in 1977, Venda in 1979, and Ciskei in 1981. After the granting of independence, the citizens of these homelands were then denied citizenship of South Africa (even though these "countries" were not recognized by any country in the world).

Another controversial component of the National Party's governance which eventually led to major conflict was the "relocation" of many non-whites. In reality relocation meant the forced removal of people from areas which had been rezoned as white areas and relocation to areas further away from the urban settlements (Thompson, 1995:194).

In the period between 1939 and the rise of the Nationalists in 1948, the ANC had been relatively quiet. It was only in 1949 when Walter Sisulu, Oliver Tambo, and Nelson Mandela were elected to the national executive of the ANC that resistance and opposition to the White ruling party became organised. In 1952 the ANC and the South African Indian Congress launched a passive resistance campaign where large numbers of volunteers defied discriminatory laws and eight thousand were eventually arrested. The campaign was only a

qualified success as it had to be called off after rioting broke out in some of the major cities, and severe penalties were imposed by the government for civil disobedience (Thompson, 1995:208).

In 1955 a coalition consisting of the ANC, the South African Indian Congress, the South African Coloured People's Organisation, the Congress of Democrats (mainly white members), and the South African Congress of Trade Unions adopted a Freedom Charter which was to become the policy statement of the ANC (Thompson, 1995:208). Robert Sobukwe founded the radical Pan-Africanist Congress in 1959. In March 1960 they launched a peaceful campaign against the pass laws where large numbers of Africans assembled at police stations without passes hoping to be arrested and slow down the judicial processes in the country. However, the police at Sharpeville opened fire on the protesters killing 67 and wounding 186, most of whom were shot in the back. This led to widespread disturbances, but the government declared a state of emergency and banned the ANC and PAC and arrested many of the leaders. It seems that it was at this stage that the ANC and PAC moved away from their commitment to nonviolent methods of protest. The Umkhonto we Sizwe and Poqo (the militant wings of the ANC and PAC) made over two hundred bomb attacks on post offices and government installations, but the leaders were arrested in July 1963. This setback combined with the fact that Mandela and Sisulu were serving life sentences on Robben Island (for sabotage) meant that the ANC and overt protest in general were relatively quiet for the next decade.

In 1968 a new student leader in the form of Steve Biko emerged. He founded the exclusively black South African Students Organisation (SASO) and promoted the idea of Black Consciousness. This ideology led to the so-called Soweto riots of June 1976, where thousands of black school children demonstrated against the government's insistence that half of their subjects be taught in Afrikaans. The protests spread to the rest of the country after the police shot and killed a thirteen year old student during the demonstration (Thompson, 1995:212). In the eight months which followed, 575 people were killed by the government, including 134 who were under the age of eighteen. In 1977 the government banned SASO and jailed numerous black leaders including Steve Biko, who died in custody soon after, from brain damage caused by injuries to his skull.

In 1978 P.W. Botha became prime minister and in the years which followed his policies were a combination of hard-line measures introduced to maintain apartheid, and a seemingly more liberal policy towards the non-whites of the country:

- In 1979 trade unions were allowed to register and gain access to the industrial court and the right to strike.
- In the 1980s the war against anti-apartheid forces in Angola, Mozambique, Zimbabwe, Zambia, and Lesotho gained momentum with the focus on the Angolan border.
- In 1984 a referendum of white voters led to a new constitution which gave Asians and Coloureds limited participation in the central government (Thompson, 1995:225).
- In 1985 the first contacts between the government and imprisoned and exiled leaders were made.
- In 1986 the pass laws were repealed, but soon after the government proclaimed a nationwide state of emergency in response to prolonged and widespread resistance and unrest. During this state of emergency thousands of people were detained and the media were prohibited from reporting on the unrest.
- In 1988 the government undertook to withdraw from Angola and cooperate in the U.N monitored independence process.

During these years resistance to the Apartheid government grew substantially:

- From 1981 and throughout the 1980s ANC guerillas carried out sabotage attacks throughout the country.
- In 1983 the United Democratic Front (UDF) was formed in an attempt to unify the internal resistance to Apartheid.
- In 1987 250 000 black mine-workers went on strike for three weeks.

One major stumbling block in the resistance movement's way was the violent conflict between the Zulu supporters of Inkatha (a political movement based mainly in Natal) and ANC supporters. It does appear that much of the conflict was spurred on by a so-called "third force" - government troops carrying out attacks on both Inkatha and ANC supporters.

#### **4.2.4 1989 - 1994**

In 1989 F.W. De Klerk became state president and immediately began to dismantle Apartheid. In 1990 he unbanned the ANC, PAC, and SACP and released Mandela and many other political prisoners. He also repealed Apartheid laws such as the Group Areas Act, Population Registration Act, and the Separate Amenities Act amongst others. The state of emergency was also revoked and representatives from the government joined 18 other parties in formal negotiations subsequently called CODESA (Convention for a Democratic South Africa). In 1992 white voters supported the negotiation process in a referendum (Thompson, 1995:247). After enduring numerous setbacks, the negotiations eventually resulted in the adoption of an interim constitution which was unique in that it provided for compulsory power-sharing in the cabinet and that there would be eleven official languages - English, Afrikaans, isiNdebele, Sesotho sa Leboa, Sesotho, siSwati, Xitsonga, Setswana, Tshivenda, isiXhosa, and isiZulu.

In April 1994, after numerous stumbling blocks, the first full general election was held. The ANC won 62.7% of the vote, the National Party 20.4%, the IFP (who joined the election at the eleventh hour) 10.5 %, the Freedom Front (a right-wing afrikaner group) 2.2%, the Democratic Party (a liberal mostly white grouping) 1.7%, and the PAC 1.2 % (Thompson, 1995:254).

Nelson Mandela was inaugurated as president of the Government of National Unity on the 10th of May 1994, where the theme of reconciliation was dominant in his address: "Out of the experience of an extraordinary human disaster that lasted too long, must be born a society of which all humanity will be proud...Never, never, and never again shall it be that this beautiful land will again experience the oppression of one by another" (Mandela, 1994:540).

F.W. De Klerk was appointed second executive deputy president and his words of congratulation to Mandela were both gracious and reconciliatory: "He has walked a long road and now stands on top of the hill...The journey is never complete and as he contemplates the next hill, I hold out my hand to him in friendship and co-operation" (Johnson, 1994:438).

De Klerk's words were both apt and prophetic in the sense that the infant post-apartheid society would bring much joy to the majority of people, but many problems as well.

### **4.3 Current political issues**

Although the general sentiment of the South African people remained positive after the initial euphoria, social problems including an escalation in crime and unemployment, the new Constitution, and the Truth and Reconciliation Commission, replaced Apartheid and racial integration as the dominant political issues in the lead-up to the 1999 election.

#### **4.3.1 NEW CONSTITUTION**

"The Bill of Rights is a cornerstone of democracy in South Africa. It enshrines the rights of all people in our country and affirms the democratic values of human dignity, equality and freedom." This is the introduction to chapter two of the Constitution of South Africa as adopted on the 8th of May and amended on the 11th of October 1997 by the Constitutional Assembly. This Constitution was the culmination of many years work beginning with the Interim Constitution of 1993 which set up the Constitutional Assembly to write the new Constitution, although all South Africans were given the opportunity to say what they thought should be in the new Constitution.

The government feels very strongly about educating all the people of South Africa as to the contents of the new Constitution. They accordingly designated the week of the 17th to the 21st of March 1997 National Constitution week, and distributed seven million copies of the Constitution, in all eleven languages throughout the country. All high-school pupils and their teachers received copies in their language of instruction, and every member of the police, security forces, prison staff and prisoners also received their own book. The editorial of the Pretoria News (1997:9) praised the government for recognising the need for constitutional education and stated that "Even the best Bill of Rights is rendered useless unless the citizens it protects, know what it entails." April 26th to May 10th 1998 was again designated Constitution Week.

There have, however, been criticisms of the new constitution. One of the major criticisms is the contradiction in the Constitution which gives the national ministry the power to make policy, but no power over the provincial budgets that pay for implementation (Sunday Times 1998:20). Another criticism has been with regard to the vague definition of "life" in the Constitution. Section 11 of the Constitution states that "Everyone has the right to life", and anti-abortionists state that life begins with conception and as a result the Termination of Pregnancy Bill which came into effect on February 1st 1997 is unconstitutional (Mda, 1998:15).

#### 4.3.2 TRUTH AND RECONCILIATION COMMISSION

In January 1996 the ANC's executive committee stated that the objectives of the Truth and Reconciliation Commission (TRC) were in essence two-fold:

- "...establishing the truth about gross human rights violations of the past."
- "...to contribute to the process of reconciliation among the forces that engaged in a life-and-death struggle, the one to defend the system of apartheid and the other to secure national liberation" (Bulger, 1996:3).

The importance of the TRC in terms of coming to a better understanding of the complexities of the South African nation is emphasised by Antjie Krog "When the truth commission process started last year, one instinctively realised: if you cut yourself off from the process, you will wake up in a foreign country - a country that you don't know and that you will never understand" (1997:13). Sullivan (1997:12) concurs with this sentiment "...the truth commission process constitutes one of the most important human-rights events of this century."

The TRC began its work in April 1996 when Nohle Mohapi, the widow of murdered activist Mapetla Mohapi testified before the commission in East London. By the end of the first phase - the information gathering phase, more than 11 000 statements had been gathered and the testimony of 1 800 victims heard throughout every province in the country (Brand, 1997a:15). The general consensus is that the human rights hearings have been highly effective in bringing home to South Africans of all races the fact that apartheid caused immense suffering.

It has also had a powerful healing effect in terms of making public the nature of the abuses that occurred and allow those who are suffering negative effects to acknowledge these effects and begin to deal with them (Brand, 1997b:13). However, the list of problems or complaints about the TRC is relatively long:

- Many people including the former leaders of South Africa such as FW de Klerk and PW Botha have complained that it is merely a witch-hunt against Afrikaners, and is completely biased.
- A complaint which has been made by both sides of the political spectrum is that too much money is being wasted by the TRC, the fact that the monthly salary bill is R2,7m a month appears to substantiate this.
- The blanket amnesty initially granted to 37 ANC officials including Thabo Mbeki without public testimony, and without specifying the acts for which amnesty was granted drew much criticism. This decision was eventually overturned by the Supreme Court.
- The fact that more than one version of the "truth" was often heard where the original idea was supposed to be that amnesty would only be granted for full and truthful disclosure.
- The length of the process has also been criticised.
- The inability of the TRC to get senior people to accept responsibility for the actions of the people who served under them, has also received much criticism.

The second phase of the TRC's task was the Amnesty hearings where many of the perpetrators of the crimes and atrocities applied for, and were granted amnesty in terms of the political nature of their crimes. The third and final phase is the finalisation of the proposal of the TRC's reparations and rehabilitation committee. Their proposal is based on the acceptance of the principle that victims of apartheid have a right to compensation. Their proposal covers two forms of reparation: urgent interim relief for people in immediate need, and a long-term reparation and rehabilitation strategy involving financial grants to individuals,

symbolic reparation, community rehabilitation and institutional reform (Brand, 1997c:17). The TRC is empowered to administer and grant urgent interim relief, but the long-term reparation policy will be the responsibility of the government.

Finally, although many of the short-term positive benefits of the process have already manifested themselves, reconciliation in the long-term remains the major objective.

### **4.3.3 SOCIAL ISSUES**

Although matters such as the TRC and the Constitution are major political issues in that many of the country's important political figures are and have been involved, social issues such as housing, crime, unemployment and education amongst others, are the issues which have an impact on the average voter.

#### **4.3.3.1 Housing**

The housing issue consists of two related but separate issues. The first concerns the major shortage of housing in South Africa. During the run-up to the 1994 election the ANC's election campaign focused on the future provision of housing in the country, and promised to build one million houses by 1999 (Burger, 1997:17). However, it seems that the backlog in housing has grown from approximately 1,5 million to an estimated two to three million units (Lamont, 1997:2).

The government provides a subsidy or one-off grant of up to R15 000 for those earning below R3 500 a month, where it is estimated that over half the country's households bring in less than R1000 per month. It appears then that the subsidy is the only way for the South Africa's homeless people to gain access to adequate housing (Chalmers, 1997:3). There have been many problems in the delivery of the houses to the people. Certain building projects have been suspended due to the poor quality of the houses, and this in turn has been blamed on the fact that in Kwazulu Natal one-roomed houses were being built for R7500 which was the approved subsidy in many cases. The contractors claimed that this was not enough to build

decent quality houses (Doonan, 1997a:6). The Minister of Housing, Sankie Mthembu-Mahanyele has stated that crime has had an adverse effect on the provision of houses in that many contractors have been intimidated, robbed, and a number have even been killed on site (1996:5). This has resulted in a situation where many of the larger contractors do not even tender for the contracts. A further problem is the delay between approval of a subsidy and the completion of a unit, which has improved from two years to approximately seven months (Burger, 1997:17).

The second issue is that of the plight of the homeless. Although the estimates of the number of people living in informal settlements (squatters) vary, Muller (1992:129) put the total at between four and five million in 1992, and this number has surely grown since then. There are many acute problems associated with living in informal settlements, such as health risks related to no running water or sewerage facilities, as well as heating in winter and the ever-present danger of fires. Figures released in January 1997 reveal that shack fires claimed 140 lives and left 25 000 people completely without shelter in the Cape metropolitan area in 1996.

The political impact of the housing problem is becoming more and more important, especially with the 1999 election looming larger. In the words of the Housing Minister herself, "This (the delay in the delivery of houses) is unacceptable and something must be done because the real losers in this are the millions of homeless people who are being denied the dignity of having a shelter of their own" (Mthembu-Mahanyele, 1996:5).

#### **4.3.3.2 Redistribution**

The redistribution of land is one of the most controversial policies of the ANC government. In essence the idea of redistributing land from the wealthy in favour of peasants and small farmers appears to be fair and just if one considers the uneven distribution of farmland in many third world and former colonised countries. However the practicalities of handing over the management of land to uneducated, inexperienced people is seen by some as "the road to disaster" (Labuschagne, 1994:111).

In 1993 the World Bank called for the "rapid and massive redistribution of land to black and coloured people" (Cargill, 1993:15). Immediately after being appointed Minister of Agriculture and Land Affairs in 1994, Derek Hanekom announced that his major goals were in accordance with the World Bank's directives:

- equitable redistribution of land including tracts lost through forced removals;
- land tenure reform;
- deregulation of agricultural marketing;
- providing greater access to marketing opportunities for new farmers (Burger, 1997:17).

Although some progress has been made in land reform, it has been very slow. By May 1998 only twenty out of 30 000 land restitution claims had been finalised, and very little of the 1,8 million hectares of land scheduled to be redistributed has been transferred (Cox, 1998:3). Experiences in other African countries have been very similar. Labuschagne (1994:110) reports that the Zimbabwean government has failed to live up to their promise to change the unequal distribution of land and the ownership pattern which it inherited at independence due to severe financial constraints and poor economic growth. This, however, has not deterred President Mugabe, as he announced in June 1997 that he would be stripping whites, foreign nationals and foreign companies of a total of 8,3 million hectares of land intended for redistribution to Zimbabwe's 11,5 million black people (The Star, 1997a:8).

Once again it would seem that the South African government has failed to live up to their election promises, and this could be an important factor in the next election.

#### 4.3.3.3 Education

Sibusiso Bengu the Minister of Education's aims remain very simple: equal education for all and to encourage a culture of learning (Burger, 1997:17). Although this sounds simple, these aims should be seen against a backdrop of over forty years of concerted effort from the previous government to create a system of education which was anything but equal. These inherited inequalities in conjunction with the culture of "Freedom now, education later" which

prevailed for almost twenty years within the black communities of South Africa, make Bengu's task very difficult.

One of his first tasks was to standardise the teacher-pupil ratio to one teacher to forty pupils. There was a lot of opposition to this as many people felt that the standard of education would be compromised, particularly in the previously all-white schools. Although this target has not been reached as yet, the ratio is slowly becoming more equitable. Part of the reason for this is that thousands of teachers have accepted voluntary retrenchment packages over the past year, thereby reducing the total number of educators.

In the three years since the election 1500 schools have been refurbished and R1,1-billion has been allocated to the building of new schools (Burger, 1997:17). In January 1998 the new "Outcomes-Based Education (OBE)" curriculum was implemented at the grade one level, after the original plans to implement it in grade seven as well. This new curriculum promotes the values and principles of a democratic society, preparation for life, critical thinking and integration of different types of knowledge, rather than rigid adherence to subject boundaries (Naidu, 1997:2). There have been many criticisms of the new curriculum:

- the language associated with OBE is too complex - teachers will have to come to terms with more than 75 new concepts and acronyms;
- the claim that OBE will lead to eventual economic growth is completely unsubstantiated by research;
- the current ratios of over 60 learners to one teacher in some schools is not conducive to the new methods;
- OBE sidesteps the issue of values in the curriculum - there is no commitment to combating racism or sexism in the classroom (Jansen, 1997:16);
- the fact that there will no longer be a formal subject like religious education (Pretoria News, 1997:9).

Other problems with regard to Education in South Africa which have become political issues are the following:

- the proposed retrenchment of all temporary teachers for financial reasons, which almost led to a general strike in June 1998;
- the poor qualifications of many teachers in South Africa, including the fact that very few teachers are qualified to teach vital subjects such as Mathematics and Science;
- the poor handling of the matriculation examinations in 1996 and 1997, where many examination papers were "leaked", invigilation was often found to be very poor and results were delayed;
- the continued poor performance of the majority of matriculants.

Despite all the criticism, OBE was introduced in January 1998, and there is general consensus that progress has been made in Education over the past four years.

#### **4.3.3.4 Labour**

Under the general category of labour, two issues have become politically prominent: unemployment and affirmative action. It is the latter which has been the subject of much debate over the past three years since it was officially accepted as part of the interim constitution and then the final Constitution. Although the actual words "affirmative action" are not mentioned, section 9(2) states: "Equality includes the full and equal enjoyment of all rights and freedoms. To promote the achievement of equality, legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination may be taken." This appears to authorise the constitutionality of "measures" which take account of race or gender for the specific purpose stated (Hugo, 1996:81).

Black (1996:75) defines affirmative action as being the appointment or promotion of educationally disadvantaged employees who are, on the whole, technically less productive than the best available advantaged candidates. The object is generally to ensure that the target group (normally disadvantaged) is equitably represented in the work force of a particular employer (Faundez, 1994:57).

Critics of affirmative action point out the following (Faundez, 1994:57):

- It has a negative effect on the general morale of the workforce as those who benefit from the policy are made to feel that they are underqualified for the job, and those who are not members of the target group feel that they have been treated unfairly and lose their drive to work.
- It is seen as a challenge to the liberal principle of equality.
- Affirmative action policies only benefit a small segment within the target group, generally those who are better educated and therefore do not need affirmative action to get the job or promotion. This also emphasises the differences within the target group.

At the other end of the scale, supporters of affirmative action claim the following:

- Measures which improve job opportunities for members of target groups act as an incentive for them to compete and develop new skills. They also point out that by promoting wider participation of members of the target group in the labour market, affirmative action improves the morale of the workplace, and makes a contribution towards national integration.
- While not all members of the target group will benefit from this policy, the fact that some individuals are given the opportunity to demonstrate their abilities and skills enhances the standing of the group in society.

Although affirmative action has been implemented in almost 90% of companies in South Africa with some success, there have been problems. A High Court judgement in July 1997 declared

the appointment of 30 senior state attorneys invalid as only women and blacks were appointed. Although leave to appeal has been granted, Judge Swart found that the Justice Department's policy had the effect of promoting a broadly representative public service at the expense of an efficient administration (Star, 1997b:6). The Housing Department has also experienced problems with the implementation of affirmative action because suitably qualified people could not be found to fill vacancies, and as a result service delivery has suffered (Star, 1997c:5). Klein (1997:1) reports that FSA-Contact's annual affirmative action monitor revealed that 32% of companies feel that their affirmative action programmes are totally or somewhat unsuccessful. This figure has risen from 22% last year. 21% of companies also reported that they experienced a drop in standards or deterioration in work quality as a result of affirmative action.

In the USA affirmative action has been part of the official labour policy for over thirty years. However, recent events such as the legal acceptance of Proposition 209 points to an uncertain future for affirmative action in the USA. Proposition 209 which was recently passed in California, prohibits preferential treatment based on race, sex, ethnicity or national origin in appointment to state jobs or in the selection of students to state colleges (Ogden, 1997:28). This decision seems to be contrary to expectations as affirmative action appears to have worked well in the USA. One of the greatest achievements of the USA over the past 30 years has been the creation of a large and growing black middle class. One black family in three now has an income that places them at or above the US average of around \$35 000 a year (Walker, 1997:18). These statistics appear to be a direct result of affirmative action policies throughout the USA.

The difference between the affirmative action policies of the USA and SA is that in the USA affirmative action is in place to protect minorities, while in SA it is in place to empower and enable a disadvantaged majority group as well as other minority groups. Labour Minister Tito Mboweni has threatened to enforce affirmative action but his proposals have met with great resistance particularly from the larger corporations, and this could be a major factor in the next election.

Official estimates of unemployment in South Africa vary from being as low as 20% (Schlemmer, 1998:13) to a high of 40% and has risen for the past three years (Burger, 1997:17). Clarke-Mcleod (1995:18) states that in August 1993, 6 million people were

unemployed in South Africa. Schlemmer (1995:72) raises another problem in that there are over eight million foreign workers in South Africa. Not surprisingly, black people account for the majority of unemployed people in the country. Mboweni states that the government has strategies in place that should help generate more employment opportunities. One of these strategies is a public works programme that will not only provide jobs but improve infrastructure, basic services and housing for deprived communities (Milazi, 1997:18). Maria Ramos, the director-general of finance states that the government's growth, employment and redistribution (Gear) strategy is another attempt at creating jobs (Gqubule, 1997:1).

Although these government projects appear to be possible solutions to the unemployment problem in South Africa, there have been delays in their implementation and the results have been very disappointing thus far. These disappointments in conjunction with the continual clashes between the Congress of South African Trade Unions (Cosatu) and the government has led to a situation where Labour in general has become a major focus of politicians with an eye on the next election.

#### 4.3.3.5 Health

Nkosazana Zuma, the Minister of Health, has become one of the most controversial figures in the South African government. She was responsible for the expenditure of over R14-million on the development of a play which would be presented to schools in an attempt to make children more aware of the AIDS epidemic. It was later found that most of this money was wasted and President Mandela was under extreme pressure to replace Zuma. The importation of undertrained Cuban doctors was another cause for criticism of Zuma (Burger, 1997:17), but Mandela has stood by Zuma, preferring to focus on her numerous successes instead.

One of Zuma's primary aims is the introduction of a system of primary health care (PHC) where all the people of South Africa would have access to health services. She has had success in the following areas:

- free health care for pregnant women and children under six years of age was introduced within months of the 1994 election;

- the primary nutrition scheme (despite numerous cases of theft and fraud) already serves almost 13 000 schools;
- 173 mobile units have been provided and 297 clinics built;
- abortion on demand was introduced to combat the serious health risks of illegal abortions (Burger, 1997:17) (see paragraph 3.3.4 for a more detailed discussion of the abortion question).

The most controversial of Zuma's policies is the Medicines and Related Substances Control Bill which proposes international tendering to buy medicines (or generic substitutes) at prices lower than those set by local drug manufacturers and distributors of international drugs (St Leger, 1997:4). The controversy is related to the fact that South Africa has signed an international patents agreement and it appears that the importation of drugs from anyone other than the patent owner would be in contravention of this agreement. The US government and the European Union have backed the outcry from multinational manufacturers, and if South Africa goes ahead with the policy, it could lead to disinvestment and job losses (Doonan, 1997b:4). Pharmaceutical companies also warn that the importation of cheaper medicines could lead to poorer quality, unsafe or even counterfeit drugs.

Zuma's policies appear to have been successful thus far, and even the controversy surrounding the Medicines Control Bill is a political success, as the majority of South Africans feel that she is fighting rich and powerful drug companies in order to supply the people with cheaper medicines.

#### **4.3.3.6 Crime**

Justice Minister Dullah Omar told the National Assembly in February 1997 "The terrible crime rate in our country is quite intolerable. Therefore it is a duty upon all of us, and government in particular, to ensure that drastic steps are taken where necessary to protect the public" (Stuart, 1997:8).

Hough (1995:56) concurs with this statement in stating that "...endemic crime is not merely a law and order issue, but has in fact become a national security issue." The fact that there has been a marked increase in crimes such as robbery, rape, assault, housebreaking, motor vehicle theft, and car hijacking since the 1994 election (Burger, 1997:17), underscores the severity of the problem which faces the government. Some of the possible reasons for the increase in crime are the following:

- the inability of police to check fingerprints quickly - they still use manual matching, which results in many suspects being released as they appear to have no prior convictions;
- the lack of a computer linkup of police districts - despite the fact that the police have a computer system that costs R400m a year to maintain and staff;
- court prosecutors and Attorneys-General offices have no computer network with which to track or sort cases according to priority, causing unnecessary administration work often leading to poorly presented cases, which in turn leads to suspects or accused being incorrectly released (Financial Mail, 1995:17).

An aspect of South Africa's justice system which is becoming a major political factor is that of the death penalty for criminals found guilty of certain crimes. Soon after the ANC came into power, the death penalty was abolished. However, the dramatic rise in violent crimes such as rape, vehicle hijacking, armed robbery and non-politically motivated murders has led to a situation where many people are calling for the re-introduction of the death penalty. There has recently been a split within the ranks of the ANC itself over this question, which does not augur well for the next elections.

The combination of the above factors and the fact that Sydney Mufamadi, the Minister of Safety and Security inherited a police service that "...emerged from the apartheid era with its reputation in tatters" (Burger, 1997:17), has led to a situation where crime has become one of the major factors in the political arena in South Africa.

#### 4.3.3.7 Political violence

Political violence has been a feature of modern South African society for almost 40 years. Initially peaceful protests against apartheid policies drew violent reactions from the government forces, eventually becoming violent protest. This was followed by a subversive campaign by the government against opponents of apartheid, and in the 1980s violent conflict between supporters of the ANC and the Zulu followers of Chief Mangosutu Buthelezi. The latter grew into an ongoing struggle mainly in the KwaZulu-Natal area, resulting in many deaths in the pre-election period in 1994. There has been a marked decrease in the number of politically motivated murders - decreasing from 1044 in 1995 to 683 in 1996 (Holzapfel, 1997:11). There is, however, still conflict between the IFP and the ANC around regional power and self-determination, and we remain one of the most violent societies on earth (Schlemmer, 1995:74).

The assassination of five ANC supporters in Richmond in KwaZulu Natal in July 1997, demonstrates political intolerance and intimidation at their worst (Sullivan, 1997:12). It is also a sign that the political tensions have not abated in Kwa-Zulu Natal, and in the run-up to the 1999 election it is a worrying factor in that intimidation cannot be tolerated if the election is once again to be declared "free and fair."

#### 4.3.3.8 Environment

In 1992 representatives of 172 governments gathered in Rio at the Earth Summit in order to address the growing environmental problems of the world. The problems that were tackled were as follows:

- Greenhouse effect - where carbon dioxide emission levels are threatening the ozone layer.
- Forestry - the deforestation of the Amazon and other jungle areas.
- Polluted water.

- Oceans and fishing - fish stocks are over-fished in 70 of the world's 200 big fisheries (Harrison, 1997:23).

Unfortunately by 1997 very little progress had been made in any of the above-mentioned areas - the issue of global warming has been largely ignored, deforestation continues to wipe out three species every hour, 20% of the world's population did not have access to safe drinking water and 50% lacked water for proper sanitation, and the world's fisheries continued to be exploited.

South Africa has played a large role in another area, that of conservation in Africa. South Africa was one of the leaders of the successful movement which supported the re-opening of limited trade in ivory at the Convention on Trade in Endangered Species (Cites). Although trade will be limited to tusks held in certified stockpiles in Zimbabwe, Botswana, and Namibia, animal rights groups are concerned that poaching will once again threaten the elephant populations of Africa (Koch, 1997:22).

Many African countries now feel that as they have an abundance of elephants, they can be safely culled and their ivory used to generate desperately needed revenues for conservation and rural development. This view is strongly supported by the South African government, while many conservationists feel that the government is supporting these African countries for the wrong reasons, and that the decision could lead to conflict with international trading partners in the future.

#### **4.3.4 NEXT ELECTION 1999**

The 1999 election is of immense importance for a number of reasons. Firstly, the 1999 election is a measure of our capacity to consolidate democracy and be an example to Africa and the world, and if we fail to convince, we simply become another failed democratic experiment. Secondly, if the ANC gains a two-thirds majority in parliament in 1999, they will be able to write a new constitution without consulting any of the opposition parties. Peter Sullivan (1997:12) feels that the 1999 election will in future be remembered as one of the five major events of the 1990s in South Africa, along with the release of Mandela, the pre-election negotiations, the 1994 elections, and the TRC process.

In February of 1997, Frederik van Zyl Slabbert warned the government that it was unlikely to be ready for the 1999 election, as the appointment of an electoral commissioner who is responsible for drawing up a proper voters' role and demarcating voting districts, had been left too late (Van Zyl Slabbert, 1997:7). Parks Mankahlana, an ANC spokesman stated that the government did not intend to delay the elections and that there was no cause for alarm (Mankahlana, 1997:1). However, Judge Johan Kriegler, the chairman of the Independent Electoral Commission agrees with Van Zyl Slabbert and has attempted to convince the government of the urgency of the situation (Van Zyl Slabbert, 1997:7).

#### **4.4 CONCLUSION**

The complexities of current South African politics are made a little less complicated when they are seen against an historical background. The importance of the need for a strong, unique Constitution is underlined when one considers the total lack of disregard for human rights and dignity which the peoples of South Africa have shown towards each other over the past two thousand years. These violations of human rights began with the conflict between the Khoisan and the Bantu-speaking tribes, continued with the exploitation of all the indigenous people by the European settlers, and finally ended with the failed attempt of the Afrikaner whites to dominate the majority black population with the system of apartheid.

The current political issues are less intense than those of the past fifty years, but knowledge and understanding of the new Constitution by the people of South Africa, particularly the youth should not be underestimated. The importance of the TRC with regard to the long-term process of nation-building should also be emphasised. Knowledge of and insight into current social issues such as the plight of the homeless, the redistribution of land, the new national health and education dispensations, unemployment, the environment, crime, and political violence are of immense importance in terms of having an enlightened electorate in the 1999 election.

In the chapters which follow, the levels of political knowledge and the ability to critically consider political issues, of adolescents will be analyzed by means of an empirical investigation.

# CHAPTER FIVE

## THE METHOD OF THE EMPIRICAL INVESTIGATION

### 5.1 INTRODUCTION

The following chapter looks at the research design used for investigating the critical thinking capabilities of adolescents with reference to political issues. In order to measure critical thinking in a political context, as well as the level of political knowledge of adolescents, new tests had to be developed. The development of these tests is discussed in this chapter. Variables such as intellectual potential, gender, age, subject choices, personality, environment (rural or urban), and cultural background based on home language were identified in the literature study as variables that may influence critical thinking. The relationship between critical thinking and these variables will be investigated in this chapter. The relationship between political knowledge and critical thinking will also be investigated, as well as the relationship between political knowledge and variables such as gender, age, environment, and cultural background.

The chapter begins with the formulation of the hypotheses with reference to these variables and their relationship to critical thinking, and concludes with a brief description of the method used to test these hypotheses. This includes the selection of the sample, a description of the measuring instruments used, and the procedure used in administering the tests.

### 5.2 HYPOTHESES

The following hypotheses, based on the literature study were formulated:

### 5.2.1 HYPOTHESIS 1

**There is a significant difference between the critical thinking abilities of adolescents from different cultural backgrounds.**

#### Rationale

Rice (1996:157) states that cross-cultural studies have shown that formal thought, which is closely related to critical thinking, is more dependent on social experience than is sensorimotor or concrete operational thought.

Serpell and Boykin (1994:400) raise the problem that children are often expected to think and solve problems at school from within a cultural framework that is disjointed from the system of meanings which informs their everyday lives. They also refer to the fact that in rural African schools, teachers are faced with the task of interpreting the world for other people's children in ways that will expand their horizons without alienating them from the culture of their home community.

In South Africa conditions are unique in that the development of the adolescents of 1998 has taken place against a backdrop of diverse circumstances. Children from white and mostly privileged backgrounds have had many advantages in terms of the level of education they have received as opposed to the majority of the black children in the country who have had a very poor education. It is therefore expected that the adolescents from educationally disadvantaged backgrounds will have a backlog in their level of critical thinking.

### 5.2.2 HYPOTHESIS 2

**There is a significant difference between the critical thinking abilities of boys and girls.**

#### Rationale

Rice (1996:156) states that from childhood into early adulthood, males perform consistently better than females on Piagetian-type spatial tasks. Flake, Kaplan and Steinbrunn (1986:612) state that sex differences persist but that they could be attributed to differential social and educational influences in our society.

With specific regard to the development of critical thinking, King, Wood and Mines (1990:181) state that the tempo of development of critical thinking skills differs, and that girls are more likely to be positively influenced by educational efforts at critical thinking development.

### **5.2.3 HYPOTHESIS 3**

**There is a significant difference between the critical thinking abilities of adolescents from a rural environment and those from an urban environment.**

#### **Rationale**

Youniss and Dean (1974:1030) found a strong correlation between the degree of urbanisation of the child and the level of development of formal thought in countries such as Korea and Costa Rica.

In South Africa, there has always been a great difference between the level of education provided to children living in rural areas as opposed to those living in urban areas in South Africa. When this is coupled with the fact that black learners were generally disadvantaged as regards education provision, and that a substantial number of South Africa's rural learners are also black, then one would expect adolescents from rural areas to be at a lower level as regards critical thinking.

### **5.2.4 HYPOTHESIS 4**

**There is a significant positive correlation between intellectual potential and critical thinking ability.**

#### **Rationale**

Many of the traditional tests of intellectual potential are based on reasoning and thinking skills in general. Therefore a link between intellectual potential and critical thinking in a political context could also be expected.

### 5.2.5 HYPOTHESIS 5

**There is a significant positive correlation between academic achievement and critical thinking ability.**

#### **Rationale**

The link between intellectual ability and academic achievement has been established by many researchers over the years. As critical thinking has been linked to levels of advanced cognitive development, it would appear that there may be a link between academic achievement and critical thinking ability.

### 5.2.6 HYPOTHESIS 6

**There is a significant difference between the critical thinking abilities of those adolescents who study certain subjects at school and those who do not.**

#### **Rationale**

Hudgins, Riesenmy, Ebel and Edelman (1989:336) state that prior knowledge or information is indispensable to effective critical thinking. This implies that pupils who study certain subjects should be better critical thinkers if certain items in a critical thinking test are based on, or are grounded in that subject. Subjects such as Mathematics would seem to inherently contain certain critical thinking skills such as problem solving and therefore pupils who study Mathematics would be at an advantage with regard to critical thinking. Pupils studying History could be expected to achieve higher scores on a critical thinking test if that test contained items related to historical or even current social issues.

### 5.2.7 HYPOTHESIS 7

There are significant correlations between certain personality factors and critical thinking ability.

#### Rationale

In paragraphs 2.3.5.1 and 2.3.5.2 certain attitudes, dispositions and personality variables were linked to critical thinking abilities. In the High School Personality Questionnaire (HSPQ) for example, 14 personality factors are identified, as well as certain second-order factors. It is hypothesised that certain of these factors could be linked to critical thinking ability in a political context. The political content of the critical thinking test naturally leads to many of the items being emotional laden, and as a result certain personality factors may play a role in the individual's thinking.

### 5.2.8 HYPOTHESIS 8

There is a significant difference between the level of political knowledge of learners from different cultural groups.

#### Rationale

South Africa's political history was discussed in chapter 4, where it was shown that the youth of certain cultural groups became highly politicised in the 1970s. In addition to this only white people were allowed to vote prior to 1994, leading to a situation where 18 year old white adolescents were obliged to be politically aware, even though it was only within the narrow constraints of the South African political spectrum. It is hypothesised that certain differences still exist between the various cultural groups.

### 5.2.9 HYPOTHESIS 9

**There is a significant correlation between the level of a learner's political knowledge and his critical thinking ability in a political context.**

#### Rationale

With regard to the measuring instrument used in the present study, it is subject-specific in that all the items relate to various political issues. Therefore one would assume that if the learner's background political knowledge is at a higher than average level, then his critical thinking abilities with regard to the measuring instrument used in this study, would also be higher.

### 5.2.10 HYPOTHESIS 10

**There is a significant difference between the levels of political knowledge of those learners who take History as a school subject and those who do not.**

#### Rationale

As many of the items in the political knowledge test relate to historical knowledge, it would appear that those pupils who have History as a school subject would score at a higher level on the political knowledge test.

### 5.2.11 HYPOTHESIS 11

**There is a significant difference between the levels of political knowledge of boys and girls.**

#### Rationale

Although many females have become involved in politics at the highest level in recent years, it has traditionally been the domain of males and it is thought that certain differences still exist between the sexes with regard to political knowledge.

### 5.2.12 HYPOTHESIS 12

There is a significant difference between the levels of political knowledge of learners from urban areas and those from rural areas.

#### Rationale

In South Africa it has traditionally been the pupils from urban areas who have been involved in political matters and protests. This may have been as a result of lack of exposure to political issues in rural areas. This situation still exists in that many rural areas still do not have electricity so access to electronic media such as television and the internet via computers is still limited. However great strides have been made and many areas can no longer be described as being completely rural, and it is therefore not clear whether learners from rural areas are still politically ignorant.

### 5.2.13 HYPOTHESIS 13

There is a significant positive correlation between the level of political knowledge and intellectual potential of adolescents.

#### Rationale

Although intellectual potential by definition would have to include many aspects, knowledge of the social system in which one lives would not appear to be an essential aspect of intellectual potential. However, South Africa's recent changes in political structure have been at a very high profile level and as a result it is thought that there is a correlation between intellectual potential and political knowledge.

### 5.2.14 HYPOTHESIS 14

There is a significant positive correlation between the level of political knowledge and academic achievement of adolescents.

#### Rationale

It is thought that high academic achievers would have a good general knowledge base and that this would include political knowledge.

## 5.3 SELECTION OF THE SAMPLE

In terms of the hypotheses listed above, the sample had to include subjects from the following sub-groups:

- subjects from rural areas;
- subjects from urban areas;
- subjects from English medium of instruction schools;
- subjects from Afrikaans medium of instruction schools;
- subjects whose home language was an African language;
- subjects whose home language was English;
- subjects whose home language was Afrikaans.

The procedure for the selection of the specific schools and subjects was as follows:

- It was decided that the urban subjects would be selected from schools in the East Rand, Gauteng Province area, which could be said to be representative of any urban area in South Africa.
- A list of schools, which included schools from traditionally "white" suburbs and "townships", was drawn up.

- Three schools were then selected at random to be representative of urban areas and which met the language criteria as discussed above.
- All the grade ten learners from each school were then included in the sample. The reasons for selecting grade ten learners are as follows:
  - The target group of most of the commercially available critical thinking tests is the 16 years and older age group.
  - As discussed in paragraph 3.4.3 the ANC Youth League and even Nelson Mandela have stated that 16 year olds should have full voting rights. This questionnaire will then, at least in part, provide further information in that regard.
- Rural areas from Northern Province and Mpumalanga were selected to represent rural areas.
- A list of schools from these areas was drawn up and one school from Northern Province and one school from Mpumalanga Province were selected at random for the sample.
- All the grade ten learners from these two schools were selected. Once again these schools met the language criteria as discussed above.
- All subjects who had IQ scores on file at their respective schools were included in the sample in order to test the hypotheses on intellectual potential. In total 155 subjects were included in the sample.
- The final grade nine aggregate marks were used as a measure of academic achievement. The aggregate marks of 334 subjects from the various schools were used as these learners' results were easily accessible, either on computer or mark sheets.

- It was decided that one of the schools would be used to measure the personality aspect and this school was chosen at random, with 94 subjects being included in the sample.

Table 5.1 lists the number of subjects by area and gender:

<b>TABLE 5.1 TABLE OF AREA BY GENDER</b>			
	<b>Male</b>	<b>Female</b>	<b>Total</b>
Urban area	286	250	536
Rural area	75	137	212
<b>Total</b>	<b>361</b>	<b>387</b>	<b>748</b>

## **5.4 MEASURING INSTRUMENTS USED IN THE INVESTIGATION**

In terms of the hypotheses listed in paragraph 5.2 above, the following variables had to be measured:

- Critical thinking ability.
- Level of political knowledge.
- Personality.
- Academic achievement.
- Intellectual potential (IQ).

### **5.4.1 CRITICAL THINKING ABILITY**

Many tests which purport to measure critical thinking ability have been developed over the years. One of the first tests was the Watson-Glaser Critical Thinking Appraisal which was first developed in the late 1930s. It has been extensively revised over the years and has become the most widely used critical thinking test. There are two parallel forms of the Watson-Glaser

test, each testing for the same aspects of critical thinking. The primary audience for the test is high school to university level. The test consists of 80 multiple-choice items divided into the following five subtests: inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments.

The Cornell Critical Thinking Tests (Level X and Level Z) are the other tests which are used extensively. Level X is aimed at high school and first year university students, although it has been used for learners in grades four to six. Level Z is aimed at undergraduates, graduates, and adults. Level X consists of four sections: inductive inference, credibility of sources and observation, deduction, and assumption identification. Level Z includes these four sections and a further section on prediction and hypothesis testing related to inductive inference, meaning, and definition and unstated reasons.

Two of the more well-known commercially available tests are the Ross Test of Higher Cognitive Processes, and the New Jersey Test of Reasoning Skills. The Ennis-Weir Critical Thinking Essay Test is the only commercially available critical thinking test in essay format.

Norris and Ennis (1989:106) offer advice with regard to the construction of critical thinking tests and suggest that deduction, credibility of sources and observations, induction, and assumption identification should be included in any test of critical thinking. Both the Watson-Glaser and the Cornell critical thinking tests include these aspects (credibility not included in the Watson-Glaser test).

As there are very few subject-specific critical thinking tests and no test which measures critical thinking ability with regard to political issues, it was decided to develop such a test based on the suggestions of Norris and Ennis.

#### **5.4.1.1 The structure of the critical thinking test**

- ***Initial considerations***

When attempting to measure an adolescent's critical thinking abilities, certain considerations should be taken into account while constructing the measuring instrument.

Firstly, the instrument should not be too time-consuming. The questionnaire will probably be used in conjunction with other psychometric tests and should therefore not be too lengthy.

Secondly, the instrument should be flexible in that it should be possible to use it in an individual or group test situation.

Thirdly, the instrument should be of such a nature that any person with an educational or testing background should be able to both administer and interpret the instrument.

- ***Final structure***

The final test consisted of the following characteristics:

- Although critical thinking has many definitions and interpretations, certain specific skills have been identified as factors which contribute towards a description of critical thinking. These five major aspects of critical thinking as identified in chapter 2 and discussed in 5.4.1 above are: deduction, inductive inference, recognition of assumptions, credibility and problem solving. Most of the currently available commercial critical thinking tests include some or all of these five aspects.
- Items for each of these aspects of critical thinking were developed. These items were given to experts in the field of critical thinking, and finally the best 20 items were selected.
- An individual's score for each of the five aspects of critical thinking could be calculated, as well as his total score for the overall test.
- The questionnaire was translated into Afrikaans in order to accommodate both official mediums of instruction in South Africa.
- The final test was once again given to experts in the field of critical thinking in order to assess its cohesiveness and functionality.

#### 5.4.1.2 The development of items for the measuring instrument

Although the format of the test was based on the Watson-Glaser Thinking Appraisal and the Cornell Critical Thinking Tests, both of those tests were general tests. Specific items relating to current political issues had to be developed for each of the sections (see appendix D and H).

- ***Section one - Deduction***

In this section each exercise consists of two statements which are considered to be true without exception. Certain conclusions follow the statements and the testee has to decide which of the conclusions are true, false, or formulated so that one cannot tell.

- ***Section two - Credibility***

In this section the testee is given two statements regarding a specific issue and the testee has to decide which of the two statements is more credible, or whether they are equally credible. The motives and background of the speakers are very important in terms of their statements.

- ***Section three - Inductive inference***

In this section the testee is given certain "evidence" or facts which have to be accepted as being true. Several conclusions then follow the evidence. The testee then needs to state whether the given evidence supports the conclusion, goes against the conclusion, or neither supports nor goes against the conclusion.

- ***Section four - Recognition of assumptions***

In this section the testee is given a statement which is followed by several proposed assumptions. The testee has to decide whether the assumption is really being made or not.

- ***Section five - Problem solving***

In this final section the testee is presented with a number of dilemmas or problem situations and a number of possible solutions to each of the problems. The testee needs to decide whether the given solution is good, acceptable but not very good, or poor.

The breakdown of the items is as follows:

Section of the critical thinking test (CTT)	Examples	Item numbers
1. Deduction	ex 1-3	1-20
2. Credibility	ex 1	21-40
3. Inductive inference	ex 1-3	41-60
4. Recognition of assumptions	ex 1-2	61-80
5. Problem solving	ex 1-3	81-100

The entire test was given to recognised experts in the field in order to reach consensus regarding the nature and suitability of the specific items in the test. A number of items were either altered or replaced in accordance with the views of the consultants.

#### 5.4.2 POLITICAL KNOWLEDGE

In the light of the fact that South Africa's political face has changed so dramatically over the past four years, it was deemed necessary to create a new political knowledge questionnaire (PKQ). The test consists of 20 multiple-choice items which cover the South African political spectrum. The first ten questions relate to South Africa's political history. An example of these questions is:

- Why was 1994 a very important year politically for all South Africans?
  - a Nelson Mandela was released from prison.
  - b The first democratic elections were held.
  - c The Inkatha Freedom Party withdrew from negotiations.

The second part of the questionnaire consists of 10 questions which relate to current political issues. An example of these questions is:

- Is abortion legal in South Africa?
  - a Yes
  - b No
  - c Only in special circumstances.

The political knowledge items were also given to recognised experts in the field, and a number of items were once again altered or replaced.

### 5.4.3 PERSONALITY

The High School Personality Questionnaire (HSPQ) was developed in the USA by Raymond and Mary Cattell of the Institute for Personality and Ability Testing in Illinois. It was adapted for use in South Africa by the Institute for Psychometric Research of the Human Sciences Research Council and was standardised for age range 13 to 18 years. The reliability and validity of the test are as follows:

The test-retest reliability coefficient for forms A and B ranged from a low of 0,51 to a high of 0,91 for all 14 factors, and for the age group 15 -17 years for English and Afrikaans speaking boys and girls.

The construct validity ranged from a low of 0,60 to a high of 0,84 for the 14 factors for the same sample of boys and girls.

This particular test was chosen for the following reasons:

- it is the most commonly used personality test for adolescents in South Africa;
- it is standardised for both official languages of instruction;
- the reliability and validity are both adequate.

### 5.4.4 INTELLECTUAL POTENTIAL

The General Scholastic Aptitude Test was used as a measure of intellectual potential. The GSAT is normally carried out during the child's senior primary phase. The GSAT is a group test constructed to measure academic potential or scholastic ability. It consists of seven sub-tests which determine the problem solving ability and reasoning of learners. There are two alternate forms of the test - Forms A and B. The Scholastic Aptitude score (SA) has a normalized standard scale with a mean of 100 and a standard deviation of 15 (the SA used

to be referred to as the IQ or intelligence quotient). There is also a normalized stanine scale for each sub-test. It provides standard scores from 1 to 9 with a mean of 5 and a standard deviation of 1,96.

The reliability of the GSAT using the test-retest method was determined to be 0,94 for form A and 0,96 for Form B.

The validity of the GSAT was determined by finding the inter-correlations of the sub-tests and correlations with other intelligence tests. Although the content of the GSAT sub-tests differed, the aim of each test was to determine the testees' problem solving ability. All sub-tests were strongly correlated with one another. The correlations varied from 0,661 to 0,813.

For the purposes of this investigation, the actual GSAT scores of the subjects who had done the test during their senior primary phase, were obtained from their Ed-lab (permanent cumulative record) cards.

#### **5.4.5 ACADEMIC ACHIEVEMENT**

In order to assess the subjects' academic achievement, it was decided to use their final grade 9 results. Their aggregate marks were used which in essence was the average of their results of all their academic subjects. Although there were variations in the specific subjects between some of the schools, the basic subjects such as Languages, History, Geography, Mathematics, Science and Biology were common to all the schools. These results were not accessible at all the schools, but a good cross-reference of results was obtained.

#### **5.4.6 PROCEDURE FOLLOWED DURING THE TESTING PHASE**

The subjects selected for the sample first received Part A which contained the Political Knowledge items (refer to appendix A and E). They also received a separate answer sheet (refer to appendix B and F) which also contained their biographical details, and a glossary (appendix C and G). The glossary which contained an explanation of some of the terms, was included as the intention of the test was not to test their language ability. The subjects were

then asked to follow the directions given to them on their questionnaires as they were read aloud to them. The first example was then read aloud and discussed. The subjects then proceeded with the items of section one. No time limit was imposed. When all the subjects had completed Part A, the questionnaire was collected and Part B which consisted of sections one to five (refer to appendix D and H), was handed out. Part A had to be collected as Part B contained some of the answers to items in Part A. The directions and examples for Part B, section 1 were then read aloud and discussed. The subjects then proceeded with section two. This pattern was then followed for all the sections. No time limit was imposed for any of the sections. Parts A and B together took approximately 90 minutes to complete.

The HSPQ was administered to all the subjects at one of the schools (as discussed in paragraph 5.3). The answer sheets and question booklets were handed out and the instructions were read aloud by the tester. There was no time limit for the HSPQ and all the subjects completed the test within 45 minutes.

All the answer sheets were then checked very carefully, and the information was then read into the computer for analysis.

Chapter six contains a detailed analysis of the results of the empirical investigation.

# CHAPTER SIX

## RESULTS OF THE INVESTIGATION

### 6.1 INTRODUCTION

In chapter five the method of the empirical investigation was described. The investigation revolved around the critical thinking of adolescents with regard to political issues. Various hypotheses relating to the factors which may have an influence on critical thinking were formulated, and a critical thinking test (CTT) was developed, as was a political knowledge questionnaire (PKQ).

The CTT and PKQ were first submitted to an item analysis and norms were then calculated for the sub-sections as well as the total of the test. The hypotheses were then tested. This chapter contains the results and statistics of these tests.

### 6.2 ITEM ANALYSIS OF THE PKQ AND THE CTT

The CTT consists of five sections, namely, deduction, inductive inference, recognition of assumptions, credibility, and problem solving (refer to paragraph 5.4.1.2). An item analysis was done for each of the sections as well as for the whole test. An item analysis was also performed for the PKQ. The purpose of the item analysis was to establish whether each of the items made a contribution to the total of a particular section. In the case where an item contributed negatively to the total, that item could be left out.

An aspect of the item analysis which should be borne in mind is the Alpha Reliability coefficient. The reliability coefficient is calculated for each of the sections in the event that all the items would be retained. The reliability coefficient is also calculated for the case where a specific item is left out. On the basis of the item-total correlation, and the reliability coefficient, it is then decided whether a specific item should be retained or left out from the final test.

Tables 6.1 - 6.7 contain the results of the item analysis:

TABLE 6.1 ITEM ANALYSIS OF THE PKQ		
No. of subjects		748
No. of items		20
Alpha reliability coefficient		0,48
Mean		10,02
Standard deviation		2,85
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
1	0,26	0,45
2	0,08	0,48
3	0,13	0,47
4	0,26	0,45
5	0,16	0,47
6	0,13	0,47
7	0,10	0,48
8	0,01	0,49
9	0,14	0,47
10	0,21	0,46
11	0,29	0,45
12	0,01	0,49
13	0,19	0,46
14	0,09	0,44
15	0,19	0,46
16	0,09	0,48
17	0,06	0,49
18	-0,06	0,51
19	0,15	0,47
20	0,31	0,44

As can be seen from table 6.1 above, only item 18 contributed negatively to the total of the PKQ. Item 18 was subsequently left out of the final test.

TABLE 6.2 ITEM ANALYSIS OF THE CTT: DEDUCTION		
No. of subjects		748
No. of items		20
Alpha reliability coefficient		0,57
Mean		8,97
Standard deviation		3,05
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
1	-0,03	0,59
2	0,30	0,54
3	0,09	0,57
4	0,14	0,57
5	0,13	0,57
6	0,17	0,56
7	0,28	0,55
8	0,13	0,57
9	0,21	0,56
10	0,22	0,56
11	0,02	0,58
12	0,20	0,56
13	0,30	0,54
14	0,16	0,56
15	0,18	0,56
16	0,35	0,53
17	0,16	0,56
18	0,34	0,54
19	0,30	0,54
20	0,13	0,57

As is reflected in table 6.2 above, only item 1 contributed negatively to the total of the section - Deduction. This item was omitted from the final test.

No. of subjects		748
No. of items		20
Alpha reliability coefficient		0,24
Mean		7,07
Standard deviation		2,22
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
21	0,10	0,23
22	0,07	0,23
23	-0,07	0,28
24	-0,01	0,26
25	-0,01	0,24
26	0,03	0,24
27	0,08	0,23
28	-0,12	0,29
29	0,20	0,19
30	0,20	0,18
31	0,19	0,19
32	0,12	0,21
33	0,08	0,23
34	-0,07	0,28
35	0,10	0,22
36	0,04	0,24
37	0,11	0,22
38	0,11	0,22
39	0,10	0,22
40	-0,01	0,26

Table 6.3 indicates that six items (23, 24, 25, 28, 34, and 40) contributed negatively to the total of the section Credibility. A possible reason for this is that the testees found it difficult to assess the motives and possibly ulterior motives of the people or institutions used in the examples. These six items were omitted from the final test.

**TABLE 6.4 ITEM ANALYSIS OF THE CTT: INDUCTIVE INFERENCE**

No. of subjects		748
No. of items		20
Alpha reliability coefficient		0,34
Mean		8,57
Standard deviation		2,58
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
41	0,13	0,31
42	0,23	0,29
43	-0,05	0,36
44	0,13	0,32
45	0,16	0,31
46	0,01	0,34
47	0,09	0,33
48	0,07	0,33
49	0,16	0,30
50	0,18	0,30
51	0,13	0,31
52	0,20	0,30
53	0,15	0,31
54	0,02	0,34
55	0,16	0,31
56	-0,05	0,36
57	-0,12	0,38
58	0,09	0,32
59	0,05	0,34
60	0,06	0,33

As can be seen in table 6.4, three items contributed negatively to the total of the Inductive Inference section (43, 56, and 57). These three items were omitted from the final test.

**TABLE 6.5 ITEM ANALYSIS OF THE CTT: RECOGNITION OF ASSUMPTIONS**

No. of subjects	748	
No. of items	20	
Alpha reliability coefficient	0,34	
Mean	11,16	
Standard deviation	2,53	
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
61	0,11	0,32
62	0,16	0,31
63	0,04	0,34
64	0,03	0,34
65	0,07	0,33
66	-0,08	0,37
67	0,03	0,34
68	0,03	0,34
69	0,09	0,33
70	0,04	0,34
71	0,07	0,33
72	0,23	0,29
73	0,27	0,28
74	0,06	0,34
75	0,13	0,32
76	0,24	0,29
77	0,10	0,33
78	0,20	0,30
79	0,14	0,31
80	-0,09	0,38

Table 6.5 indicates that items 66 and 80 contributed negatively to the total of the Recognition of Assumptions section. These two items were left out of the final test.

TABLE 6.6 ITEM ANALYSIS OF THE CTT: PROBLEM SOLVING		
No. of subjects		748
No. of items		20
Alpha reliability coefficient		0,23
Mean		5,76
Standard deviation		2,20
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
81	-0,17	0,30
82	0,01	0,23
83	0,20	0,17
84	0,03	0,23
85	-0,01	0,25
86	0,11	0,21
87	-0,07	0,26
88	-0,04	0,25
89	0,11	0,21
90	0,22	0,17
91	-0,08	0,27
92	0,17	0,19
93	0,08	0,22
94	-0,10	0,28
95	0,10	0,21
96	0,28	0,15
97	-0,04	0,25
98	-0,01	0,25
99	0,29	0,14
100	0,10	0,21

Table 6.6 indicates that eight items contributed negatively to the total of the Problem Solving section. Although this figure is high, the following should be borne in mind:

- Many of the items are emotionally-laden, and as a result the testees found it difficult to remain objective in answering the questions.
- Very few critical thinking questionnaires contain problem solving items, although problem solving is acknowledged as being one of the major aspects of critical thinking; this test is a first attempt at structuring a longer Problem Solving test. Although eight items were discarded for the final test, the remaining twelve items still serve as a relatively reliable section of the CTT.

No. of subjects	748	
No. of items	100	
Alpha reliability coefficient	0,68	
Mean	51,55	
Standard deviation	9,91	
ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
1	-0,03	0,69
2	0,30	0,68
3	0,09	0,68
4	0,12	0,68
5	0,13	0,68
6	0,15	0,68
7	0,24	0,68
8	0,19	0,68
9	0,21	0,68
10	0,26	0,68
11	0,03	0,69
12	0,22	0,68
13	0,24	0,68
14	0,13	0,68
15	0,20	0,68

16	0,41	0,67
17	0,16	0,68
18	0,32	0,67
19	0,27	0,68
20	0,15	0,68
21	0,14	0,68
22	0,14	0,68
23	-0,03	0,69
24	0,21	0,68
25	0,27	0,68
26	0,07	0,68
27	0,05	0,69
28	-0,19	0,69
29	0,08	0,68
30	0,16	0,68
31	0,17	0,68
32	0,02	0,69
33	0,14	0,68
34	-0,14	0,69
35	0,30	0,68
36	0,24	0,68
37	0,03	0,69
38	0,32	0,67
39	0,02	0,69
40	-0,11	0,69
41	0,09	0,68
42	0,21	0,68
43	0,03	0,69
44	0,15	0,68
45	0,28	0,68
46	0,05	0,69
47	0,21	0,68
48	0,09	0,68

49	0,17	0,68
50	0,24	0,68
51	0,18	0,68
52	0,27	0,68
53	0,23	0,68
54	-0,01	0,69
55	0,28	0,68
56	-0,10	0,69
57	-0,17	0,69
58	0,06	0,68
59	0,04	0,69
60	0,07	0,68
61	0,03	0,69
62	0,22	0,68
63	0,11	0,68
64	0,05	0,68
65	-0,03	0,69
66	-0,11	0,69
67	0,11	0,68
68	0,11	0,68
69	0,14	0,68
70	0,06	0,68
71	0,08	0,68
72	0,21	0,68
73	0,19	0,68
74	0,08	0,68
75	0,16	0,68
76	0,27	0,68
77	0,11	0,68
78	0,19	0,68
79	0,14	0,68
80	-0,10	0,69
81	-0,09	0,69

82	0,06	0,68
83	0,28	0,68
84	0,11	0,68
85	-0,03	0,69
86	0,03	0,69
87	-0,01	0,69
88	-0,05	0,69
89	0,08	0,68
90	0,31	0,68
91	-0,12	0,69
92	0,30	0,68
93	0,15	0,68
94	-0,06	0,69
95	0,19	0,68
96	0,27	0,68
97	0,08	0,68
98	0,01	0,69
99	0,36	0,67
100	0,12	0,68

Although twenty items were omitted from the final test, leaving 80 items, a sufficient number still remain in order for the test to be regarded as reliable.

### 6.3 RELIABILITY

As both the PKQ and the CTT could only be administered once for practical reasons, the test-retest method of determining the reliability could not be used. In order to determine the reliability, both the Cronbach Alpha Coefficient and the Split-half formula were used.

### 6.3.1 PKQ

The reliability of the PKQ was then recalculated after the items which contributed negatively to the reliability of the PKQ were omitted. Both the Cronbach Alpha Coefficient and the Split-half formulae were used. These results are reflected in table 6.8.

### 6.3.2 CTT

The reliability of each of the sections of the CTT as well as for the total CTT was also recalculated using the Cronbach Alpha Coefficient and the Split-half method after the negative items were omitted. These results are shown in table 6.8:

<b>Test/section</b>	<b>No. of items</b>	<b>Cronbach</b>	<b>Split-half</b>
PKQ	18	0,53	0,50
Deduction	18	0,60	0,64
Credibility	14	0,39	0,50
Inductive inference	15	0,46	0,35
Recognition of assumptions	18	0,41	0,56
Problem solving	11	0,50	0,48
CTT (Total)	76	0,79	0,81

The reliability of each of the sub-tests remains relatively low, but this is as a result of the fact that fewer than twenty items were included for each section. If one were to expand the length of each of the sections, the reliability would rise commensurately, but this would make the overall test too long.

As can be seen in table 6.8, the overall reliability of the CTT is 0,81. A value of 0,80 and higher could be said to be indicative of a reliable test. The reliability of the PKQ is lower but this is a direct result of the fact that there are only 18 items in the test.

## 6.4 VALIDITY OF THE PKQ AND THE CTT

Validity refers to whether the items in the test do in fact test what they purport to test. Although no specific figure is arrived at regarding the content validity of the test, it was considered in the following ways:

- the specific sections of the test (with the exception of problem solving) were based on the sections of similar commercially available tests (see paragraph 5.4.1);
- the specific items were constructed strictly according to the definition of each section;
- the original items were referred to recognised experts in the field, and based on their recommendations were either replaced, altered or accepted (see paragraph 5.4.1.1).

## 6.5 DETERMINING THE NORMS OF THE PKQ AND THE CTT

Stanines (standard scores divided into nine categories as in table 6.9) were used to determine the norms. To calculate the stanines for the PKQ and each of the sections of the CTT and the total CTT, the cumulative percentages for each of the sections and the total CTT were obtained. The stanines obtained are reflected in table 6.10 to 6.16.

Stanines	Limits	% of area
9	+ $\infty$ to +1,75z	4
8	+1,75z to +1,25z	7
7	+1,25z to +0,75z	12
6	+0,75z to +0,25z	17
5	+0,25z to -0,25z	20
4	-0,25z to -0,75z	17
3	-0,75z to -1,25z	12
2	-1,25z to -1,75z	7
1	-1,75z to - $\infty$	4

(Mulder, 1989:205)

**TABLE 6.10 TRANSFORMATION OF RAW SCORES INTO  
STANINES: PKQ**

Raw score	Frequency	Cumulative %	Stanine
2	1	0,1	1
3	5	0,8	1
4	9	2,0	1
5	26	5,5	2
6	40	10,8	2
7	64	19,4	3
8	80	30,1	4
9	107	44,4	5
10	94	57,0	5
11	91	69,1	6
12	80	79,8	7
13	69	89,0	7
14	34	93,6	8
15	26	97,1	9
16	15	99,1	9
17	6	99,9	9
18	1	100,0	9

<b>Table 6.11 TRANSFORMATION OF RAW SCORES INTO</b>			
<b>STANINES: CTT</b>		<b>Section: Deduction</b>	
<b>Raw score</b>	<b>Frequency</b>	<b>Cumulative %</b>	<b>Stanine</b>
1	1	0,1	1
2	2	0,4	1
3	14	2,3	1
4	31	6,4	2
5	44	12,3	3
6	65	21,0	4
7	87	32,6	4
8	108	47,1	5
9	102	60,7	6
10	81	71,5	6
11	55	78,9	7
12	56	86,4	7
13	34	90,9	8
14	30	94,9	8
15	20	97,6	9
16	14	99,5	9
17	4	100,0	9

<b>TABLE 6.12 TRANSFORMATION OF RAW SCORES INTO</b>			
<b>STANINES: CTT</b>			<b>Section: Credibility</b>
<b>Raw score</b>	<b>Frequency</b>	<b>Cumulative %</b>	<b>Stanine</b>
1	1	0,1	1
2	3	0,5	1
3	23	3,6	1
4	62	11,9	3
5	103	25,7	4
6	122	42,0	5
7	138	60,4	6
8	113	75,5	6
9	71	85,0	7
10	61	93,2	8
11	25	96,5	9
12	17	98,8	9
13	7	99,7	9
14	2	100,0	9

TABLE 6.13 TRANSFORMATION OF RAW SCORES INTO			
STANINES: CTT		Section: Inductive inference	
Raw score	Frequency	Cumulative %	Stanine
2	1	0,1	1
3	6	0,9	1
4	24	4,1	2
5	51	11,0	2
6	86	22,5	3
7	110	37,2	4
8	107	51,5	5
9	104	65,4	6
10	90	77,4	7
11	71	86,9	7
12	40	92,2	8
13	26	95,7	8
14	20	98,4	9
15	9	99,6	9
16	3	100,0	9

**TABLE 6.14 TRANSFORMATION OF RAW SCORES INTO  
STANINES: CTT      Section: Recognition of assumptions**

Raw score	Frequency	Cumulative %	Stanine
3	2	0,3	1
4	3	0,7	1
5	10	2,0	1
6	9	3,2	1
7	35	7,9	2
8	46	14,0	3
9	84	25,3	4
10	110	40,0	4
11	111	54,8	5
12	100	68,2	6
13	101	81,7	7
14	70	91,0	8
15	42	96,7	9
16	17	98,9	9
17	7	99,9	9
18	1	100,0	9

TABLE 6.15 TRANSFORMATION OF RAW SCORES INTO

STANINES: CTT

Section: Problem solving

Raw score	Frequency	Cumulative %	Stanine
0	2	0,3	1
1	11	1,7	1
2	47	8,0	2
3	64	16,6	3
4	103	30,3	4
5	117	46,0	5
6	116	61,5	6
7	97	74,5	6
8	106	88,6	7
9	64	97,2	9
10	19	99,7	9
11	2	100,0	9

TABLE 6.16 TRANSFORMATION OF RAW SCORES INTO

STANINES: TOTAL CTT

Raw score	Frequency	Cumulative %	Stanine
27	1	0,1	1
29	2	0,4	1
30	1	0,5	1
32	3	0,9	1
33	4	1,5	1
34	6	2,3	1
35	4	2,8	1
36	8	3,9	1
37	13	5,6	2
38	13	7,4	2
39	9	8,6	2

40	22	11,5	3
41	22	14,4	3
42	28	18,2	3
43	21	21,0	3
44	31	25,1	4
45	39	30,3	4
46	28	34,1	4
47	32	38,4	4
48	23	41,4	5
49	41	46,9	5
50	28	50,7	5
51	29	54,5	5
52	23	57,6	5
53	33	62,0	6
54	30	66,0	6
55	25	69,4	6
56	19	71,9	6
57	14	73,8	6
58	22	76,7	6
59	17	79,0	7
60	19	81,6	7
61	14	83,4	7
62	14	85,3	7
63	20	88,0	7
64	8	89,0	7
65	7	90,0	8
66	8	91,0	8
67	8	92,1	8
68	11	93,6	8
69	15	95,6	8
70	3	96,0	8
71	3	96,4	9
72	3	96,8	9

73	4	97,3	9
74	3	97,7	9
75	3	98,1	9
76	3	98,5	9
78	2	98,8	9
79	5	99,5	9
80	4	100,0	9

It is possible to establish whether an individual's score for the PKQ or for the CTT (sub-sections and total) is below-average, average, or above-average. As a general rule it is understood that the bottom three stanines (1,2, and 3) are regarded as below-average, the next three stanines (4,5, and 6) as average, and the top three stanines (7, 8, and 9) as above-average (Mulder, 1989:205). The classification of all the scores is given in table 6.17:

<b>Section</b>	<b>Below average</b>	<b>Average</b>	<b>Above average</b>
PKQ	0 - 7	8 - 11	12 - 18
Deduction	0 - 5	6 - 10	11 - 17
Credibility	0 - 4	5 - 8	9 - 14
Inductive inference	0 - 6	7 - 9	10 - 16
Recognition of assumptions	0 - 8	9 - 12	13 - 18
Problem solving	0 - 3	4 - 7	8 - 11
Total CTT	0 - 43	44 - 58	59 - 100

## 6.6 TESTING OF THE HYPOTHESES

### 6.6.1 HYPOTHESIS 1

With regard to Hypothesis 1 as stated in paragraph 5.2.1, the following null hypothesis was tested:

**There is no significant difference between the critical thinking abilities of adolescents from different cultural backgrounds.**

**This hypothesis was stated for each section of the CTT as well as the total CTT.**

The subjects were divided into three cultural groups based on their home language. The three groups were:

- subjects whose home language was English - group 1;
- subjects whose home language was Afrikaans - group 2;
- subjects whose language was an indigenous African language - group 3.

The average score for each section of the CTT was calculated, as well as the average score for the total of the CTT, for each of the three groups.

The F test was then used in order to determine whether there were significant differences between the average scores of the three groups with regard to each section of the CTT as well as for the total of the CTT, or not.

#### 6.6.1.1 Comparison between the three groups with regard to deduction

The average Deduction score for each of the three groups was calculated. In order to compare these averages, an analysis of variance was carried out. The results appear in table 6.18:

Group	N	Mean	S
1	163	11,10	2,94
2	150	9,67	3,02
3	435	7,94	2,59

$F(2, 745) = 83,8$        $p < 0,01$

The null hypothesis can be rejected at the 1% level of significance. There is a significant difference between the average deduction scores of the three groups.

In order to determine between which groups this difference exists, the t values were calculated. These appear in table 6.19:

Groups	Difference between the means	t value	Significance
1 - 2	1,43	$t > 2,4$	$p < 0,05$
1 - 3	3,16	$t > 2,4$	$p < 0,05$
2 - 3	1,73	$t > 2,4$	$p < 0,05$

There appears to be a significant difference between groups 1 and 2, 1 and 3, as well as 2 and 3. These results indicate that with regard to deduction ability in a political context, the subjects whose home language was English (the majority of whom were "white" people) scored significantly higher than those subjects whose home language was Afrikaans (the majority of whom were "white"), and also significantly higher than those subjects whose home language was an African language. The deduction ability of those subjects whose home language was Afrikaans was also significantly higher than those whose home language was an African language.

### 6.6.1.2 Comparison between the three groups with regard to credibility

The average Credibility score for each of the three groups was calculated. In order to compare these averages, an analysis of variance was carried out. The results appear in table 6.20:

Group	N	Mean	S
1	163	7,96	2,41
2	150	7,13	2,39
3	435	6,71	1,99

$$F(2, 745) = 19,71 \quad p < 0,01$$

The null hypothesis can be rejected at the 1% level of significance. There is a significant difference between the average credibility scores of the three groups.

In order to determine between which groups this difference exists, the t values were calculated. These appear in table 6.21:

Groups	Difference between the means	t value	Significance
1 - 2	0,83	t > 2,4	p < 0,05
1 - 3	1,25	t > 2,4	p < 0,05
2 - 3	0,42	t < 2,4	p > 0,05

There appears to be a significant difference between groups 1 and 2, as well as 1 and 3. These results indicate that with regard to credibility in a political context, the subjects whose home language was English (the majority of whom were "white" people) scored significantly higher than those subjects whose home language was Afrikaans (the majority of whom were "white"), and also significantly higher than those subjects whose home language was an African language.

### 6.6.1.3 Comparison between the three groups with regard to inductive inference

The average Inductive inference score for each of the three groups was calculated. In order to compare these averages, an analysis of variance was carried out. The results appear in table 6.22:

Group	N	Mean	S
1	163	9,76	2,81
2	150	8,23	2,80
3	435	8,24	2,27

$$F(2, 745) = 23,44 \quad p < 0,01$$

The null hypothesis can be rejected at the 1% level of significance. There is a significant difference between the average inductive inference scores of the three groups.

In order to determine between which groups this difference exists, the t values were calculated. These appear in table 6.23:

Groups	Difference between the means	t value	Significance
1 - 2	1,53	t > 2,4	p < 0,05
1 - 3	1,52	t > 2,4	p < 0,05
2 - 3	-0,01	t < 2,4	p > 0,05

There appears to be a significant difference between groups 1 and 2, as well as 1 and 3. These results indicate that the inductive inference ability in a political context, of the subjects whose home language was English (the majority of whom were "white" people) is significantly

higher than that of the subjects whose home language was Afrikaans (the majority of whom were "white"), and also significantly higher than those subjects whose home language was an African language.

#### 6.6.1.4 Comparison between the three groups with regard to recognition of assumptions

The average recognition of assumption score for each of the three groups was calculated. In order to compare these averages, an analysis of variance was carried out. The results appear in table 6.24:

Group	N	Mean	S
1	163	12,13	2,88
2	150	11,03	2,92
3	435	10,83	2,13

$$F(2, 745) = 16,36 \quad p < 0,01$$

The null hypothesis can be rejected at the 1% level of significance. There is a significant difference between the average recognition of assumption scores of the three groups.

In order to determine between which groups this difference exists, the t values were calculated. These appear in table 6.25:

Groups	Difference between the means	t value	Significance
1 - 2	1,10	t > 2,4	p < 0,05
1 - 3	1,30	t > 2,4	p < 0,05
2 - 3	0,20	t < 2,4	p > 0,05

There appears to be a significant difference between groups 1 and 2, as well as 1 and 3. These results indicate that the ability to recognize assumptions in a political context, of the subjects whose home language was English (the majority of whom were "white" people) is significantly higher than that of the subjects whose home language was Afrikaans (the majority of whom were "white"), and also significantly higher than those subjects whose home language was an African language.

#### 6.6.1.5 Comparison between the three groups with regard to problem solving

The average problem solving score for each of the three groups was calculated. In order to compare these averages, an analysis of variance was carried out. The results appear in table 6.26:

<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>S</b>
1	163	7,02	1,98
2	150	5,75	2,23
3	435	5,28	2,08

$$F(2, 745) = 41,34 \quad p < 0,01$$

The null hypothesis can be rejected at the 1% level of significance. There is a significant difference between the average problem solving scores of the three groups.

In order to determine between which groups this difference exists, the t values were calculated. These appear in table 6.27:

<b>Groups</b>	<b>Difference between the means</b>	<b>t value</b>	<b>Significance</b>
1 - 2	1,27	$t > 2,4$	$p < 0,05$
1 - 3	1,74	$t > 2,4$	$p < 0,05$
2 - 3	0,47	$t < 2,4$	$p > 0,05$

There appears to be a significant difference between groups 1 and 2, as well as 1 and 3. These results indicate that the problem solving ability in a political context, of the subjects whose home language was English (the majority of whom were "white" people) is significantly higher than that of the subjects whose home language was Afrikaans (the majority of whom were "white"), and also significantly higher than those subjects whose home language was an African language.

#### 6.6.1.6 Comparison between the three groups with regard to the total of the CTT

The average score for each of the three groups was calculated for the CTT. In order to compare these averages, an analysis of variance was carried out. The results appear in table 6.28:

<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>S</b>
1	163	58,80	9,11
2	150	51,33	11,73
3	435	48,91	8,00

$$F(2, 745) = 70,16 \quad p < 0,01$$

The null hypothesis can therefore be rejected at the 1% level of significance. There is a significant difference between the average CTT total scores of the three groups.

In order to determine between which groups this difference exists, the t values were calculated. These appear in table 6.29:

<b>TABLE 6.29 T TEST ANALYSIS OF THE CTT TOTAL</b>			
<b>Groups</b>	<b>Difference between the means</b>	<b>t value</b>	<b>Significance</b>
1 - 2	7,48	$t > 2,4$	$p < 0,05$
1 - 3	9,90	$t > 2,4$	$p < 0,05$
2 - 3	2,42	$t > 2,4$	$p < 0,05$

There appears to be a significant difference between groups 1 and 2, 1 and 3, as well as 2 and 3. These results indicate that the critical thinking ability, in a political context, of the subjects whose home language was English (the majority of whom were "white" people) is significantly higher than that of the subjects whose home language was Afrikaans (the majority of whom were "white"), and also significantly higher than those subjects whose home language was an African language. The critical thinking ability of those subjects whose home language was Afrikaans was also significantly higher than those whose home language was an African language.

#### **6.6.1.7 Discussion of the results with regard to hypothesis 1**

The results of the investigation as stated in paragraph 6.6.1.6 indicate that cultural factors do play a role in the critical thinking of adolescents. Notwithstanding the fact that these results relate to critical thinking in a political context, they appear to be in agreement with the results of Perkins, Jay and Tishman (1993:16), Rice (1996:157), and Serpell and Boykin (1994:371), who also found that cultural factors played a role in the critical thinking ability of adolescents. However, these results require closer analysis as South Africa's unique history and educational background should also be taken into account.

The first point to be noted was that the results of the English speaking group which consisted mainly of white people, were significantly higher than that of the Afrikaans (also whites) and African language groups for all the subtests and the total score. The Afrikaans group was also significantly higher than the African language group for the Deduction subtest and also for the total score. These results were in accordance with expectations, as the effects of generations of a poor standard of education for black people in South Africa are still evident in the schools of today. Basic education levels are still very poor in most black schools, so it was to be expected that the higher-order thinking skills of the black grade tens used in this study would be weaker than their white peers. The Deduction, Inductive inference, and Problem solving subtests would appear to be the most academic or "intellectual" type tests, therefore one would expect that the Afrikaans group would achieve significantly higher results than the African language group for these subtests. This was found to be true only for the Deduction subtest.

With regard to the results of the two "white" groups, one would expect that their results would be similar as their educational backgrounds are very similar. However, the English group obtained significantly higher results for all the subtests as well as for the total. The following are offered as possible explanations for these results:

- The Afrikaner nation has traditionally been a people who have great respect for leaders or people in senior positions. Their loyalty and respect has often been described as being both blind and unquestioning. This has led to a situation where the ability to think questioningly and critically for themselves has been severely hampered. On the other hand the English-speaking whites, possibly as a result of their Euro-centric backgrounds, are far more critical and questioning in their approach to authority or people in senior or leadership positions.
- The Afrikaner nation recently lost political control of the country and they now play a very limited role in the political makeup of South Africa. This has led to a situation where many Afrikaner families are apathetic and uninterested in politics. This situation seems to have spread to the Afrikaner youth as their lack of interest in political matters may be one of the reasons for their poor performance in the critical thinking test.

## 6.6.2 HYPOTHESIS 2

With regard to hypothesis 2 as stated in paragraph 5.2.2, the following null hypothesis was tested:

There is no significant difference between the critical thinking abilities of boys and girls.

This hypothesis was stated for each section of the CTT as well as for the total CTT.

All 748 subjects were used in the testing of this hypothesis. Group 1 represents 361 boys, while group 2 represents 387 girls. To determine whether the average scores of the groups differed significantly with regard to each of the sections of the CTT and the total CTT, the t-test was used. The results appear in table 6.30:

Variable	Group	N	Mean	S	t	df	p
Deduction	1	361	9,10	2,8	1,084	746	p>0,05
	2	387	8,86	3,2			
Credibility	1	361	7,04	2,3	0,365	746	p>0,05
	2	387	7,10	2,2			
Inductive inference	1	361	8,35	2,5	2,274	746	p<0,05
	2	387	8,78	2,6			
Recognition of assumptions	1	361	10,88	2,6	2,931	746	p<0,05
	2	387	11,42	2,5			
Problem solving	1	361	5,58	2,1	2,158	746	p<0,05
	2	387	5,92	2,2			
Total	1	361	51,19	9,6	0,970	746	p>0,05
	2	387	51,89	10,2			

According to table 6.30, a t value of 2,274 was obtained for the variable inductive inference, with p<0,05. The null hypothesis can be rejected at the 5% level of significance. This implies

that a significant difference between the inductive inference skills of boys and girls exists, with girls obtaining a higher average. The null hypothesis was also rejected for recognition of assumptions and problem solving at the 5% level of significance. In both cases the means of the girls were higher than the boys.

The null hypothesis could not be rejected for the total score of the CTT which implies that there is no overall difference between the critical thinking skills of boys and girls in a political context.

Cobb (1992:159) states that differences between males and females in verbal reasoning persist from adolescence and throughout adulthood, with females outperforming males. One would therefore expect that females would be the leaders in fields or careers where verbal reasoning skills are of great importance, while males would fill the positions requiring technical, practical or non-verbal reasoning skills. Politics is a field where verbal reasoning skills would appear to be paramount. However, society does not reflect this as there are very few female political leaders worldwide. This may be the reason why the girls in this sample did not achieve significantly higher results than the boys, in that South African society has always been male-dominated, both in the white and black cultural groups. This includes the political sphere, and therefore it would appear that the low level of interest in, and expected political participation of South African girls has hampered their results in the critical thinking test. In paragraph 6.6.11 it was found that there was a significant difference between the levels of political knowledge of boys and girls with the boys being higher. One could therefore expect that their critical thinking in a political context would also be higher. However, the mean PKQ score for the boys was 10,25 which translates to a stanine of 5 and is therefore an average score. If the mean score had been a high score or at least an above average score, then one could expect the critical thinking scores to also be higher.

Girls did perform better in skills such as inductive inference, recognition of assumptions and problem solving in the current study, which would appear to be in accordance with Anastasi (1982:125) who found that females perform better than males only in certain specific tasks related to critical thinking.

### 6.6.3 HYPOTHESIS 3

With regard to hypothesis 3 as stated in paragraph 5.2.3, the following null hypothesis was tested:

**There is no significant difference between the critical thinking abilities of adolescents from a rural environment and those from an urban environment.**

**This hypothesis was also stated for all the sections of the CTT as well as for the total of the CTT.**

All 748 subjects were used in the testing of this hypothesis. Group 1 represents 536 subjects from an urban environment, while group 2 represents 212 subjects from a rural environment. To determine whether the average scores of the groups differed significantly with regard to each of the sections of the CTT and the total CTT, the t test was used. The results appear in table 6.31:

<b>Variable</b>	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>S</b>	<b>t</b>	<b>df</b>	<b>p</b>
Deduction	1	536	9,08	2,8	1,480	746	p>0,05
	2	212	8,71	3,6			
Credibility	1	536	6,91	2,2	3,094	746	p<0,05
	2	212	7,47	2,3			
Inductive inference	1	536	8,45	2,6	2,045	746	p<0,05
	2	212	8,88	2,6			
Recognition of assumptions	1	536	11,08	2,6	1,221	746	p>0,05
	2	212	11,33	2,4			
Problem solving	1	536	5,81	2,2	1,112	746	p>0,05
	2	212	5,61	2,2			
Total	1	536	51,52	9,3	0,143	746	p>0,05
	2	212	51,63	11,4			

According to table 6.31, a t value of 3,094 was obtained for the variable credibility, with  $p < 0,05$ . The null hypothesis can be rejected at the 5% level of significance. This implies that there is a significant difference between the critical thinking skills of adolescents living in urban and rural areas with regard to credibility. The null hypothesis was also rejected for inductive inference. These results were contrary to expectations as the rural subjects scored higher than the urban subjects. It may be that the actual standard of education (notwithstanding the poorer facilities and equipment) in the rural black schools is in some instances higher than that of the urban schools.

The null hypothesis could not be rejected for the total score of the CTT which implies that there is no difference between the critical thinking skills of adolescents living in rural or urban areas in a political context. These results contradict the results of Youniss and Dean (1974:1030) who found that the degree of urbanization of the child relates to a higher degree of formal thought. In paragraph 6.6.12 it was found that adolescents living in urban areas had a significantly higher level of political knowledge than those adolescents living in rural areas. Once again as in the case of boys and girls, one would expect the urban adolescents to be significantly better critical thinkers in a political context. However, the mean PKQ score for the urban adolescents was 10,18 which translates to a stanine of 5 and is therefore an average score. If the mean score had been a high score or at least an above average score, then one could expect the critical thinking scores to also be higher.

#### **6.6.4 HYPOTHESIS 4**

With regard to hypothesis 4 as stated in paragraph 5.2.4, the following null hypothesis was tested:

**There is no significant positive correlation between intellectual potential and critical thinking ability.**

**This hypothesis was stated for each of the sections of the CTT as well as the total CTT.**

To test this hypothesis, a Pearson Product-Moment correlation was calculated between the scores of each section of the CTT and IQ, as well as between the total of the CTT and IQ. The GSAT score of 155 subjects was used as an IQ score. The results can be seen in table 6.32:

Variable	N	Mean	S	Correlation with IQ	p
IQ	155	100,21	12,9		
Deduction	748	8,97	3,0	0,51	p<0,05
Credibility	748	7,07	2,2	0,26	p<0,05
Inductive inference	748	8,57	2,6	0,49	p<0,05
Recognition of assumptions	748	11,16	2,5	0,13	p>0,05
Problem solving	748	5,76	2,2	0,40	p<0,05
Total	748	51,55	9,9	0,54	p<0,05

A correlation of 0,54 was obtained with  $p < 0,05$  between intellectual potential and the total of the CTT. The null hypothesis could therefore be rejected. This implies that intellectual potential is related to critical thinking in a political context. The null hypothesis was also rejected for deduction, credibility, inductive inference and problem solving. The null hypothesis could not be rejected for recognition of assumptions. As is reflected in table 6.32, the highest correlations were between Deduction, Inductive inference, and Problem solving and IQ. This may be related to the fact that these tests are more academic or intellectual in nature than Credibility and Recognition of assumptions. Both Credibility and Recognition of assumptions rely to a certain extent on the individual's general knowledge skills as opposed to the purely reasoning skills of tests such as Deduction or Inductive inference.

Follman (1993:74) states that there is a strong relationship between critical thinking and verbal ability. As the majority of items of most tests of intellectual potential are verbal items, including the GSAT as used in the current research, the results of the current research concur with those of Follman.

### 6.6.5 HYPOTHESIS 5

With regard to hypothesis 5 as stated in paragraph 5.2.5, the following null hypothesis was tested:

There is no significant positive correlation between academic achievement and critical thinking ability.

This hypothesis was stated for each of the sections of the CTT as well as the total CTT.

To test this hypothesis, a Pearson Product-Moment correlation was calculated between the scores of the sections and total of the CTT, and academic achievement as indicated by their aggregate results from the end of grade nine. The results can be seen in table 6.33:

Variable	N	Mean	S	Correlation with academic achievement	p
Academic achievement	334	53,67	14,4		
Deduction	748	8,97	3,0	0,52	p<0,05
Credibility	748	7,07	2,2	0,34	p<0,05
Inductive inference	748	8,57	2,6	0,48	p<0,05
Recognition of assumptions	748	11,16	2,5	0,27	p<0,05
Problem solving	748	5,76	2,2	0,37	p<0,05
Total	748	51,55	9,9	0,57	p<0,05

A correlation of 0,57 was obtained with p<0,05 between academic achievement and the total of the CTT. The null hypothesis could therefore be rejected. This implies that academic achievement is related to critical thinking in a political context. The null hypothesis was also rejected for all the sections of the CTT.

The correlations between academic achievement, Deduction, Inductive inference, and to a lesser extent, Problem solving, were the highest. This would appear to confirm that these three subtests are more academic or intellectual in nature than Credibility or Recognition of assumptions.

### **6.6.6 HYPOTHESIS 6**

With regard to hypothesis 6 as stated in paragraph 5.2.6, the following null hypothesis was tested:

**There is no significant difference between the critical thinking abilities of those adolescents who study certain subjects at school and those who do not.**

**This hypothesis was stated for each section of the CTT as well as the total of the CTT. The relevant subjects were: Mathematics, Geography and History.**

#### **6.6.6.1 Mathematics**

All 748 subjects were used in the testing of this hypothesis. Group 1 represents 524 pupils who studied mathematics, while group 2 represents 224 adolescents who did not study mathematics. To determine whether the average scores of the groups differed significantly with regard to each of the sections of the CTT and the total CTT, the t test was used. The results appear in table 6.34:

**TABLE 6.34 DIFFERENCE BETWEEN THE AVERAGE CTT SCORES FOR ADOLESCENTS WHO STUDY MATHEMATICS AND THOSE WHO DO NOT**

Variable	Group	N	Mean	S	t	df	p
Deduction	1	524	9,44	3,1	6,545	746	p<0,05
	2	224	7,89	2,6			
Credibility	1	524	7,26	2,3	3,642	746	p<0,05
	2	224	6,62	2,0			
Inductive inference	1	524	8,71	2,7	2,320	746	p<0,05
	2	224	8,24	2,3			
Recognition of assumptions	1	524	11,32	2,7	2,809	746	p<0,05
	2	224	10,76	2,2			
Problem solving	1	524	5,92	2,2	3,148	746	p<0,05
	2	224	5,37	2,1			
Total	1	524	52,82	10,5	5,470	746	p<0,05
	2	224	48,58	7,5			

According to table 6.34, a t value of 5,470 was obtained for the total of the CTT, with  $p < 0,05$ . This means that the null hypothesis can be rejected at the 5% level of significance. This implies that there is a significant difference between the critical thinking abilities of adolescents who study mathematics at school and those who do not. The null hypothesis was rejected for all the sections of the CTT.

It is not clear whether these results relate to the fact that normally the academically stronger learners choose Mathematics as a subject, or whether Mathematical skills relate specifically to reasoning and critical thinking.

#### 6.6.6.2 Geography

All 748 subjects were used in the testing of this hypothesis. Group 1 represents 524 pupils who studied geography, while group 2 represents 224 adolescents who did not study geography. To determine whether the average scores of the groups differed significantly with regard to each of the sections of the CTT and the total CTT, the t test was used. The results appear in table 6.35:

**TABLE 6.35 DIFFERENCE BETWEEN THE AVERAGE CTT SCORES FOR ADOLESCENTS WHO STUDY GEOGRAPHY AND THOSE WHO DO NOT**

Variable	Group	N	Mean	S	t	df	p
Deduction	1	214	8,68	3,1	1,661	746	p>0,05
	2	534	9,09	3,0			
Credibility	1	214	7,20	2,1	0,987	746	p>0,05
	2	534	7,02	2,3			
Inductive inference	1	214	8,71	2,6	0,903	746	p>0,05
	2	534	8,52	2,6			
Recognition of assumptions	1	214	11,06	2,6	0,676	746	p>0,05
	2	534	11,19	2,5			
Problem solving	1	214	5,86	2,2	0,822	746	p>0,05
	2	534	5,71	2,2			
Total	1	214	51,59	9,2	0,068	746	p>0,05
	2	534	51,53	10,2			

According to table 6.35, a t value of 0,068 was obtained for the total of the CTT, with  $p > 0,05$ . This means that the null hypothesis cannot be rejected. This implies that there is no significant difference between the critical thinking abilities of adolescents who study Geography at school and those who do not. The null hypothesis was accepted for all the sections of the CTT. As none of the items of the CTT were related to Geographical issues, a background in Geography would appear to hold no advantage for the subject in this critical thinking test.

### 6.6.6.3 History

All 748 subjects were used in the testing of this hypothesis. Group 1 represents 524 pupils who studied history, while group 2 represents 224 adolescents who did not study history. To determine whether the average scores of the groups differed significantly with regard to each of the sections of the CTT and the total CTT, the t test was used. The results appear in table 6.36:

**TABLE 6.36 DIFFERENCE BETWEEN THE AVERAGE CTT SCORES FOR ADOLESCENTS WHO STUDY HISTORY AND THOSE WHO DO NOT**

Variable	Group	N	Mean	S	t	df	p
Deduction	1	152	8,96	3,4	0,063	746	p>0,05
	2	596	8,98	2,9			
Credibility	1	152	7,26	2,2	1,163	746	p>0,05
	2	596	7,02	2,2			
Inductive inference	1	152	8,72	2,6	0,816	746	p>0,05
	2	596	8,53	2,6			
Recognition of assumptions	1	152	11,35	2,5	1,055	746	p>0,05
	2	596	11,11	2,6			
Problem solving	1	152	5,82	2,3	0,420	746	p>0,05
	2	596	5,74	2,2			
Total	1	152	52,70	10,3	1,611	746	p>0,05
	2	596	51,26	9,8			

According to table 6.36, a t value of 1,611 was obtained for the total of the CTT, with  $p > 0,05$ . The null hypothesis cannot be rejected. This implies that there is no significant difference between the critical thinking abilities of adolescents who study History at school and those who do not. The null hypothesis cannot be rejected for all the sections of the CTT.

These results appear to be in contradiction with the expected results. Much of South African History relates to political and social issues and although the majority of the items in the CTT were based on current social issues, it would still be reasonable to assume that such a background would have been advantageous to the subject. In fact it was found that the level of political knowledge of those adolescents who studied History at school was significantly higher than those adolescents who did not (cf paragraph 6.6.10). However, the mean PKQ score for those learners who studied History was 10,59 which transforms to a stanine of 5 and is therefore an average score. If the mean score had been a high score or at least an above average score, then the critical thinking score could also be expected to be higher, as there is a correlation between political knowledge and critical thinking in a political context (cf paragraph 6.6.9).

### 6.6.7 HYPOTHESIS 7

With regard to hypothesis 7 as stated in paragraph 5.2.7, the following null hypothesis was tested:

**There are no significant correlations between certain personality factors and critical thinking ability.**

To test this hypothesis, a Pearson Product-Moment correlation was calculated between the 14 personality factors as measured by the HSPQ, and the total of the CTT. The stanine scores of the HSPQ were used in the calculation. The results can be seen in table 6.37:

Variable	N	Mean	S	Correlation with Total CTT	p
Total CTT	748	51,55	9,9		
A	94	10,59	3,5	0,06	p>0,05
B	94	6,88	1,7	0,43	p<0,05
C	94	10,41	2,9	-0,06	p>0,05
D	94	9,96	2,7	-0,04	p>0,05
E	94	9,84	3,4	0,18	p>0,05
F	94	10,19	3,2	0,07	p>0,05
G	94	11,50	2,6	-0,07	p>0,05
H	94	9,84	3,6	0,05	p>0,05
I	94	12,40	3,6	0,17	p>0,05
J	94	9,34	3,0	-0,05	p>0,05
O	94	9,90	3,0	0,05	p>0,05
Q2	94	8,81	2,6	-0,04	p>0,05
Q3	94	11,51	2,7	-0,17	p>0,05
Q4	94	9,32	3,1	0,06	p>0,05

A correlation of 0,43 was obtained with  $p < 0,05$  between personality factor B and the total of the CTT. The null hypothesis could therefore be rejected only for factor B. This implies that personality factor B is related to critical thinking in a political context. Factor B relates to mental functioning in terms of concrete and abstract thinking. Therefore the link with critical thinking is expected, as critical thinking entails abstract thinking skills. The null hypothesis cannot be rejected for all the other personality factors. This implies that personality factors are not related to critical thinking ability in a political context. Perkins (1993:106) found that group-dependent individuals may find critical thinking an emotional and cognitive challenge and in fact would not score highly on a critical thinking test. These results were not borne out by the current research.

#### **6.6.8 HYPOTHESIS 8**

With regard to hypothesis 8 as stated in paragraph 5.2.8, the following null hypothesis was tested:

**There is no significant difference between the level of political knowledge of learners from different cultural groups.**

The subjects were divided into three cultural groups based on their home language. The three groups were:

- subjects whose home language was English - group 1;
- subjects whose home language was Afrikaans - group 2;
- subjects whose language was an indigenous African language - group 3.

The F test was used to determine whether there is a significant difference between the average scores on the PKQ of the three groups.

#### **Comparison between the three groups with regard to political knowledge**

The average scores for the PKQ for each of the three groups was calculated. In order to compare these averages, an analysis of variance was carried out. The results appear in table 6.38:

**TABLE 6.38 RESULTS OF THE ANALYSIS OF VARIANCE :  
POLITICAL KNOWLEDGE**

Group	N	Mean	S
1	163	10,83	2,7
2	150	9,52	2,8
3	435	9,90	2,8

$F(2, 745) = 9,51$        $p < 0,01$

The null hypothesis can be rejected at the 1% level of significance. There is a significant difference between the average political knowledge scores of the three groups.

In order to determine between which groups this difference exists, the t values were calculated. These appear in table 6.39:

**TABLE 6.39 T TEST ANALYSIS OF THE VARIABLE POLITICAL  
KNOWLEDGE**

Groups	Difference between the means	t value	Significance
1 - 2	1,31	$t > 2,4$	$p < 0,05$
1 - 3	0,93	$t > 2,4$	$p < 0,05$
2 - 3	-0,38	$t < 2,4$	$p > 0,05$

There appears to be a significant difference between groups 1 and 2, as well as 1 and 3. These results indicate that the political knowledge of the subjects whose home language was English (the majority of whom were "white" people) is significantly higher than that of the subjects whose home language was Afrikaans (the majority of whom were "white"), and also significantly higher than those subjects whose home language was an African language. The political knowledge of those subjects whose home language was Afrikaans was not significantly different to that of those whose home language was an African language.

Van Zyl Slabbert, et al. (1994:145) found that black and white youth in South Africa have different levels of political literacy, and the current research is therefore in agreement with this. The reason for the significantly lower level of political knowledge of the Afrikaans subjects may be that a feeling of apathy has crept in amongst Afrikaans youth as a result of the limited potential for political participation of Afrikaners.

### 6.6.9 HYPOTHESIS 9

With regard to hypothesis 9 as stated in paragraph 5.2.9, the following null hypothesis was tested:

**There is no significant correlation between the level of a learner's political knowledge and his critical thinking ability in a political context.**

To test this hypothesis, a Pearson Product-Moment correlation was calculated between the scores of each sections of the CTT and political knowledge as indicated by their scores on the PKQ, as well as between the total of the CTT and political knowledge. The results can be seen in table 6.40:

Variable	N	Mean	S	Correlation with PKQ	p
Political knowledge	748	10,02	2,8		
Deduction	748	8,97	3,0	0,40	p<0,05
Credibility	748	7,07	2,2	0,22	p<0,05
Inductive inference	748	8,57	2,6	0,23	p<0,05
Recognition of assumptions	748	11,16	2,5	0,19	p<0,05
Problem solving	748	5,76	2,2	0,33	p<0,05
Total	748	51,55	9,9	0,64	p<0,05

A correlation of 0,64 was obtained with  $p < 0,05$  between political knowledge and the total of the CTT. The null hypothesis could therefore be rejected. This implies that political knowledge is significantly related to critical thinking abilities in a political context. The null hypothesis was also rejected for all the sections of the CTT.

McPeck (1990a:35) states that critical thinking ability varies directly with the amount of knowledge of the subject required by the problem. This is the so-called Subject-specific approach to critical thinking. The current research appears to confirm this approach to critical thinking.

#### 6.6.10 HYPOTHESIS 10

With regard to hypothesis 10 as stated in paragraph 5.2.10, the following null hypothesis was tested:

**There is no significant difference between the levels of political knowledge of those adolescents who take History as a school subject and those who do not.**

All 748 subjects were used in the testing of this hypothesis. Group 1 represents 152 pupils who studied history, while group 2 represents 596 adolescents who did not study history. To determine whether the average scores of the groups differed significantly with regard to each of the sections of the CTT and the total CTT, the t test was used. The results appear in table 6.41:

<b>Variable</b>	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>S</b>	<b>t</b>	<b>df</b>	<b>p</b>
Political knowledge	1	152	10,59	2,7	2,769	746	$p < 0,05$
	2	596	9,88	2,9			

According to table 6.41, a t value of 2,769 was obtained for political knowledge, with  $p < 0,05$ . The null hypothesis can be rejected at the 5% level of significance. This implies that there is

a significant difference between the political knowledge of adolescents who study History at school and those who do not. This could be a result of the fact that most History syllabuses contain the political roots of the country as well as aspects of the format and functioning of the present system of government. In the light of these results one might expect that the subjects who studied History would fare significantly better in the CTT than those who did not. However, as stated in paragraph 6.6.6.3, they did not. The possible reasons for this are stated in paragraph 6.6.6.3.

### 6.6.11 HYPOTHESIS 11

With regards to hypothesis 11 as stated in paragraph 5.2.11, the following null hypothesis was stated:

**There is no significant difference between the levels of political knowledge of boys and girls.**

All 748 subjects were used in the testing of this hypothesis. Group 1 represents 361 boys, while group 2 represents 387 girls. To determine whether the average scores of the groups differed significantly with regard to the score on the PKQ, the t test was used. The results appear in table 6.42:

Variable	Group	N	Mean	S	t	df	p
Political knowledge	1	361	10,25	2,8	2,069	746	p<0,05
	2	387	9,82	2,9			

According to table 6.42, a t value of 2,069 was obtained for the political knowledge, with  $p < 0,05$ . The null hypothesis can be rejected at the 5% level of significance. This implies that there is a significant difference between the levels of political knowledge of boys and girls, and that boys have a higher level of political knowledge than girls. The reason for this may lie in the traditions of most of the cultural communities in South Africa - English and Afrikaans speaking whites, and African cultures. Traditionally, it has been the male in the household who

heads the household and as result it was his responsibility to lead his family, and this included political matters as well. Therefore the male was obliged to be more involved in political matters than females, and this situation still exists today. One would therefore expect that boys would perform better than girls on a critical thinking test in a political context. However, it was found in paragraph 6.6.2 that there is no difference between the critical thinking skills of boys and girls in a political context. The possible reason for this is given in paragraph 6.6.2.

### 6.6.12 HYPOTHESIS 12

With regard to hypothesis 12 as stated in paragraph 5.2.12, the following null hypothesis was tested:

There is no significant difference between the levels of political knowledge of adolescents from urban areas and those from rural areas.

All 748 subjects were used in the testing of this hypothesis. Group 1 represents 536 subjects from an urban environment, while group 2 represents 212 subjects from a rural environment. To determine whether the level of political knowledge of adolescents differed significantly with regard to the area where they live, the t test was used. The results appear in table 6.43:

<b>TABLE 6.43 DIFFERENCE BETWEEN THE AVERAGE POLITICAL KNOWLEDGE SCORES FOR SUBJECTS FROM RURAL AND URBAN ENVIRONMENTS</b>							
Variable	Group	N	Mean	S	t	df	p
Political knowledge	1	536	10,18	2,8	2,405	746	p<0,05
	2	212	9,63	2,9			

According to table 6.43, a t value of 2,405 was obtained for political knowledge, with  $p < 0,05$ . The null hypothesis can be rejected at the 5% level of significance. This implies that there is a significant difference between the level of political knowledge of adolescents living in urban and rural areas, with the urban adolescents being at the higher level.

These results are in accordance with the results of Van Hoorn and LeVeck (1992:95) and Austin and Nelson (1993:430) who found that the adolescent's immediate environment will have an influence on his knowledge and understanding of political situations. South African urban adolescents have far more exposure to political situations than the rural adolescents do - political parties are usually based in urban areas, and exposure to the media will also contribute to higher levels of political knowledge. In paragraph 6.6.3 it was found that there was no significant difference between the critical thinking skills of adolescents living in urban areas and those living in rural areas, although one might expect that the urban adolescents would perform better on a test of critical thinking skills in a political context. A possible explanation for this is provided in paragraph 6.6.3.

### 6.6.13 HYPOTHESIS 13

With regard to hypothesis 13 as stated in paragraph 5.2.13, the following null hypothesis was tested:

**There is no significant positive correlation between the level of political knowledge and the intellectual potential of adolescents.**

To test this hypothesis, a Pearson Product-Moment correlation was calculated between the political knowledge score and intellectual potential as measured by the GSAT score of 155 subjects. The results can be seen in table 6.44:

Variable	N	Mean	S	Correlation with IQ	p
IQ	155	100,21	12,9		
Political knowledge	748	10,02	2,8	0,37	p<0,05

A correlation of 0,37 was obtained with  $p < 0,05$  between intellectual potential and political knowledge. The null hypothesis could therefore be rejected. This implies that intellectual potential is significantly related to political knowledge.

### 6.6.14 HYPOTHESIS 14

With regard to hypothesis 14 as stated in paragraph 5.2.14, the following null hypothesis was tested:

**There is no significant positive correlation between the level of political knowledge and academic achievement.**

To test this hypothesis, a Pearson Product-Moment correlation was calculated between the political knowledge score and academic achievement as measured by the final grade nine aggregate marks of the subjects. The results can be seen in table 6.45:

<b>TABLE 6.45 CORRELATION BETWEEN POLITICAL KNOWLEDGE AND ACADEMIC ACHIEVEMENT</b>					
<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>S</b>	<b>Correlation with academic achievement</b>	<b>p</b>
Academic achievement	334	53,68	14,4		
Political knowledge	748	10,02	2,8	0,25	p<0,05

A correlation of 0,25 was obtained with  $p < 0,05$  between academic achievement and political knowledge. The null hypothesis could therefore be rejected. This implies that academic achievement is significantly related to political knowledge.

## 6.7 CONCLUSION

- An item analysis was carried out on the PKQ, as well as each section of the CTT and the total CTT. All items which contributed negatively to the total were then excluded from the rest of the statistics.
- The reliability of the CTT was measured by calculating the Cronbach Alpha Reliability coefficient as well as the Split-half coefficient. The reliability was

calculated as being 0,79 and 0,81 respectively. The CTT could therefore be considered to be a reliable measuring instrument.

- The reliability of the PKQ was found to be 0,53 and 0,50 for the Cronbach and the Split-half respectively. The reason for this relatively low reliability is possibly that there were only 18 items included in the final analysis.
- Norms for the PKQ and the CTT were arrived at by converting the raw scores to stanines.
- The following conclusions were arrived at after testing the hypotheses:
  - There is a significant difference between the critical thinking abilities of the different cultural groups. The English-speaking group scored at a higher level on the CTT than both the Afrikaans-speaking and the African language speaking groups. The Afrikaans-speaking group also scored at a higher level than the African language speaking group.
  - There was no significant difference between the overall critical thinking abilities of boys and girls. However, the girls did significantly outperform the boys in three areas: inductive inference, recognition of assumptions, and problem solving.
  - There was no overall significant difference in the critical thinking abilities of adolescents living in rural areas and those living in urban areas. However, anomalous results were found in that adolescents from rural areas outperformed adolescents from urban areas in credibility and inductive inference.
  - There was a significant correlation between intellectual potential and critical thinking ability. The only exception was that of recognition of assumptions where there was no significant correlation.

- There was a significant correlation between academic achievement and critical thinking ability.
- Adolescents who studied Mathematics were found to have higher critical thinking abilities than those adolescents who did not study Mathematics. There was no difference in the critical thinking abilities of adolescents who studied History or Geography, and those who did not.
- The only personality factor which correlated significantly with critical thinking ability was Factor B which relates to abstract thinking and higher mental ability.
- English-speaking adolescents were found to have a significantly higher level of political knowledge than either Afrikaans or African language speakers.
- There was a significant correlation between the level of a learner's political knowledge and his critical thinking ability in a political context. This applied to all the sections of the CTT as well as the total.
- Subjects who took History as a subject were found to have significantly higher levels of political knowledge than those who did not.
- Boys were found to have a significantly higher level of political knowledge than girls.
- The subjects from urban areas were also found to have a significantly higher level of political knowledge than the subjects from rural areas.
- A significant positive correlation was also found between the level of political knowledge and intellectual potential.
- There was also a significant positive correlation between the level of political knowledge and academic achievement.

# CHAPTER SEVEN

## EDUCATIONAL IMPLICATIONS OF THE RESEARCH AND SUGGESTIONS FOR FURTHER RESEARCH

### 7.1 INTRODUCTION

In chapter one it was stated that the aim of this research was to come to an understanding of the nature of political knowledge of South African adolescents, and their ability to think critically with regard to political issues. The research consisted of two elements, namely, a literature study and an empirical component.

The first part of the literature study focused on thinking, and critical thinking in particular. It appears that although no single theory or conception of critical thinking exists, there is relative consensus regarding the major aspects of critical thinking. These aspects are: deductive reasoning, inductive reasoning, recognition of assumptions, credibility, and problem solving. A particularly well-debated aspect of critical thinking is that of whether it is subject-specific or not. The empirical study provided a possible answer to this question.

The second part of the literature study established which factors may play a role in the critical thinking of an adolescent, with particular reference to a political context. These factors were: cultural background, gender, environment, intellectual potential, academic achievement, and subject knowledge.

The third part was an examination of important current political and social issues in South Africa. These were found to be: the new Constitution, Truth and Reconciliation Commission, housing, redistribution, education, labour, health, crime, political violence, environment, and the next election.

The results of the empirical study have serious ramifications for all the people of South Africa, but it is the educationist for whom the results might be disturbing.

It is a serious indictment of our education system when grade tens with an average age of 16,2 years display such a poor knowledge of politics, and generally poor critical thinking abilities. Only 62% of the subjects were aware of the fact that the death penalty has been formally abolished in South Africa, while only 36% could correctly define democracy in a country as being "Government by all the people, either directly or by an elected representative." If a democracy is to be successful and survive, then it is imperative for the electorate to be both knowledgeable and critical thinkers with regard to political issues, and the responsibility for this lies chiefly in the hands of the leaders and planners in education in South Africa.

The empirical study also revealed that intellectual potential and academic achievement were significantly related to critical thinking ability, while gender, environment, and personality appeared not to play a role. There was a significant correlation between political knowledge and critical thinking in a political context, implying that critical thinking is indeed subject-specific. Cultural background also played a significant role in critical thinking in a political context.

In terms of political knowledge, boys were found to be at a significantly higher level than girls. The subjects from urban areas were also at a significantly higher level than those from rural areas. There was also a positive correlation between intellectual potential, academic achievement, and political knowledge.

The following paragraphs provide some recommendations and suggestions for improving the levels of political knowledge and critical thinking abilities of South African adolescents. The recommendations refer to the following areas of life in South Africa: the curriculum, the classroom, the community, and the home.

## 7.2 EDUCATIONAL IMPLICATIONS AND RECOMMENDATIONS

### 7.2.1 THE CURRICULUM

#### 7.2.1.1 Political knowledge

The basic requirement for the survival of a democracy is that a large number of citizens need to be politically knowledgeable and also participate in politics. According to Sorenson (1996:1) one of the greatest democratic societies in the world, namely, that of the United States of America, is currently at risk. Some of the reasons she cites for this are complacency and ignorance of political matters. Sorenson states that schools must accept the responsibility of teaching young people about citizenship and that the curriculum should focus on the following three issues:

- an understanding of democracy;
- the individual citizen's responsibilities;
- the individual citizen's rights (1996:2).

Sorenson is also of the opinion that in order to come to a clear understanding of current political issues, the curriculum should include a compulsory history component focusing on the development of political issues and structures (1996:3).

Torney-Purta (1996a:1) believes that the education curriculum must include a civics education section which should focus on the following:

- knowledge of the history and structure of political institutions;
- a sense of national civic identity;
- belief in fundamental values such as tolerance;
- the rule of law and respect for human rights;
- interest in the common good and therefore in political participation at the national or local level.

In South Africa the Department of Education embarked on a curriculum review in August 1995, and in February 1997 unveiled the new Curriculum 2005. The guiding vision of the new curriculum is that its product should be a "thinking, competent future citizen" (Bengu, 1997:1). It also aims to "foster learning which encompasses a culture of human rights, multi-lingualism and multi-culturalism and a sensitivity to the values of reconciliation and nation-building" (Bengu, 1997:1).

Curriculum 2005 consists of eight learning areas, one of which is Human and Social Sciences. The basic premise of this area is that South Africa needs responsible citizens who are able to operate in a culturally diverse, democratic society, and as such much emphasis will be placed on the study of History. A study of South Africa's complete history will provide many valuable lessons for the 21st century South African.

Specific references to political studies are not apparent in the currently available Curriculum 2005 documents. However, the need for a specific political studies component would appear to be of paramount importance if the basic premise of the Human and Social Sciences is to be upheld. In the light of the results of both the literature study and empirical research, the researcher is of the opinion that the focus of such a component should be on the following areas:

- clear understanding of democracy;
- knowledge of South Africa's political history;
- knowledge and understanding of the Constitution, particularly human rights;
- the need for participation in political structures at local, provincial and national level.

#### 7.2.1.2 Critical thinking

Sorenson (1996:7) emphasises the fact that before learners leave the classroom in order to use and implement their knowledge and understanding of political issues, they must be taught to think critically about what they have learnt.

Weinstein (1991:20) states that critical thinking is one of the most important tools "for developing rational deliberation relevant to democratic education". Weinstein strongly advocates the inclusion of critical thinking in the American curriculum as it plays a major role in achieving the goal of an educated citizenry competent to participate in a democratic society.

As referred to in chapter one, the 1995 White Paper "Education and Training in a Democratic South Africa" emphasized that all levels and programmes of education should encourage independent and critical thought. Critical thinking and rational thought appear to be at the heart of the new Curriculum 2005. One of the basic differences between the old and new approaches is that instead of placing emphasis on rote-learning, Curriculum 2005 will focus on critical thinking, reasoning, reflection and action.

However, the greatest debate with regard to the teaching of critical thinking is where in the overall curriculum should instruction in thinking take place? There are three major possibilities:

- separate instruction;
- instruction integrated into the content areas;
- both separate and integrated instruction.

Although all three methods have merit, it is the second method which is advocated by the researcher for South African classrooms. The reasons for this are as follows:

- The results of the empirical research indicate that the level of critical thinking in a political context is related to the level of political knowledge. This means that in order to gain the maximum benefit, critical thinking should be taught in a particular context.
- South Africa has limited resources and funding is a major problem. To implement a separate course such as De Bono's Lateral Thinking course, or Feuerstein's Instrumental Enrichment programme, in all classrooms would be very expensive in terms of the purchasing of the course and the training of teachers. Even if private funding was obtained, it could be argued that the money could be better spent on reducing the backlog in basic education for all learners.

Many experts in the field of teaching critical thinking concur with this point of view. Beyer (1984:559) advocates teaching critical thinking skills across all appropriate content areas. He suggests that "skills taught in isolation from subject matter are not likely to transfer easily to other situations where they can be used productively".

Glatthorn and Baron (1985:52) state "We should teach thinking in all subjects, wherever appropriate. Evidence suggests that such multidisciplinary approaches are more effective than single courses in thinking." They recognise that there may be differences in application in different content areas, but a multidisciplinary approach allows for both the development of a general model of generic skills and specific applications.

What this means in practice is that teachers will require specific training in order to be able to identify and teach the content-specific skills needed for their discipline. This means that all teacher training courses should include a critical thinking component in the curriculum. As with training in political literacy, teachers currently in the teaching profession should receive in-service training.

The critical thinking training courses and critical thinking within specific subjects should focus on the following aspects of critical thinking:

- the analysis of arguments;
- decision making;
- problem solving;
- judgement of credibility;
- recognition of assumptions (cf paragraph 2.3.3).

## **7.2.2 THE CLASSROOM**

### **7.2.2.1 Political knowledge**

Political knowledge comprises three aspects: conceptual, historical, and current issues. All three of these aspects would form part of the Human and Social Sciences learning area of the new curriculum in South Africa. The teaching of political literacy could take place as part of

the subject of History (which at present is not a compulsory subject) or possibly as a separate subject altogether. The results of the present study indicated that there is a significant difference between the political knowledge of adolescents who study History at school and those who do not. These results endorse the beliefs of those educators who feel that History should be a compulsory subject for all South African learners. If one accepts that it is of paramount importance for all the people of South Africa to be politically literate, as the control and future of the country are in the hands of the voters, then surely it is of equal importance that learners are provided with a sound political history and background in the History classroom.

Moller and Joubert (1996:187) recommend that separate compulsory political literacy programmes should be introduced into the classrooms of South Africa. They state that such a programme should include the following aspects:

- knowledge of each citizen's rights, responsibilities and possible ways in which he could become involved in politics;
- an understanding of democracy in South Africa and in other countries, as well as government systems and voting procedures;
- courses in critical thinking relating to political issues which would empower citizens to search for solutions to current political problems.

The researcher concurs with the opinions of Sorenson (cf paragraph 7.2.1.1) and Moller and Joubert, in that political literacy should be a compulsory subject in the secondary school curriculum. A thorough knowledge of both world and South African history and politics will provide the learner with a vital foundation for his own values, beliefs and ideals, and also with a sense of who he is and where he has come from.

Other important aspects of the research which relate to political knowledge in the classroom are as follows:

- Learners living in urban areas were found to have a higher level of political knowledge than those learners living in rural areas. Teachers in rural areas should

be made aware of this deficiency and possibly include more topical political issues in their social studies lessons in order to eradicate the differences between rural and urban learners.

- Boys were also found to have a higher level of political knowledge than girls. These results are probably a consequence of the traditional gender dynamics of the country where the male is accepted as the head of the household, and is therefore responsible for all important decisions, including political ones. Teachers should strive to eradicate this stereotypical view by emphasizing the fact that everyone has equal rights in South Africa and therefore everyone's vote is of equal importance.
- Both intellectual potential and academic achievement were found to be significantly related to the learner's level of political knowledge. Teachers should be aware of this and attempt to differentiate within the tasks relating to political issues which they set for learners, in order to set extra challenges for the higher academic achievers or intellectually gifted. An example of this could be a debate on abortion, where the less gifted learners could be assigned the task of gathering information relating to the abortion laws in other countries, while the more gifted learners could be involved in the formulation and presentation of the arguments for the debate.

The PKQ could be used in the classroom as a tool to gauge the current level of political knowledge of the specific group of learners. Just as the syllabus would have to be flexible and regularly revised with regard to "current political issues", the PKQ would also have to be periodically updated and possibly expanded.

Finally, Bray (1996:157) states that it is the basic task of South African teachers to cultivate an awareness of basic justice and inculcate democratic values and tolerance in their students.

#### **7.2.2.2 Critical thinking**

As was the case with political knowledge, both intellectual potential and academic achievement were found to be significantly related to critical thinking. Teachers need to be

aware of these differences and cater for the needs of all the learners. Learners at the lower levels of academic achievement should not be ignored or disregarded, they should rather be given tasks relating to political issues which are on a level appropriate to them.

The results of the research indicated that learners who studied Mathematics were found to have higher critical thinking abilities in a political context, than those learners who did not. One reason for these results may be that students who have elected to study Mathematics would on the whole be the students who are intellectually stronger and are probably higher academic achievers. Another possible reason may be that as Mathematics is in essence a problem-solving skill, there is a close correlation with critical thinking as problem solving is a major aspect of critical thinking. There appeared to be no difference in the critical thinking abilities of learners who studied subjects such as History and Geography and those who did not. Although many of the basic critical thinking skills appear to be transferable, the method of application may vary. It is therefore the view of the researcher that all academic subjects should include a critical thinking component.

Gender was found to be not significantly related to critical thinking skills. There also appeared to be no significant difference between the critical thinking abilities of adolescents living in rural areas and those living in urban areas. Awareness of these results by teachers may help to correct misconceptions and stereotypical views in the classroom.

Personality was not significantly related to critical thinking ability. An awareness of this by teachers may also help to combat the idea that confidence and extroversion are related to better insight or critical thinking skills.

Terenzini, Springer, Pascarella and Nora (1995:25) found that certain classroom interactions were consistently and positively related to gains in critical thinking:

- the extent to which teachers encouraged, praised, or used student ideas;
- the amount and cognitive level of student participation in class;
- the amount of interaction among the students in a course.

Schrag (1992:33) focused on the importance of the attitude of the teachers: "To help students become more thoughtful, teachers themselves must model thoughtfulness. Key indicators include showing interest in a student's ideas and in alternative approaches to problems."

It is the opinion of the researcher that the following points, in conjunction with those mentioned above, are of importance in the teaching of critical thinking:

- the level of critical thinking skills taught should be appropriate to the level of cognitive development of the child;
- South Africa's specific needs indicate that these critical thinking skills should be applied to political issues and problems;
- all the skills taught should be applied to real world problems or situations.

One possible application of the skills and ideas discussed in the above paragraphs is the Democracy in Action Programme (DAP). The DAP is based loosely on the ICONS project of the University of Maryland in the United States (Torney-Purta, 1996a:9).

The basic aim of the DAP is to give senior high school learners the opportunity to apply their political knowledge and critical thinking skills in both their immediate environment and possibly also on a national and international level. It is thought that the exchange of ideas at this level will lead to greater tolerance and understanding of people and ideologies.

Stage 1: Intra-class. A number of groups are formed within each senior level class. The following scenario is given to each group:

The Democratic Nile Republic (DNR) is a newly independent state located in North Africa. The DNR is landlocked and is bordered by two friendly and two potentially hostile nations. The DNR has four major ethnic groups and therefore four languages. The DNR has many natural resources but does not have the skills or equipment to utilize them properly. Unemployment is high, and education levels are generally poor. The majority of the country's leaders have been in exile for many years and have little or no experience of political matters. The country is currently being governed by military leaders who were responsible for gaining

independence from the colonial rulers. Your group has been appointed as advisors to the government of the DNR and your task is to offer guidance and advice on the following matters:

- **Leadership:** How should leaders be selected/elected in order that democracy becomes a reality in the DNR? Should the example of the USA be followed in that citizens vote for a specific individual, or should the leader be selected by the party gaining the most votes? What role should the military play? What should the powers of the leader be?
- **Political Structures:** What political structures should be put into place in this country striving to become a democracy? Topics such as elections, a constitution, political parties, different branches of government such as judicial, executive, and legislative, and the rights of minorities should be addressed.
- **Basic Freedoms:** Should there be immediate complete freedom of the press? Or should this only be allowed once democracy is in place? Freedom of speech? Censorship?
- **Economic Policy:** Free enterprise? State ownership of major services such as telecommunication, electricity provision, or transport services? Trade agreements with neighbours? On which areas should the emphasis of the national budget be?
- **National Traditions:** Is the colonial past important and should traditions be preserved and retained? Is there a place for ethnic and cultural differences?
- **Human Rights:** Should certain human rights be guaranteed? If so, which ones and why?

The task of each group is to draw up policy documents for each of the above-mentioned areas, as well as aspects of politics or government not mentioned above. These policies then need to be presented to the panel, and then finally debated in conjunction with the presentations of other classes.

This exercise allows for participation of learners of various academic and intellectual levels. At one level learners with secretarial skills could be responsible for technical details such as the preparation of documents and presentations. At another level learners could be involved in the background research, while other learners could be responsible for the collation of the research material. A higher level task could be the presentation of the final policy, while the highest level which would require relatively advanced critical thinking skills, would be participation in a debate where one of the basic tasks would be to defend the group's ideas and policies.

Although the DAP will have a competitive aspect, the major aim is rather to stimulate both research and debate on political matters. There are therefore no absolutely correct ideas, rather different ideas. The evaluation will be based on the following:

- depth and quality of research;
- structure of arguments;
- originality of thought;
- group co-operation;
- ability to debate and discuss the points of view of other groups constructively.

At stage 1 it would be expected that the policies would be relatively similar, in that all the participants would be South African and from similar socio-economic backgrounds. However, the winning group would be selected to represent the class at an inter-class stage.

Stage 2: Inter-class. The emphasis of this stage would be on incorporating some of the better ideas of the other groups of the class, presentation of the policy, and on the debate. The policies would once again be expected to be very similar. The winning class would then go on to represent the school at an inter-school stage. The school team would now be representative of the school, although the core members would be the winning class members. The best aspects of the losing classes' presentations could also be incorporated in the final policy which would be representative of the whole school.

Stage 3: Inter-school. A provincial inter-schools competition could be held, with the winners going on to represent their province at a national competition. The emphasis at this level would be on debating and reasoning skills and the competition could be extended by adding

to the scenario, by for example, stating that one of the neighbouring countries has declared war on the DNR, causing economic collapse. The teams would have to work out detailed plans of action, and defend them in debate. The winning school could then go on to represent the country in the international ICONS project, which as stated earlier is an existing project.

The ICONS project is conducted mainly on the internet, but there are periodic international conferences where the international delegates meet at a central point. Although the ICONS project is not at a competitive level, the goal of the on-line or face-to-face conferences is to compare national perspectives on the key issues. The benefits are as follows:

- by working with learners from other countries in order to reach consensus on political policies for the DNR, the learners will gain insight into the perspectives of other nations;
- learners will also gain insight into their own country's policies;
- a sense of political and cultural tolerance will be fostered.

A variation of the ICONS project is when participating nations are given the task of role-playing the defence of a certain country's policies in an internet debate. This would once again require fairly extensive research into the background, history, and policies of the specific country. The participants would then have to defend the policies of the particular country, for example the United Kingdom with regard to the Irish question. Once again political knowledge and critical thinking skills will be enhanced.

The benefits of the DAP are as follows:

- general independent research skills are nurtured;
- levels of political knowledge are improved;
- critical thinking skills are sharpened;
- the opportunity to become more familiar with technology such as computers and the internet;
- group work and co-operation with fellow learners is promoted;
- the structure of the programme allows for the participation of learners with different skills;

- the programme is very flexible which means that once the overall structure is in place, many different issues can be tackled on a local, national, and even international level.

Another opportunity for learners to participate in a simulated political process, is in the Student Representative Councils of schools. The SRC mirrors many aspects of the political process: elections, representation, debate, and negotiation. It is an accepted part of the National Education Policy that all secondary schools should have an SRC, and therefore afford learners the opportunity to participate in a practical political situation.

### 7.2.3 THE COMMUNITY

If all teaching about, and discourse concerning politics takes place in isolation in schools, then democracy will still not succeed in South Africa. One area which is in desperate need is that of adult education. Adult Basic Education and Training (ABET) units are in place throughout the country and have already made tremendous progress in teaching adults the basic skills of literacy. It is, however, vital that these learners are also made politically literate as they are qualified to vote whether or not they are able to read or write (Moller & Joubert, 1996:188).

The government's attempts at educating the public with regard to the Constitution by distributing many thousands of copies of the Constitution and explanatory brochures in all communities was a step in the right direction, and further campaigns are necessary. Involvement in local community politics such as council elections should also be encouraged.

On a larger scale, the mass media can also be used to foster general political literacy. The private sector, including big business, also has a role to play in educating the public in political matters. The business community has vested interests in that a politically literate country will most likely also be a stable country, and therefore attract investment.

The various religious communities also have a role to play in terms of the political stability of the country. The researcher is not advocating that the pulpit be used as political platform, rather, it should be used to promote tolerance of others - other religions, ethnic groups, or ideologies.

## **7.2.4 THE HOME**

As much of adolescent and future adult behaviour is modelled on parental behaviour, the example of parents with regard to political participation is of paramount importance. Parenting styles as discussed in paragraph 3.6.1 will also play a role in the development of political ideas. Authoritative parenting is thought to be beneficial to both the child and the community, as such parents are likely to discuss political issues with their children, and to give them guidance, but they would leave decisions to them.

As stated in paragraph 6.6.1.7 the Afrikaner nation has traditionally been a people who do not question leaders or people in senior positions. This means that Afrikaner children seldom questioned their parents' political views, and mostly followed in their parents' footsteps regarding political matters. Parents in general, and Afrikaner parents in particular, should be made aware of the need for debate within the home on political matters, and that children should be allowed to have different political ideas to their parents.

Parents should also be encouraged to discuss current political issues, local, national, and international, on a regular basis with their children. Such discussions and informal debates will lead to a politically well-informed nation at very little cost.

## **7.3 CONTRIBUTIONS OF THE STUDY**

The first contribution of this study is that it provides clarity with regard to what critical thinking is. This study provides evidence that critical thinking is subject-specific and therefore should be taught as a part of all subjects, and not as a separate subject. The major components of critical thinking were identified as being: deductive reasoning, inductive inference, recognition of assumptions, credibility, and problem solving. Factors which may affect its development were identified in the literature study and then tested empirically.

Secondly, an original, reliable critical thinking test was developed specifically for use in a political context, as no other test currently exists. The section relating to problem solving is one of the first successful attempts to develop a standardised problem solving test. A political knowledge test was also developed.

Thirdly, the results of the research can also be seen as a contribution to the international debate on whether critical thinking is subject-specific or not. The results of the empirical investigation indicate that it is. Specific findings with regard to the relationship between critical thinking in a political context and gender, environment, intellectual potential, and academic achievement, are also a contribution to international research.

Fourthly, a number of political issues were identified as being contentious and relevant to the next election. Some of these issues are universal and are likely to remain relevant in the future.

Finally, the ICONS project was adapted for use in South African classrooms (DAP), as a possible method of improving critical thinking in a political context.

## **7.4 LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH**

Although a great deal was achieved in this study, there are always areas which may require further attention.

Firstly, although a large sample, which included testees from a number of provinces was used in the research, learners from Kwazulu-Natal were not included in the study. It may be interesting to conduct research in this province as it is a particularly politically aware area of the country. As the CTT was standardised it would be beneficial to compare the results from this area with the results from other areas.

Secondly, twenty items from the original CTT were disregarded after an item analysis was done. New items could be developed to replace these items. Most of the discarded items were from the problem solving section as this is a very difficult construct to test. The retained problem solving items could serve as a basis for the development of tests in this area in the future.

Finally, as only grade 10 learners were used in the study, the CTT could be aimed at grade 11 and 12 in the future, as this would provide us with information regarding the development of critical thinking in a political context.

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## APPENDIX A

# QUESTIONNAIRE - PKQ

**DIRECTIONS:** This questionnaire contains questions designed to assess your knowledge of certain social and political matters. All answers are to be marked on the separate answer sheet provided. Do not make any marks on this test booklet.

You must choose the correct answer out of the three possibilities provided. Only one answer is correct. Look at the following example:

Example		
ex1	Who is the President of South Africa?	
	a	Thabo Mbeki
	b	Mangosuthu Buthelezi
	c	Nelson Mandela
The correct answer is c Nelson Mandela. Write your answer on the answer sheet provided. Now answer the questions which follow.		

1. Why was 1994 a very important year politically for all South Africans?
  - a Nelson Mandela was released from prison.
  - b The first democratic elections were held.
  - c The Inkatha Freedom Party withdrew from negotiations.
2. Which group of people are thought to be the earliest inhabitants of Southern Africa?
  - a Zulu
  - b Xhosa
  - c Khoikhoi/San
3. Why was 1652 an important year in the history of South Africa?
  - a Vasco da Gama discovered the Cape.
  - b The first parliament was constituted.
  - c The first Europeans (whites) settled in South Africa.
4. Which foreign countries ruled South Africa between 1652 and 1911?
  - a Germany and Great Britain
  - b Great Britain and The Netherlands
  - c Germany and The Netherlands

5. Which provinces joined to form the Union of South Africa in 1910?
  - a Western Cape, Eastern Cape, Transvaal, Natal
  - b Transkei, Venda, Bophuthatswana, Ciskei
  - c Cape Colony, Natal, Transvaal, Orange Free State
  
6. In which year was the African National Congress (ANC) formed, initially as the South African Native National Congress?
  - a 1912
  - b 1948
  - c 1961
  
7. In which year did the National Party under DF Malan come to power and Apartheid begin?
  - a 1910
  - b 1948
  - c 1961
  
8. Which event signalled the dismantling of Apartheid?
  - a The formation of the homelands policy.
  - b The unbanning of the ANC and the release of Nelson Mandela from prison.
  - c The victory of the ANC in the first fully democratic general election.
  
9. When did South Africa declare independence from Britain and become a republic?
  - a 1910
  - b 1961
  - c 1994
  
10. What was the main reason for the protest action starting in Soweto in June 1976?
  - a Taxes were increased dramatically.
  - b The government's insistence that black pupils had to be taught partly in Afrikaans.
  - c Nelson Mandela was sent to Robben Island.
  
11. What do the letters TRC stand for?
  - a Transitional Regional Council
  - b Truth and Reconciliation Commission
  - c Tricameral Representative Commission

12. Is abortion legal in South Africa?
- a Yes
  - b No
  - c Only in special circumstances
13. Has the death penalty been formally abolished in South Africa?
- a Yes
  - b No
  - c In principle only
14. What is the official name for the following: "The appointment or promotion of educationally disadvantaged employees in order to ensure that this group is equitably represented in the work force of a particular employer?"
- a Redistribution
  - b Reconciliation
  - c Affirmative action
15. For whom is health care completely free in South Africa?
- a Anyone over the age of 65.
  - b Children under the age of 18.
  - c Pregnant women and children under 6 years of age.
16. How many people are estimated to be living in informal settlements ("squatter camps") in South Africa?
- a Less than one million.
  - b Between one and three million.
  - c More than three million.
17. According to the Bill of Rights, a child's best interests are of more importance than the interests of an involved adult.
- a True
  - b False
  - c Only in special circumstances
18. Is it the government's responsibility to build houses for everyone?
- a Yes
  - b No
  - c Only for those who currently live in informal settlements

- 19 Which of the following is the best definition of democracy in a country?
- a The rights of the majority outweigh the rights of the individual or minority.
  - b Everyone can vote.
  - c Government by all the people, either directly or by an elected representative.
20. The next general election in South Africa will be held in which year?
- a 1999
  - b 2000
  - c 2004

## APPENDIX B

QUESTIONNAIRE	ANSWER SHEET	
Surname .....		
Initials .....		
School .....	<input type="checkbox"/>	1
Age .....	<input type="checkbox"/> <input type="checkbox"/>	2-3
Home language:		
English	= 1	
Afrikaans	= 2	
Sesotho	= 3	
isiZulu	= 4	
isiXhosa	= 5	
other	= 6	<input type="checkbox"/> 4
Area:		
urban	= 1	
rural	= 2	<input type="checkbox"/> 5
Gender:		
male	= 1	
female	= 2	<input type="checkbox"/> 6
School subjects:		
yes	= 1	
no	= 2	
	Geography	<input type="checkbox"/> 7
	History	<input type="checkbox"/> 8
	Mathematics	<input type="checkbox"/> 9
AA .....	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10-12
SA .....	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13-15

ex1	a(1)	b(2)	c(3)
1	a(1)	b(2)	c(3)
2	a(1)	b(2)	c(3)
3	a(1)	b(2)	c(3)
4	a(1)	b(2)	c(3)
5	a(1)	b(2)	c(3)
6	a(1)	b(2)	c(3)
7	a(1)	b(2)	c(3)

	16
	17
	18
	19
	20
	21
	22
	23

8	a(1)	b(2)	c(3)		24
9	a(1)	b(2)	c(3)		25
10	a(1)	b(2)	c(3)		26
11	a(1)	b(2)	c(3)		27
12	a(1)	b(2)	c(3)		28
13	a(1)	b(2)	c(3)		29
14	a(1)	b(2)	c(3)		30
15	a(1)	b(2)	c(3)		31
16	a(1)	b(2)	c(3)		32
17	a(1)	b(2)	c(3)		33
18	a(1)	b(2)	c(3)		34
19	a(1)	b(2)	c(3)		35
20	a(1)	b(2)	c(3)		36
ex1	true(1)	false(2)	cannot tell(3)		37
ex2	true(1)	false(2)	cannot tell(3)		38
ex3	true(1)	false(2)	cannot tell(3)		39
1	true(1)	false(2)	cannot tell(3)		40
2	true(1)	false(2)	cannot tell(3)		41
3	true(1)	false(2)	cannot tell(3)		42
4	true(1)	false(2)	cannot tell(3)		43
5	true(1)	false(2)	cannot tell(3)		44
6	true(1)	false(2)	cannot tell(3)		45
7	true(1)	false(2)	cannot tell(3)		46
8	true(1)	false(2)	cannot tell(3)		47
9	true(1)	false(2)	cannot tell(3)		48
10	true(1)	false(2)	cannot tell(3)		49
11	true(1)	false(2)	cannot tell(3)		50
12	true(1)	false(2)	cannot tell(3)		51
13	true(1)	false(2)	cannot tell(3)		52
14	true(1)	false(2)	cannot tell(3)		53
15	true(1)	false(2)	cannot tell(3)		54
16	true(1)	false(2)	cannot tell(3)		55
17	true(1)	false(2)	cannot tell(3)		56

18	true(1)	false(2)	cannot tell(3)		57
19	true(1)	false(2)	cannot tell(3)		58
20	true(1)	false(2)	cannot tell(3)		59
ex1	a(1)	b(2)	c(3)		60
21	a(1)	b(2)	c(3)		61
22	a(1)	b(2)	c(3)		62
23	a(1)	b(2)	c(3)		63
24	a(1)	b(2)	c(3)		64
25	a(1)	b(2)	c(3)		65
26	a(1)	b(2)	c(3)		66
27	a(1)	b(2)	c(3)		67
28	a(1)	b(2)	c(3)		68
29	a(1)	b(2)	c(3)		69
30	a(1)	b(2)	c(3)		70
31	a(1)	b(2)	c(3)		71
32	a(1)	b(2)	c(3)		72
33	a(1)	b(2)	c(3)		73
34	a(1)	b(2)	c(3)		74
35	a(1)	b(2)	c(3)		75
36	a(1)	b(2)	c(3)		76
37	a(1)	b(2)	c(3)		77
38	a(1)	b(2)	c(3)		78
39	a(1)	b(2)	c(3)		79
40	a(1)	b(2)	c(3)		80
ex1	supports(1)	goes against(2)	neither(3)		01
ex2	supports(1)	goes against(2)	neither(3)		02
ex3	supports(1)	goes against(2)	neither(3)		03
41	supports(1)	goes against(2)	neither(3)		04
42	supports(1)	goes against(2)	neither(3)		05
43	supports(1)	goes against(2)	neither(3)		06
44	supports(1)	goes against(2)	neither(3)		07
45	supports(1)	goes against(2)	neither(3)		08
46	supports(1)	goes against(2)	neither(3)		09

47	supports(1)	goes against(2)	neither(3)		10
48	supports(1)	goes against(2)	neither(3)		11
49	supports(1)	goes against(2)	neither(3)		12
50	supports(1)	goes against(2)	neither(3)		13
51	supports(1)	goes against(2)	neither(3)		14
52	supports(1)	goes against(2)	neither(3)		15
53	supports(1)	goes against(2)	neither(3)		16
54	supports(1)	goes against(2)	neither(3)		17
55	supports(1)	goes against(2)	neither(3)		18
56	supports(1)	goes against(2)	neither(3)		19
57	supports(1)	goes against(2)	neither(3)		20
58	supports(1)	goes against(2)	neither(3)		21
59	supports(1)	goes against(2)	neither(3)		22
60	supports(1)	goes against(2)	neither(3)		23
ex1	yes(1)	no(2)			24
ex2	yes(1)	no(2)			25
61	yes(1)	no(2)			26
62	yes(1)	no(2)			27
63	yes(1)	no(2)			28
64	yes(1)	no(2)			29
65	yes(1)	no(2)			30
66	yes(1)	no(2)			31
67	yes(1)	no(2)			32
68	yes(1)	no(2)			33
69	yes(1)	no(2)			34
70	yes(1)	no(2)			35
71	yes(1)	no(2)			36
72	yes(1)	no(2)			37
73	yes(1)	no(2)			38
74	yes(1)	no(2)			39
75	yes(1)	no(2)			40
76	yes(1)	no(2)			41
77	yes(1)	no(2)			42



## APPENDIX C

## GLOSSARY

abolished:	stopped, ended
adequate:	good enough
alienate:	turn the people against the government
amnesty:	general pardon, excused from punishment
autocratic:	does not listen to anyone else's advice or criticism
backlog:	fallen behind, demand has got bigger
cites:	mentions, emphasises
culled:	population of animals has to be reduced due to overcrowding
deterrent:	way of discouraging, way of stopping
discrimination:	emphasise differences between people based on race, colour, etc
evict:	throw out, force out of the house or off the land
extend:	make longer
humane:	compassionate, civilized, decent
humanitarian:	compassionate, civilized, decent
independent:	not connected to any of the relevant people
intimidation:	threaten someone with violence in order to influence them
legislation:	law
majority:	most of, more than half
moral standards:	concerned with right or wrong
negligible:	very small, very little
predecessor:	the person who had the job before him
repatriate:	send back to own country

## APPENDIX D

## QUESTIONNAIRE - CTT

**DIRECTIONS:** This questionnaire contains questions which have been designed to find out how well you reason about social and political matters. There are five sub-sections. All answers are to be marked on the separate answer sheet provided. Do not make any marks on this test booklet.

### SECTION 1

#### DEDUCTION

In this test each exercise consists of two statements. For the purposes of this test consider the given statements to be true without exception. Read the conclusions which follow the statements and decide which of these conclusions are true, false or formulated so that you cannot tell. Write your answer on the answer sheet. Study the following example carefully before starting this test.

Example	
The Bafana Bafana beat all the other teams in the African soccer championships in 1996. Germany and England beat the Bafana Bafana in friendly matches in 1996.	
ex1	Conclusion: The Bafana Bafana were the African soccer champions in 1996.
ex2	Conclusion: The Bafana Bafana won all their matches in 1996.
ex3	Conclusion: The Bafana Bafana will win the next World Cup.
Answers:	ex1     true - they beat all the other teams. ex2     false - they lost to Germany and England. ex3     cannot tell who will win the next World Cup.

#### HOUSING

*In 1994 the ANC promised to build one million houses by 1999. In 1997 150 000 houses had been built and the backlog in housing had grown from 1 million to 3 million.*

Based on the above two statements, indicate which of the following conclusions are true, false or that you cannot tell.

1. Conclusion: The ANC will be able to build one million houses by 1999.
2. Conclusion: The provision of new houses is not keeping up with the demand.
3. Conclusion: The backlog in houses will be 5 million by 1999.
4. Conclusion: The ANC places great importance on the building of houses.
5. Conclusion: If the ANC had built faster, the backlog would not be as large.

6. Conclusion: The ANC never keeps its promises.
7. Conclusion: A government with more experience would have been able to build more houses.

### *TRC*

*Many of the perpetrators and victims of gross human rights violations testified before the Truth and Reconciliation Commission (TRC). Some of the perpetrators who testified were granted amnesty, and some victims felt a healing effect by testifying.*

Based on the above two statements, indicate which of the following conclusions are true, false or that you cannot tell.

8. Conclusion: Certain perpetrators were not granted amnesty.
9. Conclusion: The victims who did not testify will never heal.
10. Conclusion: Not all the perpetrators of gross human rights testified before the TRC.
11. Conclusion: Some victims denied themselves the chance to feel a possible healing effect by not testifying.
12. Conclusion: The granting of amnesty to the perpetrators had a negative effect on the victims.
13. Conclusion: The TRC has been successful.
14. Conclusion: Some of the perpetrators also felt a healing effect after testifying.

### *THE CONSTITUTION*

*The Constitution is the supreme or highest law of South Africa and must be followed by all the people in South Africa. In order to change the Constitution, at least two-thirds of the members of parliament must agree to the changes.*

Based on the above two statements, indicate which of the following conclusions are true, false or that you cannot tell.

15. Conclusion: The State President as the leader of the country does not have to follow the Constitution.
16. Conclusion: A Supreme Court judge may make rulings different to those of the Constitution if he feels that he is correct.
17. Conclusion: If the majority of the people in the country want to change a specific part of the Constitution, they may.
18. Conclusion: The Constitution of South Africa compares favourably with those of other countries.
19. Conclusion: All the people of South Africa feel that the Constitution is fair and just.
20. Conclusion: Foreigners and tourists do not have to follow the Constitution.

## SECTION 2

### CREDIBILITY

The word **credibility** means believable. In this section you are given two statements regarding a specific issue. You need to decide which of the two statements is more credible (believable) or whether they are equally credible (believable). When attempting to answer the questions in this section, you should always bear the background and possible motives of the speakers in mind.

Study the following example carefully before starting this section.

Example		
ex1	a	The owner of a famous and supposedly very valuable Picasso painting states that the painting is genuine.
	b	An independent Art Consultant states that the painting is a fake (and therefore worth nothing).
	c	a & b are equally credible (believable).
<p>The answer is b. The reason is that the owner of the painting wants to convince people that the painting is genuine because then he can sell it for a lot of money, if it is fake then it is worth nothing. The independent (meaning not connected to the owner) Art Consultant will be more credible or believable because he is an expert and stands to gain nothing either way.</p>		

#### SCENARIO:

*The European Economic Community is considering investing large sums of money in a newly independent African country called Gazania. You are sent to establish whether the country is stable, both economically and socially, and whether the government is capable or not. In order to draw up your report, you investigate various aspects of both the government and the country as a whole. You need to decide which of the two statements in each case is more credible (believable) or whether they are equally credible (believable). Remember to consider the person's motives or reasons for saying what they say.*

#### ASSESSMENT OF THE RECENT GENERAL ELECTION

21. a A government official states that the election was completely problem free.  
 b A member of the Independent Electoral Commission states that voter intimidation took place during the election.  
 c a & b are equally credible.
22. a The official opposition political party states that the pre-election political violence was the cause of their defeat in the election.  
 b An international political scientist states that the pre-election political violence had a negligible effect on the outcome of the election.  
 c a & b are equally credible.

## AFFAIRS OF STATE

23. a A government official states that the introduction of a "wealth tax" will be to the benefit of all the people of the country in the long term.
- b The editor of a national newspaper states in his editorial that the introduction of a "wealth tax" will not benefit all the people as it will alienate the wealthier people from the government.
- c a & b are equally credible.
24. a The Minister of Transport states that the roads do not require any maintenance at present.
- b An international traveller states that the roads are in a poor condition in comparison with other countries and require maintenance.
- c a & b are equally credible.

## FINANCES

25. a A professor from the State University Economics Department states that the government has major financial problems.
- b An independent financial consultant tells you that the government has very serious financial problems.
- c a & b are equally credible.
26. a The Minister of Finance states that a loan from the World Bank will solve all of Gazania's financial problems.
- b The president of the World Bank states that a loan will only make Gazania's problems worse.
- c a & b are equally credible.

## LABOUR AND EMPLOYMENT

27. a A spokesperson on labour issues from the opposition party states that unemployment is decreasing in the country.
- b A recently retrenched worker states that unemployment in the country is increasing.
- c a & b are equally credible.
28. a A government official states that there is no discrimination against foreigners seeking jobs in public departments.
- b A Zimbabwean tells you that he has been discriminated against as he has been unable to get a job in any public department.
- c a & b are equally credible.

**HOUSING**

29. a An independent consultant on housing states that the government has made excellent progress in providing houses for the homeless.
- b A homeless person tells you that the government has made no progress in providing houses for the homeless.
- c a & b are equally credible.
30. a The spokesperson on housing for the opposition party states that the houses that have been built are of a very poor quality.
- b A building engineer states that the quality of the houses is adequate.
- c a & b are equally credible.

**CRIME**

31. a A woman whose husband has just been killed in an armed robbery tells you that the country is unsafe.
- b A leading criminologist from the University states that the crime levels are decreasing in the country.
- c a & b are equally credible.
32. a The Minister of Law and Order states that the government does view the fighting of crime as being of top priority and cites the fact that almost 20% of the National Budget is allocated to fighting crime.
- b A police officer states that the government does not view the fighting of crime to be a top priority, because if they did they would pay police officers higher wages.
- c a & b are equally credible.

**EDUCATION**

33. a The Minister of Education states that the standard of education has improved as is reflected in the record number of learners who passed the matric examination the previous year.
- b An education expert from Oxford University in England states that the standards have dropped as the actual examinations were a lot easier than in previous years.
- c a & b are equally credible.
34. a The opposition party states that the new Outcomes Based Education policy may fail as it has not been tested properly.
- b An education official from the USA states that the OBE policy will definitely work as it has been successful in his home state of Texas.
- c a & b are equally credible.

**CONSERVATION**

35. a A conservation expert states that the continued hunting of elephants for their valuable tusks is putting them in danger of extinction.
- b The Minister of Trade and Tourism states that the elephants are in no danger of becoming extinct.
- c a & b are equally credible.
36. a A conservation expert states that to retain a specific nature reserve instead of mining it, would have future value in terms of tourist revenues.
- b The Minister of Finance states that the mining of the nature reserve would have future value in terms of mining revenues.
- c a & b are equally credible.

**HEALTH**

37. a The Minister of Health states that the government is doing everything in its power to combat the high infant mortality (death) rate.
- b A mother whose baby recently died states that the government is not doing enough to combat the high infant mortality rate.
- c a & b are equally credible.
38. a A leading international AIDS researcher states that the spread of the disease has led to a negative growth rate in Gazania's population.
- b The Minister of Health states that the disease (AIDS) is under control in the country.
- c a & b are equally credible.
39. a The official opposition party states that the government is unconcerned about the provision of health care facilities in rural areas.
- b The Minister of Health states that the government is concerned about the provision of health care in rural areas, stating that over a hundred new clinics have been built in rural areas since they came to power.
- c a & b are equally credible.
40. a The Nurses Association states that the legalizing of abortion has dramatically reduced the number of adult deaths due to incomplete or failed abortions.
- b The leader of the United Churches of Gazania states the legalizing of abortion will lead to a decline in the morals of Gazania's youth.
- c a & b are equally credible.

## SECTION 3

## INDUCTIVE INFERENCE

An inference is a conclusion which a person draws from certain observed facts or evidence. In the examples which follow there are several conclusions made for the given evidence. You should accept the given evidence or facts as being true. You will need to state whether the given evidence:

- \* supports the conclusion;
- \* goes against the conclusion, or
- \* neither supports nor goes against the conclusion.

Study the following example carefully before starting this section.

Example	
Evidence: The producers of the film "Titanic" spent almost \$300 million on making the film. The previous record in terms of money spent on making a film was \$200 million. In the first two weeks after the release of the film it made \$290 million.	
ex1	Conclusion: "Titanic" is the most expensive film ever made.
ex2	Conclusion: "Titanic" is unlikely to ever recoup the money spent on making it.
ex3	Conclusion: Disaster films always make a lot of money.
Answers:	<p>ex1 Supports - \$100 million more than the previous highest.</p> <p>ex2 Goes against - if it made \$290 million in just two weeks, it is very likely to make just another \$10 million in the weeks and years to come.</p> <p>ex3 Neither - there is no evidence of this in the given statement.</p>

Go to the next page and continue with this section.

*Evidence:*

*In the years leading up to 1994, the average number of murders committed per day in South Africa was 24. During the corresponding time approximately 150 people were sentenced to death and executed every year. The last execution (by hanging) was carried out in 1994 and the death penalty was formally abolished in 1997, on humanitarian grounds. Since then the number of murders committed has risen to as high as 65 per day. As a result many individuals and groups are calling for the death penalty to be brought back in South Africa.*

State whether the given evidence: **supports** the conclusion, **goes against** the conclusion, or **neither supports nor goes against** the conclusion.

41. Conclusion: The death penalty was abolished because it was not an effective deterrent for prospective murderers.
42. Conclusion: In comparison with other countries South Africa's murder rate is very high.
43. Conclusion: Lifelong jail sentences will be more effective in deterring criminals than the death penalty.
44. Conclusion: If more humane methods of execution such as the injection of a lethal poison were used, the death penalty would be more acceptable to most people.
45. Conclusion: The number of murders committed has increased since the last execution took place.
46. Conclusion: Before 1994 there were fewer than 500 murders per month.
47. Conclusion: Many South Africans feel that the death penalty should be brought back as a deterrent to murderers.
48. Conclusion: Crime in general has increased in South Africa since the last execution.

*Evidence:*

*Abortion on demand was legalized in South Africa in 1997. Since that time the number of women who have died as a result of a "backstreet" or "home" abortion has decreased significantly. The number of abandoned new-born babies has also decreased.*

State whether the given evidence: **supports** the conclusion, **goes against** the conclusion, or **neither supports nor goes against** the conclusion.

49. Conclusion: The legalization of abortion has led to a lower birth rate in the country.
50. Conclusion: The moral standards of South Africa's women have declined.
51. Conclusion: The death rate of healthy South African women has decreased since 1997.
52. Conclusion: The change in the abortion law has led to a situation where more abortions are performed daily than before.
53. Conclusion: The new abortion law appears to be a success in terms of general health and welfare issues.

*Evidence:*

*In the light of numerous escapes and criticism concerning prison facilities, the South African authorities are attempting to upgrade prisons. One country which sets a good example in this regard is the USA. The Chicago Federal Prison in the USA is known as one of the most humane prisons in the world. One of the reasons for this is that the USA authorities place great emphasis on the human rights of prisoners. The successful rehabilitation rate of former prisoners is also one of the highest in the world. There have also been no escapes from the prison.*

State whether the given evidence: supports the conclusion, **goes against** the conclusion, or **neither** supports nor goes against the conclusion.

54. Conclusion: When prisoners are treated well they do not attempt to escape.
55. Conclusion: It appears that there is a direct relationship between the humane treatment of prisoners and successful rehabilitation.
56. Conclusion: Security is a priority for the Chicago Federal Prison.
57. Conclusion: Prisoners at the Chicago Federal Prison have the same basic human rights as ordinary citizens.
58. Conclusion: South Africa has a higher rate of escapes than the USA.
59. Conclusion: Both the USA and South Africa are concerned about the well-being of prisoners.
60. Conclusion: The South African prison authorities act in a very autocratic manner and are unwilling to discuss problems.

## SECTION 4

## RECOGNITION OF ASSUMPTIONS

An assumption is something that is presupposed or taken for granted. For example when someone says to you "I'll see you tomorrow" he takes for granted that both you and he will be alive the next day and that both of you would be available the next day. Below are a number of statements. Each statement is followed by several proposed assumptions. You must decide whether the assumption is really being made or not. Answer either YES for when the assumption is being made or NO when the assumption is not made. Study the following example carefully before starting this section.

Example	
Statement: Michael Jackson has sold a record number of 50 million CDs worldwide.	
ex1	Assumption: Many people in many countries enjoy Michael Jackson's singing.
ex2	Assumption: Michael Jackson is the best singer in the world.
	Answers:        ex1    Yes, the assumption is made. ex2    No, this assumption is not made in the given statement, the statement has nothing to do with how good a singer Michael Jackson is.

*Statement:*

*After the 1994 election the South African Minister of Education stated that his major aims were to bring about equal education for all and to encourage a culture of learning.*

Answer YES for when the assumption is being made or NO when the assumption is not made.

61. Assumption: Before the 1994 elections there was not equal education for all.
62. Assumption: The Minister of Education is responsible for solving all social problems.
63. Assumption: The Minister has the power to make changes.
64. Assumption: His predecessor did not encourage a culture of learning.
65. Assumption: A culture of learning is important in terms of education in general in the country.

*Statement:*

*In 1998 the new Outcomes Based Education curriculum was implemented for grade ones. One of the criticisms of the new curriculum was that it sidesteps the issue of values.*

Answer YES for when the assumption is being made or NO when the assumption is not made.

66. Assumption: The old curriculum was inadequate.
67. Assumption: The new curriculum will be implemented for other grades in the future.
68. Assumption: The new curriculum was only implemented for grade ones because younger learners adapt faster.
69. Assumption: Any discussion of values in the classroom will be deliberately avoided.
70. Assumption: The old curriculum included values.
71. Assumption: The teaching of values is important and should be in the curriculum.

*Statement:*

*The South African Minister of Labour states that the government has strategies in place that should help to combat unemployment.*

Answer YES for when the assumption is being made or NO when the assumption is not made.

72. Assumption: The previous government was unconcerned about unemployment.
73. Assumption: The government views unemployment as an important issue.
74. Assumption: The government views itself as being the most important figure in combatting unemployment.

*Statement:*

*One proposed solution to the unemployment problem is to track down and repatriate the estimated eight million foreign workers in South Africa.*

Answer YES for when the assumption is being made or NO when the assumption is not made.

75. Assumption: The eight million jobs which the foreign workers fill could be filled by South African citizens.
76. Assumption: The foreign workers cannot do the jobs as well as South Africans could.
77. Assumption: The foreign workers cannot get jobs in their own country.

*Statement:*

*The object of affirmative action in South Africa is to ensure that historically disadvantaged groups are equally represented in the work force of a particular employer.*

Answer YES for when the assumption is being made or NO when the assumption is not made.

78. Assumption: Without a formal affirmative action policy disadvantaged groups would not normally be equally represented.
79. Assumption: Affirmative action will benefit all employees in the long term.
80. Assumption: Previously advantaged groups will now be discriminated against in terms of employment and career development.

## SECTION 5

## PROBLEM SOLVING

In this section you are presented with a number of dilemmas or problem situations. You are given a number of possible solutions to the problems. You need to decide whether the given solution is good, acceptable but not very good, or poor. Remember throughout this section that you must take some action to solve the given problem. Study the following example carefully before starting this section.

Example	
<p>Problem:</p> <p>The South African cricket team has lost ten matches in a row. The morale of the team is very low as the World Cup begins in a month's time and the players feel that they have no hope of winning. You are the Managing Director of Cricket in South Africa and you need to decide what to do about the situation.</p>	
ex1	You ignore the problem and hope that things will improve.
ex2	You hire the services of the world's most experienced cricket coach and get him to advise your coach and players on where the problems lie and what to do about them.
ex3	Replace the coach and all the players who have been playing badly and hope that the new, inexperienced coach and players will perform better than their predecessors.
	<p>Answers:</p> <p>ex1 Poor, you are not solving anything.</p> <p>ex2 Good, you are taking positive action.</p> <p>ex3 Acceptable but not very good, you are taking action but the replacements are unlikely to perform much better than the old players.</p>

*Problem:*

*In terms of the 1997 legislation, abortion on demand is now legal and any woman wishing to terminate her pregnancy may have the operation done at a government hospital. In this first scenario you are a doctor working at a government hospital and you are ordered to perform abortions. You are morally against abortion and have participated in anti-abortion protests. You are unwilling to perform the operations. If you refuse to perform the operations you risk losing your job.*

Rate the following possible solutions to your problem by stating whether the proposed solutions are: good, acceptable but not good, or poor.

81. You should voice your disapproval but perform the operations anyway.
82. You should pay another doctor to perform the operations for you.
83. You should refuse to perform the operations on the grounds that section 15 of the Constitution states that everyone has the right to freedom of conscience, religion, thought, belief and opinion.
84. You should just refuse to perform the operations.

85. You should consult with MASA (Medical Association of South Africa) and call for a strike by all the doctors who feel the same way as you do about abortion.

*Problem:*

*Workers at the Southern Hemisphere Mining Company (SHMC) have been staging a strike action against the owners for three weeks. The reason for the strike is that for the third consecutive year they have granted the workers no increase and the basic wage is below the recommended minimum wage. The striking workers have pooled their resources such as food and available funds in order to feed their women and children while they receive no pay. The owners are attempting to hire "strike breakers" at even lower pay than the striking workers were receiving, while the negotiations continue. You are a mine worker and have been out of a job for two months already. You have a wife and a child to support and you have no money left. The SHMC has offered you one of the "strike breaker" jobs.*

Rate the following solutions to the problem in terms of being a good solution, an acceptable but not very good solution, or a poor solution.

86. Take the job and ignore the circumstances.  
 87. Try not to get involved and look for a job somewhere else.  
 88. Refuse the job but become involved in the strike action and share in the pooled resources.  
 89. Take the job for a week and then join the strike action.  
 90. Join a radical group of strikers who feel that by blowing up a part of the mine, they will speed up the negotiation process.

*Problem:*

*You are the president of a small country in Africa. The current debate in your parliament is whether or not to re-introduce the legal sale of elephant tusks. Trade in tusks and ivory has been banned in your country for 10 years. Your Minister of Conservation presents strong evidence to show that the legalization of hunting of elephants and trade in tusks and ivory would lead to a situation where the elephant population would again be threatened with extinction especially when the poaching factor is included in the formula. Your Minister of Finance states that your country has a large stockpile of tusks from when the ban was introduced, and the sale of these could generate much needed funds which could help to feed many starving people in your country. The Minister of Trade says that anyone should be able to hunt elephants and then sell the tusks. He feels that they are a natural resource and therefore belong to the people.*

Consider the following solutions to the problem and decide which of them is a good solution, an acceptable but not very good solution, or a poor solution.

91. You extend the ban on hunting of elephants and on all trade in tusks and ivory.  
 92. You unban hunting of elephants and trade of tusks and ivory.  
 93. You unban trade in tusks and ivory and allow hunting of elephants by licensed hunters only.  
 94. You extend the ban on hunting of elephants and general trade, but allow the sale of stockpiled

tusks only.

95. You extend the general ban on trade in tusks and ivory and allow only government appointed dealers to sell off the stockpiled tusks and tusks from culled elephants.

*Problem:*

*You are the Chief of Police in a certain town and a local farmer has instructed you to evict, by force if necessary, a family who is living illegally (squatting) in one of the buildings on his farm. The farmer states that he wishes to demolish the building and build a garage for his vehicles. He states that this is his right as the owner of the building. The family has refused to leave as they claim that their family has lived in that building for many generations and the building has become theirs by right. The family also claims that they have nowhere else to go and that there is no other accommodation available in the area. The head of the family still works for the farmer and the children attend a nearby school. To complicate matters it is the middle of winter with sub-zero temperatures at night.*

Consider the following solutions to the problem and decide which of them is a good solution, an acceptable but not very good solution, or a poor solution.

96. You and three police officers physically drag the family out of the house and put all their belongings in the street.
97. You simply inform the farmer that you refuse to remove the family as it is too cold outside.
98. You tell the family that you are giving them another month to find alternative accommodation and then further steps will have to be taken if they haven't moved out yet.
99. You give the farmer permission to simply bulldoze the building whether or not the people or their possessions are still inside it.
100. You inform the farmer that you may not act as Section 26 paragraph 3 of the Constitution states that "No one may be evicted from their home, or have their home demolished without an order of court made after considering all the relevant circumstances."

## APPENDIX E

## VRAELYS - PKQ

AANWYSINGS: Hierdie vraelys is opgestel om vas te stel hoe goed is jou kennis oor sosiale en politieke aangeleenthede. Alle antwoorde moet op die aparte antwoordblad ingevul word. Moenie enige merkies op die vraelys self maak nie.

In hierdie afdeling moet jy die korrekte antwoord uit die drie moontlikhede wat verskaf word, kies. Slegs een antwoord is korrek. Kyk na die volgende voorbeeld:

Voorbeeld		
vb1	Wie is die President van Suid-Afrika?	
	a	Thabo Mbeki
	b	Mangosuthu Buthelezi
	c	Nelson Mandela
Die korrekte antwoord is c Nelson Mandela. Skryf jou antwoord op die antwoordblad wat verskaf is. Beantwoord nou die vrae wat volg.		

1. Waarom was 1994 op politieke gebied 'n baie belangrike jaar vir alle Suid-Afrikaners?
  - a Nelson Mandela is uit die tronk vrygelaat.
  - b Die eerste demokratiese verkiesing is gehou.
  - c Die Inkatha Vryheidsparty het aan die onderhandelinge onttrek.
2. Watter groep mense word beskou as die vroegste inwoners van Suid-Afrika?
  - a Zoeloe
  - b Xhosa
  - c Khoikhoi/San
3. Waarom was 1652 'n belangrike jaar in die geskiedenis van Suid-Afrika?
  - a Vasco da Gama het die Kaap ontdek.
  - b Die eerste parlement is saamgestel.
  - c Die eerste Europeërs (blankes) het hulle in Suid-Afrika gevestig.
4. Watter buitelandse lande het Suid-Afrika tussen 1652 en 1961 regeer?
  - a Duitsland en Groot Brittanje
  - b Groot Brittanje en Nederland
  - c Duitsland en Nederland

5. Watter provinsies het in 1910 saamgesmelt om die Unie van Suid-Afrika te vorm?
  - a Wes Kaap, Oos Kaap, Transvaal, Natal
  - b Transkei, Venda, Bophuthatswana, Ciskei
  - c Kaapkolonie, Natal, Transvaal, Oranje Vrystaat
  
6. In watter jaar is die African National Congress (ANC) gestig, aanvanklik as die South African Native National Congress?
  - a 1912
  - b 1948
  - c 1961
  
7. In watter jaar het die Nasionale Party onder DF Malan aan bewind gekom en het Apartheid begin?
  - a 1910
  - b 1948
  - c 1961
  
8. Watter gebeure het die einde van Apartheid aangedui?
  - a Die instelling van die tuislandbeleid.
  - b Die opheffing van die verbod op die ANC en die vrylating van Nelson Mandela uit die tronk.
  - c Die oorwinning van die ANC in die eerste werklik demokratiese algemene verkiesing.
  
9. Wanneer het Suid-Afrika onafhanklikheid van Brittanje verkry en 'n republiek geword?
  - a 1910
  - b 1961
  - c 1994
  
10. Wat was die hoofrede vir die protesaksie wat in Junie 1976 in Soweto begin het?
  - a Belastinge is dramaties verhoog.
  - b Die regering se aandrang dat swart leerlinge gedeeltelik in Afrikaans onderrig word.
  - c Nelson Mandela is na Robben Eiland gestuur.
  
11. Waarvoor staan die afkorting WVK?
  - a Weervoorspellingskommissie
  - b Waarheids- en Versoeningskommissie
  - c Wêreldbank Verteenwoordigingskommissie
  
12. Is aborsie wettig in Suid-Afrika?
  - a Ja
  - b Nee
  - c Slegs in spesiale gevalle

13. Is die doodstraf formeel afgeskaf in Suid-Afrika?
- a Ja
  - b Nee
  - c Slegs in beginsel
14. Wat is die amptelike benaming vir die volgende: "*Die aanstelling of bevordering van opvoedkundig benadeelde werknemers om te verseker dat die spesifieke groep regverdig verteenwoordig word in die werknemerskorps van 'n spesifieke werkgewer*"?
- a Herverdeling
  - b Versoening
  - c Regstellende aksie
15. Vir wie is gesondheidsorg heeltemal gratis in Suid-Afrika?
- a Enigiemand oor die ouderdom van 65
  - b Kinders onder die ouderdom van 18
  - c Swanger vrouens en kinders onder die ouderdom van 6 jaar
16. Hoeveel mense in Suid-Afrika woon na raming in informele behuising (plakkerskampe)?
- a Minder as een miljoen
  - b Tussen een en drie miljoen
  - c Meer as drie miljoen
17. Volgens die Handves van Menseregte weeg 'n kind se welstand swaarder as die belange van 'n volwassene wat by die kind betrokke is.
- a Waar
  - b Vals
  - c Slegs in spesiale gevalle
18. Is dit die regering se verantwoordelikheid om vir almal huise te bou?
- a Ja
  - b Nee
  - c Slegs vir diegene wat tans in informele behuising woon
19. Watter van die volgende is die beste definisie van demokrasie in 'n land?
- a Die regte van die meerderheid weeg swaarder as die regte van die individu of minderheid.
  - b Enigiemand mag stem.
  - c Regering deur alle mense, óf direk, óf deur middel van verkose verteenwoordigers.

20. In watter jaar vind die volgende algemene verkiesing in Suid-Afrika plaas?

- a 1999
- b 2000
- c 2004

## APPENDIX F

<b>VRAELYS</b>		<b>ANTWOORDBLAD</b>	
Van .....			
Voorletters .....			
Skool .....		<input type="checkbox"/>	1
Ouderdom .....		<input type="checkbox"/> <input type="checkbox"/>	2-3
Huistaal:	English = 1		
	Afrikaans = 2		
	Sesotho = 3		
	isiZulu = 4		
	isiXhosa = 5		
	ander = 6	<input type="checkbox"/>	4
Area:	stedelik = 1		
	platteland = 2	<input type="checkbox"/>	5
Geslag:	manlik = 1		
	vroulik = 2	<input type="checkbox"/>	6
Skoolvakke:	ja = 1		
	nee = 2		
	Aardrykskunde	<input type="checkbox"/>	7
	Geskiedenis	<input type="checkbox"/>	8
	Wiskunde	<input type="checkbox"/>	9
AA .....		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10-12
SA .....		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13-15

vb1	a(1)	b(2)	c(3)		
1	a(1)	b(2)	c(3)	<input type="checkbox"/>	16
2	a(1)	b(2)	c(3)	<input type="checkbox"/>	17
3	a(1)	b(2)	c(3)	<input type="checkbox"/>	18
4	a(1)	b(2)	c(3)	<input type="checkbox"/>	19
5	a(1)	b(2)	c(3)	<input type="checkbox"/>	20
6	a(1)	b(2)	c(3)	<input type="checkbox"/>	21
7	a(1)	b(2)	c(3)	<input type="checkbox"/>	22
8	a(1)	b(2)	c(3)	<input type="checkbox"/>	23
				<input type="checkbox"/>	24

9	a(1)	b(2)	c(3)		25
10	a(1)	b(2)	c(3)		26
11	a(1)	b(2)	c(3)		27
12	a(1)	b(2)	c(3)		28
13	a(1)	b(2)	c(3)		29
14	a(1)	b(2)	c(3)		30
15	a(1)	b(2)	c(3)		31
16	a(1)	b(2)	c(3)		32
17	a(1)	b(2)	c(3)		33
18	a(1)	b(2)	c(3)		34
19	a(1)	b(2)	c(3)		35
20	a(1)	b(2)	c(3)		36
vb1	waar(1)	vals(2)	kan nie sê(3)		37
vb2	waar(1)	vals(2)	kan nie sê(3)		38
vb3	waar(1)	vals(2)	kan nie sê(3)		39
1	waar(1)	vals(2)	kan nie sê(3)		40
2	waar(1)	vals(2)	kan nie sê(3)		41
3	waar(1)	vals(2)	kan nie sê(3)		42
4	waar(1)	vals(2)	kan nie sê(3)		43
5	waar(1)	vals(2)	kan nie sê(3)		44
6	waar(1)	vals(2)	kan nie sê(3)		45
7	waar(1)	vals(2)	kan nie sê(3)		46
8	waar(1)	vals(2)	kan nie sê(3)		47
9	waar(1)	vals(2)	kan nie sê(3)		48
10	waar(1)	vals(2)	kan nie sê(3)		49
11	waar(1)	vals(2)	kan nie sê(3)		50
12	waar(1)	vals(2)	kan nie sê(3)		51
13	waar(1)	vals(2)	kan nie sê(3)		52
14	waar(1)	vals(2)	kan nie sê(3)		53
15	waar(1)	vals(2)	kan nie sê(3)		54
16	waar(1)	vals(2)	kan nie sê(3)		55
17	waar(1)	vals(2)	kan nie sê(3)		56
18	waar(1)	vals(2)	kan nie sê(3)		57

19	waar(1)	vals(2)	kan nie sê(3)		58
20	waar(1)	vals(2)	kan nie sê(3)		59
vb1	a(1)	b(2)	c(3)		60
21	a(1)	b(2)	c(3)		61
22	a(1)	b(2)	c(3)		62
23	a(1)	b(2)	c(3)		63
24	a(1)	b(2)	c(3)		64
25	a(1)	b(2)	c(3)		65
26	a(1)	b(2)	c(3)		66
27	a(1)	b(2)	c(3)		67
28	a(1)	b(2)	c(3)		68
29	a(1)	b(2)	c(3)		69
30	a(1)	b(2)	c(3)		70
31	a(1)	b(2)	c(3)		71
32	a(1)	b(2)	c(3)		72
33	a(1)	b(2)	c(3)		73
34	a(1)	b(2)	c(3)		74
35	a(1)	b(2)	c(3)		75
36	a(1)	b(2)	c(3)		76
37	a(1)	b(2)	c(3)		77
38	a(1)	b(2)	c(3)		78
39	a(1)	b(2)	c(3)		79
40	a(1)	b(2)	c(3)		80
vb1	ondersteun(1)	gaan daarteen(2)	geeneen(3)		01
vb2	ondersteun(1)	gaan daarteen(2)	geeneen(3)		02
vb3	ondersteun(1)	gaan daarteen(2)	geeneen(3)		03
41	ondersteun(1)	gaan daarteen(2)	geeneen(3)		04
42	ondersteun(1)	gaan daarteen(2)	geeneen(3)		05
43	ondersteun(1)	gaan daarteen(2)	geeneen(3)		06
44	ondersteun(1)	gaan daarteen(2)	geeneen(3)		07
45	ondersteun(1)	gaan daarteen(2)	geeneen(3)		08
46	ondersteun(1)	gaan daarteen(2)	geeneen(3)		09
47	ondersteun(1)	gaan daarteen(2)	geeneen(3)		10

48	ondersteun(1)	gaan daarteen(2)	geeneen(3)		11
49	ondersteun(1)	gaan daarteen(2)	geeneen(3)		12
50	ondersteun(1)	gaan daarteen(2)	geeneen(3)		13
51	ondersteun(1)	gaan daarteen(2)	geeneen(3)		14
52	ondersteun(1)	gaan daarteen(2)	geeneen(3)		15
53	ondersteun(1)	gaan daarteen(2)	geeneen(3)		16
54	ondersteun(1)	gaan daarteen(2)	geeneen(3)		17
55	ondersteun(1)	gaan daarteen(2)	geeneen(3)		18
56	ondersteun(1)	gaan daarteen(2)	geeneen(3)		19
57	ondersteun(1)	gaan daarteen(2)	geeneen(3)		20
58	ondersteun(1)	gaan daarteen(2)	geeneen(3)		21
59	ondersteun(1)	gaan daarteen(2)	geeneen(3)		22
60	ondersteun(1)	gaan daarteen(2)	geeneen(3)		23
vb1	ja(1)	nee(2)			24
vb2	ja(1)	nee(2)			25
61	ja(1)	nee(2)			26
62	ja(1)	nee(2)			27
63	ja(1)	nee(2)			28
64	ja(1)	nee(2)			29
65	ja(1)	nee(2)			30
66	ja(1)	nee(2)			31
67	ja(1)	nee(2)			32
68	ja(1)	nee(2)			33
69	ja(1)	nee(2)			34
70	ja(1)	nee(2)			35
71	ja(1)	nee(2)			36
72	ja(1)	nee(2)			37
73	ja(1)	nee(2)			38
74	ja(1)	nee(2)			39
75	ja(1)	nee(2)			40
76	ja(1)	nee(2)			41
77	ja(1)	nee(2)			42
78	ja(1)	nee(2)			43



## APPENDIX G

**WOORDELYS**

amnestie:	sal nie vervolgd word nie, verskoon
gediskrimineer:	verskille tussen mense soos ras of kleur beklemtoon
intimidasië:	wil iemand beïnvloed deur skrikmaak
meerderheid:	net meer as die helfte
morele standaard:	reg of verkeerd
onbeduidende:	baie min
outokraties:	luister nie na kritiek nie, maak eie besluite
repatrieer:	stuur terug na land van afkoms
uitgedun:	populasie van wilde diere minder maak
voorganger:	persoon wat voor hom die werk gehad het

## APPENDIX H

# VRAELYS - CTT

**AANWYSINGS:** Hierdie vraelys is opgestel om vas te stel hoe goed jy oor sosiale en politieke aangeleenthede kan redeneer. Die vraelys bevat vyf onderafdelings. Alle antwoorde moet op die aparte antwoordblad ingevul word.

## AFDELING 1

### DEDUKSIE/GEVOLGTREKKINGS

In hierdie toets bestaan elke oefening uit twee stellings. Vir die doel van die toets moet jy die gegewe stelling sonder meer as waar beskou. Lees die gevolgtrekkings wat op die stellings volg en besluit watter van die stellings is waar of vals of van so 'n aard dat jy nie kan sê nie. Skryf jou antwoord op die antwoordblad. Bestudeer die volgende voorbeeld noukeurig voordat jy met die toets begin.

Voorbeeld	
Die Springbokrugbyspan het in 1995 al die ander spanne in die Wêreldbeker gewen. Wallis en Engeland het die Springbokke in 1995 in vriendskaplike wedstryde gewen.	
vb1	Gevolgtrekking: Die Springbokke was in 1995 die Wêreldkampioene.
vb2	Gevolgtrekking: Die Springbokke het al die wedstryde wat hulle in 1995 gespeel het, gewen.
vb3	Gevolgtrekking: Die Springbokke gaan die volgende Wêreldbeker wen.
	Antwoorde:    vb1    waar - hulle het al die ander spanne gewen. vb2    vals - hulle het teen Wallis en Engeland verloor. vb3    kan nie sê wie die volgende Wêreldbeker gaan wen nie.

### BEHUISING

*In 1994 het die ANC belowe dat hulle teen 1999 een miljoen huise sou bou. In 1997 is 150 000 huise gebou en die agterstand in behuising het gegroei van 1 miljoen tot 3 miljoen.*

Dui op grond van die bogenoemde twee stellings aan watter van die volgende gevolgtrekkings is waar, vals of van so 'n aard dat jy nie kan sê nie.

1. Gevolgtrekking: Die ANC sal in staat wees om teen 1999 een miljoen huise te lewer.
2. Gevolgtrekking: Die voorsiening van nuwe huise hou nie by met die vraag na behuising nie.
3. Gevolgtrekking: In 1999 sal die agterstand in huise vyf miljoen wees.
4. Gevolgtrekking: Die ANC beskou die bou van huise as baie belangrik.
5. Gevolgtrekking: As die ANC vinniger gebou het, sou die agterstand nie so groot gewees het nie.
6. Gevolgtrekking: Die ANC kom nooit hul beloftes na nie.
7. Gevolgtrekking: 'n Regering met meer ervaring sou in staat gewees het om meer huise te bou.

**WVK**

*Baie van die oortreders en slagoffers van growwe skendings van menseregte het voor die Waarheids- en Versoeningskommissie (WVK) getuig. Sommige van die oortreders wat voor die Waarheids- en Versoeningskommissie getuig het, het amnestie verkry, en vir sommige slagoffers was dit 'n helende ervaring om te getuig.*

Dui op grond van die bogenoemde twee stellings aan watter van die volgende gevolgtrekkings is waar, vals of van so 'n aard dat jy nie kan sê nie.

8. Gevolgtrekking: Aan sommige oortreders is nie amnestie verleen nie.
9. Gevolgtrekking: Die slagoffers wat nie getuig het nie, sal nooit geheel word nie.
10. Gevolgtrekking: Nie almal wat by die growwe skending van menseregte betrokke was, het voor die WVK getuig nie.
11. Gevolgtrekking: Deur nie te gaan getuig nie, het sommige slagoffers hulself die kans om moontlik 'n helende effek te ervaar ontsê.
12. Gevolgtrekking: Die verlening van amnestie aan die oortreders het 'n negatiewe uitwerking op die slagoffers gehad.
13. Gevolgtrekking: Die WVK was suksesvol.
14. Gevolgtrekking: Sommige van die oortreders het ook 'n helende gevoel ervaar nadat hulle getuig het.

**DIE GRONDWET**

*Die Grondwet is die opperste of hoogste wet van Suid-Afrika en moet deur al die mense in Suid-Afrika gehoorsaam word. Om die Grondwet te verander moet ten minste twee-derdes van die parlamentslede met die verandering saamstem.*

Dui op grond van die bogenoemde twee stellings aan watter van die volgende gevolgtrekkings is waar, vals of van so 'n aard dat jy nie kan sê nie.

15. Gevolgtrekking: As leier van die land hoef die Staatspresident nie die Grondwet te gehoorsaam nie.
16. Gevolgtrekking: 'n Regter in die Hooggeregshof mag uitsprake maak wat verskil van die Grondwet as hy voel dat hy reg is.
17. Gevolgtrekking: As die meerderheid van die mense in die land 'n spesifieke deel van die Grondwet wil verander, mag hulle.
18. Gevolgtrekking: Die Grondwet van Suid-Afrika vergelyk gunstig met dié van ander lande.
19. Gevolgtrekking: Al die mense van Suid-Afrika voel dat die Grondwet billik en regverdig is.
20. Gevolgtrekking: Buitelanders en toeriste hoef nie die Grondwet te gehoorsaam nie.

## AFDELING 2

### GELOOFWAARDIGHEID

In hierdie gedeelte word twee stellings oor verskeie sake gegee. Jy moet besluit watter een van die twee stellings is meer aanneemlik (geloofwaardig) en of hulle ewe aanneemlik (geloofwaardig) is. Terwyl jy hierdie vraag beantwoord, moet jy voortdurend die agtergrond en moontlike motiewe van die sprekers in gedagte hou.

Bestudeer die volgende voorbeeld deeglik voordat jy met hierdie afdeling begin.

Voorbeeld		
vb1	a	Die eienaar van 'n beroemde en na wat verneem word, uiters waardevolle Picasso skildery sê dat die skildery eg is.
	b	'n Onafhanklike kunskonsultant verklaar dat die skildery vervals is (en daarom niks werd is nie).
	c	a & b is ewe geloofwaardig.
Die antwoord is b. Die rede is dat die eienaar van die skildery die mense wil oortuig dat die skildery eg is, want dan kan hy dit vir 'n klomp geld verkoop; as dit vervals is, is dit niks werd nie. Die onafhanklike (m.a.w. hy het geen konneksie met die eienaar nie) kunskonsultant se woord is meer aanneemlik of geloofwaardig, want hy is 'n kenner en kan niks by die saak wen of verloor nie.		

#### Scenario:

*Die Europese Ekonomiese Gemeenskap oorweeg dit om groot bedrae geld in Gazania, 'n Afrika-land wat so pas onafhanklik geword het, te belê. Jy word gestuur om vas te stel of die land ekonomies sowel as sosiaal stabiel is en of die regering bekwaam is of nie. Ten einde jou verslag te kan skryf, ondersoek jy verskeie aspekte van die regering en die land as geheel.*

Jy moet besluit watter een van die twee stellings is meer aanneemlik (geloofwaardig) en of hulle ewe aanneemlik (geloofwaardig) is. Onthou om die persoon se agtergrond en moontlike motiewe in gedagte te hou.

#### EVALUERING VAN DIE VORIGE ALGEMENE VERKIESING

21. a 'n Regeringsamptenaar verklaar dat die verkiesing geheel en al sonder probleme verloop het.
- b 'n Lid van die Onafhanklike Verkiesingskommissie verklaar dat intimidasie van kiesers tydens die verkiesing plaasgevind het.
- c a & b is ewe geloofwaardig.

22. a Die amptelike politieke opposisieparty verklaar dat die politieke geweld wat die verkiesing voorafgegaan het, die oorsaak was van hul nederlaag in die verkiesing.
- b 'n Internasionale politieke deskundige verklaar dat die politieke geweld wat die verkiesing voorafgegaan het, 'n onbeduidende invloed op die verkiesingsuitslag gehad het.
- c a & b is ewe geloofwaardig.

#### STAATSAANGELEENTHEDE

23. a 'n Regeringsamptenaar verklaar dat die instelling van "welvaartsbelasting" op die lange duur tot voordeel van al die inwoners van die land sal strek.
- b Die redakteur van 'n nasionale koerant verklaar in sy redakteursartikel dat die instelling van "welvaartsbelasting" nie al die mense sal bevoordeel nie, aangesien dit die ryker mense van die regering sal vervreem.
- c a & b is ewe geloofwaardig.
24. a Die Minister van Vervoer verklaar dat die paaie op die oomblik geen onderhoud nodig nie.
- b 'n Internasionale toeris verklaar dat die paaie in vergelyking met ander lande in 'n swak toestand is en dat onderhoud nodig is.
- c a & b is ewe geloofwaardig.

#### FINANSIES

25. a 'n Professor van die Staatsuniversiteit se Ekonomiese Departement verklaar dat die regering groot finansiële probleme ondervind.
- b 'n Onafhanklike finansiële konsultant deel jou mee dat die regering ernstige finansiële probleme ondervind.
- c a & b is ewe geloofwaardig.
26. a Die Minister van Finansies verklaar dat 'n lening van die Wêreldbank al Gazania se finansiële probleme sal oplos.
- b Die president van die Wêreldbank verklaar dat 'n lening Gazania se probleme net sal vererger.
- c a & b is ewe geloofwaardig.

#### ARBEID EN WERKVERSKAFFING

27. a Die amptelike opposisieparty se woordvoerder oor arbeidsaangeleenthede verklaar dat werkloosheid in die land besig is om af te neem.
- b 'n Werker wat onlangs sy werk verloor het, verklaar dat werkloosheid in die land besig is om toe te neem.
- c a & b is ewe geloofwaardig.

28. a 'n Regeringsamptenaar verklaar dat daar nie gediskrimineer word teen buitelanders wat aansoek doen vir werk in staatsdepartemente nie.
- b 'n Zimbabwiër deel jou mee dat daar teen hom gediskrimineer is aangesien hy nie 'n pos in enige van die staatsdepartemente kon kry nie.
- c a & b is ewe geloofwaardig.

### BEHUISING

29. a 'n Onafhanklike behuisingskonsultant verklaar dat die regering uitstekende vordering gemaak het met die verskaffing van huise aan die haweloses.
- b 'n Hawelose persoon deel jou mee dat die regering geen vordering gemaak het in die verskaffing van huise aan haweloses nie.
- c a & b is ewe geloofwaardig.
30. a Die opposisieparty se woordvoerder oor behuising verklaar dat die huise wat gebou is van baie swak kwaliteit is.
- b 'n Geboue-ingenieur verklaar dat die kwaliteit van die huise voldoende is.
- c a & b is ewe geloofwaardig.

### MISDAAD

31. a 'n Vrou wie se man onlangs in 'n gewapende roof vermoor is, vertel jou dat die land onveilig is.
- b 'n Vooraanstaande kriminoloog van die Universiteit verklaar dat die misdaad in die land besig is om af te neem.
- c a & b is ewe geloofwaardig.
32. a Die Minister van Wet en Orde verklaar dat die regering die bekamping van misdaad as topprioriteit beskou en verwys na die feit dat amper 20% van die Nasionale Begroting aan die bekamping van misdaad toegewys is.
- b 'n Polisiebeampte verklaar dat die regering nie die bekamping van misdaad as 'n topprioriteit beskou nie, want as dit so was, sou hulle polisiebeamptes meer betaal het.
- c a & b is ewe geloofwaardig.

### ONDERWYS

33. a Die Minister van Onderwys verklaar dat die standaard van onderwys verbeter het, soos gereflekteer deur die rekordgetal leerlinge wat die vorige jaar die matriekeksamen geslaag het.
- b 'n Onderwysdeskundige van Oxford Universiteit in Engeland verklaar dat die standarde gedaal het aangesien die eksamens baie makliker was as in vorige jare.
- c a & b is ewe geloofwaardig.

34. a Die opposisieparty verklaar dat die nuwe Uitkomsgebaseerde onderwysbeleid moontlik nie gaan slaag nie aangesien dit nie behoorlik uitgetoets is nie.
- b 'n Onderwysamptenaar van die VSA verklaar dat die Uitkomsgebaseerde onderwysbeleid definitief sal slaag omdat dit suksesvol was in Texas, die staat waar hy vandaan kom.
- c a & b is ewe geloofwaardig.

#### BEWARING

35. a 'n Bewaringsdeskundige verklaar dat die voortgesette jag van olifante vir hul waardevolle ivoortande die gevaar inhou dat hulle uitgewis kan word.
- b Die Minister van Handel en Toerisme verklaar dat daar geen gevaar is dat die olifante uitgewis kan word nie.
- c a & b is ewe geloofwaardig.
36. a 'n Bewaringsdeskundige verklaar dat die behoud van 'n spesifieke natuurresewaat eerder as om dit in 'n myn te omskep, toekomstige waarde inhou in terme van inkomste uit toerisme.
- b Die Minister van Finansies verklaar dat die ontginning van die natuurresewaat toekomstige waarde inhou in terme van inkomste uit mynbou.
- c a & b is ewe geloofwaardig.

#### GESONDHEID

37. a Die Minister van Gesondheid verklaar dat die regering alles in sy vermoë doen om die hoë getal kindersterftes te bekamp.
- b 'n Moeder wie se baba onlangs dood is, verklaar dat die regering nie genoeg doen om die hoë getal kindersterftes te bekamp nie.
- c a & b is ewe geloofwaardig.
38. a 'n Vooraanstaande internasionale navorser oor VIGS verklaar dat die verspreiding van die virus gelei het tot 'n negatiewe groeikoers in Gazania se bevolking.
- b Die Minister van Gesondheid verklaar dat die siekte (VIGS) onder beheer is in Gazania.
- c a & b is ewe geloofwaardig.
39. a Die amptelike opposisieparty verklaar dat die regering onverskillig staan teenoor die verskaffing van gesondheidsorgfasiliteite in plattelandse gebiede.
- b Die Minister van Gesondheid verklaar dat die regering besorg is oor die verskaffing van gesondheidsorg in plattelandse gebiede en voer aan dat meer as 'n honderd klinieke al in plattelandse gebiede gebou is sedert hulle aan bewind gekom het.
- c a & b is ewe geloofwaardig.

40. a Die Verpleegstersvereniging verklaar dat die wettiging van aborsie die dodetal onder volwassenes as gevolg van onvoltooide of mislukte aborsies dramaties laat afneem het.
- b Die leier van die Verenigde Kerke van Gazania verklaar dat die wettiging van aborsies gelei het tot 'n afname in die morele waardes van die jeug van Gazania.
- c a & b is ewe geloofwaardig.

## AFDELING 3

### INDUKTIEWE INFERENSIES (AFLEIDINGS)

'n Inferensie is 'n **afleiding** wat 'n mens maak op grond van sekere waargenome feite of bewyse. In die voorbeelde wat volg, word daar verskeie afleidings gemaak op grond van die gegewe bewyse. Jy moet die gegewe bewyse of feite as waar aanvaar. Jy moet dan telkens aantoon of:

- die gegewe bewys die afleiding **ondersteun**,
- die gegewe bewys **teen** die afleiding **gaan**, of
- die afleiding die bewyse nie ondersteun nie en ook nie daarteen gaan nie (**geeneen**).

Bestudeer die volgende voorbeeld aandagtig voordat jy dié afdeling beantwoord.

Voorbeeld	
<p>Bewyse:</p> <p>Die vervaardigers van die film "Titanic" het amper \$300 miljoen aan die verfilming van die fliëk bestee. Die vorige rekord ten opsigte van geld wat aan die maak van 'n fliëk bestee is, was \$200 miljoen. In die eerste twee weke na die vrystelling van die fliëk, het die fliëk \$290 miljoen by die loket verdien.</p>	
vb1	Afleiding: "Titanic" is die duurste fliëk wat nog ooit gemaak is.
vb2	Afleiding: Dit is onwaarskynlik dat "Titanic" ooit die geld wat daaraan bestee is, terug sal maak.
vb3	Afleiding: Fliëks oor rampe verdien altyd baie geld.
	<p>Antwoorde:</p> <p>vb1 <b>Ondersteun</b> - \$100 miljoen meer as die vorige hoogste.</p> <p>vb2 <b>Gaan daarteen</b> - as dit net in die eerste twee weke \$290 miljoen verdien het, is dit hoogs waarskynlik dat nog \$10 miljoen verdien sal word in die weke en jare wat kom.</p> <p>vb3 <b>Geeneen</b> - daar is geen bewys hiervoor in die gegewe stelling nie.</p>

Vul jou antwoord op die antwoordblad in en gaan voort met die afdeling.

*Bewyse:*

*In die jare voor en tot 1994, was die gemiddelde aantal moorde wat per dag in Suid-Afrika gepleeg is, 24. Gedurende die ooreenstemmende tyd is ongeveer 150 mense jaarliks ter dood veroordeel en tereggestel. Die laaste teregstelling is in 1994 uitgevoer en in 1997 is die doodstraf formeel om humanitêre (medemenslikheids-) redes afgeskaf. Sedertdien het die aantal moorde tot so hoog as 65 per dag gestyg. As gevolg hiervan propageer baie mense en groepe dat die doodstraf heringestel moet word in Suid-Afrika.*

Dui aan of die afleiding deur die bewyse ondersteun word, deur die bewyse teengegaan word, of nie daardeur ondersteun word nie en ook nie teengegaan word nie (geeneen).

41. Afleiding: Die doodstraf is afgeskaf omdat dit nie 'n effektiewe afskrikmiddel vir voornemende moordenaars was nie.
42. Afleiding: In vergelyking met ander lande is Suid-Afrika se moordsyfer baie hoog.
43. Afleiding: Lewenslange tronkstraf sal kriminele meer effektief afskrik as die doodstraf.
44. Afleiding: As mensliker metodes van teregstelling (soos bv. die inspuiting van dodelike gif) gebruik word, sal die doodstraf vir die meeste mense meer aanvaarbaar wees.
45. Afleiding: Die aantal moorde wat gepleeg is, het toegeneem sedert die laaste teregstelling plaasgevind het.
46. Afleiding: Voor 1994 was daar minder as 500 moorde per maand.
47. Afleiding: Baie Suid-Afrikaners voel dat die doodstraf teruggebring moet word as afskrikmiddel vir moordenaars.
48. Afleiding: Misdaad in die algemeen in Suid-Afrika het toegeneem sedert die laaste teregstelling.

*Bewyse:*

*Aborsie op aanvraag is in 1997 in Suid-Afrika gewettig. Sedert daardie tyd het die aantal vrouens wat as gevolg van 'n "agterstraat-" of "tuis-" aborsie gesterf het, beduidend gedaal. Die aantal pasgebore babas wat verlate gelos word, het ook verminder.*

Dui aan of die afleiding deur die bewyse ondersteun word, deur die bewyse teengegaan word, of nie daardeur ondersteun word nie en ook nie teengegaan word nie (geeneen).

49. Afleiding: Die wettiging van aborsie het tot 'n laer geboortesifer in die land gelei.
50. Afleiding: Die morele standaard van Suid-Afrika se vrouens het afgeneem.
51. Afleiding: Die dodetal van gesonde Suid-Afrikaanse vrouens het sedert 1997 gedaal.
52. Afleiding: Die verandering in die aborsiewet het gelei tot 'n situasie waar daar daaglik meer aborsies uitgevoer word as ooit tevore.
53. Afleiding: Dit lyk asof die nuwe aborsiewet suksesvol is in terme van algemene gesondheids- en welsynsaangeleenthede.

*Bewyse:*

*In die lig van verskeie ontsnappings en kritiek oor tronkfasiliteite, poog die Suid-Afrikaanse owerhede om tronke op te gradeer. Een land wat 'n goeie voorbeeld stel in hierdie verband, is die VSA. Die Chicago Federale Tronk in die VSA is bekend as een van die mees medemenslike (humane) tronke in die wêreld. Een van die redes hiervoor is dat die owerhede in die VSA baie klem plaas op die menseregte van die gevangenes. Die suksesvolle rehabilitasiesyfer van vorige gevangenes is ook een van die hoogste in die wêreld. Daar was ook nog geen ontsnappings vanuit die tronk nie.*

Dui aan of die afleiding deur die bewyse ondersteun word, deur die bewyse teengegaan word, of nie daardeur ondersteun word nie en ook nie teengegaan word nie (geeneen).

54. Afleiding: As gevangenes goed behandel word, probeer hulle nie om te ontsnap nie.
55. Afleiding: Dit blyk dat daar 'n direkte verhouding is tussen die menslike behandeling van gevangenes en suksesvolle rehabilitasie.
56. Afleiding: Sekuriteit is 'n prioriteit vir die Chicago Federale Tronk.
57. Afleiding: Gevangenes by die Chicago Federale Tronk het dieselfde basiese menseregte as gewone landsburgers.
58. Afleiding: Die ontsnappingsyfer in Suid-Afrika is hoër as in die VSA.
59. Afleiding: Beide die VSA en Suid-Afrika is bekommerd oor die welstand van hul gevangenes.
60. Afleiding: Die Suid-Afrikaanse tronkowerhede tree op 'n baie outokratiese manier op en is onwillig om probleme te bespreek.

## AFDELING 4

### HERKENNING VAN AANNAMES

'n Aanname is iets wat 'n vooronderstelling is of wat as vanselfsprekend aanvaar word. As iemand byvoorbeeld vir jou sê "Ek sien jou môre" aanvaar die persoon dit as vanselfsprekend dat julle albei die volgende dag nog sal lewe en dat julle albei beskikbaar sal wees. Elke stelling word gevolg deur verskeie voorgestelde aannames. Jy moet besluit of die aanname regtig gemaak word of nie. Antwoord **JA** wanneer die aanname gemaak is en **NEE** as die aanname nie gemaak is nie. Bestudeer die volgende voorbeeld deeglik voordat jy met die afdeling begin.

Voorbeeld	
Stelling: 'n Rekord getal van 50 miljoen van Michael Jackson se CD's is wêreldwyd verkoop.	
vb1	Aanname: Baie mense in baie lande geniet Michael Jackson se musiek.
vb2	Aanname: Michael Jackson is die beste sanger in die wêreld.
	Antwoorde:   vb1    Ja, die aanname is gemaak. vb2    Nee, die aanname is nie in die gegewe stelling gemaak nie, die stelling het niks te doen met hoe goeie sanger Michael Jackson is nie.

*Stelling:*

*Na die 1994-verkiesing het die Suid-Afrikaanse Minister van Onderwys verklaar dat sy hoofdoelstellings is om gelyke onderwys vir almal in te stel en om 'n leerkultuur aan te moedig.*

Antwoord **JA** as die aanname gemaak word en **NEE** as die aanname nie gemaak word nie.

61. Aanname: Voor die verkiesing in 1994 was daar nie gelyke onderwys vir almal nie.
62. Aanname: Die Minister van Onderwys is verantwoordelik daarvoor om alle sosiale probleme op te los.
63. Aanname: Die Minister het die mag om veranderinge aan te bring.
64. Aanname: Sy voorganger het nie 'n leerkultuur aangemoedig nie.
65. Aanname: 'n Leerkultuur is belangrik in terme van onderwys in die algemeen in die land.

*Stelling:*

*In 1998 is die nuwe Uitkomsgebaseerde Onderwyskurrikulum by graad 1-leerders geïmplementeer. Een van die punte van kritiek teen die nuwe kurrikulum is dat dit die hele kwessie van waardes systap.*

Antwoord JA as die aanname gemaak word en NEE as die aanname nie gemaak word nie.

- 66. Aanname: Die ou kurrikulum was onvoldoende.
- 67. Aanname: Die nuwe kurrikulum sal in die toekoms in ander grade geïmplementeer word.
- 68. Aanname: Die kurrikulum is slegs by graad eens geïmplementeer omdat jonger leerders makliker aanpas.
- 69. Aanname: Enige bespreking van waardes in die klaskamer sal doelbewus vermy word.
- 70. Aanname: Die ou kurrikulum het waardes ingesluit.
- 71. Aanname: Die onderrig van waardes is belangrik en hoort in die kurrikulum.

*Stelling:*

*Die Suid-Afrikaanse Minister van Arbeid verklaar dat die regering strategieë in plek het wat behoort te help om werkloosheid te bekamp.*

Antwoord JA as die aanname gemaak word en NEE as die aanname nie gemaak word nie.

- 72. Aanname: Die vorige regering was nie besorg oor werkloosheid nie.
- 73. Aanname: Die regering beskou werkloosheid as 'n belangrike aangeleentheid.
- 74. Aanname: Die regering beskou homself as die belangrikste figuur in die bekamping van werkloosheid.

*Stelling:*

*Een voorgestelde oplossing vir die werkloosheidsprobleem is om die geraamde agt miljoen onwettige immigrante in Suid-Afrika op te spoor en te repatrieer.*

Antwoord JA as die aanname gemaak word en NEE as die aanname nie gemaak word nie.

- 75. Aanname: Die agt miljoen poste wat die immigrante beklee kan deur Suid-Afrikaanse burgers gevul word.
- 76. Aanname: Die immigrante werkers kan nie die werk so goed doen soos wat Suid-Afrikaners kan nie.
- 77. Aanname: Die immigrante werkers kan nie in hulle eie lande werk kry nie.

*Stelling:*

*Die doel van regstellende aksie is om te verseker dat die histories minder bevoorregte groepe gelykwaardig verteenwoordig word in die werkerskorps van 'n spesifieke werkgewer.*

Antwoord JA as die aanname gemaak word en NEE as die aanname nie gemaak word nie.

78. Aanname: Sonder 'n formele regstellende aksie beleid sal minderbevoorregtes nie normaalweg gelyk verteenwoordig word nie.
79. Aanname: Op die lange duur sal regstellende aksie tot alle werknemers se voordeel strek.
80. Aanname: Daar gaan nou teen groepe wat voorheen bevoordeel is, gediskrimineer word in terme van indiensneming en beroepsontwikkeling.

## AFDELING 5

### PROBLEEMOPLOSSING

In hierdie afdeling word 'n klomp dilemmas of probleemsituasies geskets. 'n Paar moontlike oplossings vir die probleme word gegee. Jy moet besluit of die oplossing goed, aanvaarbaar, maar nie baie goed nie of swak is. Onthou gedurende die beantwoording van die afdeling dat jy op 'n sekere manier moet optree om die gegewe probleem op te los. Bestudeer die volgende voorbeeld deeglik voordat jy met die afdeling begin.

Voorbeeld	
<p>Probleem:</p> <p>Die Suid-Afrikaanse krieketspan het tien wedstryde na mekaar verloor. Die moraal van die span is baie laag aangesien die Wêreldbeker oor 'n maand begin en die spelers voel dat hulle nie 'n kans het om te wen nie. Jy is die Besturende Direkteur van Krieket in Suid-Afrika en moet besluit wat om aan die saak te doen.</p>	
vb1	Jy ignoreer die probleem en hoop maar dat dinge sal verbeter.
vb2	Jy huur die wêreld se mees ervare kriketafrigter en vra hom om die span se afrigter en die spelers te adviseer oor waar die probleme lê en wat om daaraan te doen.
vb3	Jy vervang die afrigter en al die spelers wat sleg gespeel het en hoop dat die nuwe, onervare afrigter en spelers beter as hul voorgangers sal presteer.
	<p>Antwoorde:</p> <p>vb1 Swak, jy los niks op nie.</p> <p>vb2 Goed, jy doen positiewe stappe.</p> <p>vb3 Aanvaarbaar, maar nie baie goed nie, jy doen stappe maar dit is onwaarskynlik dat die plaasvervangers beter as die vorige spelers sal vaar.</p>

*Probleem:*

*In gevolge die 1997-wetgewing, is aborsie op aanvraag nou wettig en mag enige vrou wat haar swangerskap wil beëindig, dit in 'n staatshospitaal laat doen. In hierdie eerste scenario is jy 'n dokter wat in 'n staatshospitaal werk en jy word beveel om aborsies uit te voer. Jy is moreel gekant teen aborsies en het deelgeneem aan anti-aborsie protesaksies. Jy is onwillig om die aborsies uit te voer. As jy weier om die operasies uit te voer, kan jy moontlik jou werk verloor.*

Evalueer die volgende moontlike oplossings vir jou probleem deur aan te dui of die voorgestelde oplossings: goed, aanvaarbaar maar nie goed nie, of swak is.

81. Jy sal jou misnoeë te kenne gee, maar nogtans die operasies uitvoer.
82. Jy sal 'n ander dokter betaal om die operasies vir jou uit te voer.
83. Jy sal weier om die operasie uit te voer op grond van afdeling 15 van die Grondwet wat verklaar dat almal die reg op vryheid van gewete, godsdiens, gedagte, geloof en opinie het.
84. Jy sal weier om die operasies uit te voer.
85. Jy sal met MASA (Mediese Assosiasie van Suid-Afrika) oorleg pleeg en pleit vir 'n staking deur alle dokters wat dieselfde as jy voel oor aborsies.

*Probleem:*

*Werkers by die Suidelike Halfrond Mynmaatskappy (SHMM) het 'n staking van drie weke georganiseer teen die eienaars van die maatskappy. Die rede vir die staking is dat die maatskappy die werkers vir die derde agtereenvolgende jaar geen verhoging in basiese salarisse gegee het nie en dat hul salaris minder as die vereiste minimum salaris is. Die stakers het hul basiese lewensmiddele soos kos en geld saamgegooi ten einde hul vrouens en kinders te voed terwyl hulle geen geld ontvang nie. Die eienaars probeer om "stakingbrekers" teen 'n nog laer loon as wat die stakers ontvang, vir die duur van die onderhandelinge te huur. Jy het 'n vrou en 'n kind om te versorg en het geen geld oor nie. Die SHMM het jou een van die "stakingbrekerwerke" aangebied.*

Bepaal of die volgende oplossings vir die probleem 'n goeie oplossing, 'n aanvaarbare maar nie baie goeie oplossing nie, of 'n swak oplossing is.

86. Aanvaar die werk en ignoreer die omstandighede.
87. Probeer om nie betrokke te raak nie en soek iewers anders werk.
88. Bedank die werk maar raak betrokke by die staking en deel in die lewensmiddele wat die stakers saamgegooi het.
89. Aanvaar die werk, doen dit vir 'n week en sluit dan by die staking aan.
90. Sluit aan by 'n radikale groep stakers wat voel dat die onderhandelingsproses versnel kan word deur 'n gedeelte van die myn op te blaas.

*Probleem:*

*Jy is die president van 'n klein landjie in Afrika. Die huidige debat in die parlement is of die verkoop van olifantande gewettig moet word of nie. Handeldryf in olifantande en ivoor is tien jaar gelede in jou land verbied. Die Minister van Bewaring lewer sterk bewyse om te wys dat die wettiging van jag op olifante en die handel in olifantande en ivoor tot 'n situasie sal lei waar die olifantpopulasie weer 'n bedreigde spesie sal word, veral as die kwessie van wilddiewery ook in ag geneem word. Jou Minister van Finansies verklaar dat jou land in groot opgehoopte voorraad tande het wat ontstaan het toe die verbod ingestel is. Hy sê dat die verkope daarvan broodnodige fondse kan inbring wat kan help om die talle honger mense in die land te voed. Die Minister van Handel sê dat enigiemand toegelaat moet word om olifante te jag en die tande te verkoop. Hy voel dat olifante 'n natuurlike hulpbron is en daarom aan die mense van die land behoort.*

Oorweeg die volgende oplossings vir die probleem en besluit watter van hulle is 'n goeie oplossing, 'n aanvaarbare, maar nie baie goeie oplossing nie, of 'n swak oplossing.

91. Jy verleng die verbod op die jag van olifante en op alle handel in olifantande en ivoor.
92. Jy hef die verbod op die jag van olifante en die handel in olifantande en ivoor op.
93. Jy hef die verbod op handel in olifantande en ivoor op en laat die jag van olifante toe slegs deur gelisensieerde jagters.
94. Jy verleng die verbod op die jag van olifante en algemene handel, maar laat die verkoop van die opgehoopte olifantande toe.
95. Jy verleng die algemene verbod op handel in olifantande en ivoor, en laat slegs handelaars wat deur die regering aangestel is toe om die opgehoopte olifantande en die tande van olifante wat uitgedun moes word te verkoop.

*Probleem:*

*Jy is die Hoof van die Polisie in 'n sekere dorp en 'n plaaslike boer het jou opdrag gegee om 'n familie wat onwettig in een van die geboue op sy plaas woon te verwyder - met geweld as dit nodig is. Die boer verklaar dat hy die gebou wil sloop en 'n garage vir sy voertuie wil bou. Hy sê dat hy as eienaar van die gebou die reg het om dit te doen. Die familie weier egter om die gebou te verlaat omdat hulle beweer dat hul familie al vir baie jare in die gebou bly en daarom regtens daarop geregtig is om in die gebou te bly. Die familie beweer ook dat hulle nêrens het om heen te gaan nie, en dat daar geen ander akkommodasie in die gebied beskikbaar is nie. Die hoof van die familie werk steeds vir die boer en die kinders woon 'n nabygeleë skool by. Om sake nog verder te kompliseer is dit in die middel van die winter en is temperature snags onder vriespunt.*

Oorweeg die volgende oplossings vir die probleem en besluit watter van hulle is 'n goeie oplossing, 'n aanvaarbare maar nie baie goeie oplossing nie, of 'n swak oplossing.

96. Jy en drie polisiemanne dra die familie fisies uit die gebou uit en plaas hulle besittings in die pad.
97. Jy stel die boer bloot in kennis dat jy weier om die gesin te verwyder, aangesien dit te koud is buite.

98. Jy deel die familie mee dat jy hulle 'n maand gee om ander akkommodasie te kry en dat verdere stappe teen hulle gedoen sal word as hulle teen daardie tyd nog nie uitgetrek het nie.
99. Jy gee die boer toestemming om die gebou bloot gelyk te stoot ongeag of die familie of hulle besittings nog in die gebou is.
- 100 Jy stel die boer in kennis dat jy nie mag optree nie, aangesien Afdeling 26, paragraaf 3 van die Grondwet bepaal: "Niemand mag geregtelik uit hul huise gesit word of hul huis gesloop word sonder 'n hofbevel wat gemaak is nadat al die relevante omstandighede in ag geneem is".

## APPENDIX I

## KEY TO THE MEASURING INSTRUMENT

<i>PKQ</i>	<i>CTT</i>										
<b>1</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>21</b>	<b>2</b>	<b>41</b>	<b>2</b>	<b>61</b>	<b>1</b>	<b>81</b>	<b>2</b>
<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>22</b>	<b>2</b>	<b>42</b>	<b>3</b>	<b>62</b>	<b>2</b>	<b>82</b>	<b>2</b>
<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>23</b>	<b>2</b>	<b>43</b>	<b>2</b>	<b>63</b>	<b>1</b>	<b>83</b>	<b>1</b>
<b>4</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>24</b>	<b>2</b>	<b>44</b>	<b>3</b>	<b>64</b>	<b>2</b>	<b>84</b>	<b>3</b>
<b>5</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>25</b>	<b>3</b>	<b>45</b>	<b>1</b>	<b>65</b>	<b>1</b>	<b>85</b>	<b>3</b>
<b>6</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>26</b>	<b>2</b>	<b>46</b>	<b>2</b>	<b>66</b>	<b>1</b>	<b>86</b>	<b>3</b>
<b>7</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>27</b>	<b>1</b>	<b>47</b>	<b>1</b>	<b>67</b>	<b>2</b>	<b>87</b>	<b>3</b>
<b>8</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>28</b>	<b>1</b>	<b>48</b>	<b>3</b>	<b>68</b>	<b>2</b>	<b>88</b>	<b>1</b>
<b>9</b>	<b>2</b>	<b>9</b>	<b>3</b>	<b>29</b>	<b>1</b>	<b>49</b>	<b>3</b>	<b>69</b>	<b>2</b>	<b>89</b>	<b>3</b>
<b>10</b>	<b>2</b>	<b>10</b>	<b>1</b>	<b>30</b>	<b>2</b>	<b>50</b>	<b>3</b>	<b>70</b>	<b>1</b>	<b>90</b>	<b>3</b>
<b>11</b>	<b>2</b>	<b>11</b>	<b>1</b>	<b>31</b>	<b>2</b>	<b>51</b>	<b>1</b>	<b>71</b>	<b>1</b>	<b>91</b>	<b>3</b>
<b>12</b>	<b>1</b>	<b>12</b>	<b>3</b>	<b>32</b>	<b>1</b>	<b>52</b>	<b>3</b>	<b>72</b>	<b>2</b>	<b>92</b>	<b>3</b>
<b>13</b>	<b>1</b>	<b>13</b>	<b>3</b>	<b>33</b>	<b>2</b>	<b>53</b>	<b>1</b>	<b>73</b>	<b>1</b>	<b>93</b>	<b>2</b>
<b>14</b>	<b>3</b>	<b>14</b>	<b>3</b>	<b>34</b>	<b>1</b>	<b>54</b>	<b>3</b>	<b>74</b>	<b>2</b>	<b>94</b>	<b>2</b>
<b>15</b>	<b>3</b>	<b>15</b>	<b>2</b>	<b>35</b>	<b>1</b>	<b>55</b>	<b>1</b>	<b>75</b>	<b>1</b>	<b>95</b>	<b>1</b>
<b>16</b>	<b>3</b>	<b>16</b>	<b>2</b>	<b>36</b>	<b>3</b>	<b>56</b>	<b>1</b>	<b>76</b>	<b>2</b>	<b>96</b>	<b>3</b>
<b>17</b>	<b>1</b>	<b>17</b>	<b>2</b>	<b>37</b>	<b>1</b>	<b>57</b>	<b>2</b>	<b>77</b>	<b>2</b>	<b>97</b>	<b>3</b>
<b>18</b>	<b>2</b>	<b>18</b>	<b>3</b>	<b>38</b>	<b>1</b>	<b>58</b>	<b>3</b>	<b>78</b>	<b>1</b>	<b>98</b>	<b>1</b>
<b>19</b>	<b>3</b>	<b>19</b>	<b>3</b>	<b>39</b>	<b>2</b>	<b>59</b>	<b>1</b>	<b>79</b>	<b>2</b>	<b>99</b>	<b>3</b>
<b>20</b>	<b>1</b>	<b>20</b>	<b>2</b>	<b>40</b>	<b>1</b>	<b>60</b>	<b>2</b>	<b>80</b>	<b>1</b>	<b>100</b>	<b>1</b>